Maritime Security Complexes of the Indo-Pacific Region

VIJAY SAKHUJA & W. LAWRENCE S. PRABHAKAR

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Indian Council of World Affairs and Centre for Public Policy Research

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Abbreviations & Acronyms

ADIZ	:	Air Defence Identification Zone
AIP	:	Air Independent Propulsion
AIIB	:	Asian Infrastructure Investment Bank
ALCM	:	air-launched cruise missile
ASEAN	:	Association of South East Asian Nations
BBIN	:	Bangladesh, Bhutan, India, Nepal Initiative
BCIM	:	Bangladesh-China-India-Myanmar Forum for Regional Cooperation
BIMSTEC	:	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BRI	:	Belt and Road Initiative
C4ISR	:	Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance
CASD	:	Continuous at Sea Deterrence
CBM	:	confidence-building measure
CENTCOM	:	Central Command (US)
CGPCS	:	Contact Group for Piracy off the Coast of Somalia
COOP	:	crafts of opportunity
CPEC	:	China Pakistan Economic Corridor
CTF	:	Combined Task Force
CUES	:	Code for Unplanned Encounters at Sea
DCoC	:	Djibouti Code of Conduct
DPRK	:	Democratic People's Republic of Korea
EDI	:	European Deterrence Initiative
EEZ	:	Exclusive Economic Zone
EU	:	European Union
EUNAVFOR	:	EU Naval Task Force
FOIP	:	Free and Open Indo-Pacific
GCC	:	Gulf Cooperation Council
GMF	:	Global Maritime Fulcrum
GPS	:	Global Positioning System
HADR	:	humanitarian assistance and disaster relief
HBTSS	:	Hypersonic and Ballistic Tracking Space Sensor

IAMSAR	:	International Aeronautical and Maritime Search and Rescue
ICBM	:	intercontinental ballistic missile
IUU	:	illegal, unreported and unregulated
ILO	:	International Labour Organization
IMB	:	International Maritime Bureau
IMO	:	International Maritime Organization
INCSEA	:	Incidents at Sea Agreement
IOR	:	Indian Ocean Rim
IORA	:	Indian Ocean Rim Association
IONS	:	Indian Ocean Naval Symposium
IRTC	:	Internationally Recommended Transit Corridor
ISIS	:	Islamic State of Iraq and Syria
ISMERLO	:	International Submarine Escape and Rescue Liaison Office
JCPOA	:	Joint Comprehensive Plan of Action
JOC	:	joint operations centre
LACM	:	Land Attack Cruise Missile
LeT	:	Lashkar-e-Taiba
LPD	:	landing platform dock
LTTE	:	Liberation Tigers of Tamil Elam
MDA	:	Maritime Domain Awareness
MMCA	:	Military Maritime Consultative Agreement
MSB	:	Marine Security Belt
MSS	:	Maritime Safety and Security
MSR	:	Maritime Silk Road
NASC	:	North Arabian Sea Crescent
NATO	:	North Atlantic Treaty Organization
NDAA	:	National Defense Authorization Act
NEO	:	non-combatant evacuation operation
NM	:	nautical miles
NPR	:	Nuclear Posture Review
NWS	:	Nuclear Weapon States
OMZ	:	oxygen minimum zone
PACINDO	:	Pacific and Indian Ocean region
PCA	:	Permanent Court of Arbitration

PDI	:	Pacific Deterrence Initiative
PLA	:	People's Liberation Army
PLAN	:	People's Liberation Army Navy
PoK	:	Pakistan-occupied Kashmir
P-5	:	United States, Russia, China, France & United Kingdom
QSD	:	Quadrilateral Security Dialogue
RAB	:	Rapid Action Battalion
RSC	:	regional security complex
SAARC	:	South Asian Association for Regional Cooperation
SALW	:	small arms and light weapons
SAR	:	International Convention on Maritime Search and Rescue
SDSR	:	Strategic Defence and Security Review
SHADE	:	Shared Awareness and Deconfliction
SLBM	:	Submarine-launched Ballistic Missiles
SOLAS	:	Convention for the Safety of Life at Sea
SSBN	:	strategic submarine ballistic nuclear
START	:	Strategic Arms Reduction Treaty
STOVL	:	short take-off & vertical landing
SWS	:	Strategic Weapon System
TAAF	:	French Southern and Antarctic Territories
THAAD	:	Terminal High Altitude Area Defense
TRA	:	US-Taiwan Relations Act
UAE	:	United Arab Emirates
UAV	:	Unmanned Aerial Vehicles
UNSC	:	United Nations Security Council
UNCLOS	:	United Nations Convention on the Law of the Sea
USINDOPACOM	:	United States Indo-Pacific Command
VFA	:	Visiting Forces Agreement
WGMSS	:	Working Group on Marine Safety and Security
WMD	:	weapons of mass destruction

Foreword

The liberal economic order in the Indo-Pacific region was primed for high economic growth through various multilateral institutions fostering interdependence and integration. However, this order is now witnessing unprecedented turbulence, partly due to heightened rivalry, resulting in adversarial security dynamics between the United States as the established great power, and China as a rising power. The latter has been building significant capacities and capabilities to overcome any obstacles to what it claims is a 'peaceful rise.' The re-emergence of their power play has triggered reverberations that have impacted the entire region, albeit at different levels, causing unprecedented economic and security turbulence. Many regional states are experiencing politico-diplomatic dilemmas and are confronted with difficult choices with respect to the two Indo-Pacific powers. This situation also challenges the 'centrality' of ASEAN, which had hitherto been driving the region's security architecture through its multilateral organizations and multi-faceted arrangements.

The dominance of the maritime powers in the Indo-Pacific has undergone a sea change in the last decade. It is anticipated that power dynamics in this region will determine the global power structure in the coming decades. The shift in the focus of the major global powers, leading to the formation of various groups/alliances in this region, foretells that the Indo-Pacific region could be the epicentre of international politics, trade, and peace in the days to come.

In this scenario, the waters of the Indo-Pacific region, which encompasses both the Indian Ocean and the Pacific Ocean, have emerged as an arena of competition. China has consistently challenged the US's idea of a "free and open Indo-Pacific" and undertaken several initiatives that are escalatory in character and are obstructing the growth of the maritime enterprise. India has enduring strategic interests, as well as economic and commercial trade linkages in the Indo-Pacific region and the imperatives of connectivity, necessitate that these large maritime spaces remain 'open,

inclusive and free.' The emergence of China, not only as an economic power but also as a mighty military power, disrupting maritime equations and the balance of power, is the dominant story of the 21st century. Climate change, piracy, sea lanes of communication and connectivity are other vital areas of interest.

Dr. Vijay Sakhuja and Prof. W. Lawrence S. Prabhakar have sought to provide a net assessment of regional challenges and opportunities in this study of the Indo-Pacific region's security dynamics viewed through the 'maritime variant' of the Regional Security Complex Theory. This scholarly work reveals the highly tense emergent order in the maritime zone of the Indo-Pacific. It is hoped that this volume, which combines academic insight with practitioner perspectives would spur critical thinking and assist India in defining, articulating and building maritime doctrines tailored to deal effectively with the contemporary and future dynamics of the Indo-Pacific region.

Along with the Western Pacific Rim of the Indo-Pacific, two other contiguous zones are also essential to understanding the region; the Western Indian Ocean Southern Ocean and the Arabian Sea Littoral encompassing the India-Persian Gulf Region-Horn of Africa. Authors Dr. Avinash Anil Godbole, Dr. Takeshi Daimon-Sato, Dr. Pragya Pandey, Dr. R. P. Pradhan, Dr. Shelly Johny, Dr. Sankalp Gurjar, Rear Admiral Krishna Swaminathan, Dr. Uma Purushothaman, and Dr. Vivek Mishra highlight the vital aspects of this subject in detail. It has been a relevant and timely attempt by the Centre for Public Policy Research with generous support from the Indian Council for World Affairs. I take this opportunity to thank all the speakers and organizations for presenting a critical case before the academic community and governments concerned. I am certain that the book would enrich the debates about the issues of concern and emerging opportunities pertaining to this maritime region.

D. Dhanuraj Ph.D
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Introduction

Global affairs, in its holistic scope of political-diplomatic, economic-commercial, science-technology-industrial and military-technological transformations, as well as social constructions of identity and its manifestations, have been in the throes of comprehensive transformation through long cycles of historical, economical and structural (systemic) change. These transformations, over the years, decades and centuries, have spurned the evolution of regions and identities formed through security and economic interdependence, the interplay of inter-regional and intra-regional dynamics of security and strategy as well as institutional growth and governance. The complexity of different regions varies in scope and significance from one another. Focusing on the security complex of one region provides an insight into the intra-state, inter-state and the intra-regional conflicts and wars that determine the stability and order of that particular region.

The study of regions and their respective "security complexes" provides a deep understanding of the complex issues, challenges, threats and perils that impact each region. Inherent in each region are various traditional and non-traditional security challenges as well as threats that go beyond the statist interpretation and encompass evident competitive, cooperative and convergent security trends. Security complexes are therefore not confined to a state or the international system, but go beyond the conventional interpretation.

The Regional Security Complex Theory in its maritime variant (the Regional Maritime Security Complex) finds relevance in expounding a policy research perspective on how the 'global order' of maritime regions are 'constructed.' Further, the convergent maritime security paradigm could also be a possible framework of analysis to assess how the dynamics and vistas of cooperation converge on a wide swathe of issues, whether traditional, non-traditional or transnational, that have vital implications for maritime security. For instance, climate change and consequent sea level

rise would be a vital factor affecting littoral and human security, wherein the livelihood of the coastal communities has a bearing on regional security.

This study commences by expounding the conceptual and theoretical issues of the regional security complexes and their salience. In analyzing the various aspects of any regional security complex in Chapter 1, the referent role of the state, the importance of the region and the prevailing levels or benchmarks of securitization and desecuritization are critical. Deeper understanding of the regional security complexes is achieved by examining their maritime dimensions, evaluating the maritime order and studying various aspects of maritime security.

Geography and history are key determinants in understanding the regional security complexes, and their maritime dimensions also assume importance. Chapter 2 elucidates the geographical factors and the historical realities that condition various regional security complexes. Geography provides the permanent feature of territoriality and determines the economic and security derivatives of the region. History shapes the identities and constructs the norms and ideas of social behavior and creates cultural images of the region. In this chapter, the maritime geography of the Indo-Pacific region has been analyzed to infer the regional security dynamics of the seas and oceans that in turn impacts and exerts influence on the littorals.

Chapter 3 is an exposition of the maritime security complex of the Indian Ocean, an important dimension of study, given various levels of securitization associated with the multiple traditional and non-traditional security issues of the region. The inter-state and intra-state dimensions and the regional overlay of transnational issues are analyzed in the context of the maritime dynamics of the Indian Ocean. The analysis levels range from hard security issues at the high end to illegal, unreported and unregulated (IUU) fishing issues and the environmental impact of organic life depletion at the lower level.

The regional security complex and the associated maritime security dynamics in the Northern Arabian Sea Crescent are analyzed in Chapter 4. An attempt is made to examine the traditional interstate conflicts and the

irregular insurgency conflicts that have been raging in the region and impacting governance, development and growth. Analyzing security trends includes studying the nature of challenges and threats arising in the traditional, non-traditional and transnational spectrum. The role of extra-regional powers and their interventionist policies also aggravate the regional dynamics.

The Bay of Bengal is a sub-complex of the regional complex of South Asia and Indian Ocean. Chapter 5 is a case study of how the inter-regional dynamics between South Asia and Southeast Asia plays out. The Bay of Bengal is a maritime sub-regional complex that is intense due to a host of non-traditional and transnational challenges and threats that surmount the two regional security complexes of South Asia and Southeast Asia. The region also houses various regional institutions that have been built to provide capacity for greater integration and development.

Chapter 6 focuses on the Western Pacific regional security complexes of the Asia-Pacific and the Indo-Pacific. It features high levels of securitization of the traditional security challenges and threats emanating from the powerplay of great powers and their competitive strategies. The military-strategic security dynamics perhaps constitutes the fulcrum of security dynamics in this region.

The naval nuclear dynamics represents the quest of both the nuclear weapon states and the new nuclear states to develop their sea-based deterrence based on the nuclear logic of strategic stability, which, in turn, is derived from credibility and survivability. The narrative for assured retaliatory capability against a decapitating nuclear strike by a nuclear adversary and the dictates of strategic stability have determined the naval nuclear dynamics, which is understood to have provided states, especially the medium and the middle powers, with the means to enlarge their strategic depth to counter the overwhelming threat of any nuclear first strike. The naval nuclear dynamics in the Indo-Pacific region is fleshed out in Chapter 7.

The objective of this volume is to ascertain the regional security dynamics and assess securitization as a driving force. It infers the scope of

traditional, non-traditional and transnational security issues and their regional impact, with a specific focus on the maritime perspectives of regional security dynamics and also envisages the potential interplay of these factors as they continue to influence and shape future discourse.

Vijay Sakhuja
W. Lawrence S. Prabhakar

Chapter 1

Theoretical Framework of Regional Security Complexes and Strategic Futures

For more than half a century, there has been interest and focus on the role and dynamics of regions and states. During the Cold War, the focus on regionalism trends was high. The concept of regions is imagined and constructed and therefore, the populations in these regions are understood to be imagined communities. From a constructivist perspective, the focus on regionalism has been perceived as the process of creating a 'new world order' in which shared identities, values and cultures are portrayed. Regions nurture a sense of commonality of values and ideals, which facilitates regional cooperation through the formation of multilateral organizations in later stages. However, multilateral organizations alone do not fully explain the emergence of mutually exclusive regions and the intensity of the dynamics within them. Within a region, mutual interests exist, whether or not all the regional states have a shared sense of identity. One of the salient aspects of regionalism is the presence of materialist and rationalist features in which territorial boundaries and power lead to the conceptualization of regional formations. These features are seen in the density of interactions and the limited projection of power. Thus, regions are territorially bounded and embedded within power distributions.

The Regional Security Complex Theory (RSC theory) is the central focus of the present study. This theory envisages the importance of territorially coherent subsystems that are defined by interlocking patterns of securitization. In this schema, there are existing non-territorial security constellations, which could take the form of transnational, global, or even sub-systemic non-territorial securitizations that are largely ignored.

The conditions of regional security that may be recognized by states within the regional security complex are individual/joint responses intended to deal head-on with security issues. These include prevailing general security problems of inter-state defense and are characterized by the 'security dilemma' consequence. The RSC theory has a new focus on significantly autonomous localities that face insecurity and witness securitizing activities.

There are two aspects of regional security: (a) the scope and patterns of threat and conflict within the region; and (b) the core conflict that may threaten the integrity of the region. These are autonomous localities of insecurity that are defined as 'regional security complexes' (RSC) within the scope of the RSC theory. The RSC theory thus defines the various identifiable groups of states as 'security complexes' because they portray certain specific, regionally bounded inter-state and mutually affective intra-state security conditions and conduct.

Nature and Salience of Regional Security Complexes

The scope of the RSC theory is consistent with the established neorealist understanding of the international system. RSCs, however, identify a new level of inter-state relations characterized by the regional dynamics evolving from these relations. The formation of RSCs is derived from the interplay between the anarchic structure of the international and regional system. This implies that on the one hand, the RSC must be composed of two or more autonomous units operable with the balance-of-power dynamics, and on the other hand, there must be pressures stemming from local geographical proximity.[1] Within the RSCs, power relations are an important component.

Polarity is another feature that shows the distribution of power that would form part of the "essential structure" of an RSC.[2]

The RSC theory is characterized by 'identity' factors and hence it has constructivist roots. It is evident that the formation and operation of RSCs depend on patterns of amity and enmity among the constituent units, which makes regional systems dependent on the actions and interpretations of actors.[3] Besides the state-centric security that remains the focus of interest and concern, RSCs do account for non-territorial, non-military security issues and concerns.

A second characteristic salient in inter-state relations and security affairs is the regional-level developments evident in every security complex. The salience of the regional developments and dynamics evolves as the 'security community' for that specific region. The security community feature has a particular reference to Southeast Asia. The 'regional security community' analysis emerged out of the tradition of peace studies and research in international relations evident in the early 20th century, in the aftermath of World War ll. The regional security community studies have a salient normative content, with imperatives for peace in a world prone to conflict and operating within an international system dominated by great powers.

While analyzing regional security complexes, it is evident that the security interdependence is more intense on a regional scale rather than on a global scale. The reason why regions, rather than individual states, matter in the power quotient is that the majority of sovereign states lack the ability to project power beyond their own region. From the Cold War period, the region as a level of analysis gained importance over individual states. This trend continued in the post-Cold War period also. The importance of theorizing about the regional level is inevitable, since regions are not micro-versions of the global system, but these two levels are innately different and incorporate their own dynamics.[4] Thus, regions are not strictly "natural, objective and ontologically given spaces, instead, regions are spatial and temporal constructs that are contingent on a variety of interests and agendas."[5]

The regional level is characterized within a historical and geographical context and thus the proximity and familiarity within the region enable intensive interactions between actors within these groupings. There is also inherent flexibility in the way regional parameters are defined and they are not as rigid as in the prevailing global system. Regions undergo change and are adaptable to various configurations.

The scope of the regional level of security has become increasingly autonomous based on two foundational assumptions; First, territoriality is still a primary feature of international security dynamics and second, in the post-Cold War era, the regional level is an essential feature of any coherent analysis of international security.[6] Regionalism resulted in the rise of multilateral institutions in regional settings. For many state actors, regionalism has now become an increasingly viable means of organizing comprehensive security mechanisms. Threats within the region are in short proximity rather than at long distances.[7] Regionally coherent security subsystems emerge as a response to political and military ones and are strongly felt at close range.

Certain security threats tend to be regional in scope and are so intertwined that they cannot be wholly resolved or analyzed without considering the other units that exist within the dynamic of the complex. It is a fact that substantial parts of the 'securitization' and 'desecuritization' processes in the international system are evident in regional clusters. These clusters are durable and distinct from global-level processes. Regional security interdependence is a pivot for governments and a key driving force behind regional projects.

In the contemporary context, the concept of security has evolved and moved beyond its traditional roots in the military or political spheres. The pursuit of a strong and secure state implies that the state can no longer be the sole referent object of security. It provides for a reconceptualized definition of security. The nature of a security threat is an issue posited by securitization. It is explained as a threat to the survival of some referent object – nation, state or the liberal internal economic order.

The conceptualized definition of security highlights the element of perception, whereby all security threats must be viewed. They are determined by the process of two further definitions viz securitization and de-securitization. Securitization is defined as "the discursive process through which an intersubjective understanding is constructed within a political community to treat something as an existential threat to a valued referent object and to enable a call for urgent and exceptional measures to deal with the threat."[8]

The idea of securitization highlights the process by which a threat is treated equally by all involved as being a mutual and imminent concern that requires action. The process of regional securitization requires that all actors view the issue to be harmful to the same extent, to the referent object being threatened. In the conventional concept of security, what was viewed as most dire were those threats that emerged from within the state, since the state was acting as a unitary actor within the international system.

Desecuritization is defined as "the discursive process by which a political community downgrades or ceases to treat something as a threat. De-securitization is the process by which the threat is no longer considered an imminent reality but as an issue that can be dealt with within the ordinary framework of day-to-day politics."

Defining the Region

In the context of the regional security complex, defining a region is not direct as no such definition exists that is comprehensive to satisfy all perspectives and theoretical issues. A region, in security terms, "means that a distinct and significant subsystem of security relations exists among a set of states whose fate is that they have been locked into geographical proximity with each other."[9]

Geography is a critical factor that determines the nature and scope of the threats. It is the concrete situation for each state that has its influence on processes of (de)securitization. Geography cuts the world into distinct parts so that the actors in a given region share the regional properties as a

structural context. In maritime terms, combating piracy provides a case in point. In the maritime regional security complex, securitizing the freedom of movement within shipping lanes is an important concern for various regions, but it is a non-existent one for others. Thus, geography remains a crucial factor that cannot be removed from this equation.

A regional security complex could therefore be defined as a "set of units whose major processes of securitization, desecuritization or both are so interlinked that their security problems cannot reasonably be analyzed or resolved from one another."[10] However, the framework of RSC theory is not dictated by geography, culture, patterns of current events or the whims of analysts, but local discourses about regionalism. Therefore, RSCs are socially constructed by their members consciously or unconsciously, by the ways in which their processes of (de)securitization interlock with each other."[11]

The essential structure of an RSC consists of four elements: boundary, anarchic structure, polarity and social construction. It is the combination of these four elements that differentiates the lines of the complex and may be characterized as follows:

> *An RSC has a distinct dynamic between a particular set of states within a geopolitical context. The existence of an RSC is highlighted by a clear distinction between those units within the complex and those outside of it. The relationship between the states within the complex is characterized by elements of familiarity and proximity. The RSC is characterized by the structure of anarchy and are defined by two kinds of relations, power relations and patterns of amity and enmity*.[12] Buzan & Waevar (2003), op cit., pp.46-7.

Furthermore, historical hatreds and friendships, as well as specific issues that trigger conflict or cooperation, all form part of an overall security constellation of fears, threats and friendships that define an RSC. The patterns of amity and enmity are part of traditional International Relations

Theory. They represent the salience of the density of regional interactions. The patterns of amity and enmity focus the interactions between states within the specified regional context.

Having examined the generic importance of the regional security complexes, it is important to analyze the maritime dimension of the regional security complexes and their peculiar characteristics, which vary from one geographical region to another. Variations are evident in how each region of the world exhibits unique features that are different from other regions.

Regional Maritime Security Complexes

The salient features of regional security complexes include the nature of boundary, anarchic structure, polarity and social construction. They include the dynamics of securitization and desecuritization that has its discursive impact on the nature and importance of regional dynamics. The derivation of the salient features of a regional security complex needs to be correlated with the maritime domain. The emergence of the maritime security agenda in international relations has its significance in national strategic, policy and doctrinal dimensions. Regional maritime security dynamics involves the issues of maritime security, naval power, patterns of international interaction, maritime governance and the political order at sea.

Theorizing security at sea is premised on the Realist and Liberal theoretical vistas. Besides, the theorizing of security at sea is premised on constructivist thinking or influenced by critical security studies.[13] Exploring the dimensions of the regional maritime security complexes essentially focus on the issues of securitization and desecuritization at sea. The exercise involves dimensions of both the Liberal and Realist fields of study.

The Liberal interpretations of security at sea have resulted in the rise of various international regimes governing such activities. These regimes indicate that the marine environment has increasingly come under some form of collective public order and legal regulation.

The Realist interpretations are best defined as national security issues, corresponding largely to long-established traditions of naval strategy

and sea power. The Realist derivation explores the national security component of maritime security involving the development and application of naval power, which covers military power projection, homeland defense at sea, and use of warships to protect maritime trade routes, including security of the sea-lanes of communication and commerce as well as traditional naval functions of deterrence, surveillance and interdiction. The articulation of Realist issues of maritime security and order is evident in the various global hotspots of maritime geopolitics and competition.

The discursive debate of securitization in the regional maritime security complexes stresses the importance of the marine environment. Regulation, order and governance spans a wide range of issues such as marine pollution, vessel safety and regulation, maritime search and rescue, state of the ocean health and the impacts of climate change. Within the range of non-security issues, the assessment of the marine environment comes into sharper focus. The marine environment is a well-known and long-established concern in maritime affairs and its genesis lies in various international efforts to regulate shipping and other activities at sea through intergovernmental organizations such as the International Maritime Organization (IMO) or other coordination bodies working under the aegis of the United Nations.

The scope of the desecuritized dimensions of maritime security complexes refers to marine environment issues, which in turn, relate to maritime security in a number of ways. The maritime environment does represent a wider canvas of environmental security concerns at sea and in the coastal areas. In its securitized dimension, they focus on the security and safety of commercial shipping, as ships are a potential target for criminals, terrorists and pirates, and also serve as a medium for trafficking in persons, illicit goods or weapons.[14]

The maritime environment has to deal with prominent hybrid security challenges that include the scope of environmental degradation caused through fisheries crime and other environmental crimes, with its potential to increase the grievances of coastal populations thereby leading to maritime

instability. Yet another fact is that the marine environment issues are closely linked to a third domain, that of economic development. The Blue Economy at sea has immense implications that underpin the maritime security agenda. It should be noted that 90% of global trade travels by sea, and marine resources such as fisheries or offshore oil are key economic assets that need to be secured and protected.[15]

Some sections of the global maritime commerce travelling within various security complexes face threats of piracy, criminality or other forms of maritime disruption. These have emerged as the dominant issues in the security agenda of the regional maritime security complexes of the world.

Coastal states which primarily rely on the Blue Economy are preoccupied with strengthening marine resource protection and promoting development. An important domain in regional maritime security complexes is to address the issues of human security at sea, which is evident in the insecurities experienced by individuals and local communities as well as affected states.[16]

Human security issues penetrate much of the maritime security agenda. Human security involves ensuring livelihood security at sea. This includes the protection and sustainability of fisheries that underpin the livelihoods of millions living in coastal regions. Littoral communities in coastal areas are also most vulnerable to the adverse impacts of climate change and maritime pollution. Such concerns relate not only to the security of individuals and coastal communities but also to human insecurity, which facilitates the emergence of piracy or criminality as alternative sources of employment in regions suffering from significant economic deprivation or breakdown.[17]

Maritime order and governance is yet another facet of the maritime security complexes that plays a vital role in the ensuing 'construction' of maritime security complexes in every region. Maritime governance envisages the sharing of policy-making competencies in a system of negotiation between nested governmental institutions at several levels (international, (supra)national, regional and local) on the one hand, and governmental actors,

market players and civil society organizations on the other, in order to govern activities at sea and their consequences.[18] Maritime governance enables identification of the discursive dynamics of securitization and desecuritization and provides the capacity for the regional maritime security complexes to address various challenges and perils in the maritime domain, even as they work together as an integrated architecture to resolve emergent challenges, both human and nature-induced, as well as threats at sea and in the littorals.

Maritime governance constitutes the dichotomous feature, which along with maritime security emphasizes the safety of shipping and of humans at sea, and also deals with the various operational aspects that govern maritime activities. Maritime safety is "the combination of preventive and responsive measures intended to protect the maritime domain against, and limit the effect of, accidental or natural danger, harm, and damage to environment, risks or loss."[19] Maritime safety is concerned with securing lives at sea and their livelihoods, which constitutes the desecuritized dimension of the regional maritime security complex and its operations at sea.

Maritime governance and the ensuing good order at sea are two foundational pillars of any regional maritime security complex that would mediate conflicts and issues within the region and enable the region to address the various challenges that littoral human communities face in the long run. Maritime governance implies collaboration between different national and international authorities that are of equal importance. Maritime governance and its attributes and operations are the vital foundation of the neoliberal institutional order that constitutes the basis for building intergovernmental institutions that are to mitigate the negative impact of disorders and challenges at sea. Maritime governance as a process activates and enables the dynamic operations of the law at sea and regulates the code of conduct of the various stakeholders. Maritime governance within the framework of the maritime regional security complexes creates the multi-layered interdependency between national and international actors as well as coheres the activities of the wide range of stakeholders, which include states, international

organizations, international corporations, local communities, media and various non-government organizations engaged in collective maritime endeavours.[20]

Regional maritime security complexes are also engaged in the description of the patterns of 'amity and enmity' within the scope of traditional and non-traditional maritime security. Amity and enmity are within the securitized scope of competition and cooperation among the various state and non-state actors at sea.

This study of various regional maritime security complexes would be predicated on the various maritime regions and the analysis would cover the nature and scope of securitization and desecuritization, the nature and structure of anarchy as evident in various challenges and threats, examine the polarity of the issues in terms of traditional, non-traditional and transnational scope of threats and challenges and the various onshore and offshore issues that impact and influence regional maritime security dynamics.

Scope of Strategic Futures

The assessment of strategic futures has important implications and significance when the study of regional security complexes is made. Regional security complexes unveil a host of 'prospects and perils' for the states and regions, given the levels and scope of securitization and desecuritization. The scope of shifts in power balance, nature of threats and the scope of hybrid threats vary in this context. Strategic futures enable the identification of challenges, threats and perils in each region and envisage the responses in the intra-state and the inter-state levels of interaction. Strategic futures facilitate the futuristic understanding of evolving issues, challenges and threats in the various regional maritime security complexes through the unique characteristics of each issue pertinent to the region. Four issues accrue from such an analysis:

(a) Changing scope of challenges and threats would be evident in the way the various land and maritime challenges as well as threats change across the spectrum of traditional and non-traditional security with its

unique focus on maritime security. As regionalism and regions change in their patterns of development and growth, the milieu of the various issues at stake for maritime security complexes also changes. Strategic futures would essentially probe the prognostic dimensions of various changes and how it impacts overall maritime security and the regional order. Thus, regional orders have a pertinent impact on the changing scope of challenges and threats that would characterize the nature and scope of anarchy in the region and its mitigation.

(b) *Changing scope of maritime security issues and impact* is an inevitable reality as the nature of maritime security and safety would be a dynamic issue for analysis. The scope of maritime security issues and their impact on regional security complexes would critically determine the scope of maritime orders, regulation and governance. Be it within the state context or the regional context, maritime security issues would have a crucial impact on issues including competitive, cooperative and convergent security dynamics.

(c) *Changing dynamics of securitization and desecuritization* has a long-range impact as to how regional security complexes define and derive the nature of security or non-security content in each issue. Securitization and desecuritization eventually determine the scope and manner in which regional security complexes work, how the various issues, challenges and threats are structured and discussed on the security agenda and how they are derived in terms of the individual and collective impact they have on the regional security order.

(d) *Regional transformation of maritime regional security complexes* would ensue even as the regional orders change according to the milieu of regional security threats, challenges and dynamics. The impact across regions of how various security and non-security issues, challenges and threats reverberate would be the source of regional transformation. Futuristic studies would be able to cast the trajectory of the evolving transformation of various maritime regional security complexes and assess the impacts across these maritime security complexes.

Strategic futures thus emerge as an important framework in the assessment of how regional security complexes in the maritime domain evolve and how they impact and transform regions and processes.

In summation, this chapter has examined the nature of regions and regional security, the dynamics of how regional security complexes are contextualized and examined in terms of securitization and desecuritization narratives. It has also analyzed the maritime dimension of regional security complexes, which is derived from the generic framework of regional security complexes. The importance of strategic futures as a viable framework for analyzing future trends and developments within regional security complexes is also highlighted. With this framework, it would be useful to analyze various regional complexes and the issues pertaining to the dynamics of their operations.

Notes

[1] Amitav Acharya, *Constructing a Security Community in Southeast Asia: ASEAN and the Problem of Regional Order* (London: Routledge, 2014), p.45 and p.53.

[2] Ibid., p.53.

[3] Ibid., p.40 and p.48.

[4] Barry Buzan & Ole Waevar, *Regions and Powers: The Structure of International Security* (London: Cambridge University Press, 2003) p.79.

[5]Deepak Nair, '*Regionalism in the Asia Pacific/East Asia: A Frustrated Regionalism, Contemporary Southeast Asia*, 31, no. 1 (2009), p. 112.

[6] Buzan & Waevar (2003), op cit., p. 461.

[7] Ibid.

[8] Buzan & Waevar (2003), op cit., p.491.

[9] Barry Buzan, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era* (Boulder: Lynne Rienner, 1991), p.188.

[10] Buzan & Waevar (2003), op cit., p.491.

[11] Buzan & Waevar (2003), op cit., p.461.

[12] Buzan & Waevar (2003), op cit., pp.46-7.

[13] Philip E. Steinberg, *The Social Construction of the Ocean* (Cambridge: Cambridge University Press, 2001).

[14]Peter Roell, "Maritime Security: New Challenges for Asia and Europe," Institute for Strategic, Political, Security and Economic Consultancy (ISPSW) Berlin, *ISPSW Strategy Series*, Issue No. 167, November 2011, 7. http://www.isn.ethz.ch/ isn/ Digital-Library/Publications /Detail/?id=13457.

[15]Rupert Herbert-Burns, "Countering Piracy, Trafficking, and Terrorism: Ensuring Maritime Security in the Indian Ocean," in David Michel and Russell Sticklor (eds), *Indian Ocean Rising: Maritime Security and Policy Challenges*, (Washington: Stimson Center, July 2012), pp.23-39.

[16] Peter Roell (2011), op.cit.

[17] James Kraska and Raul Pedrozzo, *International Maritime Security Law* (Leiden: Nijhoff, 2014), p.10.

[18] Jan van Tatenhove (2011) Integrated Marine Governance: Questions of Legitimacy MAST, 10 (1) pp.87-113.

[19] Lutz Feldt, Dr. Peter Roell, Ralph D. Thiele (2013), "Maritime Security – Perspectives for a Comprehensive Approach" *ISPSW Strategy Series: Focus on Defense and International Security*, Issue No. 222, April 2013 accessed at https:// www.files.ethz.ch/isn/162756/222_feldt_roell_thiele.pdf

[20] Lukaszuk, Tomasz. (2019), *The Concept of Maritime Governance in International Relations* 10.7366/020909614201807

Chapter 2

Geographic Constants, Historical Connections and Modern Formulations

The Asian-African-Australian-American maritime-littoral space is surrounded by two large bodies of water, namely, the Indian Ocean and the Pacific Ocean. The Indian Ocean covers nearly 20% of the Earth's water surface (about 292,131,000 sq km) and is the third largest ocean. It is home to important seas, the more prominent of these being the Red Sea, Persian Gulf, Arabian Sea, Bay of Bengal and Andaman Sea. Several island groupings, archipelagos and numerous large and small islands dot the waters of the Indian Ocean. The average depth of this ocean is about 3,890 m and several underwater ridges create natural basins. Among these, the Java Trench at 7,450 m is the deepest. The crustal plates of Africa, India and the Antarctic converge to form the Indian Ocean seabed.

The Indian Ocean is also home to oceanic gateways also referred to as maritime choke points (Bab-el-Mandeb, Strait of Hormuz and Strait of Malacca) and these connect the Indian Ocean with the Red Sea and the Mediterranean Sea through the Suez Canal, Persian Gulf and the Pacific Ocean. These geographic constants support intense maritime activity and many Indian Ocean sea-lanes connect with the Pacific Ocean and the Atlantic Ocean. Towards the west, the sea-lane runs into the Red Sea to

pass through the Suez Canal; towards the south, it rounds the Cape of Good Hope; and in the east, it goes through the Malacca Strait before joining the Pacific Ocean. It is estimated that over 100,000 vessels sail annually through the Indian Ocean. Nearly half of the world's traded oil passes through Strait of Hormuz and 50% of the 28 ships that enter the Arabian Gulf each day are tankers. Likewise, nearly 200 ships pass through the Strait of Malacca daily, while nearly 24,000 vessels transit annually through the Suez Canal.

The contemporary economic dynamism of the Indian Ocean is rooted in its ancient history. The monsoon winds played a pivotal role in the movement of trade, cultures, ideas and religion. The Arab navigators named these wind patterns as '*mausim*' ('set time' in Arabic), now referred to as the monsoon,[1] which enabled mariners to sail long distances across the Indian Ocean for trade. These winds also facilitated links among other maritime trading systems of the Greeks, Romans, Egyptians, Jews, Arabs, Indians and Chinese.

In contemporary times, the Southern Indian Ocean has gained higher strategic and economic significance. The French territories in the Southern Ocean (French Southern and Antarctic Territories [TAAF] not including Scattered Islands and Adelia Land) generate 2,070, 356 square kilometers of Exclusive Economic Zone (EEZ).[2] Among these, the Réunion Island has a significant ethnic population of nearly 895,312 people (in 2020) of African, Indian, Malagasy, Chinese and European descent.[3] These people arrived from Africa, Asia and Europe over the last 300 years.

It is not surprising that the Indian Ocean is a critical element in the calculus of economists, politicians, military commanders and the strategic community. Significantly, economics and security have been the twin drivers that have shaped the historical and contemporary geo-political, geo-economic and geo-strategic discourse in the region.

Southern Ocean

The Southern Ocean is contiguous to the southern Indian Ocean and the Pacific Oceans but is the least "studied and sampled of all the world's

oceans."[4] It "extends from the coast of Antarctica north to 60 degrees south latitude" and is "now the fourth largest of the world's five oceans (after the Pacific Ocean, Atlantic Ocean, and Indian Ocean, but larger than the Arctic Ocean)."[5] It is a rough, cold and remote area to operate in, given that the gale-force winds known as "Roaring 40s, Furious 50s and Screaming 60s" are "terrifying in the intensity they evoke" and "long feared for the devastation they could wreak" and this natural phenomenon determined the shipping routes.[6] It is not surprising that if "anything does go wrong, help is a long way away."[7] This roughness and harshness of the Southern Ocean is best demonstrated by the international efforts (made by 34 ships and 28 aircraft from seven different countries[8]) to locate the wreckage of the Malaysian Airlines flight MH 370 in the Southern Ocean, a search that took place from 2014 to 2017.

There were many challenges encountered by the rescue ships, platforms and agencies, which confronted strong winds, rough weather, adverse sea conditions and above all, the remoteness of the region. Significantly, this sea space is rarely visited by ships and therefore there is little or no shipping traffic on this route. Although there are many clear dangers to movement of any type of maritime transport in the Southern Ocean and the southern Indian Ocean, yet these are popular among polar and ocean research vessels for Antarctic research and climate science as also among yachtsmen.[9] On occasions when they require assistance due to accidents/bad weather, the regional countries (NAVAREA Coordinators) are bound by international agreements to launch rescue operations.

Pacific Ocean

The Pacific Ocean (155 million sq km) is the world's largest ocean and covers nearly 46% of the earth's water surface area, which is double the size of the Indian Ocean. It is bounded by the maritime littoral spaces of Asia, Western Australia and the west coasts of the Americas. In the north, it adjoins the Arctic Ocean and in the south, it is contiguous to the Southern Ocean close to Antarctica. There are several large and medium water bodies within the Pacific Ocean, namely, the South China Sea, the East China Sea,

the Sea of Japan, the Sea of Okhotsk, the Philippine Sea, the Coral Sea, the Tasman Sea and the Yellow Sea lying to the west of the Sea of Korea. The Malacca Strait, Sunda Strait, Lombok Strait and Torres Strait connect the Pacific and the Indian Oceans. Similarly, the Drake Passage and the Strait of Magellan link the Pacific with the Atlantic Ocean, while the Bering Strait connects the Pacific with the Arctic Ocean.

The mean depth in the Pacific Ocean is 4,000 m and the deepest point in the world is the Challenger Deep (10,928 m) in the Mariana Trench, followed by the Horizon Deep (10,823 m) in the Tonga Trench and the Sirena Deep also located in the Mariana Trench. Thus, the geography-topography-oceanography of the vast Asian and Pacific regions is diverse and complex.

Historical Connections and Post-colonial Realities

In its ancient-historical context, the Pacific Ocean was an outlier and remained undiscovered. However, the Western Pacific waters, particularly along the coast of China and Indo-China were burgeoning with maritime activity. Ships with traders from India, Arabia, Persia and Southeast Asia frequently called at ports in the region even as far eastward as China, which resulted in a flourishing maritime enterprise. Importantly, a sophisticated maritime trading system involving China, India, Southeast Asia, Persia and Arabia had emerged. The great fleets of King Rajendra I and Admiral Zhung Ho crisscrossed the Indian and the Pacific Oceans through the Straits of Malacca and Sunda, projecting power, defeating challengers and establishing spheres of influence.

The decline in the maritime power of China and India in Southeast Asia resulted in a vacuum, which was quickly filled by Europeans whose quest for new lands and trade imperatives with the affluent East encouraged them to venture into the Indian and the Pacific Oceans. This European quest was led by the Portuguese. While Vasco da Gama made a pioneering voyage and returned home in 1499, Afonso de Albuquerque was successful in controlling the maritime trade routes of the East and built permanent fortresses with settled populations (in Socotra, Ormuz, Goa and Malacca)

and set the stage for Portuguese hegemony in the East. In 1512, António de Abreu and Francisco Serrão led an expedition to southern China followed by another led by Jorge Álvares in 1513. Meanwhile, the Spaniards led by navigator Ferdinand Magellan crossed the Isthmus of Panama in 1513 to reach the Pacific Ocean. They named it *Pacífico* or Pacific meaning peaceful. Later, the Dutch established themselves in Sumatra and the British and French followed. Soon the Indian Ocean littorals were dotted with forts and factories to support domestic demands and in the process, strong maritime foundations were built that continued well into the 20th century.

The historical connections among various regions have been maintained by various sea-based trade routes and the movement of people between these regions. Sea trade not only brought about commerce and the movement of goods and people, but facilitated the exchange of ideas, beliefs and values across high seas. The pre-colonial period saw a great deal of civilizational connect and trade between various regions within Asia and the Pacific encompassing South Asia, Southeast Asia and East Asia. The colonial period witnessed competitive rivalries among the colonial powers, who used sea power to control and subjugate various regions. It saw the restructuring of the economic order, the political control of the regions and the retreat of civilizational legacy.

After the end of the World War II, the process of decoloniza-tion occurred, resulting in the liberation of the Afro-Asian and Latin American countries. Three trends were evident in the historical process of decolonization.

The first trend was that colonization had resulted in cartography demarcated by the expediency and convenience of the ruling imperialist power. Cartographic demarcations of borders and boundaries of various countries suited colonial administrative requirements, but it was completely detached from the cultural, social and political ground realities in these countries and regions. Arbitrary cartographic demarcations resulted in the eruption of internecine conflicts in various regions and countries. On the one hand, partition complexities led to regional conflicts and tensions as

well as increased security challenges and threats, while on the other, they threw up various challenges in social and economic development. Often the vicious cycle of conflicts and wars resulting from border and boundary issues has created a net dependency in these states, stemming from their security problems and challenges. It has created a constituency for the buildup of arms and of large military establishments geared for war purposes.

The second trend was that the state and nation-building process in the new states after decolonization has resulted in various inter-state and intra-state economic, social, political and governance complications. Often, these complications have triggered a surge of internal conflicts in various countries. The spate of conflicts has been witnessed in the spectrum of ethnic, lingual, sectarian and sub-regional dimensions, further aggravating various structural complications of these states. In some cases, these have triggered separatist tendencies and have resulted in the state use of its military to control and subjugate conflicts. This, in turn, has often led to the collapse of governance and military takeovers from civilian leadership. In other cases, civilian leadership has engaged the military in various governance tasks and has aggrandized its position to establish dictatorships. Governance failure has resulted in several popular uprisings and challenges to state authority.

The third trend has been the complexities of economic development and growth that have affected several nations since decolonization. Economic development and growth have seen a mixed performance in the states of Asia and in the Pacific region. The impact of economic growth, the process of development and the rise of Asia-Africa and the Pacific regions have important consequences. Along with the nature and scope of political development, social stability, economic development and growth, the regional security dynamics is being determined by a number of domestic and external factors.

The Indo-Pacific

There has been a strong element of continuity in the 21st century and the Asian-African-Australian-American maritime littoral space has been labelled

as the Indo-Pacific region. As a maritime theater of ancient civilizations, the Indo-Pacific region represents an eclectic blend of cultures, ideas and the transmission of historical memories through ancient voyages, which have led to the evolution of contemporary globalized states who rely on the seas for their economic growth and power potential. The region is burgeoning with maritime activity led by Asian countries, particularly China, India, Japan and ASEAN member states.

