

# **Growing Nuclearization of the Indian Ocean and its Implications For South Asian Stability**

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## **Introduction**

The paradigm of security in the Indian Ocean Region (IOR) is going through a major transformation. It is a beginning of a new and unprecedented era in this part of the world. The geopolitical and economic orientation is shifting from Atlantic to Indian and Pacific Oceans as major powers such as China and United States seek to exert their influence in the region. China's major trade and hydrocarbon shipments pass through the Indian Ocean which makes it an important area for China to ensure security of trade. The littoral states of Indian Ocean are also vying to push their weight. The enormous volume of global maritime trade that passes through it also signifies its increasing importance in the world now. A report from 2015 shows that seventy percent of world's trade by volume, amounting to 777 Billion dollars, passes through the Indian Ocean.<sup>1</sup> With the advent of naval powers with nuclear submarines and nuclear tipped ballistic and cruise missiles, the contours of strategic security are evolving in the IOR.

Whilst the United States has kept its nuclear presence in the Indian Ocean Region since the early sixties, the dimensions of nuclearization in the ocean are now evolving as new players are entering the competition. China is also a comparative new entrant in the region, challenging the US' influence. India has also been actively pursuing a credible nuclear triad. In this bid,

it has begun a new competition in the IOR worrying Pakistan for its own security vis-à-vis India. As the nuclear players in Indian Ocean increase, the issues related to security, balance of power and naval dominance are bound to multiply. The region will witness a shift to a more volatile environment if an unchecked vertical proliferation continues to take place. While each state has the right to address its security apprehensions, the growing nuclearization could create problems not only for the littoral states of the Indian Ocean but also the global security.

Therefore, an analysis of the growing nuclear competition in the ocean is important to understand the dynamics of strategic stability pertaining to the nuclear states in the region. It will also tackle the interaction of littoral states with major competing powers. As China and the US are becoming more involved in this part of the world, it is equally important to analyze proliferation of their nuclear infrastructure into the Indian Ocean and their long term goals in the region.

### **Technological advancements**

Of the two nuclear weapon states that are actually located in the Indian Ocean region i.e. Pakistan and India have added a nuclear arsenal in these waters. Their qualitative and quantitative additions to the nuclear infrastructure in have made possible the development of precise and longer-range missiles, multiple independent entry vehicles also known as MIRVs, and delivery systems. The NSG waiver afforded to India with the US support, which includes access to nuclear technology, and its recent entry into MTCR which has facilitated its access to missile technology at par with the other nuclear weapon states, India has an advantage over Pakistan. While Pakistan has received some technological support from China and possibly South

Korea, it largely had to work with its indigenous pool of resources and technology to develop and upgrade its missiles and delivery systems.

## **Role of US in the IOR**

It was United States that became a precursor of nuclearization of the Indian Ocean. Soon after the Second World War, the United States, with its ample resources, technological prowess, and economic means, started spreading its military wings all over the planet, including the IOR. However, the international focus remained on the Atlantic Ocean during the nearly five decades of Cold War until the disintegration of Soviet Union. The US' presence in the region was originally motivated to counter what it believed to be the expansionist inclination of the Soviet Union, its alliances in the middle-east, and the role of the universal custodian that it had adopted post 1945.

The fifth fleet of the US navy was reactivated in 1995<sup>2</sup> and has remained active in the IOR since then. Its importance has increased as the volume of trade, the oil and gas production has multiplied and besides the factors like the growing competition between India and China, and the nuclear rivalry between Pakistan and India. The Indian Ocean functioned as a key space during the Iraq war during the six years between 2003 to 2009. Furthermore, the logistical and tactical support to the coalition forces led by the United States were routed through the Indian Ocean to support the war in Afghanistan. The US Pivot to Asia policy, first introduced by President Obama underlined the growing importance of the region with respect to economy and trade.<sup>3</sup> China also remained an important factor in US pivot to Asia calculus owing to its economic growth and possibly due to

the occasional sparring with its neighbors such as Japan and the Philippines.

