

## **NUCLEARIZATION OF THE INDIAN OCEAN BY THE SOUTH ASIAN RIVALS**

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### **Abstract**

*Indian Ocean is the third largest ocean in the world, covering 20% of the Earth's surface water, it provides ample opportunities for cooperation and contention. Where the Indian Ocean is desirous because of its location, regional climate, hydrology, marine life, sea lines of communications, chokepoints, major harbors, ports and blue economy potential, it is also quite dreaded as in addition to washing up on shores of two South Asian nuclear powers (India and Pakistan), it has also seduced powers like United States and China to dock in the IOR. The former combo, in its quest to achieve defense invincibility, has embarked on Indian Ocean nuclearization rampage while also being facilitated by the latter combo compelled by their own vested interests. This research is modelled to be descriptive in its design and qualitative in its nature. The data gathered to carry out this study has been collected through secondary sources including different articles, journals and websites etc. The study mainly focuses on the contributions and interests of the superpowers and regional powers in the Indian Ocean and points out that for a stable, secure and harmonious environment in the Indian Ocean, and concludes that to keep the nuclear frenzy of South Asian and regional rivals in check, the extra regional powers must rise to the occasion and refrain from playing favourites.*

**Keywords:** *Nuclearization, Indian Ocean, Regional Powers, SSBNs, Nuclear Deterrence.*

### **Introduction**

It can be stated with no exaggeration that the waters throughout the history have always been the biggest patrons of the civilizations from Mesopotamian to the Indus. Few also regarded them as the natural defender against enemies before the advent of navies. Along with these provisions, oceans had been increasingly treated as a battleground by the naval powers like Russia, Britain, Japan etc. In the present world, oceans serves as a realm to project states' naval power and enhance their maritime power. The words of A.T. Mahan, who believed that

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"whoever controls the Indian Ocean will dominate Asia, the destiny of the world would be decided on its waters," seem quite pertinent today. As the seas are the focus of the contemporary power politics, these comments turned out to be prophetic in nature. The Indian Ocean is important in a variety of ways. Due to its position, it is important to both regional and international actors. \*Moreover, powerful shifts in the geopolitical and geostrategic spheres took place around the world as the twenty-first century began. Great powers' attention shifted from Europe to Eurasia and then to Asia.

The statement made by Robert D. Kaplan in his book *Monsoon* also emphasizes how, in the 20th and 21st centuries, the political framework for the world migrated from the Atlantic to the Pacific and from the Pacific to the Indian Ocean region. It is important to note that this paradigm shift has decreased the likelihood of land conflicts. However, because marine trade makes up the majority of global trade, it has raised the likelihood of naval conflict, both strategically and economically. The Sino–U.S. competition of Pacific interlocks within the Indian Sea; the U.S.' war on dread rotates around this locale, and U.S.-Iran geostrategic rift is additionally vested within the exceptionally same outline. The covering nature of the interface and the desire to out-power other contenders can be seen from the arms race within the sea field among diverse partners within the Indian Sea. Being the prevailing territorial player, India considers the Indian Ocean as "India's Ocean".

In this setting, India is considered to be responsible for the nuclearization of the locale because it propelled to begin with SSBN in November 2018, specifically INS Arihant. India's pro-active conduct with respects to the Indian Sea has accentuated uncertainty in numerous states, counting China and Pakistan, squeezing them to follow suit. Pakistan too conducted a test to miniaturize its atomic weapons to be mounted on its ships or diesel-submarines for having a guaranteed second strike capability and full-spectrum discouragement. China is additionally seeking after its maritime modernization drive with the development and/or rent of bases over the Indian Sea, based on its String of Pearls Technique.

Subsequently, it can be contended that the Indian Sea is seeing expanded militarization within the coming future and would end up a potential hotbed for future clashes as well. If there is a confrontation between two powerful countries, it could lead to a war that would affect many other countries around the world. This conflict could have horizontal and vertical effects, which would be very dangerous for the global community. When it comes to comparing different things like; piracy, human trafficking, and illegal trade can be minor factors because of the bigger conflicts that exist. †Therefore, it remains important that the

\* Iram, 2013, Indian Ocean Global and regional strategies, page 1-2  
[https://www.researchgate.net/publication/344297587\\_Indian\\_Ocean\\_Global\\_and\\_Regional\\_Strategies](https://www.researchgate.net/publication/344297587_Indian_Ocean_Global_and_Regional_Strategies)

† Starfasia.com, n.d, nuclearization of Indian Ocean: ramifications on regional security. retrieved from

international community, especially major powers, play a role in drafting policy guidelines to achieve a more harmonious geopolitical and geopolitical environment in the Indian Ocean.

## 2. Research Questions

In order to avoid digression, the paper will be focused on answering the following questions:

1. American and Indian literature is filled with the mentions of the Indo Pacific region or Indian Ocean Region. Why is this region so significant?
2. What Interest do the regional power and extra regional powers hold in the Indian Ocean Region and how are they contributing to the Nuclearization of the Indian Region?
3. **Research Objectives**

Following are the objectives of this research:

1. To fathom the significance of the Indian Ocean Region.
2. To gauge the interests of regional and extra regional powers and to enlist their nuclear contributions in the Indian Ocean.