The United States continues to be the pre-eminent power with global interests and is the most vociferous proponent of the concept of a free and open Indo-Pacific. At least three more countries, namely, Australia, India and Japan have supported the Indo-Pacific, albeit with a differentiated understanding of the region and varying cartographic definitions. For the United States, the Indo-Pacific sea-space encompasses the whole of the Pacific Ocean and, in the Indian Ocean, it is limited to the southern Asian landmass until the western border of India.[10] For India, the Indo-Pacific is a large sea area comprising the Western Pacific Ocean to the western Indian Ocean along the east coast of Africa. The Australian understanding of the geography of the Indo-Pacific is similar to that of the United States, while the Japanese formulation of the Indo-Pacific spans the Pacific and the Indian Oceans and is represented by the "Confluence of the Two Seas."[11]

While spatial formulation and understanding of the 'Indo-Pacific' may be driven by a number of contending political priorities, competing economic interests and expansive strategic interests among regional as well as extra-regional powers, it has also attracted different labels such as 'Indo-Pacific' (Australia, Japan and India), 'Indo-Asia-Pacific' (United States National Security Strategy) and 'Pacindo' (Indonesia as a Global Maritime Fulcrum in the Pacific and Indian Ocean region or PACINDO).

The Indo-Pacific is home to a number of cooperative organisations, multilateral structures, bilateral and multilateral arrangements. Among these, ASEAN leads the regional initiatives for a stable and peaceful security architecture. There are visible signs of interest in the Indo-Pacific by the European Union, France and Germany. The Netherlands and the United

Kingdom have argued about stakes based on economic and strategic interests in the region. In essence, the Indo-Pacific region offers numerous opportunities, presents complex challenges, and has its share of competition and rivalries, with some states showing a strong proclivity to dominate regional affairs.

The Indo-Pacific region is currently witnessing three paradigm shifts. First, the economic growth and regional economic integration is noteworthy but the complex interplay of non-traditional and transnational challenges in the region has grown and has been intensely conflictual in nature and scope. This has resulted in the formation of the Quadrilateral Security Dialogue (QSD) or the Quad, which has heralded the call for a "rules-based order" in the region since great power rivalry, regional maritime contestations and the threat of escalatory war has been evident.

Second, the rise of China has triggered debate on the perception of an apparent power shift from the United States to China. This has widened the trust deficit between the US and China and resulted in the US military surging into the Pacific as a strategic response to escalatory geo-economic and geo-strategic contestations.

Third, the potential for escalation of regional conflicts in the West Asia-Gulf region and the Korean Peninsula has triggered extra-regional power intervention. This is marked by the consolidation of access and the setting up of bases in the entire swathe of the region.

Notwithstanding the contemporary formulation of the Indo-Pacific, both the Indian and the Pacific Oceans have been experiencing several transformations in the security and economic dynamics and therefore necessitate analysis as distinct Maritime Regional Security Complexes including sub-complexes.

As outlined in the scope of this study, the analysis and assessment of the dynamics of the regional security complexes in their maritime vistas would provide a deeper understanding of how each region evolves and responds to the milieu of the various challenges, threats and perils with which they are confronted.

The succeeding chapters will focus on four separate Maritime Sub-regional Security Complexes: (a) Indian Ocean; (b) Northern Arabian Sea Crescent; (c) Bay of Bengal; and (d) Western Pacific Ocean.

Notes

[1] Adam Kirkaldy, *History of British Shipping: From the Beginning Until WW I* (Salzwasser-Verlag Gmbh, 2009) p.38

[2] Limites Maritime (French National Portal of Maritime Limits) "Areas of France's maritime spaces of sovereignty and jurisdiction." https://maritimelimits.gouv.fr/resources/areas-frances-maritime-spaces-sovereignty-and-jurisdiction (accessed 11 March 2021).

[3] World Population Review, "Reunion Population 2020," https://worldpopulation review.com/ countries/reunion-population/ (accessed 14 March 2021).

[4] Ibid.

[5] Central Intelligence Agency, "The World Factbook-Southern Ocean, https://www.cia.gov/the-world-factbook/oceans/southern-ocean/ (accessed 10 May 2021).

[6] Escales, Ponant Magazine, "Roaring 40s, Furious 50s and Screaming 60s" https:/escales.ponant.com/en/roaring-40s-furious-50s/ (accessed 16 March 2021).

[7] Kazi Stastna, "Malaysia Airlines MH370: The challenges of a remote ocean search," CBC News, March 20, 2014 https://www.cbc.ca/news/world/malaysia-airlines-mh370-the-challenges-of-a-remote-ocean-search-1.2580125 (accessed 14 March 2021).

[8] William Langewiesche, "What Really Happened to Malaysia's Missing Airplane,"*The Atlantic*, July 2019. https://www.theatlantic.com/magazine/archive/2019/07/mh370-malaysia-airlines/590653/ (accessed 15 March 2021). Airplane

[9] In an incident involving an Indian Navy officer, a participant in the Golden Globe Race got stranded in the south Indian Ocean but was successfully rescued by the French fishing vessel Osiris and brought to the French island of I'lle Amsterdam.

[10] For more details see "United States Indo-Pacific Command," https://en.wikipedia.org/wiki/United_States_Indo-Pacific_Command (accessed 25 March 2021).

[11] Speech by H.E. Mr. Shinzo Abe, Prime Minister of Japan at the Parliament of the Republic of India. https://www.mofa.go.jp/region/asia-paci/pmv0708/speech-2.html (accessed 25 March 2021).

Chapter 3

Maritime Security Complex of the Indian Ocean

The Indian Ocean is the third largest oceanic expanse next to the Pacific and Atlantic Oceans. The Asian littoral rims the Indian Ocean, which also features the Arabian Sea, the Bay of Bengal and the South China Sea. Littoral events influence and shape the regional security complex of the Indian Ocean region. The salient threats in this region are varied and include challenges that are traditional, non-traditional and transnational in nature and scope. It is evident that the post-Cold War debates have largely been between the traditional security school and the non-traditional security school. However, perceptions differ over the theory, nature, scope and range of the "new security challenges" and its implications in the context of national, regional and global security policy.[1]

The traditional security school asserts that the referent frames of security are solely restricted to the regional and global orders based on state actors, and that inter-state security issues are the predominant issues. The traditional security school asserts that regional security complexes such as the Indian Ocean could be better elucidated with the focus on state-centric issues. However, the non-traditional school believes and affirms the concept and theoretical frame of 'security' as encompassing the entire gamut of the social, civic, political, economic, environmental and human dimensions, with multiple referents besides the state.[2]

The spectrum of the traditional versus non-traditional security debate is based on three trends: (a) the emergence of globalized networks that has exponentially increased state vulnerability to non-state actors and to a wide range of transnational threats; (b) the new technological developments in weaponry that have generated new threats, and brought states closer together, integrating them regionally and globally; and c) the globalized information networks that have contributed to increased demands for action with 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]

The Indian Ocean and the Southern Ocean region is an insecure zone, given its highly diverse sub-systems and the perennial proclivity to undergo a series of crises that frequently affects the region. The Indian Ocean region is unstable and has often been referred as the "arc of crisis." There is high-intensity competition from state actors, increasing incidence of assertion by non-state actors and their corrosive impact has aggravated state, inter-state and regional concerns regarding insecurity.

Traditional security threats and challenges as well as non-traditional threats and challenges in the Indian Ocean region are characterized by an interplay of various causes, factors and consequences. Certain threats, such as terrorism using the maritime medium with state support, could be classified as traditional security threats since they pose direct peril to the state and its armed forces. The following are the milieu of threats that is currently evident in the Indian Ocean region.

Inter-state conflicts and naval competition: Inter-state conflicts in the Indian Ocean region have increased in their intensity. There are several limited wars as well as short conflicts that have been going on for years,[5] although conventional wars have become rare, given their high escalatory levels. However, the provocations for conventional wars have come from low-intensity conflict triggers, endangering the security and stability of the region. 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 purely into non-traditional threats would not be adequate since such cases of asymmetric conflict are as significant as traditional security threats.

Inter-state conflicts in the Indian Ocean region have a strong incidence of naval arms buildup in terms of attack submarines (both conventional and nuclear, in the case of India), naval anti-ship missiles and Land Attack Cruise Missiles (LALMs). Besides, surface warships of all categories have featured in the naval buildup. In particular, the India-Pakistan naval buildup has seen phenomenal growth. Pakistan has been heavily aided by China to acquire 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, new anti-submarine warfare aircraft of the Boeing P-8I Poseidon class and Unmanned Aerial Vehicles (UAVs) have also featured in the Indian naval buildup.[6]

In the Indian Ocean littorals therefore, 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 high pace.

Maritime asymmetric threats: These asymmetric threats reflect and include traditional security threats although they also show the involvement of violent non-state actors such as terrorists, pirates and insurgents. The rationale behind classifying 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 training and tactics and their clear political and military objectives.

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, piracy and narcotics smuggling, have lesser significance. 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 Eelam (LTTE) and the Lashkar-e-Taiba (LeT)—have been most active. It should be noted that while the attacks conducted by these groups 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 that challenged and dented the Sri Lankan Navy.

The use of kamikaze-style attacks destroyed many naval craft of the Sri Lankan Navy. Maritime asymmetric threats emanating from terrorism are well supported by piracy and arms smuggling, posing a direct traditional threat to states. Navies in their traditional roles on the high seas have to adapt to contend with asymmetric threats at sea. The role of the Coast Guard along with the Navy assumes importance, as these agencies would have to adopt combined operational doctrines and tactics to deal with such threats.

Maritime asymmetric threats of terrorism and piracy have grown considerably with the increased operational capabilities of the terrorists and their exploitation of technological capabilities —such as the Global Positioning System (GPS)—and improved high-speed inflatable craft pose serious threats to the state. State responses have largely been through enhanced Maritime Domain Awareness and use of maritime intelligence to coordinate land and sea assets, employing tactics such as 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 human capital in the region, rising numbers of states are witnessing failing governance and frequently resort to the Praetorian custodianship of governments. Failed/Failing states are unable to tackle a host of social, civic, political, sectarian and secessionist challenges and grave economic problems that wreck their governance. Afghanistan (a hinterland state), Somalia and Yemen in the Indian Ocean littoral are prominent countries that have to contend with these serious challenges and perils.[7]

Failing/Failed states face four serious challenges: (a) they feature relatively larger but underdeveloped populations with low literacy levels, poor health and hygiene conditions, and low economic development and growth. Human security, human development and human rights are non-existent in these countries though they have elected governments. Failed/ Failing states encounter complex problems of religious sectarianism, ethnic conflict, poverty and severe deprivation, which serve as catalysts for endemic civic and political conflicts. Consequently, these regimes are unable to effect proper governance; (b) the prevalent situation is galvanized by terrorism and radicalism, aggravating civil war conditions as evident in Yemen, Somalia and Afghanistan. Conditions are aggravated further by the smuggling of narcotics, trafficking in humans and arms, all of which fuel conflicts involving heavy military intervention, resulting in a perennial state of insurgency in these countries. The conflation of traditional security challenges and non-traditional factors aggravates the situation; (c) piracy, insurgency, terrorism and protracted civil war result in the weakening of the administration and the highly fractured social and political order jeopardizes any reasonable operations of governance; and (d) Failed/Failing countries feature militaries and paramilitaries that are armed with large repositories of conventional arms, small arms and light weapons, fuelling the perennial conflicts in their countries. The Yemeni conflict, the Somali piracy situation, the Afghan internal conflict with Pakistani interference—all have arms as the main catalyst in the conflict. Failing/Failed States also have direct consequences in the form of traditional threats that have to be tackled 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 outcome that cannot be ignored.

Proliferation of nuclear weapons and missiles: The proliferation of nuclear weapons as well as ballistic and cruise missiles is a prominent traditional security threat that is now enveloping the region. India and Pakistan are the foremost Indian Ocean littoral states with nuclear weapons. Both states are now developing the nuclear triad, and the current preference is more towards sea-based nuclear deterrence. India has deployed its fleet

ballistic missile submarine the INS *Arihant* and is now building a four to six boat squadron that would deploy Submarine-Launched Ballistic Missiles (SLBM). India's present K-15 SLBM is a short-range missile 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] 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. This would help reduce the incentives for a pre-emptive strike on its nuclear assets. Pakistan inaugurated its Naval Strategic Forces 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, and 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] Pakistan is making attempts to nuclearize its naval fleet with Chinese assistance to overcome any difficulties. 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 the prospect of its nuclear attack class submarines (with nuclear-tipped) LAMCs in the waters of the Bay of Bengal and the Indian Ocean is, in fact, 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 inventory in the Indian Ocean region. Beijing has been regularly deploying its nuclear attack submarines and its conventional submarines (featuring LACMs) into the Indian Ocean and the Bay of Bengal in proximity to Sri Lanka and conducting port visits to Sri

Lanka. Besides the state-centric development of nuclear-capable naval ballistic and cruise missiles, there has been the sea-based transit of weapons of mass destruction (WMD)—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 is indicative of the persistence of 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 Indian Ocean

Non-traditional maritime security threats in the IOR have a wide ambit that ranges from various transnational crimes in the region, its 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. Non-traditional maritime security threats and 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 and non-traditional category of threats. The non-traditional challenges are also transnational.[11]

The nature and scope of the non-traditional challenges are neither preventive nor mitigated; therefore, the only redress lies in the coping mechanisms that require collective and cooperative regional and multilateral approaches to address them.

Non-traditional security challenges and threats could be 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 and sea level rise). Piracy is defined as a low-risk criminal activity having good returns. It has been prevalent in the Indian Ocean from the start 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 over the sea and controlled piracy to a great extent. Thus, piracy remained largely dormant through much of the colonial period.

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 case of Somalia, besides the endemic conflicts in the country, other factors such as state failure, economic stagnation and prolonged drought, turned the Somali fishermen into pirates.

In Southeast Asia, primarily in Indonesia, the incidence of piracy increased in the aftermath of the Asian Financial Crisis of 1997, which had plunged many countries into abject poverty. This crisis proved to be a strong pull factor for piracy, and more people were drawn into maritime crimes due to falling wages, higher food prices and job losses. Indonesia suffered much in this economic crisis and the situation became a catalyst for the increasing incidence of maritime piracy in the region.[12]

Piracy gained momentum by exploiting the opportunities arising from maritime globalization. With the phenomenal increase in maritime traffic of merchandise, raw materials, oil and natural gas and container traffic in the region, piracy proved attractive and increased in incidence. With the maritime traffic transiting through congested and narrow chokepoints, the Strait of Malacca, the Strait of Bab-el-Mandeb and the Hormuz Strait became the ideal hotspots for piracy in the region. The slow-moving heavy container and tanker traffic through these maritime chokepoints made the shipping lanes vulnerable to increasing piracy attacks, thus creating a nightmare for commercial shipping.

Controlling piracy cannot be achieved solely through sea operations without addressing the underlying social and economic discontent, political chaos, malgovernance and institutional and structural deficits on land. However, the stunted social and economic development in 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 peril in the littorals are addressed in a viable manner. The formation of the Combined Maritime Forces with US and NATO involvement as the Combined Task Force 150, 151 and the EU Naval Task Force (EUNAVFOR) has enabled the forging of maritime multilateralism in the region. The EU Naval Task Force has also been able to expand its out-of-area operations into the Indian Ocean region with the support of the Japanese Maritime Self Defense Force, the Royal Australian Navy, and the Republic of Korea Navy. One of the clear benefits of the EUNAVFOR platforms has been the interoperability exercises.

Moreover, there have been various bilateral exercises by the EUNAVFOR with the Indian Navy and the Pakistani Navy, while the other littoral navies have been providing them with immense value addition in terms of Maritime Domain Awareness (MDA), enhanced maritime surveillance, reconnaissance capabilities and more resilient operations in the warmer waters of the Indian Ocean-Arabian Sea. It is a fact that there have been dedicated Indian naval operations in the Gulf of Aden since October 2008. It deployed a stealth frigate earlier, followed by a guided missile destroyer. These operations have assisted not only Indian-flagged merchant vessels, but 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 starting point to the end of the Gulf of Aden. India has been also evolving its own means on the counter-piracy platform, Shared Awareness and Deconfliction (SHADE), although it is not part of the multinational Combined Task Force 150, 151. Indian operations have resulted in the seamless and robust sharing of intelligence

and surveillance. Closer coordination between the Indian Navy and NATO (Operation Ocean Shield), the European Union (Operation Atlanta) and the Coalition Maritime Forces has been achieved during various operations in the region. China has been deploying naval warships from its South China Sea Fleet in "out of area deployments in the northern Arabian Sea and off the coast of Aden with rendezvous at Gwadar port."

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 heightened maritime threat scenario is evident in the growing conflation between piracy and terrorism. Piracy could be leading to maritime terrorist attacks, given the possibilities of shared information and domain awareness. Pirates are motivated by financial gains with little or no political and ideological motives, while terrorists aim at spectacular mass attacks that send signals to the governments through violence at sea, targeting soft targets. Pirates and maritime terrorists have the potential to collaborate and provide assistance to each other in terms of money, arms and supplies. It is a fact that the terrorists lack the skills and experience needed to conduct maritime attacks, while 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 on trade passage through chokepoints. In the Indian context, the Mumbai 26/11 events have become a typology of state-sponsored spectacular mass terrorist attacks, employing crafts of opportunity (COOP) to hit soft land targets.[13]

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

The perpatrators of the 26/11 Mumbai terror attacks had skillfully exploited the spectrum of GPS communication for navigation, using COOP

and effortlessly transported the entire contraband cargo of light weapons and explosives that sustained their operations in Mumbai for over five days. The real challenge in naval network-centric operations lies not in the sophistication of the platforms or their networked systems, but in the ability to create and sustain a 24/7 MDA with 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 operation of COOP that surfaces as lethal maritime terrorist threats is a formidable task.

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, Visakhapatnam and Kochi, with the integrated theater command based at Port Blair in the Andaman and Nicobar Islands.[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 victims are in Asia and the Pacific region.[15] Illegal migration and smuggling in the Indian Ocean have increased due to organized criminal groups that have been controlling and trafficking people. During the war in Sri Lanka and in the post-war situation, the LTTE often resorted to these operations, although it also carried out evacuation operations for Tamil refugees from the Northern Provinces and took them as far as Australia. 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 fueling the Afghan and Sri Lankan ethnic conflicts as well as various conflicts in the Indian Ocean region for some time. Besides smuggling contraband narcotics, 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 smuggling of narcotics, small arms and light weapons has been intense, and has 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 find a sea route through Karachi to various destinations. Interdiction operations against narcotics smuggling have been conducted by the CTF-150,151 operating within the region.

Small arms and light weapons trafficking: Small arms and light weapons (SALW) trafficking has been the outcome of increased transnational crime that has now proliferated throughout the littorals of the Indian Ocean region. Such trafficking has resulted in high crime rates and 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 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. Counterfeit versions of Chinese and Russian arms, along with various Western-made SALWs have been in increasing circulation. The end of the Cold War and, more recently, the Afghan War had resulted in huge arms surpluses in the Asian markets, and the various sub-regions of the Indian Ocean region are heavily infested with them.[18]

Moreover, internal conflict and instabilities in the Indian Ocean have resulted in a greater demand for illegal arms, with increasing numbers being transported through the high volume of inter-regional seaborne commerce traversing the Indian Ocean. Lax control in many ports in the Indian Ocean allows these arms to evade detection and reach the hinterland, perennially fueling conflicts.[19] Besides, the porous coastal zones provide landing and transmitting platforms for this huge infusion of small and light weapons. The networks for smuggling SALWs 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 trafficked 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 SALWs has fueled terrorism and insurgency. Terrorism and insurgency, abetted by SALWs not only inflict deaths and injuries but go beyond these direct effects to undermine state security and economic development. Terrorism, insurgency and secessionist movements are rooted in extreme poverty, social inequality and ethnic tensions. These are neither adequately recognized nor managed effectively, since their root causes lie not only in conflicts but also in the uninterrupted flow of SALWs 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 these perils are affecting the littorals. The region is still struggling to evolve a suitable response to global warming and sea level rises that threaten in the near future to 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 Indian Ocean littorals feature nearly 40% of Asia's four billion inhabitants living within 100 km of the coastline. The effects of sea level rise in the region are likely to be serious.[25]

Sea temperatures in the Indian Ocean are rising more rapidly than global oceanic temperatures, and the effect of melting glaciers and Himalayan snow is compounding the impact on 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 currently destroying beaches, mangroves and coastal wetlands. Weather changes in the Indian Ocean region are also

resulting in unpredictable cyclones, floods and tsunamis. Moreover, increasing seismic activities are resulting in earthquakes that are the most devastating of the natural hazards 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 regional security, with major implications for the IOR littoral countries.[27]

Depletion of ocean organic resources: The depletion of organic resources in the Indian Ocean is a human-induced, non-traditional security threat, apart from increasing ocean pollution, which 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 destroying the livelihood of the fishing communities of the littoral countries. The colossal amounts of IUU fishing have gravely affected the food supply of the littoral communities and 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 being 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 economy and trade, it suffers from a serious deficit in its security architecture and processes. The security deficit stems from high levels of distrust and the lack of will among states owing to their competing traditional security interests. In the non-traditional sector of security, this deficit is perilous as it would disrupt the good order at sea.[30] 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 at Milan in 1995 and the Indian Ocean Naval Symposium (IONS) in 2007 have been focused

on consultative and cooperative efforts to contend with various maritime asymmetric threats. Initiatives and multilateral exercises such as 'Komodo 2014' provide the operational value addition and capacity-building for the navies and coast guards in the region.[31]

Conclution

In summation, the regional maritime security complexes of the Indian Ocean are diverse and complex with a full milieu of challenges and threats. The discursive debate on securitization perceives the region as being highly securitized in view of the multiple threats and challenges that straddle the traditional, non-traditional and transnational realms. The complexities of inter-state rivalries and the complications of non-traditional threats have been on the increase over the years and have resulted in heightened contestations. The line separating traditional and non-traditional security is increasingly blurred as the spillover of conflicts from the two spheres has created a Gordian knot that is too complex to unravel.

Notes

[1] Stares, P. B. (ed.), *The New Security Agenda: A Global Survey* (Tokyo: Japan Center for International Exchange,1998)

[2] Alagappa, M., "Rethinking security: a critical review and appraisal of the debate," in M. Alagappa (ed.) *Asian Security Practice: Material and Ideational Influences* (Redwood City: Stanford University Press, 1998), pp. 27-64. See also Buzan, B., Waever, O. and De Wilde, J., *Security: A New Framework for Analysis* (Boulder: Lynne Reinner,1998)

[3] Allison, G., "The impact of globalization on national and international security," in J.S. Nyeand J.D. Donahue (eds) *Governance in a Globalizing World* (Washington DC: Brookings Institution Press, 2000), pp. 72-85.

[5] Vijay Sakhuja, "Asymmetric Conflict and Low Intensity Maritime Operations: Challenges for the Indian Navy," *ORF Occasional Paper* # 5, August 2006, accessed at http://www.orfonline.org/cms/export/orfonline/

[6] David Scott, "India's Aspirations and Strategy for Indian Ocean—Securing the Waves," *Journal of Strategic Studies*, 2013, Volume 36, No.4 pp 484-511 DOI:10.1080/01402390.2012.728134.

[7] P. K. Ghosh, "The Indo-Pacific Region and the Rise of Transnational Maritime Threats and Challenges," in David Michel (ed.) *Sea Change: Evolving Maritime Geopolitics in the Indo-Pacific Region* (Washington D.C.: The Henry Stimson Center, December 2014). http:// www.stimson.org/images/uploads/research-pdfs/ SEA-CHANGE-WEB. pdf

[8] Iskander Rehman, *Murky Waters: Naval Nuclear Dynamics in the Indian Ocean* (Washington D.C.: Carnegie Endowment for International Peace, 2015).

[9] Iskander Rehman, op. cit., p. 21.

[10] Benjamin S. Purser III & Michael S. Chase, "Waypoint or Destination? The Jin-Class Submarine and China's Quest for Sea-Based Nuclear Deterrence," *China Brief*, Vol. 12, Issue 15 (Washington, D.C.: The Jamestown Foundation). http:// www.jamestown.org/single/?tx_ttnews%5Btt_news%5D= 39729&no_cache= 1#.Vf2XrNKqqko

[11] Aditi Chatterjee, "Non-Traditional Maritime Security Threats in the Indian Ocean Region," *Maritime Affairs*, Vol. 10, No. 2 Winter 2014, pp. 77–95 (New Delhi: National Maritime Foundation of India)

[12] Peter Lehr, "Piracy and Maritime Governance in the Indian Ocean Region," *Journal of the Indian Ocean Region*, Vol. 9, No. 1, 2013, pp. 104 -119.

[13] P. Chalk, "The Maritime Dimension of International Security: Terrorism, Piracy, and Challenges for the United States," RAND Project Air Force (Santa Monica, CA: 2008).

[14] Shishir Upadhyaya, "Damage control: India's coastal security post 26/11," IHS Janes, *Jane's Defence Weekly*, 13 January 2014.

[15] International Labour Organization (ILO), *A Global Alliance against Forced Labour*, Geneva, 2005.

[16] Ralf Emmers, "The Threat of Transnational Crime in Southeast Asia: Drug Trafficking, Human Smuggling and Trafficking, and Sea Piracy," *UNISCI Discussion Papers* (Singapore: Institute of Defence and Strategic Studies, IDSS, 2003)

[17] Aparajita. Biswas, "Small Arms and Drug Trafficking in the Indian Ocean Region," Centre for African Studies, University of Mumbai, 2008. http://archive.mu.ac.in/ arts/social_science/african_studies/ biswaswp.pdf

[18] K. Hangzo Pau, "Non-Traditional Security Challenges in the Indian Ocean Region," *ASEAN and the Indian Ocean: The Key Maritime Links*, RSIS Policy Paper, November 2011.

[19] R. Emmers, "The Threat of Transnational Crime in Southeast Asia: Drug Trafficking, Human Smuggling and Trafficking, and Sea Piracy," *UNISCI Discussion Papers* (Singapore: Institute of Defence and Strategic Studies,IDSS, 2003).

[20] Alok Bansal, 2010 "Maritime Threat Perceptions: Non-State Actors in the Indian Ocean Region," *Maritime Affairs* 6:1, pp. 10-27 (New Delhi: National Maritime Foundation of India) DOI: 10.1080/09733159.2010.508227; See also Burns, R. H., "Countering Piracy, Trafficking and Terrorism: Ensuring Maritime Security in the Indian Ocean, The Current Security Situation" in *The Indian Ocean Rising: Maritime Security & Policy Challenges*, Pg 4-5.(Washington D.C.: The Henry L. Stimson Center, April 2012).

[21]Ibid., Bansal, 2010.

[22] Arabinda Acharya and Aaron Karp, "India's States of Armed Violence: Assessing the Human Costs and Political Priorities," *Small Arms Survey Issue Brief*, Issue No.1, 2011. https://www.unodc.org/documents/southasia// webstories/IAVA-IB1-web.pdf

[23] Lee Cordner, "Maritime Security in the Indian Ocean Region: Compelling and Convergent Agenda," *Australian Journal of Maritime and Ocean Affairs*, Vol. 2, 2010, p. 17.

[24] Brahma Chellany, "Indian Ocean Maritime Security: Energy, Environmental and Climate Challenges," *Journal of the Indian Ocean Region*, Vol. 6, December 2010, pp. 155–168.

[25] A. Chatterjee, "Climate Change in the IOR: The Irreversible Threat Looming Large," NMF Web Commentary, April 2014.

[26] Lee Cordner, "Maritime Security in the Indian Ocean Region: Compelling and Convergent Agenda,"*Australian Journal of Maritime and Ocean Affair*s, Vol. 2, 2010, p. 17.

[27] Ibid. Cordner.

[28] IDSA Working Group, *Security Implications of Climate Change for India* (New Delhi: Academic Foundation, 2009) p. 101.

[29] K. Venkatshamy, "The Indian Ocean Region in India's Strategic Futures: Looking Out to 2030," *Journal of the Indian Ocean Region*, Vol.9, 2013, pp.17–4.

[30] . P.K. Ghosh, "Indian Ocean Naval Symposium: Uniting the Maritime Indian Ocean Region," *Strategic Analysis*, Vol. 36, 2012, pp. 352–357.

[31] V. Sakhuja, "Increasing Maritime Competition: IORA, IONS, Milan and the Indian Ocean Networks," Institute of Peace and Conflict Studies, #4320, 3 March 2014. See also"Indian Navy participates in Multilateral Exercise KOMODO," Indian Navy Website, 31 March 2014. http:// indiannavy.nic.in/press-release/indian-navy-participates-multilateral exercise-Komodo

Chapter 4

Security Dynamics in the North Arabian Sea Crescent

The North Arabian Sea Crescent (NASC), stretching along the Makran Coast (Iran-Pakistan) and covering the Persian Gulf, Gulf of Aden and the Red Sea is of enormous political, economic and strategic significance. In ancient times, Greco-Roman civilizations, which flourished around the Mediterranean Sea were connected to the Indian Ocean through the Persian Gulf waters. The construction of the Suez Canal (1859-1869) enabled a direct shipping route between the Mediterranean and the Red Seas. There is a strong element of continuity, and the NASC assumes geo-political, geo-economic and geo-strategic significance for the global community for several reasons. It is a major source of oil and gas, a prominent transshipment hub, and a strategic area that controls access to Central Asia and Eurasia. These waters are of politico-strategic value to a number of extra-regional powers that have forward deployed their forces within the region in support of their respective national interests. Consequently, the NASC littoral countries have developed military capabilities and also entered into politico-military alliances and partnerships.

Currently, NASC security dynamics has been a subject of debate and analysis at two levels. The first is at the level of classic security, pivoting on

numerous past and ongoing wars/operations involving regional countries such as Iraq and Iran (1980 -1988); Iraq and Kuwait in 1991; Saudi Arabia and Yemen (since 2015), Iran and Israel (since 1967), and contestations between the member states of the Gulf Cooperation Council (GCC) and Iran. The GCC is a political and economic alliance of six members, Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain and Oman, established in 2001, which comprises These wars and contestations provided opportunities for extra-regional powers such as the United States, NATO allies, along with other European and Asian countries that joined the US-led groupings and other task forces to partner with the GCC states to prevent Iranian coercion. Also, since the Gulf War of 1991, a number of extra-regional powers have deployed their forces in the Gulf Region. This is best showcased by their presence during the First Gulf War (1991), Operation Enduring Freedom (2001), Operation Iraqi Freedom (2003), and the ongoing war on terror in Afghanistan-Pakistan.

The second level of analysis concerns operations against violent non-state actors such as Al-Qaeda, Islamic State of Iraq and Syria (ISIS), an offshoot of the Al-Qaeda in Iraq (AQI), Hezbollah, Hamas, Al Shabaab (Somalia) and the ongoing operations against the Ansar Allah[1] (Houthis) in Yemen. Additionally, the region attracted international navies seeking to counter Somali piracy in the Gulf of Aden.

Regional Naval Capability

Individually, the Persian Gulf states have acquired a wide range of military hardware for a number of reasons that span the politico-economic-strategic continuum. The rationale has been to possess conventional forces that would reinforce deterrence. This includes nuclear capability in the case of Iran and Saudi Arabia, which has exhibited interest in countering Iran. Their focus has been on modernizing their own navies and air forces, notwithstanding varying national economic conditions and priorities. At the multilateral level, the GCC collective defense arrangement envisages that "Interference from any entity in the internal affairs of one of the member-states is interference in the internal affairs of all the nations of the council."[2]

Accordingly, under the agreement, an attack on any GCC member state is considered an attack on the entire council.

There are at least seven important reasons for the growth of navies in the overall military 'order of battle' of the NASC countries. First, the constants of geography necessitate that these countries invest in naval power to protect sovereignty and safeguard national interests. This role is applicable to both big and small navies and features prominently in their naval strategy. These reasons are often projected as the rationale for building a naval force, albeit at differing levels of sophistication and capability. A second reason for the building up of naval forces has been the necessity to exercise jurisdiction and control over national sea spaces (including the continental shelf, exclusive economic zone, and contiguous and territorial waters), under the 1982 United Nations Convention on the Law of the Sea (UNCLOS). These sea spaces contain massive living and non-living resources and contribute to national GDP. The third reason is the desire among regional navies to develop offensive capability to ensure self-defense, preclude coercion and maintain regional balance of power. The fourth rationale for naval build up has been the forward presence of extra-regional naval forces in the region. The NASC is witness to the navies of major powers, notably the United States, the United Kingdom, France, China and more recently, Russia and Israel, which from time to time send submarines to the north Arabian Sea. These navies are forward deployed in both cooperative and competitive formats. The fifth reason is to develop naval and air interoperability between the navies and air forces of the alliance partners, in order to facilitate joint operations under various scenarios. The sixth reason is the need to engage in constabulary roles and missions to respond to asymmetric, low-intensity threats and challenges posed by violent non-state actors. The region is also known for piracy, particularly in the Gulf of Aden, as well as drug smuggling originating from the Makran coast in Pakistan, WMD proliferation, gun-running and IUU fishing. Iran, the UAE and Saudi Arabia have dispatched their navies to counter piracy in the Gulf of Aden. Last but not the least, the seventh reason for naval growth is the understanding that the naval forces are important instruments for creating political advantage and furthering diplomacy.

Extra Regional Presence in the NASC

The United States is the predominant extra-regional military power in the Gulf Region and has instituted and established a number of treaties, partnerships, alliance arrangements as well as access and basing agreements with Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. The US presence in the Gulf region is built around the Central Command (CENTCOM), which has a large area of responsibility that encompasses 20 countries of the Middle East (excluding Israel), Central Asia, South Asia (Afghanistan and Pakistan), the Red Sea, the Gulf waters and the western portion of the Indian Ocean. The US Navy's 5th Fleet is headquartered in Bahrain and hosts a number of sophisticated naval platforms, including aircraft carriers, submarines and other expeditionary vessels that regularly call at ports in the Gulf region. The Combined Task Force 59 (CTF 59), a special unit dedicated for responding to humanitarian and other emergencies, such as oil spills and evacuations, is also located in Bahrain.

The strategic relationship between the United States and Persian Gulf States, wherein the United States is widely regarded as a factor promoting stability, heightened resilience and better protection for the national interests of these regional countries, has been a significant arrangement for the regional countries. Likewise, the role of other extra-regional powers is considered as complementing that of the United States and all these states have therefore been welcomed by the regional powers.

In a similar vein, under a 2008 agreement between France and the United Arab Emirates (UAE), France has based some army, navy and air force units in Abu Dhabi, for possible forward deployment in the Persian Gulf. Apparently, these forces are targeted against Iran and serve to complement US forces in the region. In 2014, the United Kingdom announced its plan to set up a permanent military base at Mina Salman in Bahrain[3] to support forward deployment of the Royal Navy. It also plans to develop infrastructure to store equipment and house military personnel.

China has steadily made inroads into the economic-security dynamics of the NASC and established a foothold in several countries within the

region. China's 21st century Maritime Silk Road (MSR) under the Belt and Road Initiative (BRI) is both a symbolic and substantive representation of the above narrative and is marked by various infrastructure projects. China's attempts to dispel fears over the BRI have not yielded good results. Instead, it is now widely believed that the MSR has several pivots of crucial strategic and military significance and indicates the intent-capabilities of the Chinese economic-infrastructure development plans for the region. These are dual-use facilities and support the Chinese naval strategy for the Indian Ocean, wherein these port facilities can support PLA Navy's operations. China has invested heavily in developing infrastructure in Djibouti, including the upgrading of its port facilities and a military facility in the northern Obock region. Similarly, the Gwadar port on the Makran coast is a strategic maritime outpost and has figured prominently in China's Indian Ocean calculus. Beijing had generously invested US$ 198 million of the US$ 248 million in the project. Gwadar offers China several economic and military advantages. The Chinese military facilities in Djibouti are noteworthy and significant enough to support deployment of its aircraft carriers and expeditionary ships.

Russia now has access arrangements to Indian Ocean ports in Eritrea, Egypt and Mozambique, and since 2016, its naval vessels have also been making regular port calls. In 2020, Moscow signed an agreement with the Sudanese government to set up a military-naval facility at Port Sudan.[4] During the past two decades, Sudan has acquired Russian weapons valued at US$ 1billion and Russian military instructors and advisers have been training the Sudanese armed forces.[5]

The Russian facility is strategically located astride the Red Sea overlooking the Indian Ocean and is also close to Djibouti, which now hosts military outposts of the United States, China, France, Japan, Italy and Spain. The military-naval facility at Port Sudan fits into Russian stakes in the Black Sea-Mediterranean-Red Sea naval corridor (with naval bases in Sevastopol, Tartus in Syria and Port Sudan), which supports operations by the Russian Federation Navy in the Indian Ocean and the Gulf of Aden.

Non-traditional Security Threats

The NASC has its fair share of non-traditional security threats (NTS) and other challenges. The region has witnessed activities by various terrorist groups: the Al-Qaeda, Lashkar-e-Taiba (LeT), a Pakistan-based outfit, the Hezbollah (Palestine), Al Shabaab (Somalia), and the Houthi (Yemen). In recent times, these terrorist groups have begun to use modern technology to conduct their operations. In particular, drones are popular among some non-state actors who see these as a low-cost solution for sabotage and interference.

Houthi rebel forces operating in Yemen have been most proactive, launching suicide boat attacks and laying sea mines in the Strait of Bab-el-Mandeb in the Red Sea, targeting Saudi shipping in their long-running civil war.[6] In 2019, the Houthi group launched over two dozen drones in multiple waves from multiple directions, attacking the Aramco oil processing facilities at Abqaiq and Khurais in Saudi Arabia, completely defeating the powerful Saudi air defences, including the potent Patriot and Crotale surface-to-air missiles.[7]

The NASC region is also known for piracy, particularly in the Gulf of Aden. This led to the adoption of Resolution 1816 by the UNSC in June 2008 that authorized nations to deploy warships in Somalia's territorial waters and conduct counter-piracy operations. Navies from a number of countries and alliance partners are currently engaged in counter-piracy operations in the Gulf of Aden: the US-led Task Force 151, EUNAVFOR through Operation Atlanta, NATO in support of Operation Ocean Shield, the naval Chinese Task Force (CTF 525) and warships from India. NASC countries such as Iran, Pakistan, the UAE and Saudi Arabia also dispatched their navies to counter piracy in the Gulf of Aden.

Where drug smuggling is concerned, Afghanistan is an important opium-producing region and drug shipments transit through unmarked land routes across Pakistan and thence through sea routes. The East African coast (comprising Djibouti, Eritrea, Kenya, Somalia and Tanzania) has emerged as the transshipment hub.

The nexus between drug smugglers and small arms transporters is well established. The porous land border with Afghanistan, coupled with weak coastal security in Pakistan, offers an easy outflow of drugs and inflow of weapons. Similarly, the easy availability of drugs in East Africa appears to have encouraged Al Shabaab, which is most active in Somalia, to have links with drug cartels, as the drug business helps the organization with acquisition of weapons and other logistical needs.

Another vital issue in the debate on NTS threats relates to the proliferation of WMDs and related technologies. Although the development of WMD has been the forte of technologically advanced countries, a number of actors, both state and non-state, has been part of the global proliferation network, thus undermining international efforts at containing WMD proliferation. North Korea's clandestine trade in WMD with Pakistan, Iran, Libya, and Syria has been the singular proliferation dynamic, which has resulted in the rapid acceleration of the missile and nuclear programs of these countries.

Another significant challenge in the NASC are crimes relating to the fisheries sector such as IUU fishing, which has an adverse impact on marine ecology and ocean health. The regional countries have called for strict adherence and compliance with legal and binding instruments relating to fisheries, particularly those concerned with prevention and elimination of IUU fishing.

The regional countries acknowledge that cooperation offers the best opportunity for economic growth and development. They have displayed synergy and attempted to pursue cooperative approaches to respond to NST and challenges. This understanding has led to bilateral and multilateral naval arrangements, which address issues of maritime security in the Indian Ocean through exercises, training and capacity building. For instance, in response to piracy in the Gulf of Aden (2008 onwards), a number of multi-nation institutional mechanisms was established. These include the Shared Awareness and Deconfliction (SHADE), Contact Group for Piracy off the Coast of Somalia (CGPCS) and the Internationally Recommended Transit Corridor (IRTC). The Djibouti Code of Conduct (DCoC), signed on 29

January 2009, is another significant initiative for the repression of piracy and armed robbery against ships in the western Indian Ocean and the Gulf of Aden.

The Indian Ocean Rim Association (IORA) acknowledges that this region "faces many traditional and non-traditional safety and security challenges including piracy, armed robberies at sea, terrorism, human trafficking, irregular movement of persons, drugs trafficking, illicit trafficking in wildlife, trafficking of weapons, fishery-related crimes such as IUU fishing, degradation of ocean health, unlawful exploitation of marine resources and climate change with its related repercussions on environmental security."[8] Maritime Safety and Security (MSS) is also one of the important six pillars of the IORA. In 2017, the IORA Leaders' Summit in Jakarta, Indonesia, entitled "Strengthening Maritime Cooperation for a Peaceful, Stable and Prosperous Indian Ocean" acknowledged the importance of strengthening regional cooperation. In 2018, the IORA set up a Working Group on MSS (WGMSS), which is currently developing a regional agenda through an 'MSS Work Plan.'

At the operational-tactical level, the Indian Ocean Naval Symposium (IONS) is a voluntary program to enhance cooperation among the regional navies.[9] It has been in existence since 2007 and has grown to be a 36-member association that facilitates exchange of views among naval professionals to evolve a common understanding of maritime security issues in the region. The IONS is an important initiative for institutional dialogue and can be credited with promoting naval confidence-building measures among the Indian Ocean littorals to augment regional stability.

Strategic Dynamics in the NASC

It is useful to assess at least three elements in the dynamics of alliances and coalitions that may emerge out of the US-Iran imbroglio, in view of the Joint Comprehensive Plan of Action (JCPOA), an agreement reached by the P5+1 in July 2015; President Trump pulling the United States out of the JCPOA in 2018; and President Biden's administration announcing its intention

in March 2021 to reengage and join the JCPOA. These elements discussed below can potentially shape the security dynamics of the Persian Gulf.

First, the China-Iran-Russia axis, which has been spurred by the QSD. At the behest of Iran, Russia along with China participated in the joint maritime drill codenamed Marine Security Belt (MSB) in December 2019.[10] These were timed to respond to stepped up tensions between Iran and the United States. An Iranian state television report heralded the drills as a "new triangle of sea power" in the region, with a declaration that the "era of American free action in the region is over, and [U.S. forces] must leave the region gradually" and that Russia would continue to seek new partners in Africa, and join coalitions and partnerships to counter the US influence in the Horn of Africa.[11]

Second, Israel, the United States and the European Union are likely to unite for a preemptive and coercive strategy against Iran on account of its nuclear program or WMD proliferation. Although the P5+1 and the international community hailed the historical and successful nuclear deal with Iran, mutual attacks by Israel and Iran on each other's maritime targets can potentially trigger another localized confrontation.

Third, a China-Iran-North Korea alliance could be a possible sequel to an attack on Iran by the US-led coalition. China is a longstanding friend of Iran and its engagement spans politico-diplomatic, economic, trade and energy relations. It is noteworthy that in March 2021, China and Iran signed a 25-year strategic cooperation agreement.[12] Although the agreement is focused on economic issues, Chinese Foreign Minister Wang Yi made pointed remarks noting that US sanctions on Iran were "unreasonable unilateral sanctions imposed on Iran" and referred to "the evil consequences of external interference on the regional situation," clear references to the US policy towards Iran.[12] From the North Korean perspective, there is enormous suspicion about the United States, which is further colored by the ongoing sanctions that have apparently been defeated by the resilience shown by successive regimes in Pyongyang. In this context, the Democratic People's Republic of Korea (DPRK) or North Korea could be labeled as a brinkmanship actor.