### **Increasing presence of China in the IOR**

With an increased role of the United States in the IOR, China has also been seeking to develop a security niche in the region. Moreover, India is beefing up its navy and seeking out an enhanced role in the Indian Ocean. Therefore, the docking of Chinese submarines at Colombo and Karachi harbors<sup>4</sup> can be perceived as China signaling its naval presence in the region. The Chinese navy has been boosting its overall naval presence, and has been instrumental in warding off the Somali pirates to a large extent. China's economic strength figures in its security calculus, the strategic implications of not securing the IOR. Therefore, it has been actively conducting not only anti-piracy patrolling but also has been creating space for its military vessels to maneuver in the Indian Ocean. For China, its security lies in its robust naval presence, and control, and understanding of the dynamics of the IOR. It has been testing its SONAR systems, collecting bathymetric and hydrological data.<sup>5</sup> The collection of bathymetric data could essentially be useful to provide better cover for its nuclear powered submarines since a nuclear powered submarine can stay submerged for longer periods than diesel powered submarines. With an advancement in 'quieting technologies'<sup>6</sup> which subdue a submarine's noise, thermal signal and water deflection, the submarines can go undetected for long periods of time. With the help of such data along with a hydrological survey that it is conducting in the IOR, China is readying itself for the future dynamics of naval competition in the IOR.

China duly appreciates that the choke points at the Malacca strait can potentially be translated into a complete blockade of Chinese ships; hence it must deter any such moves by hostile navies. Naturally, to achieve safe and unhindered navigation of the Indian Ocean, China is augmenting its naval power in the region. As the Indo-US partnership strengthens, the threat threshold for China is inching towards its lower limit. For China, the blocking of its economic independence by blocking its commercial activity around any of the choke points can prove to be disastrous. In this regard, China has been building up ports in other countries such as Bangladesh, Sri Lanka, and Pakistan amongst others to secure its commercial activities. This development was termed a 'String of pearls' by the U.S firm Booz Allen Hamilton in 2005, wherein it posits that China will try to expand its naval presence by building civilian maritime infrastructure along the Indian Ocean periphery.<sup>7</sup> While it mentions building up civilian maritime infrastructure, it can also provide robust support to military missions, which in turn can be a cause of concern for the Indians.

Therefore, both India and the United States assert that the string of pearls means that, "China is building strategic relationships along the sea lanes from the Middle East to the South China Sea in ways that suggest defensive and offensive positioning to protect China's energy interests, but also to serve broad security objectives,"<sup>8</sup> Therefore, China's activities in the IOR such as developing Gwadar port, modernizing Chittagong port, building Colombo port amongst others are seen as a part of China creating a chain of naval facilities in the Indian Ocean to secure its strategic and commercial objectives. More so, reported deployment of a Type 093 Shang-class nuclear-powered attack submarine (SSN) and the docking of SSNs at Colombo<sup>9</sup> and Karachi<sup>10</sup> imply an intention of building up towards

nuclearization and militarization of the IOR. However, China vehemently denies this assertion.

### **India's growing capabilities**

The advent of Indian nuclear submarines – equipped with nuclear warheads – into India's nuclear command has transformed the security dynamics of IOR. India refers to the Indian Ocean as an area of its strategic influence. India's Prime Minister, Narendra Modi noted that, "India is at the crossroads of the Indian Ocean." By virtue of being the largest, most populous and in possession of the biggest military in the region, India considers itself to be a natural key player here.

Currently, India possesses two nuclear powered submarines, one of which is a Ballistic Missile Submarine (SSBN). This SSBN known as INS Arihant was commissioned into the Indian Navy in 2016, while the SSN INS Chakra was procured from Russia in 2012 on a ten-year lease. Prior to the development of its SSBN, India conducted a series of test firings of Dhanush-class short-range ballistic missiles from offshore patrol vessels as a stop gap measure.<sup>11</sup>

Of these, INS Arihant requires more focus as it represents India's bid to enter the prestigious club of a small number of states that possess ballistic missile submarines. India's aspiration to emerge as a regional power includes a goal to assert itself as an important and key state in the IOR. Despite its huge population, a 7500-KM<sup>12</sup> long coastline and aircraft carriers in service, India has long been unable to make its mark on the IOR. As India is becoming economically more stable, it is flexing its military muscle in the region as well. Its goals of hegemony and influencing the states within the IOR are largely tied with its

ability to display military power; therefore, it is incorporating newer and better technologies into its military systems.

For India, losing control of the ocean to China would spell a strategic disaster as China is both militarily and strategically stronger than India on all accounts. Therefore, India has been taking up new ventures to secure itself.