## 4. Literature Review

On scanning the pages of history, it becomes clear that most of the states did not share same outlook on having waters at their disposal. Where some perceived it as a liability and ended up turning a blind eye towards the seas and oceans, others rode the currents to project their power and to enhance their power and prestige. After butting their heads on land at different occasions since their independence, India- Pakistan rivalry is now being unfolded in the Indian Ocean as well as both states are trying to create an environment that best caters them. In order to make the reader stay tuned with the train of thought of the researchers, this literature review is cleaved into two sections. The first one deals with the dynamics at play in the Indian Ocean until and during the 20<sup>th</sup> century whereas the second half talks about the naval power and dynamics of regional rivals in the IOR in the 21<sup>st</sup> century.

The Indian Ocean stretches from west of Australia, watering the archipelagos of South East Asia and straits of the Middle East along the way, to the eastern side of Africa where it finally gives in to the Atlantic. It carves out the coastline of

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[https://strafasia-com.cdn.ampproject.org/v/s/strafasia.com/nuclearization-of-indian-ocean-ramifications-on-regional-security/amp/?amp\\_gsa=1&amp\\_js\\_v=a9&usqp=mq331AQKKAFQArABIIACAw%3D%3D#amp\\_tf=From%20%251%24s&aoh=16714448101410&referrer=https%3A%2F%2Fwww.google.com&ampshare=https%3A%2F%2Fstrafasia.com%2F%2Fnuclearization-of-indian-ocean-ramifications-on-regional-security%2F](https://strafasia-com.cdn.ampproject.org/v/s/strafasia.com/nuclearization-of-indian-ocean-ramifications-on-regional-security/amp/?amp_gsa=1&amp_js_v=a9&usqp=mq331AQKKAFQArABIIACAw%3D%3D#amp_tf=From%20%251%24s&aoh=16714448101410&referrer=https%3A%2F%2Fwww.google.com&ampshare=https%3A%2F%2Fstrafasia.com%2F%2Fnuclearization-of-indian-ocean-ramifications-on-regional-security%2F)

over thirty- eight states. To completely understand the dynamics of the Indian Ocean region, McPherson takes us back in time and reminds us that it had always been in the spotlight due to the long list of possibilities it had to offer from communication, migration, colonization to trade.<sup>‡</sup> Hourani's book called *Arab Seafarers* explores the interaction between Arabs and the Indian Ocean further in length and denotes that to carry out trade with Asia and East Africa, Arabs relied heavily on the Mediterranean, Red Sea and Persian Gulf. The first ever Arab who went on a voyage in the Indian Ocean was way back in AD 636.<sup>§</sup> Following the footsteps of Arabs, the ancient Greek city state Athens and the Roman Empire also counted on seas and build themselves navies to protect their maritime frontiers as well as to ensure safe trade with Africa and Asia.<sup>\*\*</sup> The unregulated and unplanned commerce kept hallowing the empire from the inside and eventually caused it to crumble. The IOR exchanged different hands after that when it came to its dominance but the powers were mostly of European origin. The British took over the helm in the Indian Ocean going into the 18<sup>th</sup> century controlling the markets as well as trade routes. They transformed Indian sea fleet and elevated it to the level where it accompanied and assisted the Royal British Navy in the World wars.

As freshly formed states in 1947, the first priority of India and Pakistan was to secure their land and maritime frontiers. To make its defense invincible, the former developed its nukes in the year 1974 and the latter balanced it in 1998. It perfectly encapsulates their distrust and disapproval of each other's actions and intentions. Ever since their independence, these two states have locked horns numerous times in the form of wars and border conflicts. Gupta believes that if these two states join forces and work in unison with each other, they can keep the region peaceful and prosperous.<sup>††</sup> Hussain seconds his view and adds that it is about time India and Pakistan should taste test cooperation over competition.<sup>‡‡</sup> Pakistan at various points in history tried normalizing its relations with India but every time its initiatives fell prey to the Indian double game, deception and nonseriousness. Their rivalry has now crawled onto the waters too. India has spent a fortune in the last few decades on its navy for its modernization and nuclearization.<sup>§§</sup> The first installment of its pay back came in the form of INS

<sup>‡</sup> Kenneth McPherson, "The History of the Indian Ocean Region: A Conceptual Framework," *The Great Circle* 3, no. 1 (1981): 10–19, <https://www.jstor.org/stable/41562359>.

<sup>§</sup> George F. Hourani and John Carswell, *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times* (Princeton University Press, 1995).

<sup>\*\*</sup> Dr. Nolan, "The Roman Empire and the Indian Ocean | Naval Historical Foundation," October 4, 2018, <https://www.navyhistory.org/2018/10/the-roman-empire/>.

<sup>††</sup> Sisir Gupta, "Indo-Pakistan Relations," *International Studies* 5, no. 1–2 (January 1, 1963): 174–79, <https://doi.org/10.1177/002088176300500122>.

<sup>‡‡</sup> Ejaz Hussain, "India–Pakistan Relations: Challenges and Opportunities," *Journal of Asian Security and International Affairs* 6, no. 1 (April 1, 2019): 82–95, <https://doi.org/10.1177/2347797018823964>.

<sup>§§</sup> Global Defense Insight, "India's Naval Modernization and Expansion in Indian Ocean Region: Implications on Pakistan," Global Defense Insight, December 31, 2022, <https://defensetalks.com/indias-naval-modernization-and-expansion-in-indian-ocean-region-implications-on-pakistan/>.