In summation, it is quite evident that the states in the Gulf Region have acquired a large and varied arsenal for reasons that span the politico-economic-strategic continuum. In the post-P5+1 scenario, it remains to be seen how the security dynamics in the Persian Gulf takes shape. The nuclear issue (discussed in greater detail in a subsequent chapter) will loom large in the region despite the presence of US naval platforms and other military assets, which provide a potent security cover to the regional countries against Iran.

Interestingly, the northern Arabian Sea complex is a crescent-shaped geographical topography with the states of the Gulf and West Asia converging upon it. The securitization trends of the West Asia-Gulf states invariably influence and impact the region. Given the West Asia-Gulf region's high proclivity to unresolved territorial conflicts and the prevalent disputes over waterways in the region, the incidence of traditional state-to-state conflicts is at an all-time high. The region features high military expenditures and arms races, with intra-regional conflicts often spilling over into the adjacent regions. Intra-regional conflicts and the prevalent ethnic and sectarian conflicts have also prompted a high degree of extra-regional power intervention that emanates from the Arab-Israeli and Israeli-Palestinian conflicts, and Iran's assertive power and its intervention in the Levant, which in turn have accentuated the various regional conflicts in Lebanon, Syria and Yemen. Moreover, the non-traditional threats of piracy, arms and narcotics smuggling remain issues of high concern, with these challenges getting conflated with the traditional security threats. Additionally, the transnational threat of climate change compounds the vulnerability of the region. The northern Arabian Sea regional complex has, perhaps, the highest incidence of threats and challenges, specifically hybrid threats that complicate the security predicament of the region.

The Northern Arabian Sea Crescent also witnesses the high-octane race for access and basing that is going on within the region with several extra-regional powers vying with one another. Djibouti, Duqm and the various access points in Eritrea are coveted by the Great Powers for their basing.

In particular, Djibouti has been transformed into a converging strategic real estate for the United States, China, Japan and India, and similarly Duqm has been coveted by the United Kingdom and France. The deployment of Israel's Dolphin class submarines with nuclear-tipped missiles against Iran in the Bab-el Mandeb Strait provides the escalatory dimension in the Israel-Iran escalation spiral. Thus, the northern Arabian Sea and the Gulf region reveal an overlay of high-level security threats of the WMD category. The escalatory consequences of any war here would spill into the South Asian region due to the Israeli nuclear naval deployments and Israel's capability to inflict punitive and retaliatory strikes on mainland Iran.

The conflation of traditional security threats in this region with non-traditional and transnational threats is perilous. Cumulatively, they pose a serious risk for escalation and there are high prospects of inadvertent conflict breakouts. The highly destabilizing role played by violent non-state actors with proxy war situations provides a disastrous recipe for flashpoints of conflict and escalation. Stabilization measures or risk reduction tactics have not been viable in the region, given the deep schisms in inter-state conflicts and intra-regional rivalries. Great Power intervention has failed to facilitate any deconfliction measure or to reduce tensions, on the contrary, it has aggravated regional tensions to a considerable extent.

Notes

[1] Reuters, "Yemen Houthi drones, missiles defy years of Saudi air strikes" https://www.reuters.com/article/us-saudi-aramco-houthis-idUSKBN1W22F4 (accessed 25 April 2021).

[2] The National, "Defensive shield for the Gulf since 1982," Abu Dhabi, UAE. http://www.thenational.ae/news/uae-news/defensive-shield-for-the-gulf-since-1982 (accessed 11 July 2015).

[3] Peter Harris, "Back in Bahrain? Britain Never Left Persian Gulf," *The National Interest*, 16 December 2014. http://nationalinterest.org/blog/the-buzz/back-bahrain-britain-never-left-persian-gulf-11868 (accessed 20 April 2021).

[4] Arab News, "Russia Signs Deal with Sudan for Naval Base on the Red Sea" https://www.arabnews.com/node/1630211/middle-east (accessed 15 April 2021).

[5] Arab News, "Port Sudan: Russia's Window on Africa?" https://www.arabnews.com/ node/1630211/middle-east (accessed 15 April 2021).

[6] The Maritime Executive, "Saudi Forces Thwart Bomb Boat Attack at Port of Yanbu," 27 April 2021. https://www.maritime-executive.com/article/saudi-forces-thwart-bomb-boat-attack-at-port-of-yanbu (accessed 28 April 2021).

[7] Arab News, "Saudi Aramco attack drone components linked to Iran and Houthis in Yemen", https://www.arabnews.com/node/1630211/middle-east (accessed 28 April 2021).

[8] Indian Ocean Rim Organization, "Maritime Safety and Security." https://www.iora.int/en/priorities-focus-areas/maritime-safety-and-security (accessed 08 October 2020).

[9] "Indian Ocean Naval Symposium." http://www.ions.global/ (accessed 12 January 2021).

[10] Arab News, "Iran, Russia, China start joint maritime drill in Indian Ocean, Gulf of Oman." https://www.arabnews.com/node/1630211/middle-east (accessed 15 March 2021).

[11] Xinhua. "Iranian navy chief urges U.S. forces to leave regional waters," http://www.xinhuanet.com/english/2019-12/29/c_138665000.htm (17 March 2021).

[12] The Diplomat, "What's in the China-Iran Strategic Cooperation Agreement," 30 March 2021. https://thediplomat.com/2021/03/whats-in-the-china-iran-strategic-cooperation-agreement/ (accessed 21 April 2021).

Chapter 5

Security Dynamics in the Bay of Bengal

The Bay of Bengal region lies at the intersection of the two sub-regions of South Asia and Southeast Asia and is emblematic of shared histories, cultural and religious connections and practices, linguistic transmissions and mutations. The ancient regional trading links involving the Arabs, Chinese, Indians and Southeast Asian states was the centerpiece of the Asian maritime trading system. In the 21st century, the Bay of Bengal region is reliving its ancient glory and exhibits newfound vibrancies that are shaping its future.

The Bay of Bengal region is geo-strategically important to international commerce. The Strait of Malacca connects the vital sea route between the Indian and the Pacific Oceans. On an average, 200 ships transit every day through this strategic chokepoint. The shipping traffic, before entering or after exiting the Strait of Malacca, transits through the Bay of Bengal and this mercantile reality endows the Andaman and Nicobar Islands with enormous strategic significance for the maritime world, and particularly for India.

The Bay of Bengal littorals, Bangladesh, Myanmar, Thailand, Malaysia, Singapore, Indonesia, Sri Lanka and India, are in the throes of maritime rejuvenation evidenced by burgeoning maritime enterprise, which displays strong elements of continuity from the historical past. In fact, the

Bay of Bengal currently mirrors the sophisticated ancient maritime trading system that had emerged in Asia, which not only contributed to its own growth, but promoted linkages with other trading systems of the Indian Ocean and with countries as far west as the Mediterranean.

The Bay of Bengal littorals have also invested in regional and sub-regional cooperation initiatives such as the South Asian Association for Regional Cooperation (SAARC); Bangladesh-China-India-Myanmar Forum for Regional Cooperation (BCIM); Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC); and Bangladesh, Bhutan, India, Nepal (BBIN) Initiative, with quadrilateral agreements on water resource management, power connectivity, transport and infrastructure.

At another level, the Bay of Bengal littoral states are poised at the crossroads, where two possible futures loom ahead, largely driven by uncertainties emerging from socio-economic insecurities, ecological-environmental challenges and the traditional state-centric military-strategic contestations. As a co-author of this book has argued elsewhere, the scenarios in the Bay of Bengal reflect both a sense of "fear and hope."[1]

There are at least three discernable frameworks for security in the Bay of Bengal. The first is 'convergent maritime safety' under which selective elements of cooperation are built in order to develop capacity that enables a state to deliver 'public goods' at sea. These include safety and security issues arising from natural or human-induced catastrophes, disasters and emergencies such as tsunamis, cyclones, storm surges and climate change-induced sea level rise. These entail search and rescue (SAR) and humanitarian assistance and disaster relief (HADR) operations, which are voluntarily undertaken by navies and coast guards.

The second is 'cooperative maritime security' that involves a web of agreements among the Bay of Bengal littoral states, which are committed to ensure 'order at sea.' Under such an arrangement, navies and maritime law enforcement agencies conduct operations with alliance partners to counter piracy, respond to terrorism at sea, prevent drug smuggling and

gun-running, and suppress human trafficking and illegal migration. The war on terror and counter piracy in the Gulf of Aden is a good example of cooperative maritime security in which like-minded states have come together to address common threats and challenges.

The third is about classic 'competitive maritime security,' which is centered on the state and involves cooperation among allies and coalition partners sharing common ideologies and political interests, wherein these strategic actors come together to sustain a favorable balance of power. Although there is an apparent 'power shift' in the Indo-Pacific region, its manifestation in the Bay of Bengal region is currently not quite apparent and states do not exhibit any desire to perpetuate competitive security dynamics.

Non-traditional Threats: Nature-induced Challenges

It is now widely acknowledged that global warming, meteorological and hydrological fluctuations are adding to the vagaries of nature and causing hazards in the Bay of Bengal. These are unfolding in the form of droughts or floods, loss of habitat and sea level rise. Similarly, natural events in the form of tsunamis result in the destruction of coastal infrastructure and cause damage to coastal communities. The Bay of Bengal littoral countries are most vulnerable to climate change and this is best understood by the fact that "in the last five decades, the region has experienced an average per decade rise of 0.1–0.3°C in temperature. It is expected to increase on average by 1.5 to 2.0°C by 2065 and by 2.4–4.5°C by the end of the century."[2] Also, the region is prone to extremely severe cyclones or storms of high intensity.[3]

As far as the impact of climate change is concerned, nearly "200 million people in the world will live below the sea level line by 2100." Seventy percent of these would be from eight countries in Asia and it is anticipated that "Bangladesh and India would also be hit hard."[4] According to a study focusing on Bangladesh's coastline on the Bay of Bengal (about 580 km) comprising a large portion of the Ganges River delta, "an estimated 41% of its 163 million people live at elevations lower than 10 m."[5]

Sagar Island in the Indian Sundarbans, a huge mangrove delta in the Bay of Bengal, has now become "emblematic for climate scientists and researchers as a climate change "hotspot."[6] The sea level in the Sundarbans has risen by an average of 3cm over the past two decades, "leading to one of the fastest rates of coastal erosion in the world."[7]

Oxygen Depletion and Acidification in Bay of Bengal

The other challenge in the Bay of Bengal region is oxygen depletion, which results in loss of biodiversity and marine life, and impacts food security. The decline in oxygen is a result of several factors, particularly shore-based pollutants, sewage and industrial waste that drain into the sea. Further, "the oxygen minimum zones (OMZs) are expanding and rapidly impacting the survival of marine organisms that rely on dissolved oxygen for survival and affecting the biogeochemical cycling of carbon and nitrogen, potentially aggravating global warming."[8]

The OMZs generally have been discovered at depths of 200 and 800 m and the biggest OMZ patch is in the Indian Ocean, more specifically in the Arabian Sea (spread over approximately 70,000 sq ml in the Gulf of Oman) and the Bay of Bengal (60,000 sq km).[9] According to a study, "should a similar global trend apply to the Bay of Bengal, its OMZ will trip to anaerobic mode, like in the Arabian Sea."[10] The current OMZ in the Bay of Bengal is attributed to pollutants from rivers. For instance, the Buriganga River in Bangladesh is highly polluted and Dhaka, the country's capital, dumps nearly 4,500 tons of solid waste into the river daily with about 80% being untreated.[11] Likewise, rivers from Myanmar and India carry untreated water that is discharged into the sea. It has been noted that the "physical processes and the temperature-salinity structure in the BoB directly influence the OMZ and the depth of the oxycline and nutricline, thereby affecting the phytoplankton and marine mammal communities."[12]

It has been warned that the "dead zone of the Bay of Bengal is now at a point where a further reduction in its oxygen content could have the effect of stripping the water of nitrogen, a key nutrient. This transition

could be triggered either by accretions of pollution or by changes in the monsoons, a predicted effect of global warming."[13]

As far as ocean acidification is concerned, nearly 19% of the world's coral reefs are estimated to have been damaged already. For instance, as many as 26 of the 66 coral species of Saint Martin's Island in Bangladesh have apparently gone extinct between 1997 and 2008.[14] Increased acidity is also depleting calcium carbonate in clams, sea snails, lamp shells and sea urchins. Similarly, the mangroves of the Ganga basin that act as a nursery for fin-fishes, shrimps, crabs and cockles are adversely affected due to ocean acidification. Mangroves in Thailand are believed to be dying from the root upwards due to acidification.[15]

Natural Disasters: Tsunamis, Cyclones and Storm Surges

Occurrence of cyclones in the Bay of Bengal is a near continuous feature and impacts infrastructure and the lives of people, particularly in Bangladesh, India and Myanmar.[16] Further, on an average, in the Bay of Bengal, "five to six tropical cyclones form every year, of which two or three could be severe."[17]According to an assessment, "Over the past two centuries, 20 out of the 23 major cyclone disasters in the world have occurred bordering the Bay of Bengal, particularly in India and Bangladesh."[18] Further, 24 out of the 35 deadliest tropical cyclones in world history (in which lives in excess of 100,000 people were lost) occurred in the Bay of Bengal.[19] The Bay of Bengal also witnessed the fury unleashed by the 2004 tsunami. On 24 December of that year, high tidal waves hit the shores of eleven countries, six of them located in the Bay of Bengal: Bangladesh, Myanmar, India, Indonesia, Malaysia, Sri Lanka and Thailand. Among these Indonesia, Sri Lanka and Thailand were hit the hardest. Extensive damage was also experienced along the coastal areas in Tamil Nadu, Andhra Pradesh and the Andaman and Nicobar Islands.[20]

Non-traditional Threats: Human-induced Challenges

The Bay of Bengal region has had its fair share of piracy and terrorism. However, due to consistent efforts by the littoral states, these crimes have

reduced drastically. For instance, ports in Bangladesh were notorious for piracy and armed robbery in the early 2000, but the country took decisive steps to curb this menace. The number of reported incidents of armed robbery in ports and anchorages in Bangladesh has dropped dramatically and according to the International Maritime Bureau (IMB), there were only three (2016), eleven (2017), twelve (2018), nil (2019) and four (2020) incidents during the last five years.[21]

Similarly, the threat of terrorism emanating from the Bay of Bengal is low. As per the Global Terrorism Index 2020, Bangladesh ranked 33rd out of 163 countries and according to the Director General of the Rapid Action Battalion (RAB), Bangladesh has "significantly controlled the militant outfits till date."[22] In Sri Lanka, after the decimation of the LTTE, the island state has successfully warded off terrorist acts, barring the 2019 Easter bombing at Christian churches and hotels by a militant Sri Lankan group which supports the Islamic State (IS).[23]

Poppy cultivation and heroin production in the 'Golden Triangle' comprising Myanmar, Thailand and Laos is well known. Myanmar tops the list as the centre for heroin production in the Golden Triangle. In 2020, the "area under opium poppy cultivation in Myanmar was estimated at 29,500 (21,000 to 50,400) ha."[24] Myanmar's heroin shipments are trafficked through unmarked transit land routes passing through Thailand, Laos, Vietnam, China and India before joining up with sea routes (Lashio-Mandlay-Yangon/ Moulein) in the Bay of Bengal and Gulf of Thailand.[25]

In the Bay of Bengal, illegal migration is quite common due to land-sea connectivity. Bangladeshi migrants travel to India by land and sea, and in the case of the latter, they arrive on board small boats, particularly from areas in Bangladesh severely impacted by climate change and sea level rise. A study notes that "Sea-level rise is also projected to aggravate storm surge, flooding, erosion and other coastal hazards, resulting in significant losses of coastal ecosystems. The coastal regions of Sri Lanka and India (Andaman, Nicobar and Lakshadweep Islands) are likely to be worst affected by the phenomena."[26] The climate-displaced migration spills into neighbouring countries.[27]

In recent times, the Bay of Bengal has also witnessed Rohingya migration due to the ethnic turmoil in Myanmar. The migrants' boats are frequently intercepted by navies and maritime law enforcement agencies and are pushed back to sea. This has resulted in many migrants perishing, while those who manage to land on shores are either pushed into camps or deported as in Malaysia. The Rohingya community is highly traumatized and it has been noted that the "continuing Rohingya crisis has shown how little the sub-region is equipped to deal with such a movement of displaced people from one member state to another."[28]

Marine Litter, Debris and Underwater Noise

At another level, inefficient land-based wastewater and solid waste management practices and 'disposable' lifestyle habits have caused immense damage and harm to the marine ecosystems. Nature too has impacted the health of the oceans and seas, given the growing evidence of global warming, acidification and de-oxygenation. Many large water bodies have been severely affected by these manmade events and nature-induced phenomena, and marine life and its associated food chains have come under stress.

Like any other large water body, the Bay of Bengal too has its share of plastic litter both at sea, along the coastlines of the littoral states and on the seabed. According to researchers, the Bay of Bengal and the South China Sea are the new plastic hotspots in Asia, and the Bay of Bengal is more polluted than the Indian Ocean gyre.[29] Further, this is due to population pressure, poor waste management practices followed by the regional countries, and, above all, poorly designed products. The Helmholtz Centre for Polar and Marine Research of the Alfred Wegener Institute has indicated that there is a variety of litter in the Bay of Bengal.

Yet another source of marine pollution is the noise generated by shipping, fishing trawlers, offshore exploration, laying of oil and gas pipelines and fiber optic cables as also the use of sonar by warships, which results in casualties in marine mammals. A study has observed that underwater noise in excess of "120dB can cause discomfort to these [marine] species, more

than 170dB can cause serious internal injuries, bleeding and even hemorrhages, and noise beyond 200dB can cause instant death."[30] Also, powerful sonar transmissions from warships can potentially lead to internal bleeding in mammals, causing damage to ear and brain tissues, resulting in disorientation or death. It is also believed that whales may perceive sonar waves as an attack, become panic-stricken and drive themselves towards the shore. There have been instances of marine mammals getting stranded along India's east coast bordering the Bay of Bengal. In 2016, 80 short-finned pilot whales were found stranded along the east coast but the largest stranding took place in 1973 off the Tuticorin coast, when as many as 147 whales were found on the beach.

Disaster Diplomacy

Natural catastrophes such as tsunamis, cyclones and storm surges can occur in any part of the world and impact the national economies of developed and developing countries alike.[31] This has led to several states offering assistance to the affected country and this cooperation has been labelled as 'Disaster Diplomacy.' In recent times, Cyclone Nargis in 2008 left over 138,000 people dead and affected 2.4 million others. Ships and aircraft carrying humanitarian assistance were dispatched by many countries, including the United States and France.[32] Under Operation *Sahayata*, two Indian warships delivered relief materials, and these were supplemented by two Indian Air Force AN-32 aircraft, which carried medicines and tents.[33]

Search and Rescue

According to *Safety and Shipping Review 2018*, natural events such as typhoons and cyclones can result in loss of shipping. This review has identified "South China, Indochina, Indonesia and Philippines maritime region" as accounting for 32% of losses occurred. Although the Bay of Bengal is not mentioned in the above report, the region witnesses high shipping and fishing activity. As discussed earlier in this chapter, the region is prone to extreme cyclonic activity and resultant accidents. The Bay of Bengal also suffers from turbid waters that make the underwater domain opaque, posing immense challenges for SAR operations.

As far as SAR for submarines is concerned, most modern submarines are fitted with rescue equipment/chambers and submarine rescue tenders and other portable devices, which can facilitate crew evacuation. It is also a practice that navies do not share many platform details and therefore their operations are generally shrouded in secrecy. No navy discloses a submarine accident and under such circumstances, international efforts are unacceptable. Among the Bay of Bengal littorals, submarines currently figure in the inventories of India, Bangladesh and Myanmar, while Thailand is planning to acquire submarines from China. In the event of any submarine accident, the regional capacity to respond is limited to India, which can quickly respond with specialist equipment, ships and aircraft with less reaction time.

The Bay of Bengal littorals are also signatories to international SAR-related conventions. These are (a) 1974 Convention for the Safety of Life at Sea (SOLAS); (b) 1979 International Convention on Maritime Search and Rescue (SAR); (c) 1982 UNCLOS; and (d) International Aeronautical and Maritime Search and Rescue (IAMSAR). These conventions have also been adopted by regional countries. India is also a member of the International Submarine Escape and Rescue Liaison Office (ISMERLO).

Blue Economy

The Bay of Bengal littoral countries are conscious of the economic potential of the seas and view this medium as a source of wealth to leverage socio-economic development for their people. A large proportion of the population in these countries is dependent on the seas not only for livelihood but also for food. The respective governments have internalized the concept of the Blue Economy and their policies and pronouncements acknowledge their national commitments to use sea resources in a sustainable manner.

Bangladesh has been leading the regional discourse on the Blue Economy. It has not only internalized the concept, but has also been championing and leading the contemporary understanding of the Blue Economy and also promoting this vision at the international level through

communiqués, regional growth strategy documents, bilateral agreements and national development plans.

During the 2014 Blue Economy conference in Dhaka, Bangladesh's Foreign Minister A.H. Mahmood Ali proposed the idea of the 'Bay of Bengal Partnership for Blue Economy' based on the principles of engagement through 'mutual trust, respect, mutual benefits, and equitable sharing of benefits' as an 'inclusive and people-centric' concept.[34] Indian Prime Minister Narendra Modi, during his visit to Bangladesh in June 2015, signed a 'Memorandum of Understanding on Blue Economy and Maritime Cooperation in the Bay of Bengal and the Indian Ocean.'

India being the largest among the Bay of Bengal littorals, marine and ocean studies have been a priority area and consequently, India has made significant scientific and technological advances in this domain. It has established a number of research and development laboratories and institutions to promote technological advancements in this field and to study and exploit sea-based resources in sustainable ways.

Geopolitics and Security Dilemmas

The Bay of Bengal littorals are signatories to the 1982 UNCLOS and have ratified the same. India, Bangladesh and Myanmar have resolved their boundary disputes. The case between Bangladesh and Myanmar i.e. "Dispute concerning delimitation of the maritime boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar)" was adjudicated by the International Tribunal for the Law of the Sea (ITLOS) through its judgment on 14 March 2012.[35] The Permanent Court of Arbitration (PCA) passed orders in the dispute between Bangladesh and India on 7 July 2014. In the case of the latter, an area of 19,467 sq km, four-fifth of the total area of 25,602 sq km comprising the disputed maritime boundary in the Bay of Bengal with India, was awarded to Bangladesh.[36]

There are no major boundary disputes among the littorals barring a few, such as the one between Myanmar and Thailand. Myanmar has maritime boundaries with India, Bangladesh and Thailand. The boundary dispute between India and Bangladesh has since been resolved but "a dispute

with Thailand over the ownership of three small islets (Ginga Island/Ko Lam, Ko Khan Island and Ko Ki Nu), has on occasion sparked the occasional naval confrontation."[37]

While there are no major disputes among the Bay of Bengal littorals that can potentially create security dilemmas for their respective governments, the 21st century MSR a segment of the Chinese BRI has caused geopolitical and geostrategic rumblings in the Bay of Bengal, as some projects are based on 'lend (money) and lease (infrastructure)' agreements. This strategy has been labeled as 'creditor imperialism' and 'light debt-trap diplomacy'[38] amid fears that the host countries may partially lose sovereignty and control of the areas where the infrastructure is being developed.

China has obtained long-term leasing rights to a number of ports and maritime spaces in the Bay of Bengal littoral countries through agreements.

Ports Under BRI and Lease Terms

Sl No	Port	Lease Country	Lease Term
1	Port of Chittagong	Bangladesh	Not known
2	Colombo Harbour	Sri Lanka	35
3	Hambantota Port	Sri Lanka	99
4	Kuantan Port	Malaysia	99
5	Kyaukpyu Deep Sea Port	Myanmar	None
6	Maleka Gateway	Malaysia	99
7	Port of Pyra	Bangladesh	None
8	Port Kelang	Malaysia	Not known
9	Sittwe Port	Myanmar	Not known
10	Sonadia	Bangladesh	Not known
11	Feydhoo Finolhu Island	Maldives	50
12	Malaka Gateway	Malaysia	99
13	Piraeus Port	Greece	35

Source: Mohan Malik, "The China-India Nautical Games in the Indian Ocean," https://www.macdonaldlaurier.ca/china-india-nautical-games-indian-ocean-part-one-mohan-malik-inside-policy/ (accessed 25 March 2021).

India is wary of the BRI and the stated policy of the Government of India is not to participate amid concerns that the CPEC, a segment of the BRI, passes through Pakistan-occupied Kashmir (PoK), a region claimed by India. Although India is an important member of the Asian Infrastructure Investment Bank (AIIB) and the second largest shareholder after China, it has consistently maintained that "connectivity initiatives must be based on universally recognized international norms, good governance, rule of law, openness, transparency and equality, and must be pursued in a manner that respects the sovereignty and territorial integrity."[39]

The MSR has several pivots of crucial strategic and military significance, and it indicates the intent-capabilities of Chinese economic-infrastructure development plans for the region. Although the ongoing deep and entrenching economic-maritime infrastructure engagements between China and the Bay of Bengal littoral countries have been mutually beneficial, these agreements also display covert motivations and evolving maritime strategies. China has also leveraged port infrastructure development and access in these countries for dual civilian-military use, reaping enormous strategic-maritime-naval dividends. It has been the primary supplier of vast quantities of cheap and serviceable military hardware to a number of Bay of Bengal littorals.

Ports Under BRI and Strategic Purpose

Sl No	Port	Lease Country	Strategic Purpose
1	Port of Chittagong	Bangladesh	Logistic Base
2	Colombo Harbour	Sri Lanka	Power Projection
3	Hambantota Port	Sri Lanka	Logistic Base
4	Kuantan Port	Malaysia	Trade
5	Kyaukpyu Deep Sea Port	Myanmar	Logistic Base

6	Maleka Gateway	Malaysia	Power Projection
7	Port of Pyra	Bangladesh	Trade
8	Port of Tanjun Priok	Indonesia	Trade
9	Port Kelang	Malaysia	Trade
10	Sittwe Port	Myanmar	Trade
11	Sonadia	Bangladesh	Trade
12	Feydhoo Finolhu Island	Maldives	Submarine Facility
13	Malaka Gateway	Malaysia	Logistic Base
21	Kra Canal	Thailand	Overcoming the Malacca Dilemma

Source: Authors' assessments.

The long dormant Kra Isthmus project has triggered fresh interest in Thailand. This involves building an artificial link (about 100 km long and 26 m deep) through Thailand to connect the Bay of Bengal with the Gulf of Thailand. China has shown interest in the project, which could cost about US$ 20 billion. The scheme is to build a two-lane canal, which would allow transit by vessels of up to 500,000 DWT at a speed of 7 knots.[40] The Kra Canal project fits into the Chinese strategy of overcoming the 'Malacca Dilemma,' which has figured prominently in Chinese sea-lane security dynamics. This mega-maritime project has the potential to become part of the Chinese "MSR."

Conclusion

The Bay of Bengal region with its high concentration of non-traditional security threats presents unique challenges. These challenges pertain to human, environmental and ecological security with direct impacts on food security. Additionally, the region faces geopolitical and geostrategic contestations marked by India-China rivalry, US-led QSD involving Australia, India, Japan and the United States, and varying perceptioms and the absence of a common understanding among the BIMSTEC and ASEAN member countries about the Indo-Pacific. Additionally, the Chinese BRI with its high

dependence on Chinese economic and financial largesse has the potential to cause geopolitical and geostrategic turbulence. The countries in the region also fear the 'debt-trap' risk that the Chinese projects entail and are wary of the resultant domestic political upheavals, social disruptions, financial stress and loss of sovereignty.

Notes

[1] Sanjay Chaturvedi and Vijay Sakhuja, *Climate Change and the Bay of Bengal: Evolving Geographies of Fear and Hope* (Singapore: ISEAS, 2015).

[2] Fahmida Khatun, "BIMSTEC Countries and Climate Change: Imperatives for Action," ORF Issue Brief No. 299, June 2019, Observer Research Foundation. https://www.orfonline.org/research/bimstec-countries-and-climate-change-imperatives-for-action-52411/ (accessed 06 April 2021).

[3] Relying on data from 1965 to 2020 and scientific investigations on frequency and impacts of cyclones over the North Indian Ocean region, India's Science and Technology Minister Harsh Vardhan observed "On average, out of five cyclones developing in the North Indian Ocean region comprising the Bay of Bengal and the Arabian Sea, about three to four make a landfall, causing loss of life and property. Low lying coastal belts of West Bengal, Odisha, Andhra Pradesh, Tamil Nadu, and Puducherry are more prone to the impact of these systems." For more details see: "Data shows decline in cyclones over Bay of Bengal, increase in storms over Arabian Sea: Centre,"https://www.tribuneindia.com/news/nation/data-shows-decline-in-cyclones-over-bay-of-bengal-increase-in-storms-over-arabian-sea-centre-225605 (accessed 14 April 2021).

[4] Katherina Buchholz, "Rising Sea Levels Will Threaten 200 Million People by 2100," Statista, February 11, 2020.https://www.statista.com/chart/19884/number-of-people-affected-by-rising-sea-levels-per-country/ (accessed 14 April 2021).

[5] Barbara Neuman et al, "Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding - A Global Assessment," Plos One 10 (3): e0118571.https://journals.plos.org/plosone/article? id=10.1371/journal.pone.0118571 (accessed 23 April 2021).

[6] Nicholas Muller, "In the Indian Sundarbans, the Sea Is Coming," The Diplomat, May 1 2020. https://thediplomat.com/2020/05/in-the-indian-sundarbans-the-sea-is-coming/c(accessed 06 April 2021).

[7] Johan Augustin, "On the frontline of climate change in India's Sundarbans," Mongabay, 17 October, 2019.https://news.mongabay.com/2019/10/sundarbans-climate-change-tigers-india/ (accessed 06 April 2021).

[8]Laure Resplandy,"Will ocean zones with low oxygen levels expand or shrink?", Nature, 8 May 2018. https://www.nature.com/articles/d41586-018-05034-y (accessed 22 March 2021). Also see Geomar, "Oxygen depletion in the ocean is increasing," 4 January 2018, Hemholtz Centre for Ocean Research, Kiel, Germany. 2018https://www.geomar.de/index.php?id=4&no_cache=1&tx_ ttnews%5btt_news%5d=5630&tx_ttnews%5bbackPid%5d=185 (accessed 22 March 2021).

[9] Vijay Sakhuja, "The Problem of OMZs: Indian Ocean is Fast Losing Oxygen!", Society for the Study of Peace and Conflict (SPCC), July 28, 2018. https://www.sspconline.org/index.php/opinion/Indian-ocean-fast-loosing-oxygen (accessed 22 January 2019).

[10] K. S. Jayaraman, 'Dead zone' found in Bay of Bengal, Nature Asia, 12 December 2016. https://www.natureasia.com/en/nindia/article/10.1038/nindia.2016.163 (accessed 22 January 2019).

[11] Kelly Marks, "What are the 10 Most Polluted Rivers in the World?" Soapboxie, 15 December 2020. https://soapboxie.com/social-issues/What-Are-the-10-Most-Polluted-Rivers-in-the-World

[12] V.V.S.S. Sarma, G.D. Rao, R. Viswanadham, C.K. Sherin, Joseph Salisbury, Melissa M. Omand, Amala Mahadevan, V.S.N. Murty, Emily L. Shroyer, Mark Baumgartner, Kathleen M. Stafford, "Effects of Freshwater Stratification on Nutrients, Dissolved Oxygen, and Phytoplankton in the Bay of Bengal," *Oceanography*, 11 July 2016. https://tos.org/oceanography/article/effects-of-freshwater-stratification-on-nutrients-dissolved-oxygen-and-phyt (accessed 23 March 2021).

[13] Amitav Ghosh and Aaron Savio Lobo, "Bay of Bengal: depleted fish stocks and huge dead zone signal tipping point," The Guardian, 31 January 2017. https://www.theguardian.com/environment/2017/jan/31/bay-bengal-depleted-fish-stocks-pollution-climate-change-migration (accessed 23 March 2021).

[14] M Shahadat Hussain et al, "Vulnerability of BoB to ocean acidification," IUCN, Bangladesh, 2015, p 13, https://portals.iucn.org/library/sites/library/files/documents/2015-049.pdf (accessed 24 March 2021). [15] Ibid, p22

[16] "Cyclones in Indian Seas", http://www.imdmumbai.gov.in/scripts/detail.asp?releaseId=E0000CY3 (accessed 15 February 2019).

[17] For more details see http://vikaspedia.in/social-welfare/disaster-management-1/natural-disasters/cyclones (accessed 15 February 2019).

[18] Pardeep Sahni, Alka Dhameja and Uma Medury, Disaster mitigation: experiences and reflections (PHI Learning Pvt. Ltd., 2001) cited in Aparna Roy, "BIMSTEC and climate change: Setting a common agenda," Observer Research Foundation (ORF), 16 October 2017.https://www.orfonline.org/research/bimstec-climate-change-setting-common-agenda/#_edn13 (accessed 15 February 2021).

[19] For more details see https://www.wunderground.com/hurricane/deadlyworld.asp (accessed 15 March 2021).

[20] Vijay Sakhuja, "Indian Naval Diplomacy: Post Tsunami,"Institute of Peace and Conflict Studies (IPCS). 8 February 2005.http://www.ipcs.org/focusthemsel.php?articleNo=1640 (accessed 15 March 2021).

[21] ICC-International Maritime Bureau, "Piracy and Armed Robbery against Ships Report: 01 January–31 December 2020.https://www.icc-ccs.org/reports/2020_Annual_Piracy_Report.pdf (accessed 08 April 2021).

[22] South Asia Terrorism Portal. "Bangladesh: Assessment- 2021." Institute for Conflict Management (ICM).https://www.satp.org/terrorism-assessment/bangladesh (accessed 08 April 2021).

[23] Sirwan Kajjo, "US Charges 3 Sri Lankan Nationals for Role in 2019 Easter Attacks," VOA News, 10 January, 2021.https://www.voanews.com/extremism-watch/us-charges-3-sri-lankan-nationals-role-2019-easter-attacks (accessed 08 April 2021).

[24] UN Office on Drugs and Crime (UNODC). "Myanmar Opium Survey 2020 Cultivation, Production, and Implications." https://www.unodc.org/documents/crop-monitoring/Myanmar/Myanmar_Opium_survey_2020.pdf (accessed 21 April 2021).

[25] *International Narcotics Control Strategy Report, 1997*, Bureau for International Narcotics and Law Enforcement Affairs, US Department of State, Washington DC, March 1998.

[26] Aparna Roy, "BIMSTEC and climate change: Setting a common agenda," Observer Research Foundation (ORF), 16 October 2017. https://www.orfonline.org/wp-content/uploads/2017/10/IB-203.pdf (accessed 23 March 2021).

[27] Mohammad Zaman, "Confronting climate refugee issues in Bangladesh," The Daily Star, 22 December 2018.https://www.thedailystar.net/opinion/environment/news/confronting-climate-refugee-issues-bangladesh-1677019(accessed 23 March 2021).

[28] Sriparna Bannerjee, "Can Rohingya issue block the development of BIMSTEC?" Observer Research Foundation, 15 January, 2021. https://www.orfonline.org/expert-speak/can-rohingya-issue-block-development-bimstec/ (accessed 23 April 2021).

[29] Michael Casey, "World's oceans "plagued" by 269,000 tons of plastic pollution," CBS News, 11 December 2014.https://www.cbsnews.com/news/worlds-oceans-plagued-by-269000-tons-of-plastic-pollution/ (accessed 15 March 2021).

[30]Badri Chatterjee, "Death by noise: Sound of ships kills marine mammals in Mumbai," Hindustan Times, 3 September 2017.

[31] For instance, Hurricane Katrina hit United States and Cyclone Nargis hit Myanmar, and both disasters left a massive trail of infrastructure destruction, while lives and livelihoods of a large populace were lost.

[32] Reuters, "Angry France diverts Myanmar aid to Thailand," 25 May 2008,https://www.reuters.com/article/us-myanmar-cyclone-france/angry-france-diverts-myanmar-aid-to-thailand-idUSL254340520080525 (accessed 15 March 2021).

[33] One India, "India launches 'Operation Sahayata' in Nargis-hit Myanmar," 7 May 2008.https://www.oneindia.com/2008/05/07/india-launches-operation-sahayata-in-nargis-hit-myanmar-1210161790.html (accessed 15 March 2021).

[34] BDNews24.com, "Bangladesh seeks 'Bay of Bengal partnership' for blue economy," 2 September 2014, (accessed 24 March 2021).

[35] International Tribunal for The Law of the Sea (ITLOS), Reports of Judgments, Advisory Opinions and Orders Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar) Judgment of 14 March 2012, https://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/published/C16-J-14_mar_12.pdf (accessed 15 March 2021).

[36] "In the Matter of the Bengal Maritime Boundary Arbitration – Between the People's Republic of Bangladesh and the Republic of India," https://pcacases.com/web/sendAttach/383 (accessed 15 March 2021).

[37] Jürgen Haacke, "Myanmar and Maritime Security," The Asan Forum, 22 February 2016.http://www.theasanforum.org/myanmar-and-maritime-security/ (accessed 23 March 2021).

[38] Shelly Mahajan, "Sri Lanka Leases Hambantota Port to China: Is this the Beginning of Chinese Debt Trap in South Asia?" The Hudson Institute, 14 January, 2018.http://www.southasiaathudson.org/blog/2018/1/14/sri-lanka-leases-hambantota-port-to-

china-is-this-the-beginning-of-chinese-debt-trap-in-south-asia(accessed 25 March 2021).

[39] Ministry of External Affairs (MEA). "Official Spokesperson's response to a query on media reports regarding possible cooperation with China on OBOR/BRI."Media Briefings, 5 April 2018. https://www.mea.gov.in/media-briefings.htm?dtl/29768 Official+Spokespersons+response+to+a+query+on +media+reports+ regarding+ possible+cooperation+with+ China+on+OBORBRI (accessed 21 March 2021).

[40] Luc Verley, "The Kra-Canal Project," International Institute of Marine Surveying (IIMS), 14 January, 2015. https://www.iims.org.uk/kra-canal-project/ (accessed 21 March 2021).

Chapter 6

Security Complex of the Western Pacific Ocean

The Western Pacific has emerged as one of the highly contested regions of the globe in the 21st century and is witnessing intense rivalry between two great powers, the United States and China.[1] It is also the most militarized region, with six of the world's 10 largest standing militaries[2] and four nations with nuclear weapon capabilities. The security dynamics in the region is marked by politico-diplomatic tensions, military infrastructure buildup and aggressive naval-air posturing quite similar to the Cold War period. The centre of gravity of this contestation is the large maritime-littoral space from Hawaii and Guam, through China's First and Second Island Chains, running close to the Chinese coast along the Taiwan Strait.

In this maritime theater, the United States and China have brought to bear their respective military capabilities, both having been in a state of high military readiness (short of war). This state of readiness has been marked by restructuring and redeployment of forces, military exercises including operations by aircraft carriers, strategic bombers, nuclear submarines, special forces operations and buildup of military-related infrastructure. Both sides do not show any signs of relenting, despite the new US administration taking power. President Joe Biden, like his predecessor, has pursued an aggressive policy against China, clearly

reflecting the bipartisan consensus in Washington over China's increasingly aggressive pursuits that challenge the United States.

The US Interim National Security Guidance signed in March 2021 has targeted China and labelled it as the only "competitor potentially capable of combining its economic, diplomatic, military and technological power to mount a sustained challenge to a stable and open international system."[3] Similarly, Chinese President Xi Jinping has not shown any signs of "backing off" and signaled to the US leadership that China's march towards becoming a major regional power under his "China dream" cannot be challenged despite "pushbacks" from the United States.

In the above context, this chapter delves into three key issues: (a) the US Pacific Deterrence Initiative (PDI) and bases and access arrangements; (b) the emergence of Multiple Quads; and (c) China's naval buildup in the South China Sea and posturing by the PLA Navy.

Pacific Deterrence Initiative

The Western Pacific Ocean has continued to be the pivotal geographic space for the United States during World War II and through the Cold War period lasting nearly three decades. It has provided in the past and continues to provide now, a security umbrella to Japan and South Korea against threats from the Soviet Union/Russia and North Korea. In the post-Cold War period, its support to these alliance partners was through security guarantees and forward-deployed troops. Likewise, Washington has also accorded high priority to the Western Pacific region in terms of foreign policy, trade and economic engagements. During the last two US administrations, first, under President Barak Obama, who advocated the "pivot" or "rebalancing" towards the Asia-Pacific, and second, under President Donald Trump, this large expanse of water has been a high priority region in the US strategic calculus.

A closely associated issue is that of fiscal support to uphold the prioritization accorded to the Western Pacific. In 2017, a White Paper[4] prepared by late Senator John McCain warned about the deteriorating security

in the region. The Paper had offered "detailed recommendations for the armed services to improve capabilities incrementally but significantly."[5] Admiral Harry Harris, the then head of Indo-Pacific Command, filed budgetary requirements in 2017 and 2018 and these later formed the basis for the 2018 defense bill, the "Indo-Asia-Pacific Stability Initiative."[6] In 2019, the United States announced the PDI, which concerns fiscal support for military activities and associated infrastructure investment plans[7] in the Pacific Ocean.

The PDI is similar to the 2014 European Deterrence Initiative (EDI), which targeted Russia after it annexed Crimea. Under the EDI, the Congress and the Pentagon were unanimous in their decision to "provide funds to support rotational force deployments, infrastructure investments, and deliver the right capabilities in key locations throughout Europe."[8] However, with the emergence of US-China tensions, the Pentagon announced the reduction of US troops in Germany (from 52,000 to 25,000 military personnel)[9] to be redeployed to the Pacific, clearly displaying an urgency in Washington to reinforce US military power in the Pacific region.

However, this may temporarily change given that the United States has now announced the deployment of 500 additional US personnel in Germany to "augment our existing abilities to prevent conflict," setting up a permanent station in the Wiesbaden area to "strengthen deterrence and defense in Europe."[10] This is also to assure the NATO alliance members of the US commitment amid rising tensions between Ukraine and Russia, after the latter amassed troops along the borders with Ukraine.[11]

The PDI investment plan for fiscal 2022 through fiscal 2027 is pegged at US$ 4.7 billion.[12] The document submitted to Congress reads: "Without a valid and convincing conventional deterrent, China is emboldened to take action in the region and globally to supplant U.S. interests. As the Indo-Pacific's military balance becomes more unfavorable, the U.S. accumulates additional risk that may embolden adversaries to unilaterally attempt to change the status quo."[13]

The PDI "provides the foundation for establishing a forward-deployed, defense-in-depth posture that defends our interests abroad, deters aggression, assures allies and partners, and provides flexible response options should deterrence fail."[14] It conspicuously targets China and aims to "focus resources on key capability gaps to ensure U.S. forces have everything they need to compete, fight, and win in the Indo-Pacific," It supports the proposed investment plan by the USINDOPACOM to 'Regain the Advantage,' a concept that establishes necessary linkages between the strategy, capacity, capabilities and budgetary priorities across four focus areas: (a) Joint Force Lethality; (b) Force Design and Posture; (c) Strengthen Allies and Partners; and (d) Exercises, Experimentation and Innovation.[15]

These investments are clear signals of the US commitment to keep the Indo-Pacific 'free and open' against any attempts by China to dominate regional security matters, prevent Beijing's intimidation of Taiwan, and reassure countries that have disputes with China over the Spratly and Paracel Islands in the South China Sea.