With the inclusion of INS Arihant into India's nuclear capable platforms, India has been able to completely operationalize its nuclear triad.<sup>13</sup> To attain credible deterrence, it is crucial to have a sea based nuclear capability. A submarine is essentially the third and most important leg of a nuclear triad. It derives its importance from its survivability factor. A submarine is extremely difficult to locate as it dives deep into the sea, and as the oceans are enormous, it is difficult to target a submerged submarine. An important feature of a nuclear-powered submarine is its non-requirement of refueling which allows it to stay under water virtually indefinitely.

Thus, in case an all-out war breaks out where counter-force targets are hit and a land-based second-strike capability is incapacitated, the responding state could always depend on a sea based second-strike for its survivability. The state initiating the offensive would therefore be wary of this fact and re-evaluate its strategy. India's Arihant comes equipped with two types of missiles; K-4, which is an intermediate range nuclear capable submarine launched ballistic missile with an upper range of 3500 KM.<sup>14</sup> It gives India the ability to target its adversaries from almost anywhere in the North Indian Ocean. The second one is K-15 which is a short range nuclear capable submarine launched ballistic missile with a range of 700 KM.<sup>15</sup>

India alleges that its threat calculus, in the IOR, revolves around China but China had completed its nuclear triad long before

India in 1987 with the inclusion of its Type 092 Xia-class SSBN.<sup>16</sup> Operationalizing its nuclear triad almost 20 years after China, points to the fact that India has other than strategic reasons for obtaining this capability. For India, it is important to embark into the Indian Ocean and add on its nuclear component for two reasons; first being prestige, which was essentially why Indian acquired nuclear weapons in the first place. It would help India become a part of a prestigious club which is open only for a handful of countries. The prestige is important for India domestically as well. A large proportion of Indians who live below the poverty line, find pride in India being equated to the rich and developed countries of the world. Second, by launching a SSBN, India is trying to signal to the world that it has now become a complete nuclear power and that its strategic objectives are important for it.

India's nuclear adventure into the Indian Ocean is a reality that needs to be factored in by other states in the region, such as Pakistan and China, in their threat perception. Fortification of Indian deterrence may make India over confident of its capabilities with regards to the deterrence equilibrium in South Asia. Such a situation would be very destabilizing for the region and beyond.

### **Pakistan's response**

Pakistan's recent initiative of building a credible nuclear triad came in the shape of submarine launched cruise missile or SLCM. Pakistan took steps to safeguard its own security in the wake of India's ongoing efforts to augment its naval and nuclear power. With the establishment of Naval Strategic Force Command, in 2012, Pakistan had signaled its intent to develop its own sea-based deterrent. Thus, in 2017, Pakistan



successfully tested a SLCM to be retrofitted to French-designed Agosta 90B submarines, thereby providing the quickest way to a second-strike capability. Currently, Pakistan does not have any SSNs or SSBNs. With India acquiring this capability, it became unnecessary for Pakistan to rectify these problems with the limited means available to it. As India is a part of Missile Technology Control Regime<sup>17</sup> (MTCR) besides enjoying a NSG waiver, it has had access to technology to develop its nuclear arsenal.

Pakistan, on the other hand, with a comparatively limited technological base, is unable to develop an indigenous nuclear submarine. Moreover, the cost of a nuclear submarine is far beyond Pakistan's reach. Thus, to ensure a second-strike capability to maintain deterrence, Pakistan chose the next best option. It made use of its available resources and developed Babur-3, a short-range submarine launched cruise missile with a range of 450 KM.<sup>18</sup>This SLCM can be tipped with both conventional and nuclear warheads. It is possible that Pakistan has adopted an ambiguous policy in this regard. An unconventional naval nuclear force structure and dual-use platforms are possibly deliberate components of Pakistan's naval nuclear policy.

As a diesel-powered submarine does not afford the same freedom, speed, and viability that a SSN or SSBN can, Pakistan's options are limited. Thus, the diesel submarine equipped with an SLCM is Pakistan's effort to thwart India's mal-intentions. While it is a step towards further nuclearization of the IOR, Pakistan's entry into the third leg of nuclear realm is prompted by a 'quandem' that starts with any strategic action by the US in the IOR. It automatically warrants reciprocation from China, which then causes India to readjust itself, which then results in security issues for Pakistan, hence triggering a reaction from

Pakistan. Thus, Pakistan is essentially caught in the crosshairs of great powers' politics.