Arihant, which was its first-ever nuclear submarine produced indigenously. It is apparent that India's nuclear ambitions for the Indian Ocean are not stopping any time soon as it is determined to enhance its sea based nuclear capabilities. Pakistan initially wanted the Indian Ocean to stay non-nuclearized, a proposal floated in 2016 which could not garner much attention, but Indian actions in the naval realm have forced Pakistan's hand into exploring the nuclearization option to ensure free, open and secure Indian Ocean.<sup>\*\*\*</sup> In the light of its Maritime Doctrine, it has sworn to take every possible step to protect its maritime frontiers.

An in depth study of the books and articles written on the Indian Ocean reveals that Indian Ocean is proving itself to be another area of conflict between the two South Asian rivals. A sizeable chunk of literature is there that talks about the reasons regional states have to justify the nuclearization of the Indian Ocean region but almost no one has tallied in detail their developing sea based nuclear capabilities. This paper is set to fill that gap by highlighting their enablers and their motives and by providing an exhaustive description of their current and future plans regarding the nuclearization of the Indian Ocean.

## 5. Theoretical Foundations of the Research

Apart from the cushions that it can provide the littorals economically, given the resources that it bears and species that it sustains, the Indian Ocean has found itself at the heart of the regional politics as well as the great power rivalry. It is exactly the kind of press that Mahan forecasted for the waters in general and Indian Ocean in particular back in the 19<sup>th</sup> century. Mahan was well versed on the naval affairs as he himself served in the US Navy for forty years. His interest in seas manifested in him writing a piece called "*The Influence of Sea Power Upon History*" in 1890.<sup>†††</sup> In this book, he not only looked at the past but also at the then present developments through the lens of a naval officer. Thus, conceptualizing 'the Sea Power Theory'.

He concluded that the countries with powerful navies use waves to harass other states to get what they want. Having huge waters at their disposal provides them the luxury to sail to whichever part of the world they want to and with invincible navies accompanying them they are in a position to drown their competitors making them world powers of their time. We can apply this theory to detangle the complicated nature of rivalries at play in the Indian Ocean. Pakistan, India and China are vying for the control over the Indian Ocean and in order to achieve that they are expanding and modernizing their naval capabilities. They are developing nuclear submarines, missiles, ships and aircraft carriers so that they are able to carry out any kind of operation to secure themselves from all the threats.

India and China already have blue water navies which allows them to carry out

<sup>\*\*\*</sup> Sidra Khan, "Indo-Pak Balance of Power in the Indian Ocean," *Centre for Strategic and Contemporary Research* (blog), May 31, 2016, <https://cscr.pk/explore/themes/defense-security/indopak-balance-power-indian-ocean/>.

<sup>†††</sup> Jon Sumida, "The Case of Alfred Thayer Mahan," *Naval War College Review* 54, no. 3 (2001): 100–111, <https://www.jstor.org/stable/26393843>.

humanitarian and rescue mission across different continents.<sup>†††</sup> By helping other states of the Indian Ocean, they are trying to grab their status as a potential major regional power. As soon as one of them becomes the regional power, they will be in a position to exert influence on all the important sea lines of communication as well as the chokepoints. According to Mahan, the chokepoints like Strait of Hormuz, Bab al Mandeb and Malacca Strait are extremely important. Upon getting a complete hold of these significant waterways, a single state can easily control the economy, trade and oil supply of other two as well as the whole world. It is because of this reason that these three states are doing everything in their power to deter the other and not let it dominate the Indian Ocean which Mahan puts as, “the destiny of the World will be decided on Waters”.<sup>§§§</sup> He also once stated that whosoever will get his hold onto the Indian Ocean will be able to assert its dominance on Asia which is proving to be true. Its trade routes serve as an economic lifeline for almost half of the world. It just does not stop there, the Indian Ocean alone handles world’s 80% of oil related shipments. The dominance over the Indian Ocean by any power means that it would hand it a controller allowing it to tamper with any state’s sea based affairs. It is because of this reason that regional and extra regional powers are fixated on the Indian Ocean a lot lately.

## **6. Significance of the Indian Ocean:**

### **6.1.Strategic location:**

The Indian Ocean stands out as a truly exceptional body of water. It possesses several distinct characteristics that set it apart from other major ocean basins such as the Atlantic and Pacific. Firstly, the Indian Ocean is the smallest among the three major oceans. It covers about 20% of the Earth’s surface, making it a relatively compact and concentrated body of water. Despite its smaller size, it holds immense significance due to its strategic location and the diverse coastal regions it encompasses.

Secondly, the Indian Ocean is also the youngest of the major oceans. It began forming approximately 140 million years ago, making it relatively recent in geological terms. This youthfulness contributes to its dynamic nature and ongoing geological processes that shape its features. Furthermore, the most unique aspect of the Indian Ocean is its landlocked position in the Northern Hemisphere. Unlike the Atlantic and Pacific, it does not extend to the Arctic waters. This geographical characteristic makes it distinct and influences its climate patterns, marine ecosystems, and oceanographic processes. The Indian Ocean’s boundaries are marked by the Eastern coast of Africa to the West and Tasmania to the East. It connects to the Atlantic Ocean at Cape Agulhas, forming an important link between these two vast bodies of water. While its eastern boundaries are less

<sup>†††</sup> Ms. Yashika Sharma, “An Assessment Of China’s Blue Water Ambitions,” *Centre For Joint Warfare Studies*, August 18, 2023, <https://cenjows.in/an-assessment-of-chinas-blue-water-ambitions/>.