Bases and Access Arrangements

Military facilities across the Western Pacific and Oceania are central to the USINDOPACOM as it constitutes the core of its Indo-Pacific strategy and tactical operations against China. The United States has begun to reinforce these and is currently engaged in urgent upgradation of these military facilities, with new/augmented military infrastructure at Guam, Hawaii, Wake Island, Tinian and Pagan.

Guam is a small island (32 mi in length), which is home to 170,000 inhabitants. The Marine Corps Base Camp Blaz is being set up in Guam, and a large tract of land close to the Andersen Air Force Base has been cleared, which will house over a thousand Marines permanently and support many thousands coming to the island on rotational basis.[16] Camp Blaz will also be home to 5,000 Marines relocated from Okinawa at the beginning of 2025. The redeployment will cost about US$ 8 billion, of which Japan's share would be about US$ 2.8 billion.[17] The defense authorization bill for

fiscal 2020 included US$ 226 million for the Navy and US$ 65 million for the Air Force for military-related construction projects in Guam.[18]

The United States has also announced a "defensive ring" for Guam and Pentagon, and has sought a "deterrence fund" to support a "360-degree persistent and integrated air defense capability in Guam."[19] In 2020, Admiral Phil Davidson, Commander of the USINDOPACOM had noted that "America's day begins in Guam and is not only a location we must fight from, but we must also fight for — given future threats,"[20] clearly prioritizing the Chinese military threat. The United States has plans to set up an 'Aegis ashore' to "detect threats and finish threats under the sea, on the sea and above the sea, so that they can move with a mobile and maneuverable naval force that they were designed to protect and provide their ballistic missile defense."[21]

In Hawaii, plans envisage "additional funding for missile defense priorities, including the hypersonic and ballistic tracking space sensor (HBTSS), components for an eight-terminal high altitude area defense (THAAD) battery, Homeland Defense Radar-Hawaii and additional SM-3IIA interceptors" envisaged under the National Defense Authorization Act (NDAA) for fiscal year 2021.[22]

Located halfway between Hawaii and Japan, the military infrastructure at Wake Atoll[23] is being strengthened. It has been noted that "Wake Island has always been a geographically important location for military activities, including refueling…The re-investments done of late are not to increase activity or capacity but rather replace aged infrastructure,"[24] to form a "layered missile defense system" against advanced missiles of China and North Korea. The powerful radar on the atoll was tested for its effectiveness in 2019. An incoming intercontinental ballistic missile (ICBM) launched from Kwajalein Island was tracked by this radar and another radar in the Pacific Ocean, and the ICBM was destroyed by ground-based interceptors in California.[25]

Tinian and Pagan Islands near Guam also support US military operations in the Pacific Ocean. The airfield at Tinian is being revamped at

a cost of US$ 20 million and will support operations by KC-130 aerial refueling/transport aircraft. The possible use of Pagan as a diversionary airfield for military aircraft is being explored with the authorities of the Commonwealth of the Northern Mariana Islands and, if successful, the US Air Force plans "to build an airfield to serve as a backup in the event Guam's Andersen Air Force Base is damaged or otherwise unavailable."[26]

Security Alliances, Guarantees, VFA & Partnerships

The United States has set up a complex network of formal security alliances with Japan and Republic of Korea (RoK). These alliances endured since World War II, notwithstanding pressures from domestic constituencies in these countries asking US forces (about 56,000 active military personnel of all four services[27]) to 'leave.' In recent times, the United States has been pressuring them to pay "fair shares" for the 'nuclear umbrella' but under the current circumstances, particularly the threat from China and the near continuous danger of missile launches by the DPRK, the United States may have reconsidered such demands, particularly when Washington and Tokyo have endorsed the Indo-Pacific, the threat from China and the critical necessity to "oppose actions that undermine a rules-based international order and any one-sided action that attempts to change the status quo."[28] Japan is also a leading proponent of the QSD, which has China as the primary contender. It has been argued that "as extra-regional powers seek to expand their roles in the Western Pacific, they are generally turning to Japan as their partner of choice. Japan's Free and Open Indo-Pacific (FOIP) vision offers a common strategic umbrella that provides attractive utility for these states."[29] Furthermore, Japan's "expanded efforts to build its bilateral security partnerships have been favorably received by powers outside the region, making it their partner of choice in the western Pacific."

Similarly, RoK, which is "an advanced democratic and free market society" also supports "Biden's efforts to restore multilateralism and rules-based leadership in Asia." However, RoK's absence from the QSD is noticeable and "represents a glaring weakness in Washington's Indo-Pacific coalition-building efforts."[30] There are over 27,500 soldiers, airmen/ women, sailors and Marines stationed in South Korea.[31]

The Philippines has been under extreme coercion by China. The latter's maritime militia has been masquerading as fishermen in the Philippines-claimed features in the South China Sea. After more than 200 Chinese fishing vessels were detected anchored in Whitsun Reef, Beijing defended the presence of the boats and clarified that they were seeking shelter due to bad weather.[32] However this did not cut ice with the Philippines, prompting a warning that the "continued presence of Chinese maritime militias in the area reveals their intent to further occupy features in the West Philippine Sea (South China Sea)." This warning was followed up by dispatching Philippine air force, navy and coast guard vessels to the area. Past events and incidents such as these prompted the United States and Philippines to reinforce their 1988 Visiting Forces Agreement (VFA) to remain buoyant and allow resumption of access by US military aircraft and vessels to Philippines military facilities.[33]

In April 2021, the United States issued a stark warning that "an armed attack against the Philippines armed forces, public vessels or aircraft in the Pacific, including the South China Sea, will trigger our obligations under the US-Philippines Mutual Defense Treaty."[34] This was welcomed by Manila, and the Philippine Department of National Defense noted that the "U.S. admonition to China against the use of force on Philippine public vessels and aircraft, which are performing their constitutional mandate to protect and defend Philippine rights in the South China Sea, including the West Philippine Sea, is an additional affirmation of the long-standing partnership between our two countries."[35]

The case of Taiwan is similar. China's increasing belligerence towards Taiwan is marked by violations of its airspace,[36] specialist military exercises simulating invasion of the island and the near continuous threats to 'forcefully incorporate Taiwan into the People's Republic of China.' In January 2021, Antony J. Blinken, US Secretary of State reiterated his country's bipartisan commitment to Taiwan under the US-Taiwan Relations Act (TRA) to "make sure that Taiwan has the ability to defend itself and to make sure that we're sustaining peace and security in the Western

Pacific. We stand behind those commitments."[37] Furthermore, the USINDOPACOM "maintains plans to defend Taiwan from Chinese aggression," through "the network of long-range precision weapons, sensors, missile batteries, highly capable aircraft, surface ships and submarines. It will be an all-domain fight requiring our forces to employ Distributed Maritime Operations."[38] The United States continues to maintain a credible posturing involving naval and air exercises whose frequency, intensity and quality has improved significantly in recent times.

ASEAN

The United States has high hopes from the ASEAN vis-a-vis China and is keen to support the member states of the grouping through military capacity-building to withstand the pressures from a highly aggressive China, particularly in the South China Sea, and also in response to the newly enacted Chinese Coast Guard Law. The US policy for the South China Sea is best understood though the statement that the "world will not allow Beijing to treat the South China Sea as its maritime empire," and Washington has rejected China's claims to offshore resources in most areas of the South China Sea.[39]

The US position over the South China Sea presents the ASEAN with complex challenges and a perennial dilemma of "who to choose." However, among the member states, Vietnam during its Chairmanship of the ASEAN in 2020, "withstood the pressures from China over South China Sea; it admirably warded off any US prodding against China." However, ASEAN has been unsuccessful in finding a "solution to Chinese assertiveness and this weakness is apparently being filled in by the Quad which is fast shaping the regional security dynamics."[40] The Quad member states (as discussed in subsequent paras) have endorsed 'ASEAN centrality' in their articulations concerning the Indo-Pacific. However, there are fears regarding ASEAN's feebleness when it comes to confronting China.

There is also a view that the United States should pursue "minilateral cooperation" with select "like-minded" ASEAN countries, for "issue-specific

cooperation" given that "only a few yet pivotal ASEAN countries are interested in the South China Sea disputes and willing to pushback against China." Furthermore, "hopelessly watered down statements emanating from ASEAN meetings"[41] serve as a catalyst for growing Chinese assertiveness. Even among themselves, ASEAN has been found wanting and this was evident during the Myanmar domestic crisis in 2021, where ASEAN was unable to breach the military Junta. This may have created opportunities for India and Japan as Quad members to "prioritise an early and peaceful solution" to the coup in Myanmar.[42]

Today, the United States has several options for access and basing for its military in Southeast Asia. Singapore and Philippines are both primed for providing operational and logistic support for US forces operating in the Western Pacific. The NDAA for fiscal year 2021 makes note of the US-Singapore Memorandum of Understanding dated 6 December 2019 to "establish a fighter jet training in Guam and encourages the Secretary of Defense to explore the merit and feasibility of future agreements."[43]

Vietnam also offers excellent access and basing opportunities, but Hanoi has not been persuaded to make such an offer due to its "long-standing defense policy of the 'three nos' dating back to its first Defense White Paper in 1998." This is notwithstanding the fact that "Vietnam's 2019 White Paper raised the tantalizing prospect that Vietnam might consider altering its 'three nos' defense policy."[44]

As far as Australia is concerned, since 2012, more than 6,800 US Marines have served in Darwin to train alongside the Australian Defense Force. The rotational force reached its full complement of 2,500 Marines for the first time by July 2019.[45] Cocos (Keeling) Island of Australia is a "key strategic force multiplier for both Australian and allied-use"[46] and can potentially serve as a staging point for many US military aircraft.

Multiple Quads

Given the vast expanse of the Indo-Pacific maritime space, in 2020, the then Navy Secretary Kenneth Braithwaite had promoted the idea of

resurrecting the First Fleet since the current area of responsibility of the Seventh Fleet (Western Pacific, South China Sea and Bay of Bengal) is vast and the "area of increased tension" could have a "real void there."[47] The United States has plans to set up a 'numbered fleet' i.e. the First Fleet which could be operating in the "crossroads between the Indian and the Pacific oceans" based out of Singapore.[48] Apparently, US allies and partners such as India, Singapore and Japan may have endorsed its utility and agreed to support it.

During the recent Summit meeting of the QSD[49], the Heads of State of Australia, India, Japan and the United States announced their intention "to ensure that the Indo-Pacific remains accessible and dynamic, governed by international law and bedrock principles such as freedom of navigation and peaceful resolution of disputes, and ensure that all countries are able to make their own political choices, free from coercion."[50]

There is no doubt that the Indo-Pacific Quad Summit has upset China. Beijing has labeled it as 'Cold-War mentality' and during a press briefing, the Chinese Foreign Ministry spokesperson cautioned that "Certain countries should shake off their Cold-War mentality and ideological prejudice, refrain from forming closed and exclusive small circles, and do more things that are conducive to solidarity and cooperation among regional countries and regional peace and stability."[51]

China now faces a new challenge from another convergence among the Euro-Atlantic powers, namely France, Germany, Netherlands and the United Kingdom, which have also pivoted to the Indo-Pacific. These countries have announced their Indo-Pacific strategies and their navies are now making a beeline for the South China Sea. The French Navy ships, including a nuclear submarine, have already sailed through the South China Sea and the French Minister for the Armed Forces has labeled such deployment as "striking proof" of the French Navy's capability to operate "far and for a long time in connection with our Australian, American and Japanese strategic partners."[52]

Germany also announced deployment by its naval ship to Asia in August and stated that on its return voyage it would pass through the South China Sea.[53] It was also clarified that the German warship "would not pass within the 12-nautical-mile limits China and rival states claim as territorial waters around contested features in the strategic Waterway." Meanwhile, Germany and Japan are planning to sign an agreement on intelligence-sharing in the Indo-Pacific as part of their defence cooperation initiatives.[54]

The British Royal Navy planned to begin deployment in the region in May 2021, led by its latest and perhaps the most modern aircraft carrier HMS Queen Elizabeth II, escorted by a powerful taskforce. This deployment was to be complemented by "US Marine Corps and US Navy personnel and equipment. This includes a detachment of US Marine Corps F-35B Lightning II aircraft and the US Navy destroyer, USS The Sullivans."[55] This move was also intended to showcase and practice the 'interchangeability' of crew and platforms.

The South China Sea issue also features in Dutch strategic thinking and a foreign policy document notes that "the EU should seek cooperation with countries in the region for free passage and guarantee maritime safety… In that context, the EU must express itself more often and more strongly on developments in the South China Sea that violate the United Nations Convention on the Law of the Sea."[56] Earlier this year, the UK Ministry of Defence had provided details of the likely composition of the HMS Queen Elizabeth task group, which referred to a Dutch warship HNLMS Evertsen being included, but this particular mention was later removed.

While individual European nations have spelt out their strategies for the Indo-Pacific, the European Union's strategic approach aims to ensure " secure free and open maritime supply routes in full compliance with international law, in particular UNCLOS, in the interest of all," and its engagement in the region is premised on "a rules-based international order, a level playing field as well as an open and fair environment for trade and investment, reciprocity, the strengthening of resilience, tackling climate change and support connectivity with the EU."[57]

The above discussion covers the significant European initiatives in the South China Sea and it is not surprising that these moves have attracted criticism in Beijing. A Chinese scholar has accused Britain of retaining its colonial mindset and stated "London still views itself as an 'empire on which the sun never sets' who sees betting in a contest between the world's two top powers, China and the United States, as something that suits its international status."[58]

FONOP and Naval Maneuvers

The South China Sea is an important water space from both economic and strategic perspectives. Nearly US$ 3.5 trillion of world trade, corresponding to 30% of global trade, transits through these waters. Also, 10% of the marine fish consumed globally is sourced from this region. Besides, the South China Sea is plagued by highly volatile contestations over maritime boundaries, contested EEZ claims and issues of sovereignty over reefs. This region also faces challenges stemming from the stated Chinese political objective of unifying Taiwan with the People's Republic of China. There has been no other period in recent times that has seen such intense naval sabre-rattling as in the Western Pacific.

The United States has conducted freedom of navigation operations (FONOP) relentlessly, which challenge China's excessive maritime claims and impose restrictions on the free flow of commerce through the South China Sea. Below is a table of FONOPs undertaken by the US Navy. It is pertinent to mention that the table only includes reported FONOPs, bearing in mind there could be other such missions that were conducted but not reported.

US FONOP (2015-2021)

Date	Ship(s)	Location
27 Oct 2015	USS Lassen	Within 12 nm of Subi Reef and unspecified features claimed by the Philippines and Vietnam
29 Jan 2016	USS Curtis	Within 12 nm of Triton Island in the Wilbur Paracels
10 May 2016	USS William P. Lawrence	Within 12 nm of Fiery Cross Reef in the Spratlys
21 Oct 2016	USS Decatur	Within an "excessive" claim of territorial waters by China between two land features in the Paracels, but not within 12 nm of the said features
24 May 2017	USS Dewey	Within 6 nm of Mischief Reef in the Spratlys
02 Jul 2017	USS Stethem	Within 12 nm of Triton Island in the Paracels
10 Aug 2017	USS John S. McCain	Within 12 nm of Mischief Reef in the Spratlys
10 Oct 2017	USS Chafee	Entered excessive straight baseline of the Paracels but not within 12nm of any of the features
17 Jan 2018	USS Hopper	Within 12 nm of Scarborough Shoal
23 Mar 2018	USS Mustin	Within 12 nm of Mischief Reef in the Spratlys
27 May 2018	USS Higgins and USS Antietam	Within 12 nm of Lincoln, Tree, Triton, and Woody Islands in the Paracels
31 Aug 2018	HMS Albion	In vicinity of Paracel Islands
30 Sep 2018	USS Decatur	Within 12 nm of Gaven and Johnson Reefs in the Spratlys

26 Nov 2018	USS	In vicinity of Paracel Islands Chancellorsville
07 Jan 2019	USS McCampbell	Within 12 nm of Lincoln, Tree and Woody Islands in the Paracels
11 Feb 2019	USS Spruance and USS Preble	Within 12 nm of Mischief Reef in the Spratlys
06 May 2019	USS Chung Hoon and USS Preble	Within 12 nm of Gaven and Johnson Reefs in the Spratlys
19 May 2019	USS Preble	Within 12 nm of Scarborough Shoal
28 Aug 2019	USS Wayne E. Meyer	Within 12 nm of Fiery Cross and Mischief Reefs in the Spratlys
13 Sep 2019	USS Wayne E. Meyer	Paracel Islands but exact features/ location unspecified. Mission challenged concerned parties' "unilateral imposition of any authorization or notification requirement for innocent passage," and Beijing's 1996 declaration of straight baselines encompassing the isles
20 Nov 2019	USS Gabrielle Giffords	Within 12 nm of Mischief Reef
21 Nov 2019	USS Wayne E. Meyer	Challenged restrictions on innocent passage in the Paracel Islands
25 Jan 2020	USS Montgomery	Challenged restrictions on innocent passage imposed by China, Vietnam, and Taiwan, in the Spratly Islands, near Fiery Cross Reef and Johnson South Reef
10 Mar 2020	USS McCampbell	Challenged excessive maritime claims in the Paracel Islands
28 Apr 2020	USS Barry	Challenged excessive maritime claims in the Paracel Islands

29 Apr 2020	USS Bunker Hill	Within 12 nm of Gaven Reef in the Spratlys
28 May 2020	USS Mustin	Within 12 nm of Woody Island and Pyramid Rock in the Paracels
14 Jul 2020	USS Ralph Johnson	Within 12 nm of Cuarteron Reef and Fiery Cross Reef in the Spratlys
27 Aug 2020	USS Mustin	In the vicinity of Paracel Islands
09 Oct 2020	USS John S. McCain	In the vicinity of Paracel Islands; PLA statement claimed the destroyer entered the "territorial sea" of Paracels
22 Dec 2020	USS John S. McCain	In the vicinity of Spratly Islands
24 Dec 2020	USS John S. McCain	In the vicinity of Con Dao Islands, off south Vietnamese coast
05 Feb 2020	USS John S. McCain	In the vicinity of Paracel Islands
17 Feb 2020	USS Russell	In the vicinity of Spratly Islands
17 May 2021	USS Curtis Wilbur	Taiwan Strait transit

Source: Compiled by Collin Koh, Research Fellow, S. Rajaratnam School of International Studies, Institute of Defence and Strategic Studies, Singapore and posted on his Twitter account.

These FONOPs support the US understanding of the rules-based international order and are now being endorsed by many US allies, partners and like-minded nations which have conducted similar operations, much to the discomfort of China, which has issued warning/dèmarche/protests. It has also countered these through naval operations that have at times contradicted the rules laid down in the 1982 UNCLOS

In response, the PLA Navy conducted intense military maneuvers and air/naval exercises, including the launch of DF-26B and DF-21D ballistic missiles

as a tool of "strategic communication" to counter US intimidation by its carrier groups operating in the Pacific Ocean. China's intent was to convey to Washington that it would not be deterred as, it had been two-and-a-half decades ago during the 1995-1996 Taiwan Strait Crisis, when the US Navy deployed its aircraft carriers off Taiwan. The DF-21D and DF-26B ballistic missiles are potent weapons and have attracted the label of 'carrier killers.' These have figured prominently in US congressional hearings, threat perceptions, and in strategic and tactical calculus, particularly against the carrier battle groups. These missiles are mobile and in 2018, the Chinese state media reported that the "military had built an 'underground Great Wall' of 5,000 km (3,100 miles) of tunnels throughout the country to hide, move and launch its nuclear counterstrike forces."[59]

With regard to the force structure of the PLA Navy, the Chinese aircraft carrier program has been the centerpiece of debate and discussion among the strategic community and the naval connoisseurs, but the rapid buildup of Chinese expeditionary capability merits equal attention. The Type 071 Amphibious assault ship and Type 075 landing helicopter dock are noteworthy 'platforms' designed for power projection and carry STOVL-type fighter jets, surveillance planes and helicopters. These can also "operate with aircraft carriers, letting the carriers seize air superiority as they transport troops, tanks, and armor vehicles to land, significantly improving the Chinese Navy's combat capability in a comprehensive system."[60] China plans to use the LPD-type vessels for at least four purposes: (a) combat operations against Taiwan; (b) protecting the occupied islands in the South China Sea; (c) non-combatant evacuation operation (NEO); and (d) delivery of 'public goods at sea.'

Naval Confidence Building

The above narrative illustrates the ongoing power rivalry between the United States and China in the 21st century, which is currently being played out in the Western Pacific region. It mirrors the US-Soviet contestations during the Cold War. Both sides signed the 1972 Incidents at Sea Agreement (INCSEA) for confidence-building measures (CBM) at sea between the

US and Soviet navies. Under this agreement, the commanding officers of the ships were expected to "observe the rules of the road" and be "judicious in their actions keeping in mind the other side's interests and safety."[61] Another noteworthy naval CBM involves the Code for Unplanned Encounters at Sea (CUES), a multilateral agreement on procedures for "conduct at sea" during unexpected sightings or meetings of warships, which was adopted by 21 countries[62] of the Asia-Pacific region in 2014.

The Western Pacific region is perhaps the most contested sea space of the globe. It is also the most militarized region with six of the world's 10 largest standing militaries and four nations with nuclear weapon capabilities. The security dynamics in the region is marked by politico-diplomatic tensions, military infrastructure build-up, and aggressive naval-air posturing that is quite similar to the Cold War period. The United States and China have not only deployed their respective military capabilities, but have remained in a state of high military readiness, albeit short of war, a situation which necessitates confidence building between the two navies.

The 1995 - 1996 Taiwan Strait Crisis can be labelled as the starting point of the ongoing US-China contestation at sea. Although the two navies did not confront each other till the beginning of the crisis, a PLA Navy nuclear submarine was spotted in 1994, lurking 450 NM from US aircraft carrier Kitty Hawk in the Yellow Sea. It came as close as 21 NM from the aircraft carrier and thereafter altered course and disengaged. This incident forced both sides to explore arrangements or an agreement to avoid misunderstandings and inadvertent tensions at sea, and work towards common communication procedures.[63]

In 1998, the United States and China signed the "Agreement Between the Ministry of National Defence of the PRC and the Department of Defence of the USA on Establishing a Consultation Mechanism to Strengthen Military Maritime Safety."[64] The Military Maritime Consultative Agreement (MMCA) aimed to increase mutual understanding and reduce the chances of miscalculation between respective naval and air forces.[65] It emerged as a forum for dialogue on maritime communication issues under

which both sides met on regular basis to enhance mutual trust and encourage cooperation between the two navies.[66] The mechanism has since played an important role in enhancing mutual understanding and trust, promoting China-US maritime safety, and facilitating exchanges and cooperation between the two navies.

Notwithstanding the provisions of the MMCA, the US Navy and the PLA Navy have continued to challenge each other's ships and aircraft. The 2001 EP-3 spy plane incident; [67] the 2006 incident involving the USS Kitty Hawk and a Chinese Song class diesel submarine;[68] the 2015 Chinese submarine stalking aircraft carrier USS Ronald Reagan;[69] and many such incidents involving other ships and shadowing of military aircraft are manifestations of aggressive posturing by both sides. Significantly, the incidents raise questions about intentions and commitment on both sides to uphold the MMCA.

It is fair to argue that after two-and-a-half decades, both sides are playing out the 1995 - 1996 Taiwan Strait Crisis but this time involving also the South China Sea. Since June 2020, naval maneuvers by China and the United States (occasionally joined by its allies and partners), show of force through drills and exercises, FONOPs and standoffs have been regular features in the region. The security situation in the South China Sea-East China Sea-Yellow Sea, a space encompassing China's First Island Chain, is tense and can potentially turn into a flashpoint in which the centre of gravity could be Taiwan and its adjacent waters. For instance, in August 2020, China conduced simultaneous maneuvers and live firing drills in the Yellow Sea, East China Sea and the South China Sea.

China has relentlessly intimidated Taiwan and attempted to cross the 'median line' representing the Taiwanese Air Defence Identification Zone (ADIZ) in the Taiwan Strait and conducted naval drills to demonstrate and showcase its military power that can be brought to bear to capture Taiwan.[70] The Taiwanese have accused China of "misinformation campaigns, hybrid warfare, and... grey zone activities", and these are indicators that forces in Beijing "seem to be preparing for their final military

assault against Taiwan," and they assert that they will "defend ourselves to the very end." [71]

Both sides do not appear to show any signs of relenting, necessitating an urgent dialogue among their respective military leaders. Such a dialogue can build upon the 1998 MMCA, which remains stalled since December 2020. It now emerges that the United States has urged China for a meeting and according to Pentagon spokesman John Kirby, the US officials "certainly desire to have a dialogue with our counterparts in Beijing" and "we're still working our way through what that's going to look like and how that's going to transpire."[72]

Conclusion

China is now under tremendous pressure from the Indo-Pacific and Euro-Atlantic Quads, which have added to its worries. These Quads are unlikely to "wane and disappear" like "sea foam" as alluded to by Chinese Foreign Minister Wang Yi, who had dismissed the Indo-Pacific Quad two years ago. The US-China relations remain fraught and unlikely to move to a rapprochement anytime soon. Indeed, the year 2020 saw a further deterioration in the relationship, as the trade war continued unabated, strategic decoupling in the tech sector deepened, and clashes arose over political repression in Hong Kong and rights abuses in Xinjiang. The Covid-19 pandemic served only to exacerbate these tensions. The US-China rivalry is perhaps the most pressing geopolitical issue of the day. It creates uncertainty and risk, retards trade, growth and prosperity, and diverts attention away from critical issues such as climate change.

Currently, the Indo-Pacific Quad is poised to conduct more war games, naval exercises and Freedom of Navigation (FON) missions in the South China Sea.

Notes

[1] David F. Helvey, Acting Assistant Secretary of Defense for Indo-Pacific Security Affairs, Office of the Secretary of Defense, Statement before the 116th Congressional Committee on Armed Services, US House of Representatives, 10 March, 2021, https://docs.house.gov/meetings/AS/AS00/20210310/111316/HHRG-117-AS00-Bio-HelveyD-20210310.pdf (accessed 23 March 2021).

[2] Statista, "The biggest armies in the world ranked by active military personnel in 2021," 10 September 2021. https://www.statista.com/statistics/264443/the-worlds-largest-armies-based-on-active-force-level/ (accessed 13 April 2021).

[3] US President Joseph Biden Jr., "Interim National Security Guidance," White House, March 2021.https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf (accessed 13 April 2021).

[4] USNI News, "Document: McCain White Paper on Future Defense Budget Recommendations," 17 January, 2017.https://news.usni.org/2017/01/17/document-mccain-white-paper-defense-budget-recommendations(accessed 29 March 2021).

[5] Defense News, "John McCain has a Big-League Defense Buildup Too," 16 January 2016.https://www.defensenews.com/congress/2017/01/16/john-mccain-has-a-big-league-defense-buildup-too/(accessed 29 March 2021).

[6] Mark Montgomery and Bradley Bowman, "Listen to America's Top Commander in the Indo-Pacific and Fund the Pacific Deterrence Initiative," War on the Rocks, March 2021.https://warontherocks.com/2021/03/listen-to-americas-top-commander-in-the-indo-pacific-and-fund-the-pacific-deterrence-initiative (accessed 20 June 2020).

[7] "Investments in theater missile defense, expeditionary airfield and port infrastructure, fuel and munitions storage, and other areas will be key to America's future force posture in the Indo-Pacific." See Senator Jim Inofe and Senator Jack Reed, "The Pacific Deterrence Initiative: Peace through Strength in the Indo-Pacific," War on the Rocks, 28 May 2020. https://warontherocks.com/2020/05/the-pacific-deterrence-initiative-peace-through-strength-in-the-indo-pacific/ (accessed 20 June 2020).

[8] US Department of Defense, "European Deterrence Initiative," Office of the Under Secretary of Defense, February 2020.https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2021/fy2021_EDI_JBook.pdf (accessed 20 June 2020).

[9] David Jackson and Courtney Subramaniam, "Donald Trump says he wants the number of U.S. troops in Germany cut in half," USA Today, 15 June 2020.https://

www.usatoday.com/story/news/politics/2020/06/15/donald-trump-cut-number-u-s-troops-germany-half/3194223001/ (accessed 20 June 2020).

[10] Lloyd James Austin III., "Austin announces increase to US military presence in Germany," Cable News Network (CNN), 13 April, 2020.https://amp-cnn-com.cdn.ampproject.org/c/s/amp.cnn.com/cnn/2021/04/13/politics/lloyd-austin-increase-us-troops-germany-nato/index.html(accessed 14 April 2021).

[11] Barbara Starr and Jennifer Hansler, "US considering sending warships to Black Sea amid Russia-Ukraine tensions," Cable News Network (CNN), 8 April 2021.https://edition.cnn.com/2021/04/08/politics/ukraine-us-black-sea/index.html(accessed 14 April 2021).

[12] Aakriti Sharma, "US Military Draws Up $27 Billion Plan to Counter China in the Indo-Pacific Region," *Eurasian Times*, 5 March 2021.https://eurasiantimes.com/us-military-draws-up-27bn-plan-to-counter-china-in-the-indo-pacific-region/ (accessed 29 March 2021).

[13] Admiral Philip S.Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command,Statement before the House Armed Services Committee on U.S. Indo-Pacific Command Posture, 10 March 2021. https://docs.house.gov/meetings/AS/AS00/20210310/111316/HHRG-117-AS00-Wstate-DavidsonP-20210310.pdf (accessed 23 March 2021)

[14] Ibid.

[15] New York Times, "National Defense Authorization Act (NDAA) 2020 Section 1253 Assessment."https://int.nyt.com/data/documenthelper/6864-national-defense-strategy-summ/8851517f5e10106bc3b1/optimized/full.pdf (accessed 20 April 2021).

[16] Seth Robson, "New base expected to host thousands of Marines begins to take shape on Guam," *Stars and Stripes*, 12 March 2020.https://www.stripes.com/news/pacific/new-base-expected-to-host-thousands-of-marines-begins-to-take-shape-on-guam-1.622106(accessed 06 April 2021).

[17] Vijay Sakhuja, "US Augments Military Bases, Revitalizes Lily Pads and Pushes for Visiting Forces Agreements in the Pacific Ocean," Centre for Public Policy Research (CPPR), 10 July 2020. https://www.cppr.in/articles/us-augments-military-bases-revitalizes-lilly-pads-and-pushes-for-visiting-forces-agreements-in-the-pacific-ocean(accessed 06 April 2021).

[18] Guam Daily Post, "$743B proposed for defense spending," 13 December 2019. https://www.postguam.com/news/local/b-proposed-for-defense-spending/article_cc375146-1c0c-11ea-b0eb-0b45672f030f.html (accessed 06 July 2020).

[19] Joe Gould, "Eyeing China, Indo-Pacific Command seeks $27 billion deterrence fund," *Defense News*, 2 March 2021.https://www.defensenews.com/congress/2021/

03/02/eyeing-china-indo-pacific-command-seeks-27-billion-deterrence-fund/ (accessed 21 April 2021).

[20] Aaron Mehta, "Inside US Indo-Pacific Command's $20 billion wish list to deter China — and why Congress may approve it," *Defense News*, 2 April, 2020.https://www.defensenews.com/global/asia-pacific/2020/04/02/inside-us-indo-pacific-commands-20-billion-wish-list-to-deter-china-and-why-congress-may-approve-it (accessed 06 July 2020).

[21] Mallory Shelbourne, "Davidson: Aegis Ashore on Guam Would 'Free Up' 3 Navy Destroyers," *USNI News*, 4 March 2021. https://news.usni.org/2021/03/04/davidson-aegis-ashore-on-guam-would-free-up-3-navy-destroyers (accessed 23 March 2021).

[22] Senator Jim Inhofe and Senator Jack Reed, "Fiscal Year 2021: National Defense Authorization Act (NDAA)," US Senate Armed Forces Committee.https://www.armedservices.senate.gov/imo/media/doc/FY%2021%20NDAA% 20Summary.pdf (accessed 06 April 2021).

[23] It is a tiny coral atoll measuring 5-sq mi and had remained uninhabited for centuries but is now marginally habitable. It had no water supply and residents relied on rainwater and reverse osmosis.

[24] L. Myers, "The US Military is Pouring Hundreds of Millions of Dollars into Tiny Wake Island," KITV, 19 October 2019."https://www.kitv.com/story/41204820/the-us-military-is-pouring-hundreds-of-millions-of-dollars-into-tiny-wake-island (accessed 06 April 2021).

[25] Ibid.

[26] Florida Today, "CNMI, Navy discussions about Pagan remain on back burner," 29 August 2019.https://www.floridatoday.com/story/news/2019/08/29/cnmi-governors-office-no-plans-discussions-navy-pagan/2148976001/ (accessed 06 April 2021).

[27] C.Wallace Gregson, Jr. and Jeffrey W. Hornung. "The United States Considers Reinforcing its 'Pacific Sanctuary,'" War on the Rocks, 12 April 2021.https://warontherocks.com/2021/04/the-united-states-considers-its-pacific sanctuary/?fbclid=IwAR0SQaX6Inb1jBrD8cSKhq47BZXCsYEgQy1PmlPuMFvWAyV9VK-NU_T9tZI (accessed 13 April 2021).

[28] Thisanka Siripala, "US and Japan Name China as Threat to International Order," *The Diplomat*, 17 March 2021.https://thediplomat.com/2021/03/us-and-japan-name-china-as-threat-to-international-order/ (accessed 13 April 2021).

[29] "Japan Takes the Lead in Western Pacific Maritime Security,"Asia Policy, Volume 16.2, April 2021.

[30] Andrew Park and Elliot Silverberg, "Mutual Suspicion, Mutual Threats: Getting Japan and South Korea to Work Together," War on the Rocks, 6 April 2021.https://warontherocks.com/2021/04/mutual-suspicion-mutual-threats-getting-japan-and-south-korea-to-work-together/ (accessed 13 April 2021).

[31] Reuters, "Factbox: U.S. and South Korea's security arrangement, cost of troops," 13 November 2019.https://www.reuters.com/article/us-southkorea-usa-military-factbox-idUSKBN1XN09I(accessed 10 April 2021).

[32] Andrew S. Ericson and Ryan D. Martinson, "Records Expose China's Maritime Militia at Whitsun Reef." *Foreign Policy*, 29 March 2021.https://foreignpolicy.com/2021/03/29/china-militia-maritime-philippines-whitsunreef/ (accessed 15 April 2021).

[33] Vijay Sakhuja, "Philippines Infuses New Life in its Relationship with the US," Kalinga International Foundation, 18 June 2020.http://kalingainternational.com/Dr-Vijay-Sakhuja8.html (accessed 10 April 2021).

[34] CNN Philippines, "Chinese armed attacks in West PH Sea to 'trigger US obligations' in defense treaty – official," 8 April 2021.https://www.cnnphilippines.com/world/2021/4/8/China-West-Philippine-Sea-Julian-Felipe-Reef-US-mutual-defense-treaty.html (accessed 10 April 2021).

[35] Radio Free Asia, "Philippines Welcomes US Backing to help Defend Manila in South China Sea," 8 April 2021. https://www.rfa.org/english/news/china/defend-04082021152123.html (accessed 25 April 2021).

[36] The Guardian, "Largest Chinese breach of Taiwan air zone in a year after US warning," 12 April 2021.https://www.theguardian.com/world/2021/apr/12/largest-chinese-breach-of-taiwan-air-zone-in-a-year-after-us-warning (accessed 13 April 2021).

[37] US Department of State, "Secretary Antony J. Blinken with Chuck Todd of NBC's Meet the Press," 29 August 2021.https://www.state.gov/secretary-antony-j-blinken-with-chuck-todd-of-nbcs-meet-the-press/#.YHNMnuDoaq4.twitter (accessed 10 April 2021).

[38] Joseph V. Micallef, "How Effective Are Freedom of Navigation Operations? A US Navy Officer's Perspective," Military.com, 2 April 2021.https://www.military.com/daily-news/opinions/2021/04/02/how-effective-are-freedom-of-navigation-operations-us-navy-officers-perspective.html (accessed 13 April 2021).

[39] The Hindu, "U.S. rejects China's claims in South China Sea," 14 July 2020.https://www.thehindu.com/news/international/us-rejects-chinas-claims-in-south-china-sea/article32073839.ece (accessed 13 April 2021).

[40] William Choong, "Why the Quad will endure," Op-Ed, 9Dashline, 13 April 21. https://www.9dashline.com/article/why-the-quad-will-endure (accessed 14 April 2021).

[41] Richard Javad Heydarian, "Why Biden Should Pursue 'Minilateralism' with ASEAN," Asia Maritime Transparency Initiative (AMTI), 26 March 2021.https://amti.csis.org/why-biden-should-pursue-minilateralism-with-asean/ (accessed 22 April 2021).

[42] Ibid.

[43] "Fiscal Year 2021: National Defense Authorization Act (NDAA)." https://www.armed-services.senate.gov/imo/media/doc/FY%2021%20NDAA%20Summary.pdf (accessed 06 July 2020).

[44] Carl Thayer, "Will Vietnam Lease Cam Ranh Bay to the United States?" The Diplomat, 6 May 2020. https://thediplomat.com/2020/05/will-vietnam-lease-cam-ranh-bay-to-the-united-states/ (accessed 06 July 2020).

[45] US Department of State, "U.S. Security Cooperation with Australia," Fact Sheet, 14 September 2021.https://www.state.gov/u-s-security-cooperation-with-australia/ (accessed 06 July 2020).

[46] Stephen Kuper, "Australia's own Indo-Pacific fortress – The case for redeveloping Cocos Islands," Defence Connect, 28 May 2019. https://www.defenceconnect.com.au/key-enablers/4124-australia-s-own-indo-pacific-fortress-the-case-for-redeveloping-cocos-islands (accessed 06 July 2020).

[47] Gina Harkins, "A Resurrected First Fleet is the Weapon the Navy Needs to Counter China, Former Sec Nav Says," Military.com, 16 April 2021.https://www.military. com/daily-news/2021/04/16/resurrected-first-fleet-weapon-navy-needs-counter-china-former-secnav-says.html (accessed 22 April 2021).

[48] Snehesh Alex Philip, "US plans new fleet for Indo-Pacific region as it focuses on ties with India, countering China," The Print, 18 November 2020.https://theprint.in/diplomacy/us-plans-new-fleet-for-indo-pacific-region-as-it-focuses-on-ties-with-india-countering-china/546771/ (accessed 22 April 2021).

[49] Press Trust of India (PTI), "Countries should be able to make their own political choices: PM Modi, Biden, Morrison, Suga in joint op-ed," *Business Today*, 14 March 2021.https://www.businesstoday.in/current/economy-politics/countries-should-be-able-to-make-their-own-political-choices-pm-modi-biden-morrison-suga-in-joint-op-ed/story/433810.html (accessed 13 April 2021).

[50] The Tribune, "Quad leaders: Committed to free, open, secure and prosperous Indo-Pacific region," 15 March 2021. https://www.tribuneindia.com/news/world/quad-leaders-committed-to-free-open-secure-and-prosperous-indo-pacific-region-225102 (accessed 21 April 2021).

[51] Scroll.in, "Some countries exaggerate Chinese threat, should abandon Cold War mentality: Beijing on Quad meet," 15 March 2021.https://scroll.in/latest/989624/

some-countries-exaggerate-chinese-threat-should-abandon-cold-war-mentality-beijing-on-quad-meet (accessed 13 April 2021).

[52] "A French Navy SSN Patrolled the South China Sea." https://webcache.googleusercontent. com/search?q=cache:f3-yhuP2aSAJ:https://www.navalnews.com/ naval-news/2021/02/a-french-navy-ssn-patrolled-the-south-china-sea/+&cd=14&hl=en&ct=clnk&gl=in (accessed 21 April 2021).

[53] VOA, "US Hails German Warship Plan to Sail South China Sea," 4 March 2021. https://www.voanews.com/east-asia-pacific/us-hails-german-warship-plan-sail-south-china-sea#:~:text=German%20government% 20officials%20said% 20on,South% 20China%20Sea%20since%202002. (accessed 21 April 2021).

[54] Masaya Kato, "Japan and Germany to sign intel-sharing pact in coming weeks," *Nikkei Asia*, 18 March 2021.https://asia.nikkei.com/Politics/International-relations/Japan-and-Germany-to-sign-intel-sharing-pact-in-coming-weeks#:~:text=Japan%20and%20Germany%20to%20sign%20intel% 2Dsharing% 20pact%20in%20coming%20weeks,Two%20sides%20to&text=TOKYO% 20%2D%2D%20Japan%20and%20Germany,in%20the%20Indo%2DPacific% 20region (accessed 21 April 2021).

[55] George Allison, "MoD remove mention of Dutch warship from carrier deployment," *UK Defence Journal*, 20 January 2021.https://ukdefencejournal.org.uk/mod-remove-mention-of-dutch-warship-for-carrier-deployment (accessed 21 April 2021).

[56] Sebastian Strangio, "Following France and Germany, the Netherlands Pivots to the Indo-Pacific," The Diplomat, 18, November 2020.https://thediplomat.com/2020/11/following-france-and-germany-the-netherlands-pivots-to-the-indo-pacific/ (accessed 22 April 2021).

[57] Council of the European Union, "EU Strategy for cooperation in the Indo-Pacific-Council: Conclusions (16 April 2021)."https://data.consilium.europa.eu/doc/document/ST-7914-2021-INIT/en/pdf (accessed 21 April 2021).

[58] Zhang Hui and Zhao Yusha, "UK tilting toward Indo-Pacific to counterweight China 'immature' decision," *Global Times*, 16 March 2021.https://www.globaltimes.cn/page/202103/1218586.shtml (accessed 21 April 2021).

[59] Liu Zhen "China now has the nuclear strength to hit back at a first strike, former PLA colonel says." South China Morning Post (SCMP), 17 November 2020.https://www.scmp.com/news/china/military/article/3110091/china-now-has-nuclear-strength-hit-back-first-strike-former-pla (accessed 13 April 2021).

[60] Liu Xuanzun, "China's second Type 075 amphibious assault ship starts first sea trial reports," *Global Times*, 20 December 2020.https://www.globaltimes.cn/page/202012/1210707.shtml (accessed 21 April 2021).

[61] Vijay Sakhuja, "Cold War in the Arabian Sea," *Strategic Analysis*, Vol XXV, No 3, June 2001, IDSA.https://www.idsa-india.org/an-jun-3.htm (accessed 01 May 2021).

[62] Australia, Brunei, Cambodia, Canada, Chile, China, France, Indonesia, Japan, Malaysia, New Zealand, Papua New Guinea, Peru, the Philippines, Russia, Singapore, South Korea, Thailand, Tonga, the United States and Vietnam.

[63] Vijay Sakhuja, *Asian Maritime Power in the 21st Century: Strategic Transactions: China, India and Southeast Asia* (Singapore: ISEAS, 2011), p.189.

[64] The text of the agreement available at the website of the *Federation of American Scientists* at http://www.fas.org/nuke/control/sea/text/us-china98.htm (accessed on 01 May 2021).

[65] See "The Military Maritime Consultative Agreement," *US Naval Proceedings*, August 1999.

[66] The first annual MMCA meeting in July 1998 established timeline and goals for two subsequent working group meetings that were completed in the summer of 1999. In late1998, the first working group meeting was held in San Diego to implement the charter established by Secretary Cohen and General Chi Hotian.