### **Impact on the strategic stability in the IOR**

The increased nuclear activity in the IOR as well as the infrastructure that is being developed is creating strategic issues in the region with both short and long-term implications. The Indian Ocean had long remained a nuclear friction free area even at the height of the Cold War. The introduction of nuclear weapons in the region would have negative ramifications.

There would arise several new problems in the region. For instance, as the nuclear powers in the region compete against each other, a nuclear accident could not be ruled out completely. With the addition of more submarines in the ocean, it would be difficult for a state to be able to differentiate between friendly and hostile submarines operating in IOR, and more so during war time. The United States and China have the resources to engage in a nuclear competition in the Indian Ocean, however in doing so they would alter the contours of recessed nuclear deterrence that Pakistan exercises against India, adversely affecting deterrence stability in the region.

Besides the nuclear competition, use of conventional operations under a nuclear shadow would be disastrous since such operations could be misperceived<sup>19</sup> and can escalate out of hand, resulting in a possible exchange of nuclear weapons. India might want to assert more control over the sea to keep other states out. This would lead to confrontation with China or vice versa. Additionally, Pakistan, being a smaller state would use nuclear signaling to imply its readiness to retaliate if India shifts its conventional or nuclear posture. This is despite the fact that Pakistan's nuclear arsenal is kept in de-mated form to avoid any

mishaps or accidents. This would also entail massive problems for strategic stability in the region as any state that feels threatened could wrongly indicate its readiness, in effect causing gratuitous fighting.

The communication systems with a central command system would be difficult to maintain during war time, as even during peace time, the communication channels such as Very Low Frequency (VLF) and Acoustic Systems can be somewhat unreliable for less technologically advanced states. On the other hand, Extremely Low Frequency (ELF) Communication Systems can be used to transmit messages much deeper than VLF based systems; however, the information transmitted is very limited. Incidentally, it gives birth to another problem pertaining to the command system of nuclear submarines. Pakistan and India claim that their nuclear weapons are controlled directly through a central command authority, known as National Command Authority (NCA) in Pakistan and Nuclear Command Authority (NCA) in India. Both states maintain that the control of nuclear weapons is centralized which means only the head of government of both states, which is the prime minister, can authorize the use of nuclear weapons. With regards to submarines, it may not be possible and the command might have to be delegated to strategic force commanders present in the submarine. However, both the states assert that the control will remain central and assertive.

The issue of de-mated or cannistrized weapons is also a matter of concern. The idea being that in a submarine, it is physically impossible to keep a nuclear weapon de-mated from its delivery system owing to lack of space. This, in turn, stirs a debate on the claims pertaining to the inadvertent use of nuclear weapons.

## **Conclusion**

The Indian Ocean Region is being focused upon by the major world powers owing to the massive economic potential it affords to the global maritime trade. Its strategic location enables it to be the connecting pathway for four continents of the world i.e. Asia, Europe, Africa, and Australia. The abundance of natural resources which include hydrocarbons as well as seafood also adds to its significance.

The nuclear competition in the IOR is dangerous to the region's security. Moreover, when major powers embark upon increasing their nuclear presence in the region, they neglect smaller states' security and adversely impact the balance of power in the region. The IOR is being exposed to a similar intrusion by major powers in the regional strategic environment which has the risk affecting strategic stability between the two nuclear powers of South Asia. This tug of war between the states would create a precarious and volatile nuclear environment in the region.

With regards to the command and control systems, the issue of communication with submarines continues to be a security problem. A nuclear accident could happen either through collision if anti-submarine vehicles crash into a submarine. Moreover, nuclear submarines pose an environmental danger in the case a submarine meets an accident or comes under attack. Such an eventuality may cause disaster to the marine environment caused by radiation and spent fuel debris.

The issues involving inadvertent or unauthorized use of nuclear weapons also requires due attention, as it can precipitate a nuclear war between states.

Overall, the nuclearization of Indian Ocean would prove to be a challenge for the states in the region. The nuclear states would have to keep adjusting and readjusting their nuclear postures

and policies to address the challenges that would arise owing to fortifications of arsenals or modification of nuclear policies of major powers.

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## **Endnotes**

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