<sup>§§§</sup> David Brewster, “An Indian Sphere of Influence in the Indian Ocean?,” *Security Challenges* 6, no. 3 (2010): 1–20, <https://www.jstor.org/stable/26459796>.

precisely defined, they generally extend from Southeast Cape to the 147° E meridian.

Spanning almost 1,000 km, the Indian Ocean is the widest between Western Australia and the Eastern coast of Africa. This width contributes to its vastness and provides a diverse range of marine habitats, supporting a rich array of marine life. Hence, the Indian Ocean's uniqueness lies in its status as the smallest, youngest, and most complex of the major ocean basins.<sup>\*\*\*\*</sup> Hence, its landlocked position, distinctive boundaries, and wide expanse make it a captivating and remarkable part of the world.

### **6.2. Extensive Chokepoints and Sea lines of communications (SLOCs):**

The Indian Ocean is super important for global trade, especially for energy supply. It connects East Asia, Europe, the Middle East, East Africa, South Asia, and Australia through extensive Sea Lines of Communications (SLOCs). These SLOCs are like highways for ships to transport goods and energy. The Strait of Hormuz, the Bab El Mandeb Strait, and the Malacca Strait are the important gateways to the Indian Ocean.

Because of the economic growth of India and China, a lot of the world's energy trade now happens through these SLOCs. That's why many countries from outside the region are always present in the Indian Ocean for their commerce and geopolitical interests. The seaboard of Sub-Saharan Africa has become really important because of all the commercial activity and the competition for resources. China and India are big players in Africa, and even Western superpowers are getting more interested in the region. All this activity has made the Indian Ocean a major center of gravity for both local and global entities. It has influenced the policies and political settings not only for the region but also globally.

Furthermore, the wealth and resources of the Indian waters have had a big impact on the additional regional actors in the ocean. They're all competing and trying to make their mark. All countries in the Indian Ocean region, including landlocked nations, see the value of the Indian Ocean. Among the South Asian countries, India stands out as the most important player. India is incredibly innovative and has made significant technological advancements, putting it at the forefront of the world.

Unlike the Atlantic and Pacific oceans, the Indian Ocean is a relatively enclosed region. It can only be accessed through specific straits like the Cape of Good

<sup>\*\*\*\*</sup> Fava, M. Fava. 2022. "Which Is the Largest Ocean? The Largest Ocean Is..." Ocean Literacy Portal. June 7, 2022. <https://oceanliteracy.unesco.org/the-largest-ocean/#:~:text=The%20Indian%20Ocean%20basin%20is>.

Hope, the Red Sea, the Suez Canal, and the Straits of Malacca.<sup>†††</sup> Therefore, controlling these strategic points can effectively control the Indian Ocean.

### **6.3. Economy and trade through SLOCs:**

The Indian Ocean is a vital hub for trade and the economy, impacting the daily lives of nearly 40% of the Asian population living within 100 km of its coast. There are number of key economic factors that are related to the sea lines of communication (SLOCs) in the region. Firstly, it possesses over half of world's oil reserves crowning it as a crucial source of energy. Secondly, it handles 50% of the world's container traffic which makes it an important artery for the global trade. Thirdly, the chokepoints and ports sprinkled throughout the entirety of the Indian Ocean are among the most used for trade. Lastly, along with its abundant gas reserves, it satisfies the appetite of most of world's sea food enthusiast through the different species of fish it nurtures.

As the coastal and hinterland areas of the Indian Ocean continue to experience economic development, the importance of the region as a shipping area only grows. <sup>††††</sup>The Indian Ocean plays a crucial role in facilitating global trade and supporting the economies of the countries within its reach.

### **6.4. Aquatic Life :**

The Indian Ocean is a unique and diverse ecosystem, with its own set of challenges and opportunities for marine life. The heat of the ocean limits the production of microscopic plants, except in certain areas like the northern margin. This, in turn, affects the abundance of marine life in the region. Fishing plays a crucial role in the Indian Ocean, not only for neighboring countries but also for fleets from Japan, Russia, Taiwan, and South Korea. Known for its vast fishing grounds, the Indian Ocean region contributes to approximately 15% of the world's total fish catch, which amounts to around 9 million tons per year. With 87% of the world's marine fish stocks fully exploited, it's crucial for Indian Ocean Rim (IOR) countries to develop effective national policies to manage fish stocks.

In addition to commercial fish species, the Indian Ocean is also home to rare marine life such as dugongs, seals, turtles, and whales. These creatures add to the biodiversity and beauty of the ocean. This helps ensure sustainability and meets the protein needs of their populations. Hence, the Indian Ocean presents both challenges and opportunities for fisheries, and it's important for countries to work together to maintain the delicate balance of this valuable ecosystem.

<sup>†††</sup> Singh, Abhijit. n.d. "Securing Sea Lines of Communication in Asia." ORF. <https://www.orfonline.org/research/securing-sea-lines-of-communication-in-asia/>.

<sup>††††</sup> "Strategic Importance of the Indian Ocean Region." UKEssays, March 21, 2023. <https://www.ukessays.com/essays/history/strategic-importance-of-the-indian-ocean-region-history-essay.php>.

### **6.5. Hydrology:**

The continental shelf, which is the area near the coast, has an average width of 200 kilometers. However, off the west coast of Australia, it's over 1,000 kilometers wide! The ocean itself has an average depth of 3,890 meters, with the deepest point being the Diamantina Deep at 8,047 meters in the Diamantina Trench. The Sunda Trench is also considered to be quite deep, ranging from 7,258 to 7,725 meters.