[67] Shirley A. Kan, et al. "China-U.S. Aircraft Collision Incident of April 2001: Assessments and Policy Implications," CRS Report for Congress, 10 October 2001. https://fas.org/sgp/crs/row/RL30946.pdf (accessed 02 May 2021).

[68] John J. Tkacik, Jr., "China's Quest for a Superpower Military," Backgrounder No. 2036, 17 May 2007.

[69] Bill Gertz, "Chinese Submarine Stalked U.S. Aircraft Carrier," The Washington Free Beacon, 3 November 2015.https://freebeacon.com/national-security/chinese-submarine-stalked-us-aircraft-carrier/ (accessed 02 May 2021).

[70] British Broadcasting Corporation (BBC), "China holds military drill as US envoy visits Taiwan," 18 September 2020. https://www.bbc.com/news/world-asia-54200913 (accessed 12 April 2021).

[71] Associated Press (AP), "China says US increasing military activity directed at it," Defense News, 29 April 2021.https://www.defensenews.com/flashpoints/2021/04/29/china-says-us-increasing-military-activity-directed-at-it/ (accessed 02 May 2021).

[72] Teddy Ng, "US still seeking dialogue with Chinese military chiefs, Pentagon says," *South China Morning Post* (SCMS), 26 May 2021. "https://www.scmp.com/news/china/diplomacy/article/3134856/us-still-seeking-dialogue-chinese-military-chiefs-pentagon (accessed 28 May 2021)

Chapter 7

Naval Nuclear Dynamics in the Indo-Pacific Region

The Asia-Pacific and the Indo-Pacific along with the West Asia-Gulf region have emerged as the most intense theaters for nuclear weapons and ballistic and cruise missiles. The proliferation of WMDs has been high, as conflicts and levels of securitization have been rising steadily in this region since the Cold War.

Asia has emerged as the global "fulcrum" of WMD proliferation and the most nuclear-dense region, encompassing a conglomeration of interlocking nuclear triangles such as US-China-Japan (as a non-nuclear power with US extended nuclear deterrence), US-North Korea-South Korea (as a non-nuclear power with US extended nuclear deterrence), US-China-India, US-Russia-China, and India-China-Pakistan.

The three regions identified in this theater are the West Asia-Persian Gulf, the South Asia and the Indian Ocean, and the East Asian region that encompasses the Indo-Pacific. The WMDs order features the overlay of the nuclear weapon states of the United States, Russia and China and the regional states of Israel, Iran, India, Pakistan and North Korea. While the three established nuclear powers have maintained the stability of deterrence among themselves, the new nuclear weapon states have displayed their zest to acquire WMDs/nuclear weapons and ballistic and cruise missiles to deal with regional conflicts.

Nuclear weapons and their impact on deterrence is a complex paradigm yet vital in terms of strategic stability and regional order. The US-Russia, US-China, Russia-China and the second-tier nuclear powers, namely the United Kingdom and France, have reached the desired levels of strategic stability in deterrence. However, the continuing quest by the new nuclear states has introduced several trends and transformed the global proliferation environment. While the new nuclear states have all been successful in manufacturing and deploying first-generation nuclear devices such as free-fall bombs deployed on fighter attack aircraft, the subsequent miniaturization and deployment as nuclear warheads atop missiles has taken quite a long time. The transformation of nuclear weapons from free-fall bombs to miniaturized warheads loaded on ballistic and cruise missiles has been achieved effectively only in recent years. Advances in technology development, guidance and satellite navigation, targeting technologies and operational strategies have improved over the years.

The proliferation of delivery vehicles and fissile material stocks of the new nuclear states has resulted in both vertical and horizontal proliferation patterns. Three important benchmarks characterize the nuclear arsenal of the established nuclear powers and the new nuclear states: credibility, survivability and stability of the force posture. There have been widespread concerns about the nuclear forces of the new nuclear states on the basis of these benchmarks and the inherent challenges arising from the stability-instability paradox of these states in relation to the escalatory potential of any conflict.

At the start of 2020, nine states—the United States, Russia, the United Kingdom, France, China, India, Pakistan, Israel and the DPRK—possessed approximately 13,400 nuclear weapons, of which 3,720 were deployed with operational forces.[1]

Salience of Naval Nuclear Deployment

The salience of naval nuclear deployments needs to be inferred and analyzed as this constitutes the increasingly preferred mode among the nuclear

weapons states and the new nuclear nations. Naval nuclear deployments are relatively invulnerable and dispersible. Nuclear deterrence logic dictates that the credibility of nuclear arsenals relies on the reliability of any retaliatory strike as that would balance and bolster deterrence. The logic of deterrence dictates that the relative invulnerability of the second-strike capability is vital for the survival of a state that faces the probability of a nuclear first strike. In the context of nuclear deployments, specifically naval nuclear deployments, it is essential to analyze the logic of second-strike capability, which underscores the importance of the relative invulnerability of retaliatory capability.

Land-based ballistic and cruise missiles as well as air-delivered cruise missiles and free-fall bombs are all vulnerable to a potential decapitating first strike. Such a strike could be launched by a nuclear power or a new nuclear state with a view to cripple the nuclear first strike capability deployed in both air-delivered and land-based ballistic or cruise missiles. Therefore, relative invulnerability is a criterion in all second-strike capability forces. Relative invulnerability is quite effective when the nuclear delivery vehicles and their payloads have been deployed on board ships and submarines as they are effectively dispersed and the targeting of naval platforms is a complex task, given the opacity of the sea.

In addition to their relative invulnerability, naval platforms, whether on the surface or submerged, have the advantage of quick maneuvering, aided by the stealth of the sea. Hence the precise counterforce targeting of naval platforms has been extremely complex. Naval-based nuclear deployments have thus emerged as the assured retaliatory capability of the nuclear powers (P-5), which include the United States, Russia, China, France and the United Kingdom. The possession of naval nuclear capability completes the deterrence equation as it establishes the full scale of retaliatory capability along with a first-strike capability. The unique character of naval nuclear deployment stems from five related issues:

Dispersal of assets: Nuclear payloads deployed on board surface ships and submarines have the greatest advantage of being dispersed swiftly

in the opacity of the world's oceans. Given the vast oceanic theaters and the advantage of very low or ultra-low frequency bandwidth of communications, the dispersal of a submerged platform carrying ballistic missiles with nuclear payloads is a routine matter. The main challenge is that the dispersal of the platforms could lead to loss of secure communication. This could happen through the voluntary disobedience of the ship's commander, who decides to act by himself, given the enormous destructive power at his command, by autonomously launching the nuclear warheads. However, the dispersal of nuclear assets is viewed as the optimal means to reinforce the second-strike capability of the defending nuclear states. In the contemporary context, the nuclear powers as well as the new nuclear states are investing more in sea-based nuclear platforms.

Flexible targeting: This is a robust characteristic of sea-based nuclear deterrence. Surface ships deploying sea-launched cruise missiles and submarines deploying sea-launched ballistic and cruise missiles provide the nuclear powers and the new nuclear states with the flexibility to change and employ rapid targeting. Flexible targeting is based on the logic of flexible response doctrines of nuclear deterrence that enable the nuclear command authority to use nuclear deterrence not only in coercive attacks on the adversary but also for the purpose of 'compellence' and 'dissuasion.' The speedy deployment of nuclear-propelled submarines bearing nuclear missiles and payloads provides rapid options in flexible targeting.

Stealthy and secure launch: This is the primary attribute of sea-based nuclear-powered platforms. The ability of nuclear-powered submarines to delve deeper and remain in stealth posture has been its primary advantage. Running silent and deep enables the submerged platform to position itself for the 'cold launch' of its SLBM payload from the depth by using a pressurized pop-up gas that ejects the missile from the silo and above the surface of the sea, before the point of ignition for target firing. The stealthy launch enables the submerged platform to rapidly move away after firing the missile payload. However, nuclear submarines launching cruise missiles have to surface to fire the payload. Cruise missiles carrying

nuclear payloads are however air-breathing and could employ endo-atmospheric transmission to strike the targets.

Secure communication: This is an important operational attribute to the sea-launched nuclear missile systems. The use of very low or ultra-low frequency bandwidth enables the reliable encryption of communication links with the submerged platform, transmitted through the density of water over long distances. Reliable communication is an integral part of the C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) architecture. While many strides have been made in this area, it is the nuclear powers that have perfected this technology architecture though with several limitations. The new nuclear states are still in the process of developing this technology and do face serious technological barriers in overcoming these limitations.[22]

Continuous at Sea Deterrence: This envisages the maintenance of a nuclear-powered and nuclear payload-equipped submarine in continuous sea patrols with a view to maintain a deterrence posture vis-à-vis a state's adversaries. Continuous at Sea Deterrence (CASD) enables the nuclear power or the nuclear state to sustain marine deterrence and also acts as a strategic insurance against any surprise first attack, since the retaliatory strikes could follow from the deployed nuclear platform. The United States, Russia, the United Kingdom, France and China do maintain CASD that enables effective deterrence as well as enhances the war fighting posture of these powers. Israel has also been deploying its Dolphin class submarines armed with the Popeye Turbo cruise nuclear-tipped missiles vis-à-vis Iran.[3]

The salience of the naval nuclear deployments is that it enables and envisages the maintenance of second-strike capability or assured retaliatory capability against a punitive first strike that would decapitate the land-based nuclear assets of a nuclear power or state. The challenges of maintaining sea-based deterrence exact costs in terms of affordability and sustainability, based on the number of platforms deployed at any given time and the associated issues of readiness and mobilization. Besides maintaining the deterrence posture, there are challenges stemming from the anti-submarine

warfare that would be constantly targeting the sea-based nuclear deterrent, which is deployed in the fleet ballistic and cruise missile submarines. Thus, the fleet ballistic missile submarines are usually accompanied by the fleet attack submarines, which would provide protection to the platforms or they fleet ballistic submarines are usually deployed in bastions of sheltered protection and are secured by attack submarines from adversary attack submarines. Sea-based missile defenses are yet another threat posed by the adversary that could potentially intercept the launch of sea-based ballistic and cruise missiles in the pre-boost or post-boost phase.

The salience of naval nuclear deployments has prompted the quest for acquiring assured retaliatory capability and the endeavor to achieve robust deterrence, despite the complexities that the new nuclear states and even nuclear powers like China are contending with in their deployment.

Naval Nuclear Dynamics of Nuclear Weapon States

The naval nuclear dynamics of the Nuclear Weapon States (NWS) was led by the United States with its pioneering work in the design and building of naval nuclear research reactors since the 1950s. The quest of the NWS was to design robust and optimal naval nuclear reactors that were miniaturized to suit the hull requirements of the nuclear submarines in the fleet ballistic missile submarines as well as the fleet attack submarines. The relentless development of technology resulted in the transformation that saw nuclear propulsion as the fundamental requirement for naval nuclear deployment of submarines with fleet ballistic missiles, followed later by the deployment of cruise missiles.

Naval Nuclear Capability: Country Profiles

The United States of America

The US Navy operates its nuclear-powered strategic fleet ballistic missile submarines through a fleet of 14 Ohio class submarines. Out of this fleet of Submersible Ship Ballistic Nuclear (SSBN) vessels, 12 submarines are usually operational, while two are at any time in the process of refuelling and overhauling. Of the 14 submarines, eight are based at the Kitsap naval

submarine base in Washington State on the Pacific coast and six are based at the Kings Bay naval submarine base in Georgia. Each of the submarines carry up to 20 Trident II D5 SLBMs. Given the Strategic Arms Reduction Treaty Strategic Arms Reduction Treaty (START) requirements, there are 12 deployable SSBNs and they carry no more than 240 missiles.[4]

On the normal routine patrol, around eight to ten SSBNs are normally at sea, of which four or five are on alert in their designated patrol areas and ready to fire their missiles within 15 minutes of receiving the launch order. Since 2017, the US Navy has been replacing its Trident II D5 SLBMs with an enhanced version known as the D5LE (LE for 'life extended'). This was followed by another 24 missiles deployed in 2018 with 24 more deployed in 2019 and the upgrades are likely to be concluded by 2024.[5] The D5LE is equipped with the new Mark 6 (Mk-6) guidance systems. The D5LE will arm Ohio class SSBNs for the remainder of their service lives up to 2042. This service life extension would also be deployed on British Trident submarines.

The US Navy would be arming the D5LE, the new Columbia class SSBN and the USS Columbia (SSBN-826) that are scheduled to start patrols in 2031. Subsequently, the D5LE would be replaced by a new SLBM, presently known as SWS (Strategic Weapon System) 534 or D5LE2.[6] The 2018 US Nuclear Posture Review (NPR) stated that the US Navy would commence studies in 2020 to define a cost-effective, credible and effective SLBM that would be the standard deployment in the incoming Columbia class submarines.[7]

Russia

The Russian Navy has an operational fleet of 10 nuclear-armed and nuclear-powered ballistic missile submarines (SSBNs). The fleet has six Soviet-era Delfin class (Project 667BDRM or Delta IV NATO designation) submarines, one Kalmar class (Project 667BDR or Delta III) submarine, and three Borei class (Project 955/A) submarines, out of a planned total of 10. One of the former Project 941 (Typhoon) SSBN has been converted to a test-launch

platform for SLBMs although it is not nuclear-armed.[8] Currently, two of the Borei class SSBNs are operational with the Pacific Fleet and the Northern Fleet. The first of the improved design Borei-A (Project 955A) is being built, while four others are under construction and expected to enter service over the next decade.[9] Russia aims to maintain an SSBN fleet equal to that of the United States. Each SSBN type is being equipped with 16 ballistic missiles and the Russian fleet can carry a total of 720 warheads. Out of the total of 10 submarines, one or two SSBNs are normally undergoing repairs and maintenance at any given time and are not armed. The nuclear warhead loading on some missiles has been reduced to meet the total warhead limit under the New Strategic Arms Reduction Treaty (the New START). This brings the estimated number of deployed warheads to about 560 out of the total of 720 warheads.

China

China's nuclear force modernization has focused more on improving the range, accuracy and mobility of its land-based missiles. However, enough effort and resources have also gone into advancing the submarine force. China is serious about equipping its sea-based nuclear force with the intent to reinforce the assured retaliatory capability with massive force, in case of a nuclear conflict. China's efforts are being focused on improving its ability to penetrate the US missile defenses in any such conflict.

Future generations of Chinese nuclear submarines that are currently being built are capable of operating undetected in the open ocean and could challenge US missile defenses by attacking from an unexpected launch azimuth from an unanticipated location.[10]

China has now progressed well beyond its first experiment in SSBN technology: the sole, aging Type 092 or Xia-class boat that was designed in the 1970s, commissioned in the 1980s and unveiled in a 2009 international fleet review. This aging submarine has been replaced by its successor, the Type 094 Jin class, based in the Yulin naval base on Hainan Island in the South China Sea.[11]

The Jin class Type 094 is considered to be China's first "credible sea-based nuclear deterrent" and it is likely that four of these platforms would be operational, with a fifth under construction. Each Jin class Type 094 would carry up to 12 JL-2 (Julang-2) SLBM, with an estimated range of 7,400 km, enough to reach US territory from the waters of the Western Pacific.[12]

Additionally, China is developing an improved third-generation SSBN, the Type 096, to be fitted with a long-range missile, the JL-3 (Julang-3) that could reach the United States from the waters of the South China Sea.[13]

While these submarines are being built, the operational patrols of the submarines with nuclear payloads have not yet commenced. The initial operational capacity was determined as 2014 but had been subsequently revised as 2015 and yet the deployments have not been operational. More broadly, China is showing increased seriousness about its ability to conduct prolonged submarine operations. Beijing had been conducting long-range patrols of its nuclear submarines, notably in the Indian Ocean in 2013 and 2014. These patrols indicate the People's Liberation Army Navy (PLAN) intention to test the operational procedures and endurance of its crew on long-range submerged voyages such as those conducted by SSBNs.[14] It is a fact, as cited by a US Navy Vice Admiral, that a Chinese SSBN had already conducted a 95-day patrol.[15]

France

France has a total nuclear arsenal of approximately 290 warheads. The warheads are designated for delivery by 48 SLBMs and 50 air-launched cruise missiles (ALCMs) produced for both land and carrier-based aircraft. The French nuclear doctrine considers all of its nuclear weapons as strategic, even though the weapons carried by the airborne component of its nuclear forces have characteristics that would classify them as tactical.[16]

The primary component of France's nuclear forces is the sea-based Strategic Oceanic Force known as the Force Océanique Stratégique (FOST). FOST deploys four Triomphant class SSBNs that are based on the Île Longue peninsula near Brest. Each SSBNs payload is 16 SLBM. At

any given point, one SSBN is out of service for overhaul and maintenance work and is not armed. The Triomphant class submarines entered operational service in 1997, replacing six older Redoubtable class SSBNs.[17]

One notable feature is that FOST and the French Navy have maintained a continuous at-sea deterrent posture since 1972.[18] France had sustained its continual modernization of its force both in terms of the SLBMs and associated warheads. The French Navy had completed work to modify the Triomphant class submarines to carry the newer M51 SLBM, replacing the M45 missile.[19] The M51 is currently deployed in two versions. The M51.1 is capable of carrying up to six multiple independently targetable re-entry vehicle (MIRV) TN-75 warheads, each with an explosive yield of 100 kilotons (kt). This warhead is being replaced by an upgraded version known as M51.2, with greater range and improved accuracy. The M51.2 is designed to carry the new, stealthier oceanic nuclear warhead, the Tête Nucléaire Océanique (TNO), with a reported yield of 100 kt.[20] However, the number of warheads on some of the missiles has been reduced in order to improve targeting flexibility.[21] France is working on the design of the new M51.3 SLBM with improved accuracy. This is scheduled to replace the M51.2 to be operational in 2025.[22]

France has also begun preliminary design work on a third-generation SSBN, designated the SNLE 3G, which will eventually be equipped with a new modification of the M51 (M51.4) SLBM.[23] The construction of the first of four submarines in the class is scheduled to begin in 2023[24]

United Kingdom

The British nuclear stockpile as of January 2020 was between 195–215 warheads. By the 2015 Strategic Defence and Security Review (SDSR), the British Government planned and reaffirmed that it would cut down the size of its nuclear arsenal. Thus, the number of available operational nuclear warheads has been reduced to no more than 120. The overall size of the nuclear stockpile, including non-deployed warheads, will decrease to no more than 180 by the mid-2020s.[25]

The British nuclear deterrent consists exclusively of a sea-based component: four Vanguard class Trident SSBNs. Two HMS Vanguard submarines entered service in December 1994, while the last submarine in the class, HMS Vengeance, entered service in February 2001.[26]

The United Kingdom operates a single deterrent capability without the land and the air units. Britain has maintained the continuous at-sea deterrence posture since 1969, by which one British SSBN is on patrol at any given time.[27] This deterrence posture also ensures that the second and third SSBNs can be put to sea rapidly, although the fourth would take longer because of the cycle of extensive overhaul and maintenance. Each of the Vanguard class SSBNs is armed with 16 UGM-133 Trident II D5 SLBMs. Britain does not own the missiles, but leases them from a pool of 58 Trident SLBMs shared with the United States Navy at the US Strategic Weapons Facility in Kings Bay, Georgia.[28] With the stipulations of the 2010 SDSR, while on patrol, the submarines are armed with not more than eight operational missiles with a total of 40 nuclear warheads.[29]

The missiles are maintained in a 'detargeted' mode, which implies that the target data would need to be loaded into the guidance system prior to launch, and thus have a reduced alert status of several days before they are ready for firing.[30]

Britain is working for the replacement of the Vanguard class SSBNs with four new ballistic missile submarines.[31] The new class of submarines known as the Dreadnought would have a missile compartment that would hold only 12 launch tubes, reduced from the earlier 16 tubes carried by the Vanguard class. Britain and the United States are working out a cost-saving measure with a Common Missile Compartment that will also equip the US new Columbia class SSBNs. Britain and the United States have been working to resolve technical problems with the manufacturing of the missile launch tubes that would be used in the compartment.[32]

The Dreadnought submarines were originally expected to enter into service by 2028 but this is likely to be delayed until the early 2030s.

Salient features of deployment

The NWS have been able to develop full-fledged, dedicated nuclear submarine forces that are nuclear-propelled and armed with the fleet ballistic missiles. There are, however, submarine-launched cruise missiles deployed by the US Navy, Russian Navy and China's PLAN. These are deployed in nuclear attack submarines and their payloads are not advertised in terms of conventional or nuclear warheads. The nuclear weapons states thus have the deployment capability by which the submerged platforms are technically capable of global deployments.

The US Navy and the Russian Navy have accomplished such deployments. Usually, the fleet ballistic missile submarines are accompanied by nuclear attack submarines as force protection in extended deployments. While in most cases, such as the Russian Navy, they are always deployed in bastions such as the Sea of Okhotsk and are surrounded by the attack submarines to prevent predatory attack submarines of adversaries from attacking them. The CASD, however, enables them to involve the submarine force deployments on routine patrols to designated regions. Thus, the NWS navies are characterized as global nuclear powers since they carry a preponderant strike capacity in terms of warheads, range and yield.

Naval nuclear deployments of the NWS thus fulfil the requirements of short notice, first-strike capabilities as well as assured retaliatory capabilities that provide them with the strategic room to take decisive actions during an escalating crisis. The sea-based and the air-based deterrent thus provide the inherent flexibility in terms of deployment, recall and standby of force, thus providing the strategic factor of compellence in crisis escalation, besides the readiness to deliver coercive action, should the need arise. The submarine forces also provide the flexibility of deterrence in any situation and are tailored to deal with brinkmanship threats from state actors by resorting to a punitive strike. The advantage of the MIRV is that it is a credible force multiplier. It enables multiple warheads in any payload of a single missile, thus offering opportunities for multiple targeting.

Having examined the force structure and the salience of deployments of the nuclear weapon states, it would be interesting to analyze the new nuclear states who are ambitious to field nuclear forces in the naval domain. Although they are in the upward sweep of the technology trajectory, yet the objectives of naval deployment have given them an increased impetus for deterrence in the sea domain.

Naval Nuclear Dynamics of New Nuclear States

The naval nuclear dynamics of the new nuclear states(NNS) has been characterized by ambiguity and secrecy. A survey of the naval nuclear dynamics of these states reveals that the pace of various programs has been fraught with technological challenges, operational complexities and threat perception scenarios that they contend with from their adversaries as well as from the nuclear weapon states. The new nuclear states have also been subject to a variety of pressures, including sanctions, even as they developed these programs, but they have worked to overcome these challenges and have succeeded.

India

India's nuclear forces are in the midst of extensive modernization. India's second-strike retaliatory capability against its two potential adversaries, China and Pakistan, are not assured, despite the rhetoric voiced by the Indian government. While India's land-based missiles with shorter ranges deter a nuclear-armed Pakistan, the sea-based nuclear submarine program is geared to enhance India's confidence that it will not be coerced or subject to compellence by China. India's land-based weapons, the long-range variants of the Agni missile, are designed to target China. However, it would be the submarine launch missile capability that would increase India's confidence regarding assured retaliation. Missile tests from submarines have been routinely conducted.[33] India's successful tests would thus aim to complete the nuclear triad that it has been aiming to build. In 2009, India launched its first ballistic missile nuclear submarine, the INS Arihant.[34] Four submarines

are planned in total and an updated design is being planned for the fifth submarine. A second such submarine is being built —to be put to sea potentially within the within a year or two — and a third and possibly fourth are also planned. There are reports that in the medium term, an updated design is planned for India's fifth SSBN.[35] This design vessel would have a larger and a more powerful reactor, allowing longer-range patrols.[36]

There are reports that the INS Arihant was a technology demonstrator and was partly based on the earlier Soviet Akula class attack submarine. The initial design had also resulted in a larger acoustic signature, which would enable the potential tracking of the submarine by other states and adversaries. Besides, the K-15 SLBM was to have been paired with the submarine. The K-15 has a shorter range of 750 km and hence cannot be viably deployed against China. Consequently, India has been testing the navalized version of the Agni 3 that has more than 3,500 km range.[37]

Israel

The Israeli government neither confirms nor denies that it possesses nuclear weapons. This ambiguous posture has been widely accepted by allies and adversaries alike, as an indication that Israel has been a nuclear-armed state for over half a century.

Israel had developed a nuclear warhead for a sea-launched cruise missile that would be launched from its German-built diesel-electric Dolphin-class attack submarines. Certain reports state that the nuclear-capable sea-launched cruise missile is a modification of the conventional "Popeye Turbo" air-to-surface missiles, while others state that Israel had converted the US-supplied Harpoon—a long-standing US anti-ship missile—to nuclear capability. [38]

Israel plans to operate six Dolphin class submarines. The last three editions of the submarines are 10 m (approximately 33 ft) longer than the first three, due to the addition of an improved air-independent propulsion system. After delivery of the first three submarines, rumors of nuclear capability reportedly prompted Germany to demand that Israel give

assurances that the additional submarines it ordered would not be carrying nuclear weapons.[39]

Given this ambiguity, Israel has put a tight lid on information regarding any of its nuclear plans. The specific number of Dolphin class submarines equipped with cruise missiles is unknown and the number of missiles and warheads that Israel possesses has also not been cited.

Pakistan

Pakistan, like Israel, has relied on diesel-electric submarines and on sea-launched cruise missiles rather than developing fleet ballistic missile submarines and SLBMs. Pakistan had made credible efforts in establishing sea-based capability, although it is behind China and India. Islamabad had sought to "equalize its strategic relationship with its neighbour."[40]

Pakistan's quest for sea-based capability stems from its perception of the growing conventional imbalance with India and the lack of strategic depth.[41] Moreover, India has made determined strides in ballistic missile defenses. Pakistan has deployed its Babur cruise missile on the Chinese-supplied Yuan class submarines.[42][42]

North Korea

North Korea had reported progress in fitting a submarine with vertical launch tubes and testing a missile, constituting initial efforts to develop a sea-based deterrent. In May 2015, North Korea announced that it apparently achieved warhead miniaturization and successfully conducted missile tests.[43] North Korea claimed to have conducted these missile tests by improvisation of the Soviet-era R-27 SLBM, which was in service from 1968 to 1988 as a liquid-fuelled missile. However, this technology does not suit the SLBM. Thus, the initial attempts by North Korea have been a failure.[44]

Salient features of deployment

The aspirations of the new nuclear states of India, Israel, Pakistan and North Korea reflect the continued quest of these states to achieve strategic stability through the acquisition of second-strike capability. The objective of

the new nations in terms of strategic stability and the penchant for an 'equalizing' status with the nuclear weapon states also arises because the new nuclear states are themselves subject to varying pressures from the Great Powers in terms of regional conflicts. Great Power intervention is one issue that the new nuclear states must contend with and hence acquiring nuclear capability and advancing it to an operable second-strike nuclear capability have been their objectives. However, the new nuclear states face a host of challenges in their deployment strategies. There are five main challenges that daunt the new nuclear states in the maritime domain:

(a) *The operational challenge* is daunting for all the new nuclear states. Israel is perhaps the exception, as its advanced technological capabilities and improvisation have enabled the deployment of the Dolphin class submarines with the Popeye cruise missiles equipped with a tailored, miniaturized warhead. Israel's most opaque deterrence status is baffling and its quiet deployment of the submarines in a strategic role has provided it with an insurmountable advantage against its foes. Other new nuclear states contend with a host of operational challenges and are working out ways to resolve them.

(b) *The technological challenge* has been the main hurdle, although the new nuclear states have continued to pursue their objectives despite various technological limitations. Great Power pressure in curbing technologies and technology transfer has been the most formidable challenge, even though these states have assiduously built their technological capabilities. Technological capabilities and resource investment have been the twin challenges that the states had to contend with while they build their nuclear programs. The untiring efforts of the new nuclear states to build sea-based deterrence have been impressive. While the Great Powers and the nuclear weapon states have proven maritime capabilities, the new nuclear states have been making extraordinary efforts, even though their proven maritime capabilities have been limited.

(c) *The incidents at sea challenge* constitutes an important dimension of major incidents involving the compromising of nuclear assets at

sea or succumbing to incidents that could trigger a clash on the high seas. While various measures mitigating incidents at sea have been negotiated, inadvertent incidents could still arise, given the highly unstable operational environments in which the platforms of the new nuclear states are running. This is an issue of heightened concern and it is critically imperative for an agreement to avoid incidents at sea involving nuclear platforms and those bearing nuclear assets.

(d) *The risk of accidents involving nuclear platforms and nuclear weapons* is yet another major maritime safety issue that cannot be overlooked. Accidents at port or at sea leading to major catastrophic spillage or loss of radioactive or fissile material is an issue of critical concern. Avoidance of accidents and averting of catastrophic events does not only concern the new nuclear states but also the nuclear weapon states that could encounter such critical perils either at the ports or on the high seas. Cooperative arrangements enhancing maritime safety from nuclear accidents are vital, as the proliferation of nuclear platforms at sea is now on a higher drive.

(e) *The loss of communication challenge* is perhaps the most critical challenge that could result in the loss of the nuclear platform or a possible mutinous situation in which rebel commanders can take over the vessel in an unauthorized manner and threaten a doomsday scenario. These challenges, though considered remote, are certainly feasible in any operational context.

Thus, there is a contrasting salience in the nature of the naval-nuclear deployments between the nuclear weapon states and the new nuclear states, which brings to the fore the differing scope of the naval nuclear experience of these two categories of nuclear powers.

In summation, two vital issues are imperative in the context of the naval nuclear dynamics of the nuclear weapon states and the new nuclear states. One is the relevance of nuclear weapon-free zones in West Asia-Gulf, Southeast Asia and Latin America. While the nations in the region

have urged the elimination of nuclear weapons and a ban on the passage of nuclear platforms, the nuclear weapon states and the new nuclear states have been careful to abide by the principles of amity in the region. The passage of nuclear platforms is thus obviated from these regions and the demand for banning nuclear weapons is respected. Nuclear weapon-free zones are thus an important factor that determines the regional security complex of the regions, even as countries and regions are vocal in their support.

At the same time, there are latent nuclear proliferation trends in such regions that profess the nuclear weapon-free zone policies like Israel in West Asia (although Israel neither confirms nor denies its nuclear/WMD stance). This has accentuated the trends of WMD proliferation and nuclear proliferation in the region. The second issue is that the regional security complexes in the region feature the interventionist strategies of the Great Powers, which though extra-regional, have featured naval deployments in regions with high incidence of conflict, such as the United States and Russia in West Asia, Northeast Asia and the Indo-Pacific. Quite often, the forward presence of naval forces featuring nuclear-propelled platforms is deployed in the conflict zones as a possible means of intervention and for providing support for proxy war operations as is evident in the different regions. Nuclear platforms like nuclear-powered aircraft carriers as deployed by the United States are a routine feature of Great Power naval intervention in regional conflicts.

The naval nuclear dynamics thus constitutes a critical dimension of regional security and the maritime dimension of regional security complexes is crucial, as it determines many issues relating to regional order and strategic stability.

Notes

[1] World Nuclear Forces, *SIPRI Yearbook 2020*, Chapter 10, "Armaments, Disarmament and International Security" (Stockholm: SIPRI 2020).

[2] Naval-technology.com: https://www.naval-technology.com/features/featuredeep-secret-secure-submarine-communication-on-a-quantum-level/

[3] Malcolm Chalmers, "Continuous at Sea Deterrence: Costs and Alternatives." RUSI Briefing Note, London, July 2010. https://rusi.org/system/files/CASD.pdf

[4] US Navy, "Fleet ballistic missile submarines: SSBN," United States Navy Fact File, 29 January 2019.

[5] Wolfe, J., Director, Strategic Systems Programs, Statement before the Subcommittee on Strategic Forces, Armed Services Committee, US Senate, 23 March 2019, p. 4.

[6] Peterson, J., "Navy strategic missile boss starting concept development for new missile," *Seapower*, 24 May 2017.

[7] US Department of Defense, Nuclear Posture Review 2018,https://dod.defense.gov/News/SpecialReports/2018NuclearPostureReview.aspx

[8] Saranov, V. "Decommissioning 'Akula': Why Russia abandons the biggest submarines." RIA Novosti, 24 January 2018 (in Russian).

[9] TASS. "Russia to complete Borei and Yasen series of nuclear-powered submarines in 2023–2024." TASS, 27 June 2019.

[10] Wu Riqiang, "Survivability of China's Sea-based Nuclear Forces," *Science and Global Security* 19, no. 2 (2011), p.109–110.

[11] Christian Conroy, "China's Ballistic-Missile Submarines: How Dangerous?" The Diplomat, 18 November 2013, http://nationalinterest.org/commentary/chinas-ballistic-missile-submarines-howdangerous-9414.http://www.defense.gov/pubs/2015_China_Military_Power_Report.pdf.

[12] US Department of Defense, Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2015 (Office of the Secretary of Defense, 2015).

[13] Ibid.

[14] Felix K. Chang, "Chinese Submarines and Indian ASW in the Indian Ocean," *Geopoliticus*: The FPRI Blog, Foreign Policy Research Institute, 2014.http://www.fpri.org/geopoliticus/2014/11/chinese-submarines-and-indian-aswindian-ocean.

[15] Kris Osborn, "Admiral Says China Now Outnumbers US in Attack Submarines," *DoD Buzz*, 26 February 2015. http://www.dodbuzz.com/2015/02/26/admiral-says-china-outnumbers-u-s-inattack-submarines.

[16] Hollande, F., President of France, 'Discours sur la dissuasion nucléaire: Déplacement auprès des forces aériennes stratégiques' [Speech on nuclear deterrence: Visit to the strategic air forces], Istres, 25 February 2015.

[17] Le Triomphant entered active service in July 1997, while the fourth and final submarine in the class, Le Terrible, entered service in September. 2010. Tertrais, B., "French Nuclear Deterrence Policy, Forces and Future," Recherches & Documents no. 01/2019 (Fondation pour la Recherche Stratégique: Paris, January 2019).

[18] French Ministry of the Armed Forces, "500e patrouille d'un sous-marin nucléaire lanceur dengins" [500th patrol of a nuclear-powered ballistic missile submarine], 12 October 2018.

[19] Navy Recognition, "Final French Navy SSBN 'Le Temeraire' upgraded for M51 SLBM," 18 August 2018. Le Terrible was equipped with launch tubes for the M51 missile during its construction.

[20] Groizeleau, V., "Dissuasion: 25 milliards en cinq ans pour le renouvellement des deux composantes" [Deterrence: 25 billion in five years for the renewal of the two components], *Mer et Marine*, 2 October 2019; and Groizeleau, V., "Dissuasion: F. Hollande détaille sa vision et l'arsenal français" [Deterrence: F. Hollande outlines his vision and the French arsenal], *Mer et Marine*, 20 February 2015.

[21] Tertrais, B. "French Nuclear Deterrence Policy, Forces and Future," Recherches & Documents no. 01/2019. Fondation pour la Recherche Stratégique: Paris, January 2019. p.63.

[22] French Ministry of the Armed Forces, "Missiles balistiques stratégiques (MSBS)" [Strategic ballistic missiles], 28 January 2020; and French Ministry of the Armed Forces, 'Discours de Florence Parly, ministre des Armées prononcé à l'usine des Mureaux, Ariane Group, le 14 décembre 2017' [Speech by Florence Parly, Minister of the Armed Forces, presented at the Mureaux factory, Ariane Group], 14 December 2017.

[23] Tertrais op cit., pp. 63, 67.

[24] Groizeleau, "Deterrence: 25 billion in five years for the renewal of the two components" op. cit. The aim is to have an operational successor to the Triomphant class submarine in service by the early 2030s. Hollande op. cit.; and Le Drian, J. Y., French Minister of Defence, 'Discours de clôture du colloque pour les 50 ans de la dissuasion' [Conference closing speech on the 50th anniversary of deterrence], French Ministry of Defence, Paris, 20 November 2014.

[25] British Government, "National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom," Cm 9161 (Stationery Office: London, November 2015), para. 4.66.

[26] Mills, C., "Replacing the UK's strategic nuclear deterrent: Progress of the Dreadnought class," Commons Briefing Paper CBP-8010, House of Commons Library, 11 February 2020, p. 9.

[27] British Ministry of Defence, 'Continuous at sea deterrent 50: What you need to know,' 3 May 2019.

[28] Allison, G., "No, America doesn't control Britain's nuclear weapons," *UK Defence Journal*, 20 July 2017.

[29] HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*, Cm 7948 (London: The Stationery Office, October 2010), p. 9.

[30] Ibid.

[31] British Parliament, House of Commons, "UK's nuclear deterrent," House of Commons Hansard, col. 559, vol. 613, 18 July 2016

[32] British Ministry of Defence, "The United Kingdom's future nuclear deterrent: 2019 Update to Parliament," 20 December 2019, pp. 1–2.

[33] Ajay Banerjee, "A First: Nuke Sub Arihant to Test-fire N-capable Missile," The Tribune, 9 July 2015. http://www.tribuneindia.com/news/nation/a-first-nuke-subarihant-to-test-fire-n-capable-missile/104772.html

[34] "PM Launches INS Arihant in Visakhapatnam," The Times of India, 26 July 2009, http://timesofindia.indiatimes.com/city/hyderabad/PM-launches-INSArihant-in-Visakhapatnam/articleshow/4820660.cms

[35] Rajat Pandit, "Move to Fast-Track Two Submarine Projects Gathers Steam," *The Times of India*, 14 July 2014, http://timesofindia.indiatimes.com/india/Moveto-fast-track-two-submarine-projects-gathers-steam/articleshow/38342676.cms

[36] Pravin Sawhney and Vijay Shankar, "Is the Navy's Newest Sub Worth the Price?" The Hindu, 5 April 2012, http://www.thehindu.com/opinion/op-ed/is-thenavys-newest-sub-worth-the-price/article2829121.ece

[37] Iskander Rehman, "Murky Waters: Naval Nuclear Dynamics in the Indian Ocean," Carnegie Endowment for International Peace, March 9, 2015, pp12-13.

[38] Israel: Nuclear Threat Initiative (NTI) https://www.nti.org/learn/countries/israel/delivery-systems/

[39] Nuclear Notebook,"Israeli nuclear weapons, 2014,"Hans M. Kristensen & Robert S. Norris, Bulletin of the Atomic Scientists,Volume 70, 2014, Issue 6, Pages 97-115 | Published online: 27 November 2015 https://doi.org/10.1177/0096340214555409

[40] Kyle Denning, "Outrunning an Arms Race: Naval Nuclear Deterrence in South Asia," Project on Nuclear Issues (blog), Center for Strategic and International Studies, http://poniforum.csis.org/blog/naval-nuclear-deterrence-in-south-asia

[41] Rehman, "Murky Waters," op cit. 17–23.

[42] Reuters, "Pakistan PM Approves Deal to Buy Eight Chinese Submarines: Official," 2 April 2015, http://www.reuters.com/article/2015/04/02/us-chinapakistan-idUSKBN0MT05M20150402

[43] Jeyup S. Kwaak, "North Korea Developing Ballistic-Missile Submarine, Seoul Says," *The Wall Street Journal*, 11 May 2015.http://www.wsj.com/articles/northkorea-developing-nuclear-missile-submarine-seoul-says-1431322781

[44] James Hardy, "North Korean SLBM Test Leaves More Questions than Answers," IHS Jane's Defence Weekly, 12 May 2015, http://www.janes.com/article/51356/north-korean-slbm-test-leaves-morequestions-than-answers

Conclusion

The analysis and assessment of regional security complexes and their maritime derivatives holds several important implications for intra-state and inter-regional security dynamics. Regional security complexes and their maritime derivatives feature prevailing internal security challenges and threats, inter-state threats and perils, and also intra-regional challenges and threats. The evaluation of all these threats and challenges is based on two referents. First, the scope of state-actor dynamics in the context of traditional security challenges and the regional dynamics of how states within the region have been pursuing either a competitive or cooperative agenda. Second, exploring the role of non-state actors and transnational challenges that constitute hybrid threats. The scope of securitization and the intensity levels of prevalent security challenges viz 'traditional,' 'nontraditional' and 'transnational' vary from one region to another, and the impacts generated have also been varied. Hence, there is no uniformity in the scope of threats and challenges across the region. The level of analysis, therefore, varies with the differing levels of securitization of the key issues in each regional security complex.

In exploring the conceptual and theoretical framework, the focus has been on the nature of regions and regional security, envisaging the dynamics of how regional security complexes are contextualized and examined through the narratives of securitization and desecuritization. Deriving the maritime dimension of regional security complexes from the

generic framework of these complexes further reveals the unique features of maritime security and how they impact regional dynamics. The need to prognosticate regional events highlights the importance of a framework that analyses future trends and developments within the regional security complexes. This framework would be useful in analyzing the various regional complexes and the issues pertaining to their operational dynamics. As outlined in the scope of this study, the analysis and assessment of the dynamics of the various regional security complexes in their maritime vistas would provide a clearer understanding of how regions evolve and respond to the milieu of challenges, threats and perils that confronts them.

Assessing the regional maritime security complex of the Indian Ocean with its full milieu of challenges and threats is a diverse and complex task. The discursive debate on securitization perceives the region as being highly securitized, in view of the multiple threats and challenges that straddle traditional, non-traditional and transnational realms. The complexities of inter-state rivalries and the complications of non-traditional threats have been rising over the years and have resulted in increasing contestations.

The line separating traditional and non-traditional security is increasingly blurred, as the spillover of conflicts from the two spheres has created a Gordian knot that is difficult to unravel. The future of the Indian Ocean region is characterized by the emergence of hybrid threats and challenges. At one end is the high-octane traditional rivalry focused on WMDs and nuclear weapons, and at the other end is the securitization of various transnational challenges, from ecological deprivation to livelihood security challenges.

Adjoining the Indian Ocean regional security complexes are the two semi-enclosed maritime regional security complexes of the northern Arabian Sea to the west and the Bay of Bengal to the east, which provide two uniquely salient sub-regional complexes. The northern Arabian Sea complex, interestingly, is a crescent-shaped geographical topography with the states of the Persian Gulf and West Asia converging upon it. The securitization trends of the West Asia-Gulf region invariably influence and

impact the whole region. Given the West Asia-Gulf region's high proclivity to unresolved territorial conflicts and the prevailing disputes over waterways, the incidence of traditional state-to-state conflicts is at an all-time high. The region features high military expenditures and keen arms races, with intra-regional conflicts often spilling over into the adjacent regions. Intra-regional conflicts and the prevalent ethnic and sectarian conflicts have also prompted a high degree of extra-regional power intervention that emanates from the Arab-Israeli and Israeli-Palestinian conflicts and Iran's assertive power and its intervention in the Levant, which in turn have accentuated various regional conflicts in Lebanon, Syria and Yemen etc. Moreover, the non-traditional issues of piracy, arms and narcotics smuggling are conflated to a great extent with traditional security threats. Additionally, the transnational threat of climate change compounds the general vulnerability of the region. The northern Arabian Sea regional complex has, perhaps, the highest incidence of threats and challenges, including specific hybrid threats that complicate the region's security predicament.

The Bay of Bengal region presents unique challenges, including a high concentration of non-traditional security threats. These affect human, environmental and ecological security with direct impacts on food security. Moreover, the region faces geopolitical and geostrategic contestations marked by India-China rivalry, US-led QSD involving Australia, India, Japan and the United States, and varying perceptions and the absence of a common understanding amoung the BIMSTEC and ASEAN member countries about the Indo-Pacific. Besides, the Chinese BRI with its high dependence on Chinese economic and financial largesse can potentially cause geopolitical and geostrategic turbulence. The countries in the region also fear the 'debt-trap' risk that the Chinese projects could entail, and the resultant domestic political upheavals, social disruptions, financial stress and loss of sovereignty.

The Western Pacific regional maritime complex is characterized by the prevalence of Great Power rivalry and competition, naval rivalry dynamics, heightened arms race and strategic modernization. Amidst traditional power rivalry, the Western Pacific region is contending with a

host of non-traditional and transnational threats, coupled with a high incidence of hybrid threats. China as the focus of intensified competition in the region has overtaken all other security challenges.

Naval nuclear deployments are crucial, as they envisage and enable the maintenance of second-strike capability or assured retaliatory capability against a punitive first strike that would decapitate the land-based nuclear assets of a nuclear power or state. The challenges of maintaining such sea-based deterrence entail costs, which need to be analyzed in terms of affordability and sustainability. Costs are based on the number of platforms deployed at any given time and the associated issues of readiness and mobilization. Two vital issues are imperative in the context of the naval nuclear dynamics of both the nuclear weapon states and the new nuclear states. One is the relevance of nuclear weapon-free zones in West Asia-Gulf, Southeast Asia and Latin America. While the nations in the region have urged the elimination of nuclear weapons and a ban on the passage of nuclear platforms, the nuclear weapon states and the new nuclear states have been careful to abide by the principles of amity in the region. The passage of nuclear platforms is thus obviated from these regions and the demand for banning nuclear weapons is respected. Nuclear weapon-free zones are thus an important factor that determines the dynamics of the regional security complex of the regions, even as countries and regions are vocal in their support.

At the same time, there are latent nuclear proliferation trends in such regions that profess the nuclear weapon-free zone policies like Israel in West Asia, (althouth Israel neither conforms nor denies its nuclear/WMD stance.) This has accentuated the treands of WMD and nuclear proliferation in the region. The second issue is that these regional security complexes feature the interventionist strategies of the Great Powers, which though extra-regional, have authorized naval deployments in regions with high incidence of conflict high incidence of conflict, such as the United States and Russia in West Asia, Northeast Asia and the Indo-Pacific. Quite often, the forward presence of naval forces featuring nuclear-propelled platforms

is deployed in the conflict zones as a possible means of intervention and for providing support for proxy war operations as is evident in the different regions. Nuclear platforms like nuclear-powered aircraft carriers as deployed by the United States are a routine feature of Great Power naval intervention in regional conflicts.

Finally, the Indo-Pacific region is turning incrementally into an arena of competition between the United States and China, a situation which would naturally impel other countries from within and without the region to choose sides, thus entailing numerous 'strategic dilemmas.' In particular, the political, economic, and military-technological strategies of the United States and China will merit close watch. Both countries possess significant military-naval-space capabilities (nuclear and conventional) and their future engagements would determine the security environment. These engagements will also have an impact on the arms buildup race by Japan, India, ASEAN and European powers, which would in turn compound Asian (in)security.

Appendix

STRATEGIC FUTURES

Regional Maritime Security Complexes

(Western Pacific Rim; Indian Ocean - Southern Ocean; and the Arabian Sea Littoral)

ICWA-CPPR Virtual Conference on

Strategic Futures: Regional Maritime Security Complexes

18 August 2021

Indian Council of World Affairs and Centre for Public Policy Research

Conference Compendium

Indian Council of World Affairs (ICWA)

The Indian Council of World Affairs (ICWA) was established in 1943 by a group of eminent intellectuals led by Sir Tej Bahadur Sapru and Dr. H.N. Kunzru. Its principal objective was to create an Indian perspective on international relations and act as a repository of knowledge and thinking on foreign policy issues. The council today conducts policy research through an in-house faculty as well as through external experts. It regularly organizes an array of intellectual activities including conferences, seminars, roundtable discussions, lectures and brings out a range of publications. ICWA has over 50 MoUs and partnerships with international and Indian think tanks, research institutions, and universities to promote a better understanding of international issues and develop areas of mutual cooperation.

Centre for Public Policy Research (CPPR)

The Centre for Public Policy Research (CPPR) is an independent public policy think tank that is dedicated to extensive and in-depth research on current economic, social and political issues.

Based out of Kochi, Kerala (India), its engagement in public policy that began in 2004 has initiated open dialogue, policy changes and institutional transformation in the areas of Urban Governance, Urban Transport, Economy & Public Finance, Education, Health, Election Studies, Governance & Law, International Relations, Defence & Security Studies, and Technology Policy & Artificial Intelligence.

CONTENTS

CONCEPT NOTE

ONE-DAY VIRTUAL CONFERENCE ON

STRATEGIC FUTURES: REGIONAL MARITIME SECURITY COMPLEXES

(Western Pacific Rim; Indian Ocean - Southern Ocean; and the Arabian Sea Littoral)

Jointly organized by

INDIAN COUNCIL OF WORLD AFFAIRS AND CENTRE FOR PUBLIC POLICY RESEARCH 18 AUGUST 2021

INTRODUCTION

In the third decade of this century, three contiguous regions in maritime Asia and beyond have gained immense and critical strategic significance: (a) Western Pacific Rim of the Indo-Pacific; (b) Western Indian OceanSouthern Ocean; and (c) Arabian Sea Littoral encompassing the India-Persian Gulf Region-Horn of Africa. India has enduring strategic interests and economic-commercial-trade linkages in the region. The imperatives of connectivity necessitate that these large maritime spaces remain open, inclusive and free. Indias role and possible engagement/entanglement in these regions merit elucidation and critical evaluation of a net assessment of opportunities and capabilities for stabilization in the region through a comprehensive policy-doctrinal-operational response.

The ICWA and CPPR jointly organized a one-day virtual seminar, where across three plenary sessions, each of the three focus topics identified above was discussed by a panel of Indian and international experts. The seminar was the culmination of a joint research initiative of ICWA and CPPR on Strategic Futures: Regional Maritime Security Complexes of the Western Pacific Rim; Indian Ocean - Southern Ocean; and the Arabian Sea Littoral.

TOPICS

Topic 1. Western Pacific Rim Security Complex

The post-Cold War period of nearly three decades has witnessed dynamic transformation. The United States still retains immense economic capacity, scientific and technological capabilities and, above all, the enduring edge in strategic military outreach. China's spectacular rise, aided by high rates of economic growth, unprecedented military modernization and assertive politico-diplomatic momentum, has heavily impacted the regional narrative and catalyzed the security dynamics in the region. Furthermore, the Belt and Road Initiative (BRI) was the singular narrative that epitomized China's rise and acted as a catalyst to the construction of the Indo-Pacific discourse, which envisages the 'China Rise' and, eventually, the 'China Threat' scenarios, thus necessitating debates and assessments around the Regional Security Complex of the Pacific Rim (East Asia- Oceania-Southeast Asia) within the Indo-Pacific region.

Topic 2: Western Indian Ocean - Southern Ocean Security Complex

The Indian Ocean Regional Maritime Security Complex is of immense strategic importance to the countries of the region. It adjoins the Southern Ocean, which is a vast maritime expanse directly impacting the realms of the Indian Ocean. The Western Indian Ocean-Southern Ocean maritime security complex spawns various issues of convergent security — trilateral maritime convergence between India, Brazil and South Africa through the IBSA, and India and the Indian Ocean Commission (IOC), comprising Comoros, Madagascar, Mauritius, Reunion (French territory) and Seychelles. These regions generate an entire gamut of issues concerning good order at sea — Blue Economy; ocean-factored climate change such as sea-level rise and other natural disasters; and food, water, and energy security; and thereby exert a wide and deepening impact on the socio-economic fabric of society.

Topic 3. Arabian Sea Littoral Maritime Security Complex

The Arabian Sea Littoral Maritime Security Complex is crucial for international sea-based commerce, particularly in the context of sea-lanes of communications (SLOCs) in the Indian Ocean, the strategic chokepoints of Bab-el-Mandeb in the Red Sea (piracy, terrorism, human migration, etc.), and the Strait of Hormuz in the Persian Gulf, due to regional insecurities among the Persian Gulf States (Iran and Saudi Arabia) and turbulence in the Horn of Africa region. Furthermore, the persistent forward presence of extra-regional naval forces (United States, United Kingdom, France, and China) in the region has added to the complex geopolitical and geostrategic environment. These have given rise to hyper momentum for hybrid warfare, which has profound escalatory consequences.

CONFERENCE INAUGURAL ADDRESS

Mrs. Vijay Thakur Singh IFS (Retd)
Director-General, Indian Council of World Affairs

It is my pleasure to address the webinar on 'Strategic Futures: Regional Maritime Security Complexes' jointly organized by ICWA with its MoU partner, the Kochi-based Centre for Public Policy Research (CPPR), as part of a collaborative research project.

The Indo-Pacific region is the new geographic formulation that combines two large bodies of water — the Indian and the Pacific Oceans — in a seamless continuum. Traders from Arabia, Persia, India, Southeast Asia, and China have sailed across the seas and oceans of the Indo- Pacific since ancient times, creating a flourishing maritime enterprise.

In the 21st century, the Indo-Pacific region has gained immense significance across the strategic political-diplomatic-economic spectrum. The Indo-Pacific countries seek to harness the forces of globalization; and this is reflected in the numerous bilateral and multilateral agreements/ arrangements that promote integration and interdependence, leading to economic growth and prosperity.

This augurs well for the Indo-Pacific. The region is experiencing unprecedented strategic turbulence, great power competition, and confrontational security dynamics among regional powers. The norms and principles for a peaceful region are being increasingly challenged.

The Indo-Pacific maritime theatre also has its fair share of non-traditional threats and challenges. The countries from the region are using the maritime medium for developing regional and international cooperation. This is reflected in the 'maritime multilateralism' of the Indian Ocean Rim Association (IORA), the ASEAN Regional Forum (ARF), the East Asia Summit (EAS), the ASEAN Defence Ministers Meeting Plus (ADMM Plus), and the ASEAN Maritime Forum (AMF).

Yet, the single geopolitical unit of the Indo-Pacific comprises several sub-regions with their own inter-state and intra-regional challenges as well as opportunities. Cooperative solutions to maritime threats and challenges that can potentially contribute to stability and order, require the study of these regional security complexes, their inter-connectedness, and the interplay of their strategic concerns. The northern Arabian Sea security complex has its fair share of non-traditional threats like piracy and terrorism, while traditional threats and challenges also loom large. The western Pacific is currently marked by intense great power competition, which has exacerbated regional tensions. In the Bay of Bengal, under cooperative initiatives such as the Bay of Bengal Initiative for Multi-Sectoral Technical and economic Cooperation (BIMSTEC), littoral countries are focused on issues such as climate change and human development.

India has an all-encompassing vision for the Indo- Pacific and is committed to a "free and open, inclusive and rule-based, secure and prosperous Indo-Pacific region." On August 9, Mr. Narendra Modi became the first Indian Prime Minister to preside over a high-level debate at the UN Security Council (UNSC). This was the first holistic discussion on the issue of maritime security in the UNSC, at India's initiative. Prime Minister Modi called for international cooperation to enhance maritime security and combat maritime challenges based on five principles related to India's vision of SAGAR (Security and Growth for All in the Region). These are: (a) removing barriers to legitimate maritime trade; (b) peaceful settlement of disputes based on international law; (c) jointly fighting maritime threats created by natural disasters and non-state actors; (d) preservation of maritime environment and maritime resources; and (e) responsible maritime connectivity. A Presidential Statement outlining the principles for international cooperation to enhance maritime security and safety was unanimously adopted at the end of the debate, marking the first comprehensive outcome document by the UNSC on the issue of maritime security. With its greater focus on maritime safety and security, this conference is timely, and I compliment CPPR for choosing to study and understand the Indo-Pacific region through regional security complexes. We look forward to receiving the publications proposed under the collaborative research project.

CONFERENCE KEYNOTE ADDRESS

Ambassador TP Sreenivasan
Former Ambassador of India and Governor for India of the IAEA

I must compliment Dr. Dhanuraj and his CPPR colleagues and Ambassador Vijay Thakur Singh and her ICWA colleagues for choosing 'Maritime Security' as the topic of this conference, anticipating the focus it received at the UN Security Council session presided over, for the first time in history, by an Indian Prime Minister. I am certain the deliberations of this conference will contribute towards the gathering momentum for India to build its maritime security, even as it fosters international cooperation in exploring the vast resources of the ocean, which is our common heritage.

Prime Minister Narendra Modi called for a framework of mutual understanding and cooperation for the preservation and use of our common maritime heritage. He set forth five principles: remove barriers from legitimate maritime trade; work on the basis of international law; cope with natural disasters and maritime threats created by non-state actors together; preserve maritime environment and maritime resources; and establish responsible maritime connectivity. These five principles should therefore guide the deliberations at this conference.

In the limited time available to me, I would like to share with you my own experience of the evolution of our maritime policy during my time at the United Nations, leaving it to the scholars here to examine the various theories relating to the operation of the maritime law and what course it should take in the future.

I happened to be in our UN mission in the early '80s, when the United Nations Convention on the Law of the Sea ('UNCLOS) was negotiated. It was a new experience for the international community to codify the laws relating to the sea. Though it was left to the lawyers to draft the Convention, it was also a highly political exercise in which ideological differences came into play. Finally, it led to the United States not joining the

Convention, despite attaching great importance to the Laws of the Sea enshrined in the Convention. It was at that time that the world became aware of the vast resources on the ocean floor, which led to the allocation of areas to develop mining of precious materials and to lay down the laws relating to international activities.

Around that period, there was a battle royal in the Ad-hoc Committee on the Indian Ocean, created by Sri Lanka on behalf of the Non- Aligned Movement (NAM), following the Declaration of the Indian Ocean as a Zone of Peace (IOZOP). Although it was discussed in the First Committee, which was responsible for disarmament and international security, this was also the body where the issues of Cold War raged ferociously. While the non-aligned group, under the instigation of India, defined the Zone of Peace as a region free of foreign military presence, the western countries opposed the idea and argued for free navigation. Within the non-aligned group, there were some, notably Pakistan and Sri Lanka, who were wary of India's military growth, even as a regional power. The Soviet bloc accepted the concept of IOZOP and used it to attack the West for their military bases in the region. Consequently, all these countries paid lip service during an international conference in Colombo, but undermined the concept because no consensus was possible. In Moscow, PM Indira Gandhi made a distinction between bases and passing ships and justified the Soviet position. The conference got postponed from year to year.

By the time I returned to New York in 1992, after the end of the Cold War, the situation had changed dramatically. India and others sought the cooperation of external powers to exploit marine resources and to work together for maritime security. However, divisions persisted within the non-aligned group, since Pakistan pushed for declaring the region as a Nuclear Weapon-Free Zone (NWFZ), even after clandestinely acquiring nuclear weapons from China. India opposed Pakistan's hypocritical proposal for a NWFZ, as disarmament had to be global and not regional.

As China built up its naval presence in the Indian Ocean, India's position evolved further and it toyed with the idea of going back to the Zone

of Peace concept of opposing foreign military presence in the Indian Ocean. However, India's stance did not take off due to the shift in the balance of power in the Indo-Pacific region. The action shifted from the Atlantic to the Indo-Pacific when the US forces moved to the region and set up its 'Pivot to Asia'. Initially, India was reluctant to embrace the idea, but eventually found merit in cooperating with other democratic countries in the region, leading to the formation of the Quadrilateral security dialogue. India still maintains that the Quad is not a military alliance, but the Chinese incursions into Ladakh brought India closer to the Quad and the United States as a form of defense against Chinese expansionism. From a position of opposing foreign military presence, India has begun to perceive international cooperation as essential to ensure maritime security. This has also brought about an agenda to combat the pandemic, climate change, and the exploitation of natural resources.

In ancient times, India was considered secure, with the Himalayas in the north and the Indian Ocean in the south. However, it was soon discovered that India needed to fortify its natural frontiers to secure its sovereignty and territorial integrity. It was the ocean which brought various cultures to India, along with trade and even colonialism. The invasions from the north also exposed the vulnerability of the country. India is now on a quest to increase its interaction across the seas and the Himalayas and use to its advantage. I hope this conference will contribute new ideas to that quest. I wish the conference all success.

Western Pacific Rim Security Complex

INDO-PACIFIC AS A RESPONSE TO CHINA'S ASIA POLICY

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The rise of China and its desire to become the norm maker is a sign of its power growth, especially in the last couple of decades. However, it also represents its aspirations and ambitions in the world order, indicating that it is no longer interested in being the norm taker i.e. accepting the norms developed by the West.

Broadly, there are three stages of China's foreign policy strategy when analyzed in a linear manner. The first phase was about capabilities, and lasted roughly from 1992 to 2008, when the global economic slowdown marked the end of this capabilities era. The power era began in 2008 and continued till 2019-20, when the Covid-19 pandemic hit. The current era is one of influence with China's imprint on the international system growing steadily.

China also uses history and victimhood to underline its posture in the Indo-Pacific region as being benign. Additionally, it uses this posture in a highly strategic manner to isolate Japan and to create the binaries and fatalism for smaller states by offering them the choice of aligning with either the United States (the Indo-Pacific) or China. There is need for creativity to counter this narrative, which obviously runs the risk of falling into ideological and identity lines. However, there is a need to recognize that China is not the only victim of imperial powers and that it is no more a victim. Its power is an outcome of accommodation and cooperation. It needs to play its role in the rules-based international order in the Indo-Pacific and in the wider world.

The course of the Chinese assessment of Quad and the Indo-Pacific suggests how the country is viewing these concepts. China

perceives the United States as an imperial power trying to run the Asian order once again. It sees Japan as an opportunist country trying to evade the constitutional constraints imposed by Article 9. It projects Australia as an indecisive and reluctant power swinging between China and the Indo-Pacific. Lastly, it sees India as being currently driven by economic considerations. Importantly, within this division, there is the hierarchy that China allocates to these four countries. Whether this hierarchy can be employed, not only to suit India's collective interests but also to design the tasks ahead, is a potentially important question.

China's posturing as a norm maker is also evident from the way it is using the Afghan situation to question the credibility of US commitments and promises. The comparison of Afghanistan and Taiwan, for example, in recent Chinese social media and Ministry of Foreign Affairs (MFA) posts is evidence of that. Norms and narrative building, therefore, go hand-in-hand in the Chinese worldview, which is being used to discredit the Indo-Pacific. In fact, one finds multiple Chinese documents where the argument is made that, "Indo-Pacific is as shallow as the froth on the sea wave. It dissipates on its own and you don't need to bother about it beyond a moment's attention."

Previously, the pertinent question was how to operationalize the Indo-Pacific. However, the current question is, how can the Chinese influence be countered. Spurred by recent Chinese activities, several concepts have been conceived in response to that question. As the US INDOPACOM Commander stated recently, to counter the Chinese influence, "something we have to do is to establish credible deterrence, something that is not seen by anyone as a bluff." To bring credibility, sustainable, resilient and joint deterrence needs to be built. Thus, the US Navy as well as the Marines and Coast Guard, have already been engaged in joint operations for the last couple of years. Within this framework of sustainable, resilient and joint deterrence, there is also a space for small powers, who will neither speak of the Indo-Pacific nor endorse it openly, but would support this idea. How these states can be

engaged in this field is crucial. South Korea is one country that will not openly oppose the Indo-Pacific, and Indonesia is another. Malaysia and Singapore also share the same stand to some extent.

These countries have similar concerns but may not be speaking the language of the Indo-Pacific openly for fear of adverse consequences, primarily because of their economic dependence on China. They can be engaged through the framework of sustainable, resilient and join deterrence strategies that allow some creative space. The most recent Quad meeting discussed the idea of a free, open, inclusive and resilient Indo-Pacific. India has been using these terminologies for long in its individual statements. However, India is required to do more in terms of highlighting the notion of an inclusive Indo-Pacific through more documents and statements, elucidating how it applies to China as well as to Southeast Asia and East Asia.

The capabilities-building approach is another way of extending the kind of cooperation that has often been discussed. The development of platforms and human resources is another area, where one can include countries like Indonesia. Another significant strategy report that brings out key issues and outlines the US strategy is the Interim National Security Strategy Guidance, which was issued in March 2021. It mentions China 15 times and the Indo- Pacific two or three times. However, mention of China is accompanied with words like rivalry, assertion, accountability, strategic competition, agenda-setting, manipulation and so on. It also mentions working with China to further common interests in fields like climate change. How does one balance such contradictions? In fact, extensive US support in areas like climate change, global commons and arms reduction infused China with a sense of power. For example, US cooperation with China on climate change during the late Bush tenure and the first term of President Obama went hand-in-hand with the idea of G2. In fact, this cooperation gave China the technology and capacity to develop electrical vehicle infrastructure successfully over the last 20 years. There might be some doubts as to whether the

Indo-Pacific is just one of many US strategies. If that is the case, balancing all these strategies might be a concern. The United States is required to answer these questions in terms of the credibility and longevity of its own approach to the Indo-Pacific strategy.

Peace and prosperity are often considered equal pillars of the Indo-Pacific but there is poor focus on prosperity. If prosperity is not assured, then the idea of the Indo-Pacific as a peace strategy will not be effective and that is something that demands more attention. Creating jobs, developing manufacturing capabilities and expanding the middle class is what will create power in Asia. In fact, China has benefited from that power-sharing with the belief that it will become a normal country. Drawing from the example of climate change and technologies, it is witnessed that China is able to manufacture electric trucks now with American investment. Democracies, however, did not get this sort of engagement. These are the kind of anomalies that need to be addressed.

The United States is required to answer another question: What does it think of China's economic role in the post-pandemic economic recovery and order? How do we reimagine the Indo-Pacific through G7 and the role of Europe through initiatives such as Build Back Better World (B3W)? What is the viability of the Blue Dot Network? The Biden Administration has not taken this forward, despite the possibility of the same. Entanglements with non-tariff barriers need to be avoided to utilize this space creatively within the Indo-Pacific framework.

It is worth mentioning the obvious. The Indo-Pacific is the idea of finding strength in solidarity, as Rory Medcalf has argued in his recent book. Our commonality is in nurturing, responding to and respecting diversity, which is what the Indo-Pacific is all about – to engage multiple partners, to have shared ideas and to create shared prosperity. This is the only way we will be able to reassure smaller countries of the credibility and viability of this idea. Finally, as long as we are able to prevent coercive situations where diplomats turn into 'wolf warriors', as they have been doing recently, the idea of the Indo-Pacific will succeed.

SINO-JAPAN RIVALRY AND FREE AND OPEN INDO-PACIFIC INITIATIVES: CAN INDIA PLAY A CATALYST ROLE?

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Introduction

A striking military coup took place in Afghanistan, led by the Taliban, one of the most extreme Islamist fundamentalist groups, just a few weeks after US President Joe Biden's announcement of the US military withdrawal from the country after 20 years. This is a déjà vu moment, comparable to the early 1990s, when the withdrawal of massive foreign aid from the Western industrialized countries created a power vacuum, which eventually hosted the entry of the extremist Taliban regime throughout the 1990s. Lacking a financial and industrial base, the Taliban had to rely on money laundering by the international terrorist group Al-Qaida under a symbolic leader Osama bin Laden, until its collapse in 2001 soon after the 9/11 atrocities. The Taliban regime collapsed with military attacks by the United States and the North Atlantic Treaty Organization (NATO). A democratically-elected government was established, and just as in the early 1990s, Kabul received massive foreign aid. However, this government was incapable of handling economic challenges and could not establish the basic rule of law in the country. The same strategy repeated in the summer of 2021 ended, not quite unexpectedly, in failure.

Over the decades, the United States and Western democracies had domestic priorities uppermost in mind, such as the pandemic and the 'America First' campaign under the Trump Administration.

The campaign had been so contagious that it led to similar 'Japan First', 'UK first' and 'China First' campaigns all over the world that could coexist comfortably with their fight against the Covid-19 pandemic. Afghanistan had remained out of their focus, and was considered strategically less important than Iran or Iraq. China alone had a sensitive issue in its domestic Xinjian Uyghur Autonomous Region (XUAR), where the authoritarian Xi Government

had a core national interest. This region borders Pakistan and Afghanistan and is located not far from Kashmir. Beijing quickly recognized the new Taliban government and also had successive teleconferences with Russian and US leaders. It is anticipated, at least in the short run, that there will be a temporary coalition among US-Russia-China to deal with the Afghan crisis. With an ethnic, cultural and religious commonality, Pakistan has high stakes in Afghanistan, and the stability of latter greatly affects the stability of the former. Needless to say, Indo-Pakistani relations or tensions have potentially a great potential impact on the South and Western Asian region.

Given this context, the relevance of the Free and Open Indo-Pacific (FOIP) initiative is recognized even more strategically in international relations. The FOIP initiative was originally proposed by the Abe Administration as a diplomatic counter force to the well-known Belt and Road Initiative (BRI) of China. This paper addresses the issue of long-standing Sino-Japan rivalry and FOIP, asking if India under the Modi Administration is ready to play the role of a catalyst in this battlefield.

Any Possibilities for Win-Win-Win?

Daimon-Sato (2021) proposed that the competition over hegemony between Japan and China in Asia over FOIP and BRI can be mitigated by the intervention of the recipient country, especially if the country has a balancing interest between the rivals. Though still at conceptual level, the paper argued that the Modi Administration, if it wants, can play a catalyst role in tapping strategic interest from both the initiatives, creating a Grand Coalition among the three powers in Asia.

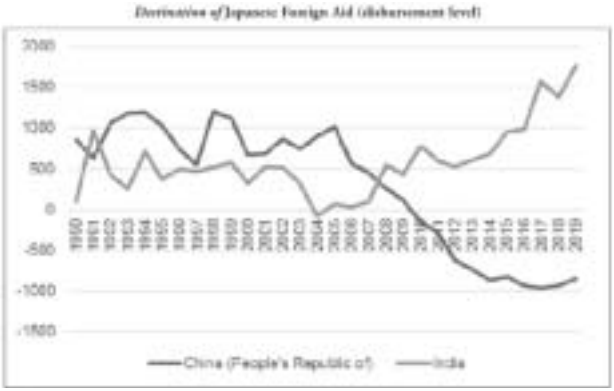
The Belt and Road Initiative, also known as the 'New Silk Road' Initiative, proposes to connect China and Europe via Central Asia by 'Road' (or ground transportation) and South Asia and East Africa by 'Belt' (or maritime transportation). As is known in world history, India played an important role in connecting China and the rest of the world via the Silk Road, in its original sense.

India today has huge potential to reassume its role as a major player in the BRI. India is expected to grow rapidly and catch up with Japan in terms of gross domestic product (GDP) by the end of the 2020s, to become the third largest economy in the world.

Japan Welcomes India's Role as a Catalyst and Vice Versa

India has been increasingly recognized as a 'key' player in this US–China–Japan diplomatic triangle. The argument in favor of Japan is that establishing a strategic partnership with India provides an additional security guarantee for Japan. Free and Open Indo-Pacific or FOIP, in this context, symbolizes a great expectation in Japan that India and Japan, as the two largest democratic nations in Asia, can play an important role in expanding the security–strategic network.

Mumbai-Ahmedabad High Speed Rail Project: In 2018, the Japanese government extended soft loans totaling US$2.5 billion, equivalent to the National High-Speed Rail Corporation with 50 years maturity at 0.1% interest rate per year. This is by far the most generous ODA loan package that the JICA has ever extended.



For Japan, the HSR project is a good practice of FOIP, as a counterproposal of BRI. For India, this project is a matter of national pride that will cement the support for the Modi Administration.

Cautions Against China's Entry into Game

China has expressed its ambition to develop Central Asia as an important route for BRI, rich in natural resources, especially oil and natural gas. Central Asian countries would also like to recover from the Covid-19 recession by selling their natural resource products to Chinese market. However, it is not a simple economic calculation.

On one hand, enhancing economic connectivity itself benefits stakeholders, including India, through increased trade and investments. The long-time dream of a gas-pipeline project connecting Turkmenistan-Afghanistan-Pakistan-India, known as the TAPI project, can benefit all these countries and enhance their energy security. Landlocked countries in Central Asia can gain access to the Indian seaports through rail and road, which will also create economic opportunities for India.

On the other hand, there is skepticism about Chinese dominance in BRI. In many industrialized countries, along with most emerging markets, China has caught up with India. Moreover, the inclusion of Pakistan and Afghanistan could facilitate the flow of not only essential goods but also unwanted goods, illegal drugs in particular. It could also help to foster terrorist activities in the region. Regional security may thus be greatly endangered.

Concluding Remarks – Japan's Position

Since its total defeat in World War II, and its military surrender to the US Allies, the country had to keep a low profile and seek a "respectable position in international society" (1947 Constitution).

Japanese national pride was greatly humiliated in often frustrating dealings with China and Korea in their occasional use of the "history card" to impose theirunilateral positions, however dubious they may be. Abe has decided to deal straight with these former enemies to convey clear messages based on universal values of freedom and democracy, which paved the way for the FOIP proposal and its acceptance by an increasing number of countries in the region.

WESTERN PACIFIC

'REGIONAL MARITIME SECURITY COMPLEX' AMIDST DYNAMIC STRATEGIC SCENARIOS IN THE INDO-PACIFIC

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Introduction

The increasing salience of the Indo-Pacific in regional and global discourses is coupled with intense geopolitical churning with complex, and at times competitive, interests of regional and global powers. The region has some of the most crucial International Sea-lanes (ISLs) through which plies much of the trade between Asian countries, Europe, the Middle East and the Pacific region. Therefore, the safety and security of these ISLs is critical not only for the regional countries but also for ensuring international economic stability.

The regional geopolitical environment has already been undergoing unprecedented transformation, accelerated by the Covid-19 pandemic. One of the key factors for this is China's asymmetric rise and its increasing foothold across the region. It has led to a situation where the region is becoming increasingly securitized with other players in an apparent attempt to balance China through their foreign, security and military policies. Increasing friction between the United Stated and China, uncertainty over US commitment in Eurasia and the South China Sea (SCS) conundrum have all resulted in a situation where the security balance in the region looks uncertain.

In the Reginal Security Complex (RSC) approach to international relations, geographical proximity and regional balance of power largely determines the actions of the state actors. This is being played out in the western Pacific. The maritime subregions or what can be categorized as

subcomplexes, i.e. SCs (as per the RSC theory), which include the contiguous waters around the South Pacific and the Malacca, have enormous strategic and economic value for global energy production and international maritime trade. This paper, therefore, delves deeper into analyzing the present strategic environment and possible strategic future in the western Pacific.

Why Regional Maritime Security Complex?

In the post-Cold War world, conventional representations and perceptions have understood security as a subjective, elastic and essentially contested concept. The nature of the threats to maritime peace and security has also become multidimensional and multifaceted, challenged not only by the traditional realist 'state-centric' threats but also from non-traditional challenges that are often transnational in nature. No wonder that maritime security is becoming a significant aspect of security studies in the field of international relations.

The western Pacific Rim is an arena witnessing a new set of power rivalries where naval powers with varying degrees of strength have been competing for influence. Therefore, shifts in the distribution of sea power will largely determine the region's strategic future, which necessitates discussion and debate about its regional maritime security complex.

Evolving Maritime Security complex in the Western Pacific

The varying interests of the players including rising China, emerging India and the United States, as also of Australia, Japan and the Southeast Asian countries creates a complex situation. Another important area in the overall security complex of the Pacific Rim is the Oceania and, more specifically, the South Pacific, which is "the strategic front line between Asia and the Americas."1 The region that has largely been dormant, is experiencing increasing engagement from India, Japan, Indonesia and France (which has overseas territories) in recent times. However, the most effective and disruptive engagement by far, in the region has come from China.2

The Pacific Island Countries (PICs) lying at the crossroads of strategically significant maritime trade routes, with large Exclusive Economic

Zones (EEZs), abundance of natural resources, relatively lesser developed economies and vulnerability to geophysical changes, are attracting attention from regional and extra-regional powers. Until recently, the region was an area of US influence managed under the trilateral military alliance set up by the Australia-New Zealand-US (ANZUS) agreement of 1951. However, China's recent interest in the region seems to have challenged the traditional western predominance, causing apprehensions among the regional players.

With recent large-scale Chinese investments in the region, the island nations have begun to look more to their north for assistance. China has been financing infrastructure projects such as the multi-purpose port in Manus Island, Papua New Guinea, the Luganville Wharf Redevelopment3 in Vanuatu and other such initiatives. This has stoked fear in the strategically vital neighborhood.

The aid narrative has mainly determined the relationship of the PICs with the larger countries. While Australia remains the largest aid and development partner, over the past few years, China has gradually emerged as one of the highest donors to the PICs, becoming the second largest after Australia,4 challenging thereby, Canberra's traditional dominance in the region. This, in turn, has raised apprehensions about China's active presence in the region in future, considering examples from the past in the Indian Ocean region of the strategic ports of Gwadar, Hambantota and the military base at Djibouti. With Beijing bolstering its economic and diplomatic footprints, both New Zealand and Australia have been vocal about their concerns regarding China's strategic ambitions in the region and its 'chequebook diplomacy.'

Australia is enhancing its role in the region with its Pacific "step up" policy that aims at augmenting security, economic and diplomatic cooperation with the region. On the other hand, New Zealand announced its "Pacific Reset" policy in February 2018, focusing on building deeper and more mature partnerships with the PICs, as well as increasing its diplomatic presence.5 France, Australia and New Zealand already have close relations to coordinate their assistance in the Pacific Islands under the tripartite FRANZ Agreement of 1992. In recent years, faced with the prospect of

growing Chinese presence in the region, Australia and France have shown renewed interest in their bilateral relationship.

Alongside these geopolitical tensions, the Pacific Island Forum (PIF), which is the only significant regional organization, has been undergoing a crisis, with five members deciding to quit the forum. This will have implications for the region's prosperity and stability in the long run.

Australia, with its unique geographical location, has an enduring interest in the peace, stability and economic prosperity of the Indo-Pacific strategic arc. Many 'sore points' have emerged in Australia- China relations in recent time, including the issue of 5G, Canberra's critique of Chinese meddling in Australia's domestic politics, Covid-19 and the subsequent trade war between the two, which signal their deteriorating bilateral ties.

The United States has also expressed concerns over China's increasing investment across the region and the lack of transparency in its actions. In June 2018, US-China Economic Review Commission's report titled, 'China's Engagement in the Pacific Islands: Implications for the United States' highlighted that "China is increasing its involvement in the Pacific Islands region in recent years, driven by its broader diplomatic and strategic interests, reducing Taiwan's international space, and gaining access to raw materials and natural resources."6 It pointed out that a possible Chinese base in the region could pose challenges to US defence interests and to its key partners in the region, Australia and New Zealand.

The United States has recently been taking the Oceania region as a whole much more seriously. This is reflected by some recent high-level visits, including the first visit of the Secretary of State to the Federated States of Micronesia (FSM) in 2019 and by a Defense Secretary to Palau in 2020, which later offered to host a US base.7

A major development in the region recently has been Kiribati and Solomon Islands switching allegiance from Taiwan to China. Kiribati is particularly important for Beijing, as it houses China's only offshore satellite facility.8 In January 2020, the President of Kiribati Taneti Maamau during

his visit to Beijing expressed willingness to support more Chinese investments in Kiribati. China's active presence in Kiribati can be a cause of apprehension to the United States.

India's approach towards the PICs has undergone a positive shift in recent years; highlighting the government's willingness for greater engagement with these small island countries. This is reflected in the formation of the action-oriented Forum for India and Pacific Islands Cooperation (FIPIC) in 2014. It has provided a platform to facilitate multilateral and multidimensional cooperation on focus areas such as climate change, connectivity, disaster management, informational technology, trade and investment, sustainable development, maritime security, human resource development and people-to-people contact between India and these island countries. India's approach towards the PICs focuses on a transparent, need-based approach and inclusive relationship with the region based on shared values and a shared future.

Meanwhile India's relationship with Australia has been on an upswing. In 2020, both the Comprehensive Strategic Partnership (CSP) and Arrangement concerning Mutual Logistics Support (MLSA) were agreed between the two countries.9 MLSA allows the possibility of India and Australia using each other's strategically located island territories i.e. India's Andaman and Nicobar Islands closer to the Malacca Strait, and Australia's Cocos Islands located in the Indian Ocean in close proximity to the Lombok, Sunda and Makassar Straits.10 It will enhance their joint capacity, particularly in maritime domain awareness. Both the countries are part of the Quad. Australia has made re-entry into the Malabar exercises. Additionally, there are regular bilateral exercises between the navies of the two countries.

The South China Sea (SCS) has an impact on the balance of power of the larger western Pacific and, in turn, the much wider Indo-Pacific geostrategic calculus. The SCS is the second most-used waterway and has a vast amount of natural resources. Therefore, keeping the region free and open is crucial for most of the countries in the Indo-Pacific region. The region has witnessed the high pitch of regional tensions with the long-standing

dispute between China and Southeast Asian countries (Philippines, Vietnam, Malaysia, Brunei and Indonesia). China's aggressive military activities and posturing have continued even during the pandemic, with multiple instances of Chinese fishing boats in waters adjacent to Indonesia's Natuna islands and deployment of survey vessels in the EEZs of Malaysia, Brunei, Vietnam and the Philippines.11

In the United States, the Biden Administration has upheld its predecessor's rejection of nearly all the Chinese claims in the SCS. During the fifth Anniversary of the Hague Tribunals Award in favor of the Philippines, on 11 July 2021, a statement released by Anthony Blinken's office reiterated that "Nowhere is the rules-based maritime order under greater threat than in the South China Sea. The People's Republic of China (PRC) continues to coerce and intimidate Southeast Asian coastal states, threatening freedom of navigation in this critical global throughway."12 Calling China to cease its provocative behavior, the statement reaffirmed that "an armed attack on Philippine armed forces, public vessels, or aircraft in the South China Sea would invoke U.S. mutual defense commitments under the 1951 U.S.-Philippines Mutual Defense Treaty."13

Prioritizing China as "the number one pacing challenge" the United States is set to establish a US$ 2.2-billion Pacific Deterrence Initiative (PDI) to bolster deterrence and maintain competitive advantage14 in the Indo-Pacific region and deepen cooperation with allies and partners.

India's longstanding balanced position on the SCS underwent a shift since the Galwan Valley incident. On the issue of SCS, speaking at the 15th East Asia Summit 2020, the External Affairs Minister expressed concern about "actions and incidents that erode trust in the region," and also stated that the "Code of Conduct negotiations should be in accordance with the UNCLOS and not be prejudicial to legitimate interests of third parties".15 From the strategic and economic point of view, the sea-lanes across the region are crucial for India, as much of the country's trade with East Asian countries passes through the region. New Delhi has deep investment in ensuring a free, open and rules-based order in the region. Moreover, with its increasing economic and maritime military capabilities and strategic

ambitions in the wider Indo-Pacific region, India is keen to look beyond the east of Malacca. The South China Sea, therefore, has become a part of India's strategic calculus.

Recently, the Indian Navy announced deployment of a naval task force of four ships for two months into Southeast Asia, the SCS and the western Pacific, as part of regular deployment in pursuit of its Act East Policy and the SAGAR initiative. During the course of deployment, these ships will be participating in drills and exercise with friendly countries, including Singapore (SIMBEX), Indonesia (Samudra Shakti) and Australia, and a significant one with the Quad countries for the Malabar exercises off the coast of Guam, which will be second in a row with all the four countries participating in it.16

Conclusion

The expansive, non-transparent and unsustainable nature of Beijing's extensive projects under the Belt Road Initiative (BRI), its increasing foothold in the Indian Ocean, its assertive actions in the SCS and push in the South Pacific have caused apprehensions among the regional countries. For the United States, interest in the Indo-Pacific is driven by the region's size and economic dynamism but clearly another important factor has been the rise of China and willingness for closer partnership with India. The United States has clearly articulated its continued commitment to the Indo-Pacific region. With early engagement with Quad and PDI, the Biden Administration has continued with its predecessors' tough approach towards China. India is keen to strengthen partnership across the region through various multilateral and plurilateral platforms, to help build economic capabilities, improve maritime security and connectivity, and promote sustainable development and collective security. India endeavors to strengthen relationships with the regional partners in a mutually supportive and cooperative manner under the vision of 'SAGAR'. This spirit was further enhanced under the Indo-Pacific Oceans Initiative (IPOI) announced by Prime Minister Narendra Modi at the 14th East Asia Summit in November 2019.

Increasing competition, intractable disputes, most strategic hotspots, power rivalry, increasing military expenditures and naval capabilities, unilateral actions challenging the multilateral order and international laws are some of the common concerns for the regional countries. In addition, there are innumerable non-traditional challenges to the maritime security of the region, such as climate change, piracy and unsustainable plundering of resources, all of which require cooperative efforts to deal with. At this stage, given the absence of any significant region-wide security architecture, the dynamic geopolitical environment of the region and unprecedented pandemic-induced shifts, the regional balance of power looks uncertain.

Notes

1 Endnotes

Cleo Paskal, STRATEGIC OVERVIEW OF OCEANIA,

https://www.eastwestcenter.org/publication/strategic-overview-oceania

2 I.bid

3 China eyes Vanuatu military base in plan with global ramifications, 9 April 2018 https://www.smh.com.au/politics/federal/china-eyes-vanuatu-military-base-in-plan-with-global-ramifications-20180409-p4z8j9.html

4 The Mapping Foreign Assistance in the Pacific Project, Lowy Institute for International Policy, https://chineseaidmap.lowyinstitute.org/

5 Our relationship with the Pacific, New Zealand Department of Foreign Affairs and Trade, https://www.mfat.govt.nz/en/countries-and-regions/pacific/ 6China's Engagement in the Pacific Islands: Implications for the United States, January 2018, https://www.uscc.gov/sites/default/files/Research/China- Pacific%20Islands%20Staff%20Report.pdf

7 I.bid

8 Richard K. Pruett, "A United States-Kiribati Compact of Free Association Would Yield Mutual Dividend", Asia Pacific Bulletin, No. 501, March 2020, https://www.eastwestcenter.org/publications/united-states-kiribati-

compact-free-association-would-yield-mutual-dividends#:~:text=Kiribati%20is%20a%20Pacific%20Micronesian,Micronesia% 2C%20and%20the%20Marshall%20Islands.&text=Each%20is%20now%20a%20sovereign,law%20equal%20to%20the%20Constitution.

9 Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific Between the Republic of India and the Government of Australia, June 04, 2020, https://mea.gov.in/bilateral-documents.htm?dtl/32730/Joint_Declaration_on_a_Shared_Vision_for_Maritime_Cooperation_in_the_IndoPacific_Between_the_Republic_of_India_and_the_Government_of_Australia

10 History repeating: Australian military power in the Cocos Islands, https://theconversation.com/history-repeating-australian-military-power-in-the-cocos-islands-4484

11 As US-China tensions rise, what is the outlook on the South China Sea dispute in 2020-21?,https://www.scmp.com/week-asia/opinion/article/3100563/ us-china-tensions-rise-what-outlook-south-china-sea-dispute-2020

12 https://www.state.gov/fifth-anniversary-of-the-arbitral-tribunal-ruling-on-the-south-china-sea/ 13https://www.state.gov/fifth-anniversary-of-the-arbitral-tribunal-ruling-on-the-south-china-sea/

14 Pacific Deterrence Initiative, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/fy2022_Pacific_Deterrence_Initiative.pdf

15 15th East Asia Summit, https://www.mea.gov.in/press-releases.htm?dtl/33194/15th+East+Asia+Summit

16 Indian Navy to deploy 4 frontline warships early August in next edition of Malabar exercise https://theprint.in/defence/indian-navy-to-deploy-4-frontline-warships-early-august-in-next-edition-of-malabar-exercise/708117/

Western Indian Ocean - Southern Ocean Security Complex

ISLAND CHAINS AND THE SECURITY DILEMMA: HOW TO MOVE FORWARD?