In terms of sediments, about 86% of the major basins in the Indian Ocean north of 50°S are covered by pelagic sediments. These sediments, like the Globigerina mud, make up more than half of the total sediment cover. The remaining 14% is made up of terrestrial sediments. Moreover, the continental shelf of the Indian Ocean covers about 4.2% of the total area and is believed to be rich in minerals like tin, gold, uranium, cobalt, nickel, aluminum, and cadmium. However, most of these resources have not been developed yet.

### **6.6. Major key ports and harbors:**

There are several major ports and harbors in the Indian Ocean that play a significant role in trade and commerce. The Port of Singapore, located in the Strait of Malacca, is the busiest port in the Indian Ocean and serves as a crucial link to the Pacific Ocean. In India, Mumbai Port is a major commercial port on the Indian Ocean coast, while Chennai Port is the busiest port on the East Coast and the second busiest in the country.

Other important ports in India include Tuticorin, Mormugao, Panambur, Mundra, Hazira, Kochi, Port Blair, Kolkata, Alang, Visakhapatnam, Ennore, Paradip, and Nagapattinam. In South Asia, Chittagong in Bangladesh, Colombo, Galle, and Trincomalee in Sri Lanka, and Karachi and Gwadar in Pakistan are significant ports along the Indian Ocean coast. Aden in Yemen is a major port that controls ship traffic entering the Red Sea.

Moving to Africa, there are several major ports along the Indian Ocean coast. These include Mombasa in Kenya, Dar es Salaam and Zanzibar in Tanzania, Durban, East London, and Richards Bay in South Africa, Beira in Mozambique, and Port Louis in Mauritius. Zanzibar is particularly famous for its spice exports. Other notable ports in the Indian Ocean region include Yangon in Burma (Myanmar), Muscat in Oman, Medan in Indonesia, Jakarta, Fremantle (which serves Perth, Australia), and Dubai in the United Arab Emirates. So, these ports serve as vital gateways for trade, facilitating the movement of goods and fostering economic growth in their respective regions.

## **7. Geopolitical significance of Indian Ocean for Regional and Extra-Regional Powers**

The Indian Ocean Region (IOR) has become a strategically important area, drawing the interest of multiple naval fleets from various countries. Conflicts between riparian states and other Asian countries vying for influence have gotten worse. China and the United States are seen as strategic rivals, and their rivalry has grown within the IOR. In order to balance China's expanding influence, the United States has increased its military presence in the area. United States' long-standing rivalry with Iran and worries about the Middle Eastern security also add to its interests in the Indian Ocean.<sup>§§§§</sup>

In its quest for regional power status, India looks to forge prospective alliances in order to further its military and economic goals. The development of the Australian navy and maritime security activities are two examples of measures that try to lessen the negative effects of growing influence in the IOR. However, worries about maritime security, such as protecting sea lines of communication (SLOCs), securing maritime chokepoints, managing Indo-Pak conflicts, and addressing Sino-Indian rivalry, pose serious risks to regional stability and could affect how power will be distributed in the future in the IOR.<sup>\*\*\*\*\*</sup>

During the Cold War, the United States significantly contributed to the IOR, but by the early 21st century, it had scaled back its participation. The U.S. is currently attempting to counterbalance China's influence in the IOR, where both Russia and China are expressing their military and economic might. As a result, new problems and possibilities are emerging. The United States is helping India to become a regional security counterbalance to China, which may have an influence on Pakistan's economic and security interests in the larger Indian Ocean.

India and China have experienced difficulties even as they have sought to cooperate on economic and geopolitical matters. They have a contentious border, and a recent military standoff along it as well as increased maritime rivalry in the Indian Ocean have shown how complex their relationship is. India's security, which is largely concerned with protecting SLOCs from piracy threats in the Red Sea and the Horn of Africa, is significantly impacted by security dynamics in the IOR, particularly in the Persian Gulf and the Arabian Sea.

India is concerned about China's economic and military prowess, which may put India's territorial security at risk. Additionally, India is concerned about the security of sea lines of communication through ports like Gwadar and Hambantota due to China's Belt and Road Initiative (BRI) projects in South Asia, including Pakistan, Nepal, Bangladesh, Sri Lanka, and the Maldives. Through

<sup>§§§§</sup> Sehrish Qayyum, "The Strategic Maritime Environment Of The Indian Ocean: An Analysis Of The Challenges And Prospects For Pakistan," *P-JMR* 3, no. 1 (December 12, 2021): 81–118, <https://polaris.bahria.edu.pk/index.php/ojs/article/view/39>.

<sup>\*\*\*\*\*</sup> Patrick Bratton, "India and Freedom of Navigation: Maritime Power and Control of the Sea," February 6, 2023, <https://www.airuniversity.af.edu/JIPA/Display/Article/3285647/india-and-freedom-of-navigation-maritime-power-and-control-of-the-sea/>.

projects like the China-Pakistan Economic Corridor, it may improve its ability to deal with emerging challenges, safeguard its exclusive economic zones, and guarantee that freedom of navigation remains crucial for Pakistan's interests and economic prosperity which is in stark contrast with what India wants.

Geographically, the Indian Ocean is in the center of the world, controlling important maritime routes that link the continents of Africa, South Asia, the Middle East, Europe, East Asia, and the United States. Nearly 80% of the transportation of energy in the world is handled by choke points in this area. Regarding India's improvements in ballistic missile and nuclear capabilities, particularly the successful test of the K-4 submarine-launched ballistic missile, Pakistan has voiced its concerns. This accomplishment demonstrates India's dedication to developing a nuclear submarine deterrent that includes homegrown nuclear submarines. The US, China, and India have seen complicated dynamics as a result of the Indian Ocean Region's growing strategic importance, with consequences for regional stability, economic growth, and security. Addressing the changing opportunities and challenges in this important marine realm requires a thorough understanding of these dynamics.<sup>††††</sup>

When it comes to the non-regional powers, the United States seemingly has the most stakes in the concerned region. United States has at least 1.4 trillion dollar-worth of trade with countries in the Indo Pacific area. It suggests that United States influence or presence in the region is a long term that would benefit from a stable environment. Any kind of insecurity and instability would affect both. Under Build Back Better World US along with other G-7 countries is going to invest \$40 trillion on developing countries thereby maintaining its influence in the region. It will be done by 2035.

United States is determined to put a stop to the rise of China as it feels threatened to lose its super power status to China. That is why the U.S. is doing everything in its power to trap China in the Pacific Ocean with AUKUS and in the Indian Ocean with Quad hence giving the concept of Quad (Quadrilateral Security Dialogue). United States has made India as its Major Defense Partner in 2016 which ensures technology transfer and defense contracts. This is being done to contain China. United States keeps its presence in the region by carrying out Freedom of Navigation Operations in the region to make sure that the Sea Lines of Communications and International Waterways are secured and functional. It has also kept bases at Diego Garcia, Oman Seychelles, Saudi Arabia and fifth fleet at Bahrain to oversee the matters of the region.

France also has a continued presence in the Indian Ocean because of its naval facilities and air base on Reunion and Mayotte which are tiny islands, if you will,

<sup>††††</sup> Beenish Altaf, "Nuclearization of Indian Ocean: A Pakistan's Perspective," 2017, [https://www.ssoar.info/ssoar/bitstream/handle/document/50996/ssoar-indrastraglobal-2017-3-altaf-Nuclearization\\_of\\_Indian\\_Ocean\\_A.pdf;jsessionid=FF65213A428A2579390207699497B669?sequence=1](https://www.ssoar.info/ssoar/bitstream/handle/document/50996/ssoar-indrastraglobal-2017-3-altaf-Nuclearization_of_Indian_Ocean_A.pdf;jsessionid=FF65213A428A2579390207699497B669?sequence=1).

off the coast of Africa. Djibouti which is one of the states whose coasts form the outline of the Indian Ocean, houses France's largest base. France regularly provides the major states of the Indian Ocean with its Submarines, engines etc under defense contracts.

## 8. Nuclearization of the Indian Ocean

### 8.1. Contribution of Pakistan

Pakistan's rivalry with its arch-nemesis, India, began soon after both received independence from their colonial masters. Pakistan despises India for the unfair partition and occupation of Kashmir whereas India accuses Pakistan of carrying out state-sponsored terrorism against India by supporting, financing and training the freedom fighters of Kashmir. In short, both nations always have their weapons ready and pointed towards each other due to the mutual distrust of each other's intentions. As sad as it is, it is true that Pakistan was never a match to India in terms of conventional personnel and weapons as with greater territory comes greater resources and larger population which is something Pakistan lacks. Given this situation, the only way Pakistan could secure itself was by developing nuclear weapons to match its rival's strength which got its hands on the atomic bomb over two decades prior. Pakistan broke to the world that it had become the nuclear state in the year 1998. Since then, Pakistan has assumed **the first use policy** as opposed to its hostile neighbor's. India is subscribed to **no first use policy** but India's growing defense ties with United States and subsequent development of nuclear sea based missiles suggests unspoken shift from no first use to possible first strike policy.<sup>\*\*\*\*</sup> It has created a precarious position for Pakistan and has lead Pakistan to expedite its efforts in acquiring **assured second strike capability** which means developing sea based nuclear capabilities. Induction of Babur- III in the state's nuclear arsenal is a first step in that direction.

#### 8.1.1. BABUR-III:

At the backdrop of the above-mentioned threats, Pakistan shifted its focus towards its waters in May of 2012 with the formation of Naval Strategic Force Command. The main purpose of which was to ensure that nation is not only able to protect its nuclear warheads in case of a nuclear attack but is also capable of inflicting the attack of same magnitude to defend itself if need be. It gave Pakistan a clear purpose regarding what it was trying to achieve which led to the press release made by ISPR on Jan 9<sup>th</sup>, 2017. On that day, it was shared with Pakistanis that Pakistan had conducted a successful test of a sea based nuclear missile named Babur- 3.<sup>\*\*\*\*\*</sup> It has provided Pakistan with a Credible Second Strike Capability.

<sup>\*\*\*\*</sup> Abhijnan Rej, "Pakistan's Sea-Based Nuclear Deterrent and Its Asymmetric Escalation Strategy," *Observer Research Foundation- ORF*, no. 240 (2018), [https://www.orfonline.org/wp-content/uploads/2018/05/ORF\\_Issue\\_Brief\\_240\\_Pakistan\\_Sea-based.pdf](https://www.orfonline.org/wp-content/uploads/2018/05/ORF_Issue_Brief_240_Pakistan_Sea-based.pdf).

<sup>\*\*\*\*\*</sup> DG ISPR, "Inter Services Public Relations Pakistan- No PR-10/2017-ISPR," January 9, 2017, <https://www.ispr.gov.pk/press-release-detail.php?id=3672>.