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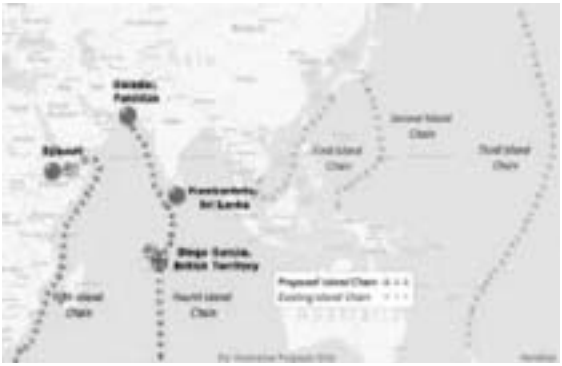
Introduction

Former Japanese Prime Minister Shinzo Abe recognized the continuity of the Indian and the Pacific Oceans. He called it the 'Confluence of Seas'. There are myriad small and big islands spread all across this confluence. Some call it 'Cloud of Islands' or 'Sea of Islands'. In geopolitical terminology, they are called Island Chains. The First, Second, Third, Fourth and Fifth Island Chains are the most contested maritime places today in the entire Indo-Pacific. From Washington to Beijing, and Tokyo to Canberra, including New Delhi, all major powers want a stake in these Island Chains. Australians are the all-weather friends of the Pacific Island Countries. While the Australians are watching in anxiety, China is on an island shopping binge and some wealthy Chinese individuals have also bought islands for their personal luxury. This island shopping spree could well be a political imperative for the People's Republic of China (PRC).

President Franklin Roosevelt once observed, "Across the Pacific, islands, hundreds of them, appear only as small dots on most maps. But they cover a large strategic area." Islands dotting the Indo- Pacific are like stars in the night sky. Naturally, star gazers from India, China, Turkey or Australia may see many patterns and star constellations based on their perception.

In spite of their intricate correlation with nature and geology, in the last five-hundred years, these islands, unlike the star constellations, have been connected in particular groupings — an inter-relationship which is neither natural nor inevitable. Island groupings have been a by-product of military power and geopolitics.



In the Indian Ocean, such Island Chains are the subject of geopolitical competition between India and China. In the Pacific, these Island Chains have triggered competition between the United States and China, or between Japan and China. Several such islands are now possessions of the United States, Great Britain, France, Japan, China, India and others. Despite their small size, they are known as strategic 'game changers' in the Indo- Pacific.

Islanders and Mainlanders

In 1982, French information scientist Abraham Moles coined a term called 'Nissology' or 'Nissonology,' connoting the scientific study of islands. Australian anthropologist Grant S. McCall put forward this term in the 1990s as an emerging branch of study.

Islands in the modern times have been increasingly subjected to geopolitical constructions and correspondingly fallen victim to mainland strategic imaginations, narratives and formulations. Throughout Cold War politics, 'Island Chains' were seen and strategized as maritime outposts of the mainland security architect to facilitate geopolitical domination. From Taiwan to Papua New Guinea or from Diego Garcia to Malta, all the islands of the world are often viewed as strategic constructions to the high power of mainlanders. Back in November 1967, Arvid Pardo, Malta's Ambassador to the United Nations (UN), for the first time voiced his concern about the mainlanders' geopolitical overbearing on the islands. Seven months before Ambassador Pardo's famous speech in the UN, the Torrey Canyon oil

spill, one of the world's most serious oil spills, occurred. The super tanker 'SS Torrey Canyon' ran aground on rocks off the south-west coast of the United Kingdom in March 1967, spilling an estimated 25-36 million gallons of crude oil. Apparently, in order to halt and minimize the oil spill which quickly spread around 300 NM into the territorial waters of Spain, France, Germany and the entire coastal region, the British Royal Navy and Air force bombarded the vessel. As the records would tell us, apparently 45% of the bombs by the British Navy and Air force missed its target. It was a huge environmental and ecological disaster as well as a grave political scandal.

Malta, being the next-door island nation, Arvid Pardo's UN speech had an alarming tone of how the islands are being viewed in geopolitics. Contrary to the strategic and geopolitical designs of big powers, Nissologists are concerned that islands and islanders are victims of mainlander's geopolitical imaginations. Nissology, therefore broadly argues that it is a science of 'island thinking'.

Christian Jacob's 'The Sovereign Map' refers to the island as "a minimal unit of cartographical space, a space reduced to the singularity of a form." This definition highlights the function of the insular figure as an elemental graphic component of cartographical semiosis. Speaking on behalf of islanders, Grant S. McCall and Christian Depraetere defined 'Nissology' as the study of islands on their own terms.

Islands and the Changing Dynamics

Nissology focuses more on the island people, the sea and ocean, the laidback island culture, poetry and all that nature has bestowed on the islanders — a bottom-up approach or a subaltern corridor away from the bustle of geopolitics. However, in contrast, they have been handed a top-down approach by the mainlanders. Structurally, they are seen as too small to sustain any meaningful independence and, correspondingly, they are seen as extensions of big power's definition of what and how they should be.

Now times have changed for the islanders. While the big powers are keen to invest money and resources in these islands, the islanders have

also learnt to bargain. India is far too eager to help Maldives, lest the Chinese might outdo its efforts. Under Washington's Blue Dot Network program, where Australians and Japanese are also involved, Pacific Island villages are being electrified and local infrastructure is being developed. The Blue Dot Network proposes to bring together governments, the private sector and civil society under shared standards for global infrastructure development — a counter to China's Belt and Road Initiative (BRI). Too many regional organizations have also emerged, and investments are being promised. The Indo-Pacific Islands are now blue-eyed destinations and the loyalties of islanders are commensurate to the inflow of dollars.

Island Chains and the Security Dilemma

The protagonists of the Assemblage Theory simplify some of the dilemma. Writing from the Assemblage theoretical platform, Sasha Davis, Lexi Munger and Hannah Legacy argue that 'Island Chains' fail to be within any country's sphere of influence. They argue that since islanders have learnt to navigate multiple foreign influences and to benefit from several, it cannot be a zero-sum game. Each proximate power has to invest in physical infrastructure on the islands based on how they want the island to be oriented. Washington may view the Pacific Islands as a constellation of maritime strategic assets and outposts. But when the Chinese talk of BRI (MSR), the islanders are bound to be influenced by the investment and infrastructure it may bring and the connectivity that may open up.

Each of these physical and structural dynamics has direct and dramatic effects on local landscape, popular psyche and the local or regional political economy, which also influences the political narrative of the islands. While each such material infrastructure and investment can orient or fashion the islands in a particular direction, all such infrastructure can be redesigned and redirected too. Therefore, any 'Assemblage of Islands' is always normatively unstable and shall have a permanent security dilemma.

The Way Forward

The top-down approach emerging from the mainland is fundamentally fallacious. The time has come for the real-time empowerment of the islanders and cooperative maintenance of islands' natural, geographic and ocean-centric physical features, which are critical as the global environmental pulse points. Instead of colonizing islands through several means, the nissologists must be given a chance and collectively, islands must be preserved on their own terms.

EMERGING THREATS AND CHALLENGES TO THE WESTERN INDIAN OCEAN SECURITY COMPLEX

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The major world powers in the post-Cold War era had identified the strategic importance of securing the sea-lanes of communication (SLOC) and the vital chokepoints of the larger Indo-Pacific region to ensure the economic development of the fastest growing Asian economies. For example, a total of 95% of India's trade volume for the financial years 2005–2015 was in the form of maritime trade, further underscoring the importance of protecting the SLOCs. While earlier threats included piracy, terrorism, arms, drugs and human trafficking and natural calamities, major developments in the 2010s had added new dimensions to the threats and challenges faced by the Western Indian Ocean security complex. Recent tit-for-tat attacks on commercial shipping between Iran and Israel reveal how the rivalry between the two states has complicated the maritime environment around the Arabian Peninsula, and threatens to escalate into a wider regional conflict, putting the sea lanes and maritime chokepoints at great risk.

Certain developments of the past few years threaten to convert the Western Indian Ocean into a contested zone between the major powers of West Asia and the Persian Gulf region besides the continuing rivalries between the United States and India on the on the one side and China on the other. Since 2015, Saudi Arabia has led a coalition of nations against the Houthi rebels of Yemen who seized the capital Sanaa in 2014. As the Houthis belong predominantly to the Shia sect, Saudi Arabia fears the growing influence of Iran in Yemen. As part of this campaign, both Saudi Arabia and the UAE have for all purposes annexed certain islands and a section of the land-based territory of Yemen to secure their maritime strategic, security and commercial interests. These seized Yemeni territories are seen as spoils of war by the two powers. However, such neo-colonial projects risk further

expanding the Iran-Arab Gulf rivalries into a vital chokepoint like the Bab-el-Mandeb Strait, which can have repercussions in the future.

From the 2000s onwards, the Red Sea and the Horn of Africa regions were prone to maritime security threats such as piracy, terrorism and various kinds of trafficking. However, these regions have now turned into zones of militarized and commercial maritime competition among various powers, with visible potential to turn into clashes. New geopolitical conditions, especially after the Arab Spring protests which began in late 2010, threaten the security of the Red Sea and the Horn of Africa littoral states. While on the one side, the Houthis have conducted attacks on commercial shipping, the Saudis and the Emiratis are trying to acquire bases and staging posts in this vital region for different reasons. While the Saudis are doing so as part of their military campaign in Yemen, the Emiratis, who have mostly withdrawn from the onslaught against the Houthis, want to secure their long-term interests in the region. Such efforts have also meant that the rivalries of the Persian Gulf region, including the one between Saudi Arabia, the UAE and Bahrain on the one side, and Qatar on the other, leading to the blockade of Qatar by the former powers and Egypt in 2017, are intensifying the competition for acquiring military bases and access to commercial ports in the Red Sea and the Horn of Africa littoral states. Egypt and Turkey, which had taken sides in the Persian Gulf rivalry, have also entered this competition in the Red Sea region.

Other West Asian powers like Israel also have their own security arrangements in the region. External powers like Britain and France and rivals of the larger Indo-Pacific region like China and India besides Japan and South Korea are all involved in attempts to gain access to naval facilities in the region. The Red Sea provides direct passage from and to the Arabian Sea and the Mediterranean Sea through the Suez Canal to the north and the Bab-el-Mandeb Strait to the south. If any event prevents access to these Red Sea points for commercial shipping, rerouting them to shipping lanes around the Cape of Good Hope off South Africa would be three times as long and expose shipping to new security vulnerabilities. It was earlier

considered that only the land territories of the states of West Asia and the Persian Gulf region were impacted by the US invasion of Iraq in 2003 and the conflicts triggered by the Arab Spring protests of 2010. But now it is clear that these conflicts threaten the safety of the sea-lanes of communication and chokepoints around the Arabian Sea Peninsula. Therefore, it is in the security interests of the entire Indo-Pacific region that the rivalries and contests of major regional and external powers in the waters of West Asia are halted and attention is directed once again towards the larger maritime threats that impact all the states in the wider region.

MAJOR POWERS AND WESTERN INDIAN OCEAN: RECRAFTING INDIA'S POLICY

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In the last few years, the strategic importance of the Western Indian Ocean (WIO) has gone up significantly. The WIO includes the region lying between Djibouti in the north, South Africa in the south and Mauritius to the west. The region forms the western flank of the Indo-Pacific region and links Asia with the resource-rich continent of Africa. The region is critical for global energy security and economic prosperity as the petroleum traffic between West Asia and Europe passes through it. The region is also resource-rich in terms of fisheries, minerals and offshore energy.

Since the opening of the Suez Canal in the 1860s, the region has attracted major global powers. Currently, major powers such as the United States, China and Japan have established a firm foothold in the region. France continues to maintain a substantial presence, while Russia, Saudi Arabia and the United Arab Emirates are increasing their strategic footprint in the WIO. The strategic rivalries between these powers are being played out in the WIO1 and have implications for its evolving political and security dynamics. For India, strategic developments within the region play a role in shaping India's foreign and strategic policies, especially towards Africa and the Indian Ocean.

Major Powers in the WIO

Most WIO states are unable to deal with a number of non-traditional security threats such as terrorism, maritime piracy, illegal, unreported and unregulated (IUU) fishing, smuggling of arms and drugs, etc. due to their weak state capacity. Therefore, major global powers found opportunities to enter the region and assist the regional states in building their capabilities. Post 9/11, the United States expanded its presence in the region through the Combined

Joint Task Force–Horn of Africa (CJTF-HoA). It acquired a military base at Djibouti and also opened smaller military facilities, including listening posts for gathering intelligence and launching drone attacks against suspected terror targets in Somalia and Yemen.2 France already had its military base at Djibouti and control over strategically significant island territories such as the Réunion and Mayotte.

Around 2007-08, maritime piracy began to threaten global shipping passing through the Gulf of Aden, which Somalia was unable to contain or control. As a result, a multi-national naval coalition came together to launch anti-piracy patrols in the waters of the Horn of Africa,3 which was the turning point in the geopolitics of the WIO. It provided an excellent opportunity for Japan, South Korea and China to send their naval warships to the Gulf of Aden.

Even Russia, Iran and India (being a residential naval power) have contributed to this endeavor.4 It accelerated the process of integrating the strategic concerns of the WIO with the Asia-Pacific and fast-tracked the emergence of the Indo-Pacific as a single, geopolitical unit.

The expansion of interests and capabilities of Asian powers since the 1990s has allowed them to engage with the littoral states and acquire a military foothold in the region in the form of access to facilities/military bases and economic investments. For instance, Japan opened its base at Djibouti in 2011. Now it hosts military bases of France, the United States, Japan and China and has emerged as probably the "most valuable military real estate" in the world.5

Similarly, Russia established a military base in the Red Sea after an agreement with Sudan.6 The UAE has acquired military facilities in Eritrea, Somaliland, and southern Yemen.7 Turkey trains Somalia's troops and guards the Mogadishu airport.8 These ties have helped these countries to expand their influence in the region. South Korea deploys a unit of Special Forces in the UAE for protecting its interests in West Asia and East Africa. Interestingly, even Taiwan has established diplomatic contacts with the self-

governing territory of Somaliland just south of Djibouti.9 Now Britain is also deepening its defence partnership with Kenya and Oman. Greater British presence, especially in the maritime domain, is on the cards. Consequently, the evolving military presence and growing engagements of major powers with the WIO is a reality.

India's Interest

For India, the WIO has traditionally been an important region. The Indian Navy has assisted the WIO states10 in a variety of ways. In 2019 and 2020, it had sent naval ships to Mozambique and Madagascar, respectively, as Cyclone Idai and Cyclone Diane ravaged these states, making India the first responder to the crisis in Madagascar. In 2015, India successfully evacuated hundreds of nationals who were caught in war-torn Yemen. These operations underscore India's geopolitical relevance for the WIO.

Regarding maritime security, apart from its anti- piracy efforts in the Gulf of Aden, India's continuous naval presence has helped to make this maritime space more secure. India is positioning itself as the net security provider in the region. In the past, India had deployed naval warships in 2003and 2004 to secure the maritime perimeter around Maputo, as Mozambique hosted the African Union (AU) and World Economic Forum (WEF) summits.11 India has also invested considerable diplomatic capital in deepening military and political relationships with Mauritius and Seychelles, where India is also developing naval and air facilities.12 These operations would help India to project its growing regional power and protect its vital national interests as the country's Indian Ocean and Africa policies converge in the WIO.

Ensuring security and stability in the WIO is a shared concern for India, France, Japan, and the United States. Therefore, India's ties with these powers are growing. There have been reports of discussions on India being granted possible access to the Japanese facilities in Djibouti. India has also been admitted as an observer in the French-dominated Indian Ocean Commission (IOC)13. In early 2021, the Indian Navy conducted naval exercises with France and the UAE in the WIO. Subsequently, during the

June 2021 visit to Kenya by Dr. S. Jaishankar, India's External Affairs Minister, the joint statement that was released framed Indo-Kenyan ties in the context of the Indo-Pacific.14 These steps indicate the growing salience of the WIO in India's foreign and strategic policy calculations.

The growing presence of major global powers is reshaping the geopolitics of the WIO and altering its regional balance of power. China's growing presence in the region and expanding partnerships with Iran and Russia present challenges for the United States and its allies. Despite the real challenge of China, the overall geopolitical setting is complicated. It is rebuilding ties with Iran, while Russia remains a key strategic partner, which means that India can find areas of convergence with these countries even within the WIO. However, the hostile relationship between the United States and Russia, and between the United States and Iran constrains India's strategic space. In addition, the rivalries between the UAE, Turkey and Iran also impact the overall security dynamics of the WIO. In this context, India needs to protect its interests by keeping a close watch on the developments and navigating through the strategic rivalries and complicated geopolitics of the WIO.

Notes

1 Neil Melvin, "The Foreign Military Presence in the Horn of Africa Region", SIPRI Background Paper, April 2019, available at: https://www.sipri.org/sites/ default/files/ 2019-05/sipribp1904_2.pdf (Accessed on 9 August 2021).

2 Michael R Gordon, "U.S. turns Horn of Africa Into a Military Hub", The New York Times, 17 November 2002 ; Neil Melvin, "The Foreign Military Pres- ence in the Horn of Africa Region", SIPRI Background Paper, April 2019, available at: https:// www.sipri.org/sites/default/files/2019-05/sipribp1904_2.pdf (Accessed on August 9, 2021).

3 James Stavridis, Sea Power: The History and Geopolitics of the World's Oceans, Penguin, New York, 2017, pp. 116-118.

4 Ibid.

5 Bruno Maçães, "The most valuable military real estate in the world", Politico, 15 January 2018. Available at: https://www.politico.eu/blogs/the-coming- wars/2018/01/the-most-valuable-military-real-estate-in-the-world/ (Accessed on 9 August 2021).

6 Roman Goncharenko, "With Sudan naval base, Russia may have a 'Key to Africa', Deutsche Welle,12 December 2020, available at: https://www. dw.com/en/with-sudan-naval-base-russia-may-have-a-key-to-africa/a-55791124 (Accessed on 9 August 2021).

7 Zach Vertin, "Red Sea Rivalries: The Gulf, the Horn and the New Geopolitics of the Red Sea", Brookings Institution, June 2019, available at: https:// www.brookings.edu/wp-content/uploads/2019/06/Red-Sea-Rivalries.-The-Gulf-The-Horn-and-the-New-Geopolitics-of-the-Red-Sea-English-pdf.pdf (Accessed on 9 August 2021).

8 Neil Melvin, "The Foreign Military Presence in the Horn of Africa Region", SIPRI Background Paper, April 2019, available at: https://www.sipri.org/sites/ default/files/2019-05/sipribp1904_2.pdf (Accessed on 9 August 2021).

9 Sankalp Gurjar, "Taiwan-Somaliland Relationship and the Geopolitical Competition in the Red Sea", ICWA Issue Brief, 1 September 2020. Available at: https://www.icwa.in/show_content.php?lang=1&level=3&ls_id=5317&lid =3747 (Accessed on 9 August 2021).

10 DD News, "Indian Navy to provide humanitarian aid to cyclone-hit Mozambique", 20 March 2019. Available at: http://ddnews.gov.in/international/indi- an-navy-provide-humanitarian-aid-cyclone-hit-mozambique (Accessed on 9 August 2021); PIB, "Indian Navy Launches 'Operation Vanilla' to Provide Humanitarian Assistance and Disaster Relief at Madagascar", 29 January 2020. Available at: https://pib.gov.in/newsite/PrintRelease.aspx?relid=197712(- Accessed on 9 August 2021).

11 Pramit Pal Chaudhuri, "India's 21st century African partner: Why Mozambique was Modi's first stop", Hindustan Times, 7 July 2016. Available at: https://www.hindustantimes.com/india-news/india-s-21st-century-african-partner-why-mozambique-was-modi-s-first-stop/story-jPw0z4yQQbn- WdddIOkvRAM.html (Accessed on 9 August 2021).

12 Samuel Bashfield, "Agalega: A glimpse of India's remote island military base", The Interpreter, 2 March 2021. Available at: https://www.lowyinstitute. org/the-interpreter/agalega-glimpse-india-s-remote-island-military-base (Accessed on 9 August 2021).

13 The Wire Staff, "India Approved as Observer of Indian Ocean Commission", The Wire, 6 March 2020, available at: https://thewire.in/diplomacy/in- dia-approved-as-observer-of-indian-ocean-commission (Accessed on 9 August 2021).

14 MEA, "India-Kenya Joint Statement on the Visit of External Affairs Minister to Kenya", 14 June 2021. Available at: https://www.mea.gov.in/bilateral-documents.htm?dtl/33918/IndiaKenya_Joint_Statement_on_the_Visit_of_External_Affairs_Minister_to_Kenya_June_1214_2021 (Accessed on 9 August 2021).

Arabian Sea Littoral Maritime Security Complex

THE SECURITY DYNAMICS OF THE ARABIAN SEA LITTORAL: ADDRESSING THE COMPLEXITIES

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The Arabian Sea littoral maritime security complex is an interesting interplay of words. Any discussion on strategic futures, especially of the Arabian Sea maritime security, is indeed going to be very complex.

The security dynamics of the Arabian Sea area assumes significance not only within the Indian Ocean region but globally as well. The geography of this area is compact, like an inverted bowl, hemmed in by landmasses on three sides. In the east is the Indian subcontinent, in the north the Makran Coast that includes the coast of Pakistan and the coast of Iran, and then there is the Gulf of Oman that provides entry and exit into the Persian Gulf. There are also the coasts of Oman and Yemen. The Gulf of Aden provides entry into the Strait of Hormuz and from there to the Red Sea and on to the Suez Canal. There are also the Eritrean and the Somalian Coasts. Although it is an important international sea space, this is a land that is hemmed in and has a localized geography. As Admiral Murlidharan observed, it is a very compact space and some of the distances are very small.

The people who have lived in this space have had interlinkages for centuries. The monsoon trade winds facilitated the movement of traders from the Indian subcontinent all the way up to the ports of East Africa, Yemen and Oman as well as those in the Gulf. They would go in one season and come back in another, interconnecting the people within these regions. In the process, they would establish contacts that were of socio-cultural, economic and traditional significance. This interconnectedness and compact geography meant that a security threat that manifested in one part of the region could get easily exported to another. It has therefore been seen as one compact security zone.

Another issue faced by the Arabian Sea littoral states is related to several unresolved, simmering disputes and internal conflicts in the region. The Indo-Pak issue, the Iran-Iraq conflict, the internal turmoil in Afghanistan, the sectarian violence in Pakistan, the incidence of terrorism, and the presence of several weak political establishments impede opportunities for economic and social expression. People in these regions are impoverished, highly nationalistic and fiercely parochial, leading to frequent ethnic and sectarian clashes. Therefore, when studying the geography of this area, it is evident how nations sharing borders with each other have rarely lived in peace and harmony. Instead, they have always been engaged in a constant struggle for domination.

Geography determines two important aspects of this region. The first aspect covers the regional security threats, while the second aspect is the geo-economics of this region, which is crucial for global geopolitics and geo-strategy.

Coming to the security threats, this region is a hot bed of terrorism, narcotic smuggling, arms smuggling, illegal migration and even armed robbery. There have also been instances of piracy threats in the Gulf of Aden. It was from this region that the United States led the global war against terrorism, after the 9/11 attacks.

As far as the geo-economics of this region is concerned, it has a critical contribution to global security and strategic stability. This is primarily due to the two chokepoints to which Admiral Muralidharan alluded. The first one is the Strait of Hormuz, which in its narrowest part, is just 21 NM wide and has a navigable channel of only about six NM wide. Therefore, it is easy for two ships to get blocked. The chokepoint is huge and therefore has significant ramifications for international trade. In 2020, about 18 million barrels of oil were transported through the Strait of Hormuz, which amount to about a third of the global seaborne oil and about a quarter of the liquefied natural gas that is derived from it. This indicates that a feature of the trade conducted through the Persian Gulf is that it not only feeds the economies of the regional countries but also feeds the economies of many energy-

deficient countries such as China, Japan and South East Asia as well as some countries in Europe and North America. Therefore, turning off the tap in the Strait of Hormuz has regional as well as global consequences.

The second chokepoint is the Bab-el-Mandeb, a strait that connects the Indian Ocean region to the Arabian Sea and the Red Sea and from the Red Sea to the Suez Canal. It is a key maritime waterway, as it makes international trade viable and economically feasible for most countries.

For six days, 23–29 March 2021, the Suez Canal remained blocked because a ship called Evergiven got itself wedged in the canal. This led to a huge financial loss that the Suez Canal authority itself claimed a compensation of about US$ 910 million towards loss of revenue from the operator of the vessel. After some hard negotiations, the amount was brought down to about US$ 515 million. However, the two parties finally brokered a deal at a much lesser price. This incident is testament to the fact that any disruption in trade either in the Suez Canal or in the Bab-el-Mandeb Strait has huge repercussions for international trade and commerce as well as energy security.

This region witnesses two different cognitive considerations. The first one is that it is prone to ideological, ethnic and sectarian violence. There are plenty of simmering disputes and disagreements among the countries in the region. On the one hand, there is political and social insecurity, and on the other, this region is crucial for international trade and global economy. This explains the large number of international warships that have been constantly making their presence felt in the region for the last 20 years. While the Coalition Task Force 150, the CTF 151, the CTF 152 and the UNAV4 have a distinct presence, there is also a regional maritime security patrol. This is greatly indicative of the national interest that all states have in ensuring that stability is established and maintained in this strategic region. This has always been the situation and is expected to continue in the foreseeable future.

Four significant developments that took place recently are going to significantly impact the security dynamics in the North Arabian Sea and the Indian Ocean region. The first is the drastic and sudden withdrawal of the

US military from Afghanistan in August 2021. Subsequently, the Taliban has taken over Kabul and most other parts of Afghanistan. This event can potentially have huge ramifications in terms of regional security, raising fears of militancy, terrorism, violence and armed conflict.

The second development, which is highly pertinent from the Indian perspective, is the entry of China into the Indian Ocean region. China entered the Indian Ocean region in 2008 under the pretext of undertaking anti-piracy measures. As eyebrows were raised and questions asked, Beijing responded that the entire international community had an interest in anti-piracy and so did China. Since then, China has marked its permanent presence in the Arabian Sea and is now the norm maker through its Anti-Piracy Escort Force (APEF). Currently, China has 38 APEF there. The APEF is constituted by a top-of-the-line destroyer, a frigate and a support ship that can keep them in station for three or four months together. Back in 2008, this was the only factor that legitimized China's entry into the Arabian Sea. However, now China's Belt and Road Initiative (BRI), the ambitious vision of Xi Jinping, has the China-Pakistan Economic Corridor (CPEC) at its core. The CPEC has the deep seaport of Gwadar as its center of gravity, and that is hard investment in hard national interest. The BRI, the CPEC and the seaport of Gwadar connect the Arabian Sea to Kashgar in the Xinjiang province. It is very important for India to take note of these developments.

The third and fourth developments are not military threats, but still warrant a discussion. The Covid-19 pandemic has wreaked havoc in all local economies all over the world and this region has not been an exception. There has been a rise in unemployment and poverty, exacerbating social inequality and insecurity and creating a lot of angst in many societies.

The fourth development is the release of the sixth assessment report (AR6) by the Intergovernmental Panel on Climate Change (IPCC). The AR6 suggested that at 1.5°C — the cap that the international community agreed upon in the Paris agreement in 2015 — is likely to be exceeded sooner than we expect in the next two decades. The melting of snowcaps, permafrost, rising sea levels and severe weather events are going to be

manifested in coastal areas. These are areas that are tightly packed with an impoverished population, one that remains ready to take on the non-traditional threats to life and survival.

There are static factors like the geography, the economic potential and the geo-economic importance of the area, and then there are dynamic factors like the ascension of the Taliban, the abrupt withdrawal of the US military from the area, the entry in force by China in the coming years because of BRI and the Covid-19 pandemic. This is a region which demands attention. Maritime security will take the centerstage in international relations all over the world, specifically in the North Arabian Sea. As Prime Minister Narendra Modi said in his address during India's presidency of the United Nations Security Council (UNSC), maritime security would indeed be a shared concept. It will depend on collaboration, cooperation and interoperability of like-minded nations in the five broad principles that the Prime Minister talked about. Those five principles will be equally applicable in this region too. To conclude, it takes collaboration, cooperation, capability and credibility to come together to ensure maritime security. The Indian Navy, as a principal manifestation of the nation's maritime power, is ready and prepared for that grave task and responsibility.

CHALLENGES IN THE ARABIAN SEA: AN INDIAN PERSPECTIVE

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The littoral region of the Arabian Sea is undoubtedly one of the global geopolitical hotspots as it is home to a number of historical and contemporary rivalries and disputes. These have been exacerbated by the presence of outside powers such as the United States, and now, increasingly China.

The region has had immense cultural influence on India. As former Indian diplomat T.C.A. Raghavan says, unlike the Bay of Bengal, from where India has projected influence, the Arabian Sea is a region from where India got influenced. Some of the major religions like Islam, Judaism and Christianity arrived in India via the Arabian Sea. As for trade, Arabs and later Europeans came to trade with India via the Arabian Sea, which later became the springboard for colonial rule in India. As the statesman and historian K.M. Panikkar observes, India never lost her independence till she lost command of the sea in the first decade of the 16th century.

The Arabian Sea region is strategically important for India for several reasons. First, several of India's major ports are located there. Second, the omnipresent China factor is visible here as well. China is developing Pakistan's Gwadar port and connecting it through the China Pakistan Economic Corridor (CPEC) to the Xinjiang province, providing a vital land route to China to enter the warm waters of the Arabian Sea. China has also built a logistics base at Djibouti in the Horn of Africa. This base, the Gwadar port and now Chinese investments in the Iranian port of Chabahar give China access to areas near India, thereby challenging India's primacy and threatening its security. Third, from a security perspective, one of the worst terrorist attacks on India, the 2008 attacks on Mumbai, was carried out because the terrorists could use the sea route to enter the country. Fourth, as the world's third largest energy consumer after the United States and

China, India is dependent on oil imports for its energy needs, and most of that oil is projected to come from the Persian Gulf via the Arabian Sea. Fifth, India has close economic and cultural ties with both the Persian and Arabian shores of the Gulf. Approximately 3.5 million Indians work in Gulf Cooperation Council (GCC) countries and send home billions of dollars annually as remittances. Finally, as the largest littoral and most populous country, India's leadership role in the ocean is crucial for the region's strategic future and for ensuring the freedom of the sea-lanes of communication (SLOCs). Thus, India has enduring strategic interests in the Arabian Sea region, and therefore it needs this large maritime domain to remain 'open, inclusive and free.'

The Arabian Sea is of global strategic importance, as it is one of the most nuclearized seas; it is home to India and Pakistan. In addition, countries like Iran and Israel and extra-regional powers like the United States, China and France have considerable presence in the region. The US

Navy has used its bases in the Persian Gulf to bomb Afghanistan and Iraq. The region is also important for the US fight against Islamic terrorism. The Arabian Sea also hosts crucial SLOCs like the Straits of Hormuz and Bab-el-Mandeb. In 2018, its daily oil flow averaged about 21% of the global liquid petroleum consumption. Moreover, there are several rivalries playing out in this region such as the US--China, China-¬India, India-Pakistan, US- Iran and even Iran-Pakistan. Adding to these tensions is Iran's support to the three Hs, the Houthi rebels, the Hamas and the Hizbollah. Saudi support for government forces in the civil war in Yemen has complicated the regional situation further. So the Iran-Saudi proxy war is yet another contributing factor to the current tensions. Finally, there is the situation in Yemen itself, where a civil war has killed over 130,000 people, of whom about 25% are children.

Given all these tensions and rivalries, drone attacks could be the trigger for escalatory attacks. These threaten not only the peace and stability of the region, but also the security of countries dependent on energy imports. The second major threat to the region is the lack of democracy, the one

defining characteristic of the region. Many of the littoral states are not democracies and are unstable. However, the region might not witness its own version of 'Arab Spring' because most of these governments now have access to Pegasus or similar software. Third, this region has always been known for piracy. Ibn Battuta, who was a victim of pirates off the western coast of India, wrote that in the 14th century, ships in the Indian Ocean travelled in armed convoys for protection. However, incidents of piracy have come down due to concerted international efforts, including India's. Fourth, several incidents of marine terrorism have taken place such as the USS Cole attack in the Gulf of Aden in 2000, the 2008 Mumbai attacks and the 2014 attack on a Pakistani Navy frigate. Fifth, smuggling of drugs, arms, and humans using traditional smuggling routes is a threat. Finally, there is the threat of the proliferation of weapons of mass destruction (WMD). In 1999, India had seized a North Korean vessel in Kandla port in Gujarat carrying equipment for producing surface-to-surface missiles meant for Pakistan or Libya. As for traditional security, the need for HADR will probably increase in the coming years due to climate change. In the last few years, the number of cyclonic storms in the Arabian Sea has increased and the destruction caused thereby has also intensified. According to a study by the Indian Institute of Tropical Meteorology, this is because the surface temperature has risen by 1.2–1.4°C over the last 40 years. Many coastal regions could become inhabitable, giving rise to climate refugees. So HADR coordination between regional and extra-regional powers is necessary.

Finally, land-based pollution like sewage, drainage and discharge, and marine-based pollution caused by shipping like spillage and ballast water, drilling and mining, and illegal waste dumping have deteriorated the water quality of the Arabian Sea.

In conclusion, the security challenges in the Arabian Sea region are very different from those in the Bay of Bengal. The security situation in the Bay is more about governance challenges like illegal, unreported and unregulated (IUU) fishing, pollution and marine conservation, along with

some strategic coordination and exercises with friendly countries. In contrast, the focus in the Arabian Sea is on constabulary and issues like piracy, drug smuggling, IUU fishing, SLOC security and counter-terrorism. While the Bay of Bengal is packed with geopolitical rivalries, it also has several inter-governmental regimes, agreements and platforms such as BIMSTEC, which temper and moderate these rivalries. However, the Arabian Sea coast lacks such arrangements. Given the enormity of the challenges in the region of the Arabian Sea, a single navy cannot assume complete responsibility. So, a burden-sharing model in the region is the safest alternative, with India playing the most important role. As the largest regional power with an advantageous strategic location and good relations with most regional states, it can play a significant role in creating an effective maritime security regime in the region. The crucial part will be to expedite its capabilities, particularly drone capabilities, as these can change the maritime dynamics in the region.

FROM GREAT POWER DOMINANCE TO MULTILATERAL COOPERATION: THE EVOLVING SECURITY COMPLEX OF THE ARABIAN SEA LITTORAL

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The power play in the Arabian Sea littorals has directly impacted the maritime regions surrounding the Sea. The Arabian Sea has been important historically for two reasons. First, it has perhaps been the most strategically decisive part of the Indian Ocean in terms of the balance of power. All great powers (Great Britain, the United States, Russia and China) have sought access to this region. Second, the Arabian Sea littorals have both been energy-rich and marked by political instability, thereby attracting great power interventions throughout history. China has been the most recent entrant in the region, with its naval presence at Djibouti.

US as a Historically Predominant Actor

The maritime security complex of the Arabian Sea has been an increasingly evolving landscape of competition and cooperation since World War II. The entry of the US Navy in the Indian Ocean changed the dynamics for the Arabian Sea littoral countries.1 In 1949, the US naval presence was institutionalized in the form of the US Middle East Force (MIDEASTFOR). The initial berthing of non-combatant ships by the United States was gradually supplemented by sporadic deployments of combatant ships under the umbrella of the Central Treaty Organization (CENTO). The concentration of powers in the northwest Indian Ocean led to security concerns for littoral Countries, especially those which considered themselves non-aligned during the Cold War.

US dependance on Arab oil ensured that the Persian Gulf and its corridors leading to the Indian Ocean were coterminous with security concerns to guarantee a predictable flow of oil. The Arab- Israeli War of 1973 and the subsequent oil embargo imposed on the United States further

underscored the deeply intertwined security matrix of the Arab world. The Iran hostage crisis and the Soviet invasion of Afghanistan anchored the role of the United States as strategic player in the region even more firmly. The Islamic Revolution which deposed Shah Reza of Iran marked the end of support and predictability for US interests in the region. In the 1980s, the United States and local Gulf Arab monarchies tried to create a favorable balance of power.

For the United States , the end of the Soviet threat meant change in its strategic posture in the Gulf to regional challenges and opportunities. Since the end of the Cold War, American naval doctrine underwent a dramatic transformation. While the need for ideological proximities with regional regimes in West Asia waned, concerns regarding regional instability remained predominant, prompting the United States to maintain a favorable military balance.2

The Gulf War of 1991 proved that the United States could effectively project power in the region. In its Aftermath, a credible space was created for the US military in the Persian Gulf area. Several regional states showed more willingness to accept an explicit US military presence in the region. This allowed the United States to pursue friendly relations with other countries in the littorals of the Arabian Sea, facilitated by the 'Coalition of the Willing' covering 40 countries, including NATO allies and several Arab nations. On the contrary, the second Gulf War of 2003 left far more regional discontent. This, in turn, created the need for the United States to rely on other Indian Ocean littoral countries instead of just those in the Arabian Sea.

However, the 9/11 attacks changed the US approach to West Asia. Counter-terrorism efforts in the region, anti-piracy and intelligence gathering became the basis of renewed regional partnerships. Relations with Pakistan and partnerships in the maritime domain with countries like India became the new hallmarks of the US outlook on the Persian Gulf.

Enter China

Since 2000, China's interests in the Indian Ocean including the Arabian Peninsula have been growing. As the largest trading partner of Africa, China

brings a new economic-strategic perspective to the geopolitics of the Arabian Sea and the east African littorals. Through the extension of its Belt and Road Initiative (BRI) to West Asia and Africa, China has consolidated its strategic stakes in the region. Multiple MoUs with Arabian Sea littoral states and African countries have given China unprecedented access to the region. In particular, its stakes in Djibouti3, Gwadar port in Pakistan and Lamu port in Kenya have positioned China at the heart of the Arabian Sea security calculus.

China seeks to bring unprecedented trade connectivity and technology, and through them hybrid influence and control in the region. The Chinese presence has two specific impacts on the region. First, Chinese great power presence has grown disproportionately, creating the need for a multilateral response to avoid a destabilized order. For instance, the Quadrilateral Security Dialogue (QSD or Quad) and extensions of the Quad, involving Pacific countries such as New Zealand, South Korea and Vietnam. Second, individual countries have sought to renew their linkages with the countries of the region. As China's strategic presence has heightened regional competitive-ness, great power rivalry is slowly giving way to a coalition mechanism that combines the multilateral and bilateral approaches of the partner countries, while seeking their own unilateral interests.

Growing Multilateralism

The growing need for multilateralism in the Arabian Sea was driven by at least three factors: (a) growing discontent among regional countries about the US military presence in the region, especially after the 2003 Iraq invasion; (b) resource constraints for supporting large US military contingents abroad; and (c) the scramble by China and other powers to enter the region. The global financial crisis of 2007-08 hastened this process, making regional security in the Indian Ocean a multilateral concern.

This was also the period that saw the beginning of fatigue in the United States with its 'forever wars' which prompted it to embrace the reformed security outlook in the Indian Ocean, primarily by way of offshore balancing. This created space for more multilateral cooperation for the United

States and other countries. For instance, in 2002, the Combined Maritime Forces, a broad security coalition of naval partnerships was launched to ensure maritime security through counter-terrorism and counter-piracy efforts. However, such large coalitions in the Indian Ocean proved insufficient in restoring the balance of power and ensuring net security. One reason for this was that resident Indian Ocean Rim (IOR) countries with large littorals such as India were left out. Additionally, power concentration in the Indian Ocean still remained largely in the Arabian Sea. Amidst a new scramble for balance of power in the Indo-Pacific, India has found renewed strategic outlooks, not just in the larger Indian Ocean but in specific theaters such as the Arabian Sea in the north, East African Coast, the Southern Indian Ocean and the Bay of Bengal, marking a strategic loop in the region.

India and the Arabian Sea Littorals: Changing Dynamics

The multilateral effort in HA/DR after the 2004 Tsunami was institutionalized through the conceptualization of the Indo-Pacific by the Japanese Prime Minister. The concept and mandate of the Indo-Pacific helped diversify the power concentration, hitherto asymmetrically stacked in the north-western corner of the Indian Ocean. Besides the Quad, the embracing of the Indo-Pacific has broadened the spectrum of strategic relations of the IOR countries. For great powers like the United States, this broadening has meant that there will be more offshore balancing. These changes in the security complex of the Indian Ocean have tethered its security to the actions of the regional countries more than ever. The centrality of India, with the most powerful regional navy, in ensuring the security of the Indian Ocean has been established and acknowledged, as evident from the western definition of India's role in the region as a 'lynchpin' to its own acknowledgement of its 'net-security provider' role.

Historically, the waters of the Arabian Sea have remained more distant for India than other parts of the Indian Ocean. India remained outside the military coalitions of CENTO and SEATO, as well as outside the Combined Maritime Forces since 2002. However, that has changed

significantly in the past few years, as India has sought to rekindle its strategic relations with the Arabian Sea littoral countries. Bilaterally, India has expanded its strategic relations with the UAE, Oman, Bahrain and Iran, besides engaging with the United States in the region. These engagements have taken the form of war exercises and passage exercises, as well as joint training to strengthen regional objectives.

For India, the regional security complex in the Arabian Sea has changed on two counts. First, the increasing Chinese presence through the China- Pakistan strategic relationship — Chinese submarine dockings and port control in Gwadar, supplemented by its naval presence at Djibouti. In the past few years, China's own investments in the ports of the Arabian Sea littorals through its BRI, seek to create a regional ecosystem of port-led infrastructure. Chinese access in the region promises growth and enhanced connectivity, however it disturbs the regional balance of power.

Second, the enhancement of India's regional role in the Arabian Sea through partnerships with countries such as the United States and France. Newer strategic linkage and maritime coordination is expected between India and the United States through the Logistics Exchange Memorandum of Agreement (LEMOA), Communications Compatibility and Security Agreement (COMCASA) and Basic Exchange and Cooperation Agreement (BECA). For better coordination regarding security and domain awareness in the Indian Ocean, India has also placed a defense attaché in the US Naval Command in Bahrain.4

The rising skepticism regarding US engagements in West Asia and its 'forever wars' in the region could pave way for China to gain an asymmetric advantage. The Chinese presence in Djibouti and its BRI connections with Indian Ocean shores have necessitated a renewed infrastructural push in the Indo-Pacific. Besides, the continued Arab-Israeli rivalry, increasing strategic nexus between China and Pakistan, and India's own quest to partner effectively with countries of the Arabian Sea along with its agreements with the United States have thrown open a new quest for security balance in the Indian Ocean.

In the wake of the US pullout from Afghanistan, the case for offshore balancing for the United States is likely to grow, possibly involving large regional navies like India more holistically. Multilaterally, this could mean a growing mandate for maritime cooperation in the Indian Ocean with other partners having shared interests in the region.

Notes

1DeForth, P. (1975). U.S. NAVAL PRESENCE IN THE PERSIAN GULF: THE MIDEAST FORCE SINCE WORLD WAR II. Naval War College Review, 28(1), 28-38.

Retrieved 8 August 2021, from http://www.jstor.org/stable/44641608 (Accessed 2 August 2021).