Babur-3 is a sea/ naval version of a Ground Launched Cruise Missile Babur-2. It carries a nuclear payload and has a range of about 450 km which is enough to cover India from Chennai up to Mumbai. It is a Submarine Launched Cruise Missile (SLCM).\*\*\*\*\* In order for it to be used, it needs a delivery system. Pakistan still to this day has neither developed Nuclear Powered Submarines nor purchase it from any other nation. Pakistan's options regarding delivery system boil down to its five conventional submarines which involve three Agosta 90B and two Agosta 80 subs. Experts believe that Babur-3 missiles will be paired with the Agosta 90B or with the S20 Yuan Class, four of which Pakistan will get in 2023 for \$4 billion and the remaining four by 2028 for \$5 billion.

## 8.2. Contribution of India

Years following the partition, India was not in the good books of United States as it did not let the latter step on it to get things the way it wanted. The pursuance of somewhat of a neutral policy meant that it had no hard hitting stance over Russia. India was able to cash that policy really well as it kept both US and Russia in the palms of its hands occasionally getting a stack from the former and the latter on the way. Not only that, India has now ditched its non-alignment policy and is now visibly leaning to the US side for it is being fairly compensated. India's main muse behind this switch is China, a nation deemed as India's and United States' mutual enemy. Both of these states have joined forces to neutralize their common enemy by signing Defense Partnerships, forming alliances and by facilitating technology transfers. As far as the Maritime realm is concerned, India has received assistance from Russia, France, Germany and the United States which has enabled the country to emulate the designs and develop its own sea based nuclear capabilities. Although, India maintains that its weapons are aimed at achieving deterrence with China, the careful analysis reveal that a sizeable chunk of its Naval Nuclear Force is obsessively Pakistan centric.

### 8.2.1. OUTSOURCED NAVAL NUCLEAR CAPABILITIES

Excessively propagated as a peace-loving state relative to its neighbor Pakistan, India conceived the idea of nuclear Indian Ocean as early as 1985 when the said state attempted to develop a 90 MW nuclear reactor prototype. Then in the year 1988, India contacted Russia for their Charlie Class submarine to get it on lease for three years. This contract not only provided India with a nuclear attack submarine but also allowed them to dissect it under their covert Advance Technology Vessel (ATV) program. India struck another deal with Russia for a lease of **Akula- Class nuclear powered attack submarine (SSN) called INS Chakra**. The deal was locked for \$700 million. Although it could launch a nuclear capable missile but as it was leased and not purchased, India was barred from launching such weapons from it. It had a nuclear reactor of about 190

\*\*\*\*\* Ankit Panda, "Pakistan Conducts Second Test of Babur-3 Nuclear-Capable Submarine-Launched Cruise Missile," April 1, 2018, <https://thediplomat.com/2018/04/pakistan-conducts-second-test-of-babur-3-nuclear-capable-submarine-launched-cruise-missile/>.

MW.<sup>†††††</sup> It was leased for 10 years so it was returned to Russia earlier this year. News is coming out from India that they have already made a deal with Russia for **Chakra III**. It will cost India \$3 billion. Additionally, India has six Scorpene-Class Submarines which were provided to them by France.

## 8.2.2. INDIGENOUS CAPABILITIES

### i. INS Arihant:

When India was borrowing nuclear attack submarines from Russia, it was side by side striving to develop its very own Nuclear Powered Ballistic Missile Submarine (SSBN) called Arihant too. It completed its first test patrol in November 2018. It has included India in the list of an exclusive club of six states with nuclear powered submarines. INS Arihant is capable of launching nuclear capable ballistic missiles. It can carry up to twelve K-15 missiles (SLBM) at once having range of about 750 km which is barely enough to target few cities of its traditional rival Pakistan but not China. It however does ensure Second Strike Capability for India against Pakistan. To acquire this capability against China, India has added to its missile collection K-4, K-5 and K-6 missile with a range of 3500 km, 5000 km and 6000 km respectively.<sup>†††††</sup> Moreover, India has also successfully built a sea-based BrahMos which is a submarine launched cruise missile (SLCM) which are fitted on Rajput Class Destroyers and Talwar Class Frigates. It has a range of about 290 km. Sea version of BrahMos was given a fire test in the year 2013.

### ii. INS Arighat S3 and S4:

It is a second installment of Arihant, an indigenously made nuclear powered SSBN. It is undergoing sea trials. It is expected to be an improved version of its predecessor. It can carry twenty- four K-15 or 8 K-4 missiles.<sup>§§§§§</sup> Its nuclear reactor is more powerful than INS Arihant. Third, nuclear powered submarine of this series has already been launched according to the Indian newspaper the Hindu.

## 8.3. Contribution of China

China is in a double whammy where it has United States in the Pacific to counter and India in the Indian Ocean to check. United States along with UK has partnered up with Australia under AUKUS where it has promised Australia

<sup>†††††</sup> admin, "INS Chakra - Naval Post- Naval News and Information," December 4, 2017, <https://navalpost.com/ins-chakra/>.

<sup>†††††</sup> Aqeel Akhtar and Sufian Ullah, "India's Sea-Based Nuclear Forces and Strategic Stability in South Asia," Australian Journal of Maritime & Ocean Affairs, August 4, 2021, 1–15, <https://doi.org/10.1080/18366503.2021.1961352>.