2Roy-Chaudhary, R (1998). "US Naval Policy in the Indian Ocean". Strategic Analysis. 22(9). Institute of Defence Studies and Analyses

Kelly, James F. (1983). "Naval Deployments in the Indian Ocean," Proceedings of the U.S. Naval Institute 109/5/963 May. Retrieved from: https://www. usni.org/document/kelly-james- 1983-109-5-963pdf?magazine_article=62450. (Accessed 2 August 2021).

3Chaziza, M (2021). "China consolidates its commercial foothold in Djibouti". The Diplomat. January 26. Retrieved from: https://thediplomat. com/2021/01/china-consolidates-its-commercial-foothold-in-djibouti/ (Accessed 2 August 2021).

4"Soon, India defence attaché at US navy Bahrain command". Hindustan Times. 21 March 2018. Retrived from https://www.hindustantimes.com/in- dia-news/soon-india-defence-attache-at-us-navy-bahrain-command/story-iTGPB5sLbOlod11MlprWjI.html (Accessed 2 August 2021).

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BIBLIOGRAPHY

Acharya, Amitav. *Constructing a Security Community in Southeast Asia: ASEAN and the Problem of Regional Order.* London: Routledge, 2014.

Acharya, Arabinda and Aaron Karp. "India's States of Armed Violence: Assessing the Human Costs and Political Priorities." *Small Arms Survey Issue Brief*, Issue No.1, 2011. https://www.unodc.org/documents/southasia/ / webstories/IAVA-IB1-web.pdf

Alagappa, M. (ed.). *Asian Security Practice: Material and Ideational Influences*. California: Stanford University Press, 1988.

Alagappa, M. (ed.). *Asian Security Practice: Material and Ideational Influences*. California: Stanford University Press, 1988.

Alagappa, M. "Rethinking security: a critical review and appraisal of the debate." M. Alagappa (ed.) *Asian Security Practice: Material and Ideational Influences*. California: Stanford University Press, 1998.

Allison, G. "No, America doesn't control Britain's nuclear weapons." *UK Defence Journal*, 20 July 2017.

Allison, G. "The impact of globalization on national and international security" in Nye, J. S. and Donahue, J. D. (eds.) *Governance in a Globalizing World*. Washington DC: Brookings Institution Press, 2000.

Allison, George. "MoD remove mention of Dutch warship from carrier deployment." *UK Defence Journal*, 20 January 2021. https:// ukdefencejournal.org.uk/mod-remove-mention-of-dutch-warship-for-carrier-deployment

Arab News. "Iran, Russia, China start joint maritime drill in Indian Ocean, Gulf of Oman." https://www.arabnews.com/node/1630211/middle-east

Arab News. "Port Sudan: Russia's Window on Africa?" https:// www.arabnews.com/node/1630211/middle-east

Arab News. "Russia Signs Deal with Sudan for Naval Base on the Red Sea." https://www.arabnews.com/node/1630211/middle-east

Arab News. "Saudi Aramco attack drone components linked to Iran and Houthis in Yemen." 19 February 2020. https://www.arabnews.com/node/1630211/middle-east

Associated Press (AP). "China says US increasing military activity directed at it." *Defense News*, 29 April 2021. https://www.defensenews.com/flashpoints/2021/04/29/china-says-us-increasing-military-activity directed-at-it/

Augustin, Johan. "On the frontline of climate change in India's Sundarbans." Mongabay, 17 October 2019. https://news.mongabay.com/2019/10/sundarbans-climate-change-tigers-india/

Austin III, Lloyd James. "Austin announces increase to US military presence in Germany." Cable News Network (CNN), 13 April, 2020. https://amp-cnn-com.cdn.ampproject.org/c/s/amp.cnn.com/cnn/2021 /04/13/ politics/lloyd-austin-increase-us-troops-germany-nato/index.html

Banerjee, Ajay. "A First: Nuke Sub Arihant to Test-fire N-capable Missile." *The Tribune*, 9 July 2015. http://www.tribuneindia.com/news/nation/a-first-nuke-subarihant-to-test-fire-n-capable missile/104772.html

Bannerjee, Sriparna. "Can Rohingya issue block the development of BIMSTEC?" Observer Research Foundation, 15 January, 2021. https://www.orfonline.org/expert-speak/can-rohingya-issue-block development-bimstec/

Bansal, Alok. "Maritime Threat Perceptions: Non-State Actors in the Indian Ocean Region." *Maritime Affairs*, Journal of the National Maritime Foundation of India, 6:1, 2010. DOI: 10.1080/09733159.2010.508227;

BDNews24.com. "Bangladesh seeks 'Bay of Bengal partnership' for blue economy." 2 September 2014. https://bdnews24.com/economy/2014/09/02/bangladesh-seeks-bay-of-bengal-partnership-for-blue economy

Biswas, Aparajita. "Small Arms and Drug Trafficking in the Indian Ocean Region." Centre for African Studies University of Mumbai, Mumbai 2008. http://archive.mu.ac.in/arts/social_science/african_studies/ biswaswp.pdf

Bouchard, C. “Emergence of a new geopolitical era in the Indian Ocean: characteristics, issues and = limitations of the Indian-oceanic order.” Dennis Rumley and Sanjay Chaturvedi (eds) *Geopolitical Orientations, Regionalism and Security in the Indian Ocean*. London: Routledge, 2004.

Bradford, John. “Japan Takes the Lead in Western Pacific Maritime Security.” *Asia Policy*, Volume 16.2, April 2021.

British Broadcasting Corporation (BBC). “China holds military drill as US envoy visits Taiwan.” 18 September 2020. https://www.bbc.com/news/world-asia-54200913

British Government. “National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom.” Stationery Office: London, November 2015.

British Ministry of Defence. “Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review.” Cm 7048, Stationery Office: London, October 2010.

British Ministry of Defence. “The United Kingdom’s future nuclear deterrent: 2019.” Update to Parliament, 20 December 2019.

British Parliament, House of Commons. “UK’s nuclear deterrent.” House of Commons Hansard, col. 559, vol. 613, 18 July 2016.

Buchholz, Katharina. “Rising Sea Levels Will Threaten 200 Million People by 2100.” Statista, 11 February 2020. https://www.statista.com/chart/19884/number-of-people-affected-by-rising-sea-levels per-country/

Bureau for International Narcotics and Law Enforcement Affairs. *International Narcotics Control Strategy Report, 1997*. Washington DC: US Department of State, March 1998.

Burns, R. H., “Countering Piracy, Trafficking and Terrorism: Ensuring Maritime Security in the Indian Ocean,” The Current Security Situation. *The Indian Ocean Rising*, April 2012.

Buzan, Barry & Ole Waevar. *Regions and Powers: The Structure of International Security*. London: Cambridge University Press 2003.

Buzan, Barry, Ole Wæver and Jaap de Wilde. *Security: A New Framework for Analysis*. Boulder: Lynne Reinner, 1998.

Buzan, Barry. *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era*. Boulder: Lynne Rienner, 1991.

Capen, George S., Lieutenant Commander, US Navy. "The Military Maritime Consultative Agreement." *US Naval Proceedings*, August 1999.

Casey, Michael. "World's oceans "plagued" by 269,000 tons of plastic pollution." CBS News, 11 December 2014. https://www.cbsnews.com/news/worlds-oceans-plagued-by-269000-tons-of-plastic pollution/

Central Intelligence Agency. "The World Factbook-Southern Ocean." https://www.cia.gov/the-world factbook/oceans/southern-ocean/

Chalk, P. "The Maritime Dimension of International Security: Terrorism, Piracy, and Challenges for the United States." RAND Project Air Force, Santa Monica: California, 2008.

Chalmers, Malcolm. "Continuous at Sea Deterrence: Costs and Alternatives." RUSI Briefing Note, London, July 2010. https://rusi.org/system/files/CASD.pdf

Chang, Felix K. "Chinese Submarines and Indian ASW in the Indian Ocean." *Geopoliticus: The FPRI Blog*, Foreign Policy Research Institute, 2014. http://www.fpri.org/geopoliticus/2014/11/chinese-submarines-and-indian-aswindian-ocean.

Chatterjee, A. "Climate Change in the IOR: The Irreversible Threat Looming Large." NMF Web Commentary, April 2014.

Chatterjee, Aditi. "Non-Traditional Maritime Security Threats in the Indian Ocean Region." *Maritime Affairs*, Vol. 10, No. 2, Winter 2014.

Chatterjee, Badri. "Death by noise: Sound of ships kills marine mammals in Mumbai." *Hindustan Times*, 3 September 2017.

Chaturvedi, Sanjay and Vijay Sakhuja, *Climate Change and the Bay of Bengal: Evolving Geographies of Fear and Hope.* Singapore: ISEAS, 2015.

Chellany, Brahma. "Indian Ocean Maritime Security: Energy, Environmental and Climate Challenges." Journal of the Indian Ocean Region, Vol. 6, December 2010.

Choong, William. "Why the Quad will endure." Op-Ed, 9Dashline, 13 April 21. https://www.9dashline.com/article/why-the-quad-will-endure

CNN Philippines. "Chinese armed attacks in West PH Sea to 'trigger US obligations' in defense treaty –official." 8 April 2021. https://www.cnnphilippines.com/world/2021/4/8/China-West-Philippine-Sea-Julian-Felipe-Reef-US-mutual-defense-treaty.html

Conroy, Christian. "China's Ballistic-Missile Submarines: How Dangerous?" *The Diplomat*, 18 November 2013. http://nationalinterest.org/commentary/chinas-ballistic-missile-submarines howdangerous-9414.

Cordner, Lee. "Maritime Security in the Indian Ocean Region: Compelling and Convergent Agenda." *Australian Journal of Maritime and Ocean Affairs,* Vol. 2, 2010.

Council of the European Union. "EU Strategy for cooperation in the Indo-Pacific-Council: Conclusions (16 April 2021)." https://data.consilium.europa.eu/doc/document/ST-7914-2021-INIT/en/pdf

Davidson, Admiral Philip S., U.S. Navy Commander, U.S. Indo-Pacific Command. Statement before the House Armed Services Committee on U.S. Indo-Pacific Command Posture, 10 March 2021. https://docs.house.gov/meetings/AS/AS00/20210310/111316/HHRG-117-AS00-Wstate-DavidsonP 20210310.pdf

Defense News. "John McCain has a Big-League Defense Buildup Too." 16 January 2016. https://www.defensenews.com/congress/2017/01/16/john-mccain-has-a-big-league-defense-buildup-too/

Denning, Kyle. "Outrunning an Arms Race: Naval Nuclear Deterrence in South Asia." Project on Nuclear Issues (blog), Center for Strategic and International Studies (CSIS) http://poniforum.csis.org/blog/naval-nuclear-deterrence-in-south-asia

Emmers, Ralf. "The Threat of Transnational Crime in Southeast Asia: Drug Trafficking, Human Smuggling and Trafficking, and Sea Piracy." *UNISCI*

Discussion Papers, Institute of Defence and Strategic Studies, Singapore, 2003.

Ericson, Andrew S. and Ryan D. Martinson. "Records Expose China's Maritime Militia at Whitsun Reef." *Foreign Policy*, 29 March 2021. https://foreignpolicy.com/2021/03/29/china-militia-maritime-philippines-whitsunreef/

Escales, Ponant magazine. "Roaring 40s, Furious 50s and Screaming 60s." = https://escales.ponant.com/en/roaring-40s-furious-50s/

Fahmida Khatun. "BIMSTEC Countries and Climate Change: Imperatives for Action," ORF Issue Brief No. 299, June 2019. New Delhi: Observer Research Foundation. https://www.orfonline.org/research/bimstec-countries-and-climate-change-imperatives-for-action-52411/

Feldt, Lutz, Dr. Peter Roell and Ralph D. Thiele. "Maritime Security – Perspectives for a Comprehensive Approach." *ISPSW Strategy Series: Focus on Defense and International Security*, Issue No. 222, April 2013. https://www.files.ethz.ch/isn/162756/222_feldt_roell_thiele.pdf

Florida Today. "CNMI, Navy discussions about Pagan remain on back burner." 29 August 2019. https://www.floridatoday.com/story/news/2019/08/29/cnmi-governors-office-no-plans-discussions-navy pagan/2148976001/

Geomar, Helmholtz Centre for Ocean Research. "Oxygen depletion in the ocean is increasing." Kiel: 4 January 2018. https://www.geomar.de/index.php?id=4&no_cache=1&tx_ttnes%5btt news%5d=5630&tx ttnews%5 backPid%5d=185

Gertz, Bill. "Chinese Submarine Stalked U.S. Aircraft Carrier." *The Washington Free Beacon*, 3 November 2015. https://freebeacon.com/national-security/chinese-submarine-stalked-us-aircraft-carrier/

Ghosh, Amitav and Aaron Savio Lobo. "Bay of Bengal: depleted fish stocks and huge dead zone signal tipping point." *The Guardian*, 31 January 2017. https://www.theguardian.com/environment/2017/jan/31/bay-bengal-depleted-fish-stocks-pollution climate-change-migration

Ghosh, P. K. "The Indo-Pacific Region and the Rise of Transnational Maritime Threats and Challenges." in David Michel (eds) *Sea Change:*

Evolving Maritime Geopolitics in the Indo-Pacific Region, Washington D.C: The Henry Stimson Center, December 2014. http:// www.stimson.org/ images/uploads/research-pdfs/SEA-CHANGE-WEB. pdf

Ghosh, P.K. "Indian Ocean Naval Symposium: Uniting the Maritime Indian Ocean Region." *Strategic Analysis*, Vol. 36, 2012.

Gordon, S. et al. *Security and Security Building in the Indian Ocean Region*. Canberra: Strategic and Defence Studies Centre, 1996.

Gould, Joe. "Eyeing China, Indo-Pacific Command seeks $27 billion deterrence fund." *Defense News*, 2 March 2021. https://www.defensenews.com/ congress/2021/03/02/eyeing-china-indo-pacific-command-seeks-27-billion-deterrence-fund/

Gregson Jr., Wallace C. and Jeffrey W. Hornung. "The United States Considers Reinforcing its 'Pacific Sanctuary." War on the Rocks, 12 April 2021. https://warontherocks.com/2021/04/the-united-states-considers-its-pacific-sanctuary

Guam Daily Post. "$743B proposed for defense spending." 13 December 2019. https://www.postguam.com/news/local/b-proposed-for-defense spending/article_cc375146-1c0c-11ea b0eb-0b45672f030f.html

Haacke, Jürgen. "Myanmar and Maritime Security." The Asan Forum, 22 February 2016. http://www.theasanforum.org/myanmar-and-maritime-security/

Hardy, James. "North Korean SLBM Test Leaves More Questions than Answers." *IHS Jane's Defence Weekly*, 12 May 2015. http://www.janes.com/article/51356/north-korean-slbm-test-leaves-morequestions than-answers

Harkins, Gina. "A Resurrected First Fleet is the Weapon the Navy Needs to Counter China, Former Sec Nav Says." Military.com, 16 April 2021. https://www.military.com/daily-news/2021/04/16/resurrected-first-fleet-weapon-navy-needs-counter-china-former-secnav-says.html

Harris, Peter. "Back in Bahrain? Britain Never Left Persian Gulf." *The National Interest*, 16 December 2014. http://nationalinterest.org/blog/the-buzz/back-bahrain-britain-never-left-persian-gulf-11868

Herbert-Burns, Rupert. "Countering Piracy, Trafficking, and Terrorism: Ensuring Maritime Security in the Indian Ocean." David Michel and Russell Sticklor (eds) *Indian Ocean Rising: Maritime Security and Policy Challenges.* Washington: Stimson Center, July 2012.

Heydarian, Richard Javad. "Why Biden Should Pursue 'Minilateralism' with ASEAN." Asia Maritime Transparency Initiative (AMTI), 26 March 2021. https://amti.csis.org/why-biden-should-pursue minilateralism-with-asean/

House, John. "War, peace and conflict resolution: towards an Indian Ocean model." *Transactions of the Institute of British Geographers*, New Series, Vol. 9, Issue 1, 1984.

http://www.southasiaathudson.org/blog/2018/1/14/sri-lanka-leases-hambantota-port-to-china-is-this-the beginning-of-chinese-debt-trap-in-south-asia

Hui, Zhang and Zhao Yusha. "UK tilting toward Indo-Pacific to counterweight China 'immature' decision." *Global Times*, 16 March 2021. https://www.globaltimes.cn/page/202103/1218586.shtml

Hussain, Shahadat M. et al. "Vulnerability of BoB to ocean acidification," IUCN, Bangladesh, 2015. https://portals.iucn.org/library/sites/library/files/documents/2015-049.pdf

ICC-International Maritime Bureau. "Piracy and Armed Robbery against Ships Report: 01 January 31 December 2020." https://www.icc-ccs.org/reports/2020_Annual_Piracy_Report.pdf

IDSA Working Group. *Security Implications of Climate Change for India*. New Delhi: Academic Foundation, 2009.

Indian Metereological Department, Mumbai. "Cyclones in Indian Seas." http://www.imdmumbai.gov.in/scripts/detail.asp?releaseId=E0000CY3

Indian Navy. "Indian Navy participates in Multilateral Exercise 'KOMODO.'" Indian Navy press release, 31 March 2014. http://indiannavy.nic.in/ press-release/indian-navy-participates-multilateral exercise-Komodo

Indian Ocean Naval Symposium. http://www.ions.global/

Indian Ocean Rim Association. "Maritime Safety and Security." https:// www.iora.int/en/priorities-focus areas/maritime-safety-and-security

Inhofe, Senator Jim and Senator Jack Reed. "Fiscal Year 2021: National Defense Authorization Act (NDAA)." US Senate Armed Forces Committee. https://www.armedservices.senate.gov/imo/media/doc/ FY% 2021%20NDAA%20Summary.pdf

Inhofe, Senator Jim and Senator Jack Reed. "The Pacific Deterrence Initiative: Peace through Strength in the Indo-Pacific." War on the Rocks, 28 May 2020. https://warontherocks.com/2020/05/the-pacific deterrence-initiative-peace-through-strength-in-the-indo-pacific/

International Labour Organization (ILO). *A Global Alliance against Forced Labour*. Geneva: 2005.

International Tribunal for The Law of the Sea (ITLOS). Reports of Judgments, Advisory Opinions and Orders. "Dispute Concerning Delimitation of the Maritime Boundary Between Bangladesh and Myanmar in the Bay of Bengal" (Bangladesh/Myanmar) Judgment of 14 March 2012. https:// www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/published/C16-J-14_mar_12.pdf

Israel: Nuclear Threat Initiative (NTI). https://www.nti.org/learn/countries/ israel/delivery-systems/

Jackson, David and Courtney Subramaniam. "Donald Trump says he wants the number of U.S. troops in Germany cut in half." *USA Today*, 15 June 2020. https://www.usatoday.com/story/news/politics/ 2020/06/15/ donald-trump-cut-number-u-s-troops germany-half/3194223001/

Jayaraman, K. S. 'Dead zone' found in Bay of Bengal. *Nature India*, 12 December 2016. https://www.natureasia.com/en/nindia/article/10.1038/ nindia.2016.163

Kajjo, Sirwan. "US Charges 3 Sri Lankan Nationals for Role in 2019 Easter Attacks." VOA News, 10 January, 2021. https://www.voanews.com/ extremism-watch/us-charges-3-sri-lankan-nationals-role-2019 easter-attacks

Kan, Shirley A. et al. "China-U.S. Aircraft Collision Incident of April 2001: Assessments and Policy Implications." CRS Report for Congress, 10 October 2001. https://fas.org/sgp/crs/row/RL30946.pdf

Kareem, Shaheen. "Defensive shield for the Gulf since 1982." The National, Abu Dhabi. http://www.thenational.ae/news/uae-news/defensive-shield-for-the-gulf-since-1982

Kato, Masaya. "Japan and Germany to sign intel-sharing pact in coming weeks." *Nikkei Asia*, 18 March 2021. https://asia.nikkei.com/Politics/International-relations/Japan-and-Germany-to-sign-intel-sharing-pact-in-coming-weeks

Kazi Stastna, "Malaysia Airlines MH370: The challenges of a remote ocean search." https://www.cbc.ca/news/world/malaysia-airlines-mh370-the-challenges-of-a-remote-ocean-search 1.2580125

Kirkaldy, Adam. *History of British Shipping: From the Beginning Until WW I*. Salzwasser-Verlag Gmbh, 2009.

Kraska, James and Raul Pedrozzo. *International Maritime Security Law*. Leiden: Nijhoff, 2014.

Kristensen, Hans M. and Robert S. Norris. Nuclear Notebook: "Israeli nuclear weapons, 2014." *Bulletin of the Atomic Scientists*, Volume 70, Issue 6, 2014. https://doi.org/10.1177/0096340214555409

Kuper, Stephen. "Australia's own Indo-Pacific fortress – The case for redeveloping Cocos Islands." Defence Connect, 28 May 2019. https://www.defenceconnect.com.au/key-enablers/4124-australia-s-own-indo-pacific-fortress-the-case-for-redeveloping-cocos-islands

Kwaak, Jeyup S. "North Korea Developing Ballistic-Missile Submarine, Seoul Says." *The Wall Street Journal*, 11 May 2015. http://www.wsj.com/articles/northkorea-developing-nuclear-missile-submarine-seoul-says-1431322781

Langewiesche, William "What Really Happened to Malaysia's Missing Airplane." *Atlantic Magazine*, July 2019. https://www.theatlantic.com/magazine/archive/2019/07/mh370-malaysia-airlines/590653/ Airplane

Lehr, Peter. "Piracy and Maritime Governance in the Indian Ocean Region." *Journal of the Indian Ocean Region*, Vol. 9, No. 1, 2013.

Limites Maritimes (French National Portal of Maritime Limits). "Areas of France's maritime spaces of sovereignty and jurisdiction." https://

maritimelimits.gouv.fr/resources/areas-frances-maritime-spaces sovereignty - and-jurisdiction

Lukaszuk, Tomasz. *The Concept of Maritime Governance in International Relations*, 2019. 10.7366/020909614201807.

Mahajan, Shelly. "Sri Lanka Leases Hambantota Port to China: Is this the Beginning of Chinese Debt Trap in South Asia?" The Hudson Institute, 14 January, 2018.

Maritime Executive. "Saudi Forces Thwart Bomb Boat Attack at Port of Yanbu," 27 April 2021. https://www.maritime-executive.com/article/saudi-forces-thwart-bomb-boat-attack-at-port-of-yanbu

Marks, Kelly. "What are the 10 Most Polluted Rivers in the World?" Soapboxie. 15 December 2020. https://soapboxie.com/social-issues/What-Are-the-10-Most-Polluted-Rivers-in-the-World

Mehta, Aaron. "Inside US Indo-Pacific Command's $20 billion wish list to deter China — and why Congress may approve it." *Defense News*, 2 April, 2020. https://www.defensenews.com/global/asia pacific/2020/04/02/inside-us-indo-pacific-commands-20-billion-wish-list-to-deter-china-and-why congress-may-approve-it/

Micallef, Joseph V. "How Effective Are Freedom of Navigation Operations? A US Navy Officer's Perspective." Military.com, 2 April 2021. https://www.military.com/daily-news/opinions/2021/04/02/how-effective-are-freedom-of-navigation-operations-us-navy-officers perspective.html

Mills, C. "Replacing the UK's strategic nuclear deterrent: Progress of the Dreadnought class." Commons Briefing Paper CBP-8010, House of Commons Library, 11 February, 2020.

Ministry of External Affairs (MEA). "Official Spokesperson's response to a query on media reports regarding possible cooperation with China on OBOR/BRI." Media Briefings, 5 April 2018. https://www.mea.gov.in/media briefings.htm?dtl/29768/Official+Spokespersons+response+to+a +query+ on +media +reports+regarding+ ossible+cooperation+with+China+ on+OBORBRI

Ministry of Foreign Affairs, Government of Japan. "Speech by H.E. Mr. Shinzo Abe, Prime Minister of Japan at the Parliament of the Republic of India." https://www.mofa.go.jp/region/asia paci/pmv0708/speech-2.html

Montgomery, Mark and Bradley Bowman. "Listen to America's Top Commander in the Indo-Pacific and Fund the Pacific Deterrence Initiative." War on the Rocks, March 2021. https://warontherocks.com/2021/03/listen-to-americas-top-commander-in-the-indo-pacific-and fund-the-pacific-deterrence-initiative

Muller, Nicholas. "In the Indian Sundarbans, the Sea Is Coming." *The Diplomat*, 1 May 2020. https://thediplomat.com/2020/05/in-the-indian-sundarbans-the-sea-is-coming/

Myers, L. "The US Military is Pouring Hundreds of Millions of Dollars into Tiny Wake Island." KITV, 19 October 2019. https://www.kitv.com/story/41204820/the-us-military-is-pouring-hundreds-of-millions-of dollars-into-tiny-wake-island

Nair, Deepak. 'Regionalism in the Asia Pacific/East Asia: A Frustrated Regionalism.' *Contemporary] Southeast Asia*, 31, no. 1, 2009.

Naval-technology.com: https://www.naval-technology.com/features/featuredeep-secret-secure submarine-communication-on-a-quantum-level/

Neumann, Barbara, Athanasios T. Vafeidis, Juliane Zimmermann and Robert J. Nicholls. "Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding - A Global Assessment." Plos One, 11 March 2015. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118571

New York Times. "National Defense Authorization Act (NDAA) 2020 Section 1253 Assessment." https://int.nyt.com/data/documenthelper/6864-national-defense-strategy summ/8851517f5e10106bc3b1 /optimized/full.pdf

Ng, Teddy. "US still seeking dialogue with Chinese military chiefs, Pentagon says." *South China Morning Post* (SCMS), 26 May 2021. https://www.scmp.com/news/china/diplomacy/article/3134856/us still-seeking-dialogue-chinese-military-chiefs-pentagon

One India. "India launches 'Operation Sahayata' in Nargis-hit Myanmar." 7 May 2008. https://www.oneindia.com/2008/05/07/india-launches-operation-sahayata-in-nargis-hit-myanmar 1210161790.html

Osborn, Kris. "Admiral Says China Now Outnumbers US in Attack Submarines." *DoD Buzz*, 26 February 2015. http://www.dodbuzz.com/2015/02/26/admiral-says-china-outnumbers-u-s-inattack-submarines.

Pandit, Rajat. "Move to Fast-Track Two Submarine Project Gathers Steam." *The Times of India*, 14 July 2014. http://timesofindia.indiatimes.com/india/Moveto-fast-track-two-submarine-projects-gathers-steam/articleshow/38342676.cms

Park, Andrew and Elliot Silverberg. "Mutual Suspicion, Mutual Threats: Getting Japan and South Korea to Work Together." War on the Rocks, 6 April 2021. https://warontherocks.com/2021/04/mutual-suspicion-mutual-threats-getting-japan-and-south-korea-to-work-together/

Pau, K. Hangzo. "Non-Traditional Security Challenges in the Indian Ocean Region." *ASEAN and the Indian Ocean: The Key Maritime Links.* RSIS Policy Paper, November 2011.

Permanent Court of Arbitration (PCA). "In the Matter of the Bengal Maritime Boundary Arbitration Between the People's Republic of Bangladesh and the Republic of India." https://pcacases.com/web/sendAttach/383

Peterson, J. "Navy strategic missile boss starting concept development for new missile." *Seapower*, 24 May 2017.

Philip, Snehesh Alex. "US plans new fleet for Indo-Pacific region as it focuses on ties with India, countering China." The Print, 18 November 2020. https://theprint.in/diplomacy/us-plans-new-fleet-for-indo-pacific-region-as-it-focuses-on-ties-with-india-countering-china/546771/

Press Trust of India (PTI). "Countries should be able to make their own political choices: PM Modi, Biden, Morrison, Suga in joint op-ed." *Business Today*, 14 March 2021. https://www.businesstoday.in/current/economy-politics/countries-should-be-able-to-make-their-own-political-choices-pm-modi-biden-morrison-suga-in-joint-op-ed/story/433810.html

Press Trust of India. "PM Launches INS Arihant in Visakhapatnam." *The Times of India*, 26 July 2009. http://timesofindia.indiatimes.com/city/hyderabad/PM-launches-INSArihant-in Visakhapatnam/articleshow/4820660.cms

Purser, Benjamin S. III, & Michael S. Chase. "Waypoint or Destination? The Jin-Class Submarine and China's Quest for Sea-Based Nuclear Deterrence." *China Brief*, Vol. 12, Issue 15, The Jamestown Foundation. http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=39729&no_cache=1#. Vf2XrNKqqko

Radio Free Asia. "Philippines Welcomes US Backing to help Defend Manila in South China Sea," 8 April 2021. https://www.rfa.org/english/news/china/defend-04082021152123.html

Rehman, Iskander. "Murky Waters: Naval Nuclear Dynamics in the Indian Ocean." Carnegie Endowment for International Peace, March 9, 2015.

Resplandy, Laure. "Will ocean zones with low oxygen levels expand or shrink?" *Nature*, 8 May 2018. https://www.nature.com/articles/d41586-018-05034-y

Reuters. "Angry France diverts Myanmar aid to Thailand." 25 May 2008. https://www.reuters.com/article/us-myanmar-cyclone-france/angry-france-diverts-myanmar-aid-to thailand-idUSL254340520080525

Reuters. "Factbox: U.S. and South Korea's security arrangement, cost of troops." 13 November 2019. https://www.reuters.com/article/us-southkorea-usa-military-factbox-idUSKBN1XN09I

Reuters. "Pakistan PM Approves Deal to Buy Eight Chinese Submarines: Official." 2 April 2015. http://www.reuters.com/article/2015/04/02/us-chinapakistan-idUSKBN0MT05M20150402

Reuters. "Yemen Houthi drones, missiles defy years of Saudi air strikes." Dubai: 17 September 2019. https://www.reuters.com/article/us-saudi-aramco-houthis-idUSKBN1W22F4

Riqiang, Wu. "Survivability of China's Sea-based Nuclear Forces." *Science and Global Security* 19, no. 2 (2011).

Robson, Seth. "New base expected to host thousands of Marines begins to take shape on Guam." *Stars and Stripes*, 12 March 2020. https://www.stripes.com/news/pacific/new-base-expected-to-host thousands-of-marines-begins-to-take-shape-on-guam-1.622106

Roell, Peter. "Maritime Security: New Challenges for Asia and Europe." Institute for Strategic, Political, Security and Economic Consultancy. Berlin: *ISPSW Strategic Series*, Issue No. 167, November 2011. http://www.isn.ethz.ch/ isn/Digital-Library/Publications /Detail/?id=13457.

Roy, Aparna. "BIMSTEC and climate change: Setting a common agenda." Observer Research Foundation (ORF), 16 October 2017 https://www.orfonline.org/research/bimstec-climate-change-setting-common-agenda/#_edn13

Sahni, Pardeep, Alka Dhameja and Uma Medury. *Disaster Mitigation: Experiences and Reflections*. PHI Learning Pvt. Ltd., 2001.

Sakhuja, Vijay. "Asymmetric Conflict and Low Intensity Maritime Operations: Challenges for the Indian Navy." *ORF Occasional Paper* # 5, August 2006. http://www.orfonline.org/cms/export/orfonline/

Sakhuja, Vijay. "Cold War in the Arabian Sea." *Strategic Analysis*, Vol XXV, No 3, June 2001, IDSA. https://www.idsa-india.org/an-jun-3.htm

Sakhuja, Vijay. "Increasing Maritime Competition: IORA, IONS, Milan and the Indian Ocean Networks." Institute of Peace and Conflict Studies, #4320, 3 March 2014.

Sakhuja, Vijay. "Philippines Infuses New Life in its Relationship with the US." Kalinga International Foundation, 18 June 2020. http://kalingainternational.com/Dr-Vijay-Sakhuja8.html

Sakhuja, Vijay. "The Problem of OMZs: Indian Ocean is Fast Losing Oxygen!" Society for the Study of Peace and Conflict (SSPC), 30 May 2018. https://www.sspconline.org/index.php/opinion/Indian-ocean fast-loosing-oxygen

Sakhuja, Vijay. "US Augments Military Bases, Revitalizes Lily Pads and Pushes for Visiting Forces Agreements in the Pacific Ocean." Centre for

Public Policy Research (CPPR), 10 July 2020. https://www.cppr.in/articles/us-augments-military-bases-revitalizes-lilly-pads-and-pushes-for-visiting forces-agreements-in-the-pacific-ocean

Sakhuja, Vijay. *Asian Maritime Power in the 21st Century: Strategic Transactions China, India and Southeast Asia.* Singapore: ISEAS, 2011. *Federation of American Scientists* website. http://www.fas.org/nuke/control/sea/text/us-china98.htm

Saranov, V. "Decommissioning 'Akula': Why Russia abandons the biggest submarines." RIA Novosti, 24 January 2018 (in Russian).

Sarma, V.V.S.S, G.D. Rao, R. Viswanadham, C.K. Sherin, Joseph Salisbury, Melissa M. Omand, Amala Mahadevan, V.S.N. Murty, Emily L. Shroyer, Mark Baumgartner, Kathleen M. Stafford. "Effects of Freshwater Stratification on Nutrients, Dissolved Oxygen, and Phytoplankton in the Bay of Bengal." *Oceanography,* 11 July 2016. https://tos.org/oceanography/article/effects-of-freshwater-stratification-on nutrients-dissolved-oxygen-and-phyt

Sawhney, Pravin and Vijay Shankar. "Is the Navy's Newest Sub Worth the Price?" *The Hindu*, 5 April 2012.http://www.thehindu.com/opinion/op-ed/is-thenavys-newest-sub-worth-the price/article2829121.ece

Scott, David. "India's Aspirations and Strategy for Indian Ocean—Securing the Waves." *Journal of Strategic Studies*, 2013, Volume 36, No.4. DOI:10.1080/01402390.2012.728134

Scroll.in. "Some countries exaggerate Chinese threat, should abandon Cold War mentality: Beijing on Quad meet." 15 March 2021. https://scroll.in/latest/989624/some-countries-exaggerate-chinese-threat-should-abandon-cold-war-mentality-beijing-on-quad-meet

Sharma, Aakriti. "US Military Draws Up $27 Billion Plan to Counter China in the Indo-Pacific Region." *Eurasian Times*, 5 March 2021. https://eurasiantimes.com/us-military-draws-up-27bn-plan-to-counter china-in-the-indo-pacific-region/

Sharma, Vibha. "Data shows decline in cyclones over Bay of Bengal, increase in storms over Arabian Sea: Centre." Tribune News Service, New

Delhi: 15 March 2021. https://www.tribuneindia.com/news/nation/data-shows-decline-in-cyclones-over-bay-of-bengal-increase in-storms-over-arabian-sea-centre-225605

Shelbourne, Mallory. "Davidson: Aegis Ashore on Guam Would 'Free Up' 3 Navy Destroyers." *USNI News*, 4 March 2021. https://news.usni.org/2021/03/04/davidson-aegis-ashore-on-guam-would-free-up-3 navy-destroyers

SIPRI. "Armaments, Disarmament and International Security." World Nuclear Forces, *SIPRI Yearbook 2020*, Chapter 10. Stockholm: SIPRI, 2020.

Siripala, Thisanka. "US and Japan Name China as Threat to International Order." *The Diplomat*, 17 March 2021. https://thediplomat.com/2021/03/us-and-japan-name-china-as-threat-to-international-order/

South Asia Terrorism Portal. "Bangladesh: Assessment- 2021." Institute for Conflict Management (ICM). https://www.satp.org/terrorism-assessment/bangladesh

Stares, P.B. (ed.). *The New Security Agenda: A Global Survey*. Tokyo: Japan Center for International Exchange,1998.

Starr, Barbara and Jennifer Hansler. "US considering sending warships to Black Sea amid Russia-Ukraine tensions." Cable News Network (CNN), 8 April 2021. https://edition.cnn.com/2021/04/08/politics/ukraine-us-black-sea/index.html

Statista. "The biggest armies in the world ranked by active military personnel in 2021." 10 September 2021. https://www.statista.com/statistics/264443/the-worlds-largest-armies-based-on-active-force-level/

Steinberg, Philip E. *The Social Construction of the Ocean*. Cambridge: Cambridge University Press, 2001.

Strangio, Sebastian. "Following France and Germany, the Netherlands Pivots to the Indo-Pacific." *The Diplomat*, 18, November 2020. https://thediplomat.com/2020/11/following-france-and-germany-the-netherlands-pivots-to-the-indo-pacific/

TASS. "Russia to complete Borei and Yasen series of nuclear-powered submarines in 2023–2024." TASS, 27 June 2019.

Thayer, Carl. "Will Vietnam Lease Cam Ranh Bay to the United States?" *The Diplomat*, 6 May 2020. https://thediplomat.com/2020/05/will-vietnam-lease-cam-ranh-bay-to-the-united-states/

The Guardian. "Largest Chinese breach of Taiwan air zone in a year after US warning." 12 April 2021. https://www.theguardian.com/world/2021/apr/12/largest-chinese-breach-of-taiwan-air-zone-in-a-year after-us-warning

The Hindu. "U.S. rejects China's claims in South China Sea." 14 July 2020. https://www.thehindu.com/news/international/us-rejects-chinas-claims-in-south-china sea/article32073839.ece

The Tribune. "Quad leaders: Committed to free, open, secure and prosperous Indo-Pacific region." 15 March 2021. https://www.tribuneindia.com/news/world/quad-leaders-committed-to-free-open-secure-and-prosperous-indo-pacific-region-225102

Tiezzi, Shannon. "What's in the China-Iran Strategic Cooperation Agreement?" 30 March 2021. https://thediplomat.com/2021/03/whats-in-the-china-iran-strategic-cooperation-agreement/

Tkacik, John J. Jr. "China's Quest for a Superpower Military." *Backgrounder No. 2036*, 17 May 2007.

UN Office on Drugs and Crime (UNODC). "Myanmar Opium Survey 2020 Cultivation, Production, and Implications." https://www.unodc.org/documents/cropmonitoring/Myanmar/ Myanmar_Opium_survey 2020.pdf

Upadhyaya, Shishir. "Damage control: India's coastal security post 26/11." IHS Janes, *Jane's Defence Weekly*, 13 January 2014.

US Department of Defense. "European Deterrence Initiative." Office of the Under Secretary of Defense, February 2020. https://comptroller.defense.gov/Portals/45/Documents/defbudget/ fy2021/fy2021_EDI_ JBook.pdf

US Department of Defense. "Military and Security Developments Involving the People's Republic of China 2015." Annual Report to Congress, Office

of the Secretary of Defense, 2015. http://www.defense.gov/pubs/2015_China_Military_Power_Report.pdf.

US Department of State. "Secretary Antony J. Blinken with Chuck Todd of NBC's Meet the Press." 29 August 2021. https://www.state.gov/secretary-antony-j-blinken-with-chuck-todd-of-nbcs-meet-the press/#.YHNMnuDoaq4.twitter

US Department of State. "U.S. Security Cooperation with Australia." Fact Sheet, 14 September 2021. https://www.state.gov/u-s-security-cooperation-with-australia/

US Navy. "Fleet ballistic missile submarines: SSBN." United States Navy Fact File, 29 January 2019.

US President Joseph Biden Jr. "Interim National Security Guidance." White House, March 2021. https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf

USNI News. "Document: McCain White Paper on Future Defense Budget Recommendations." 17 January, 2017. https://news.usni.org/2017/01/17/document-mccain-white-paper-defense-budget recommendations

Van Tatenhove, Jan. Integrated Marine Governance: Questions of Legitimacy. Marine Studies (MAST), 10 (1), 2011.

Venkatshamy, K. "The Indian Ocean Region in India's Strategic Futures: Looking Out to 2030." *Journal of the Indian Ocean Region*, Vol.9, 2013.

Verley, Luc. "The Kra-Canal Project." International Institute of Marine Surveying (IIMS), 14 January, 2015. https://www.iims.org.uk/kra-canal-project/

Vijay Sakhuja, "Indian Naval Diplomacy: Post Tsunami." Institute of Peace and Conflict Studies (IPCS). 8 February 2005. http://www.ipcs.org/focusthemsel.php?articleNo=1640

Vikaspedia. http://vikaspedia.in/social-welfare/disaster-management-1/natural-disasters/cyclones

VOA. "US Hails German Warship Plan to Sail South China Sea." 4 March 2021 https://www.voanews.com/east-asia-pacific/us-hails-german-warship-plan-sail-south-china-sea#

Weather Underground. https://www.wunderground.com/hurricane/deadlyworld.asp

Wikipedia. "United States Indo-Pacific Command." https://en.wikipedia.org/wiki/United_States_Indo Pacific_Command

Wolfe, J. Director, Strategic Systems Programs, Statement before the Subcommittee on Strategic Forces. Armed Services Committee, US Senate, 23 March 2019.

World Population Review. "Reunion Population 2020." https://worldpopulationreview.com/countries/reunion-population/

Xinhua. "Iranian navy chief urges U.S. forces to leave regional waters." 29 December 2019. http://www.xinhuanet.com/english/2019-12/29/c_138665000.htm

Bibliography of French References

French Ministry of the Armed Forces. 'Discours de Florence Parly, ministre des Armées prononcé à l'usine des Mureaux, Ariane Group, le 14 décembre 2017' [Speech by Florence Parly, Minister of the Armed Forces, presented at the Mureaux factory, Ariane Group, 14 December 2017]

French Ministry of the Armed Forces. "500e patrouille d'un sous marin nucléaire lanceur dengins." [500th patrol of a nuclear-powered ballistic missile submarine] 12 October 2018.

French Ministry of the Armed Forces. "Missiles balistiques stratégiques (MSBS)." [Strategic ballistic missiles], 28 January 2020.

Groizeleau, V. "Dissuasion: 25 milliards en cinq ans pour le renouvellement des deux composantes." [Deterrence: 25 billion in five years for the renewal of the two components] *Mer et Marine*, 2 October 2019.

Groizeleau, V. "Dissuasion: F. Hollande détaille sa vision et l'arsenal français" [Deterrence: F. Hollande outlines his vision and the French arsenal], *Mer et Marine*, 20 February 2015.

Hollande, F., President of France. 'Discours sur la dissuasion nucléaire: Déplacement auprès des forces aériennes stratégiques.' [Speech on nuclear deterrence: Visit to the strategic air forces] Istres, 25 February 2015.

Le Drian, J. Y., French Minister of Defence. 'Discours de clôture du colloque pour les 50 ans de la dissuasion.' [Conference closing speech on the 50th anniversary of deterrence] French Ministry of Defence, Paris, 20 November 2014.

Navy Recognition, "Final French Navy SSBN 'Le Temeraire' upgraded for M51 SLBM." 18 August 2018.

Tertrais, B. "French Nuclear Deterrence Policy, Forces and Future," Recherches & Documents no. 01/2019. Fondation pour la Recherche Stratégique: Paris, January 2019.

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The importance and relevance of the Indo-Pacific region in the years ahead cannot be emphasised more for the world at large and more specifically for India. The book brings out a holistic view of the entire gamut of security issues starting with the theoretical aspects of regional security, influence of geography and historical connections and analyses the specifics of maritime security as sub-regions. The impact of events, threats and challenges, both traditional and non-traditional on maritime security, as well as transnational challenges in the four maritime sub-regions viz Indian Ocean, Northern Arabian Sea Crescent, Bay of Bengal and Western Pacific Ocean are detailed. Nuclear dynamics as a critical dimension of regional and maritime security has to be taken into account while discussing the Indo-Pacific. The book is a thought-provoking compilation and highly recommended reading to understand the future of global politics as the maritime arena and more so Indo Pacific will have a significant role in transformation of the world order.