<sup>§§§§§</sup> Izza Syed and Malik Qasim Mustafa, "Modernization Of Indian Nuclear Triad and Development Of SSBNs: Regional Implications," Institute of Strategic Studies, Islamabad, August 5, 2021, [https://issi.org.pk/wpcontent/uploads/2021/08/IB\\_Izza\\_Syed\\_Aug\\_25\\_2021.pdf](https://issi.org.pk/wpcontent/uploads/2021/08/IB_Izza_Syed_Aug_25_2021.pdf).

nuclear powered submarines to put it in a position to keep China at bay in the Pacific. Therefore, China is already preoccupied as it has to not only assert and maintain its dominance over South China Sea but also has to deal with nuclearization of the Indian Ocean but it does not mean that China is ignorant of its sly neighbor. China's list of sea based nuclear capabilities and weapons is a lot lengthier and impressive than India's but momentarily China has mostly resorted to patrolling of the Indian Ocean to send across a clear message to the US and India that China is willing to defend its interests in the South China sea as well as protect its interests in the Indian Ocean.

China has a catalogue of fifty- five non- nuclear submarines, eight Nuclear Powered Ballistic Missile Submarines (SSBNs) and thirteen Nuclear Powered Attack Submarines (SSNs) which is undoubtedly more than any other state of the world. To keep its presence in the Indian Ocean, China regularly carries out counter piracy operations and patrolling with its conventional and nuclear submarines.

**i. Jin- Class (SSBN):**

Out of its nuclear submarines, its six Jin- Class submarines are capable of carrying nuclear armed JL- 2 (SLBMs). JL- 2 missiles have a range of about 7200 Km which allows China to easily target India as well as United States but to completely cover US, Chinese Jin- Class submarines are used to launch JL- 3 which are Intercontinental Ballistic Missiles which will have a range of 10,000 Km.  
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**ii. Shang Class:**

The plan to develop nuclear powered attack submarine called Shang was conceived in the 80s but it was not until 2002 that the construction was completed. The launch was done in 2003 and it was commissioned in 2006.<sup>††††††††</sup> It carries YJ- 82 anti- ship cruise missiles. It is paired with SSBNs and perform the duty of defense against other submarines.

**iii. Shang – II Class Submarines:**

These are nuclear powered attack submarines (SSN). These are considered as China's most modern submarines as they are capable of carrying YJ- 18

\*\*\*\*\* Tony Capaccio, "China Has Put Longer-Range ICBMs on Its Nuclear Subs, U.S. Says," *The Japan Times*, November 19, 2022, <https://www.japantimes.co.jp/news/2022/11/19/asia-pacific/china-longer-range-icbms-submarines-us/>.

†††††††† H.I Sutton, "Chinese-Navy-Type-093-Shang-Class-Submarine," *Covert Shores*, December 10, 2020, <http://www.hisutton.com/Chinese-Navy-Type-093-Shang-Class-Submarine.html>.

supersonic cruise missiles. It has range between 220- 540 Km.<sup>\*\*\*\*\*</sup> It was made available to be used by the PLAN in 2014.

### **Conclusion:**

The Indian Ocean is a third largest ocean of the world. It is bordered by thirty-eight states and it spans over three continents. It has been an area of conflict and cooperation between the regional and extra regional powers. The two major states of the region Pakistan and India see it as a front where they try to settle scores with each other. If one improves its naval capabilities, then the other does the same to maintain regional balance. For instance, Pakistan has responded to India's indigenously built nuclear powered submarines with a Submarine launched nuclear capable Cruise Missile. Both countries have started looking at it as an assurer of their second strike capability and have indulged in a naval nuclear arms race. Where China supports Pakistan, the United States supports India coloring it with great power rivalry. The United States is skeptical of China's intentions therefore it is backing India at all levels to make it replace China as region's major power. The United States fears losing its title of being a superpower to China. The strings of pearls, Belt and Road Initiative have been reciprocated by Quad, Build Back Better World and the defense partnership with India. this vicious cycle is not going to stop anytime soon unless major powers take a step back from the nuclearization of the Indian Ocean and sign some kind of agreement that limits the number of nuclear warheads, submarines and nuclear capable weapons can be kept in the Indian Ocean.

The combination of strategic rivalries including the United States, China, India, and Pakistan is principally responsible for the nuclearization of the Indian Ocean. China sees its nuclear arsenal as an essential deterrent against future American actions that could endanger its interests in the larger Asian area, leading either India or the United States to consider a nuclear response to balance China's capabilities. In addition, although it is still unlikely, tensions on the Sino-Indian border have sparked worries about the use of nuclear weapons in a fight between these two countries. A situation like that might lead Pakistan and the US to back China and India, respectively. Furthermore, Saudi Arabia has stated its intention to pursue a nuclear program if Iran were to develop nuclear weapons in response to concerns about Iran's nuclear program. Furthermore, Israel has long been accused of equipping its Dolphin-class submarines with nuclear-capable cruise missiles and stationing them in the Indian Ocean to counter any Iranian threats. In conclusion, the complex dynamics of regional and global powers are driving a growing trend of nuclearization together with the increasing strategic importance of the Indian Ocean.

<sup>\*\*\*\*\*</sup> H. I. Sutton, "The Chinese Navy's Most Powerful Attack Submarine: The Type-093A," Naval News, November 15, 2020, <https://www.navalnews.com/naval-news/2020/11/the-chinese-navys-most-powerful-attack-submarine-the-type-093a/>.

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