



## Arihant

# Strengthening India's Naval Capability

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India added new teeth to its Navy and enhanced its strategic depth by demonstrating its capability to indigenously build and operate a nuclear-powered submarine – the INS Arihant, which Prime Minister Manmohan Singh launched for sea trial in Visakhapatnam on 26 July 2009. The 110-metre-long, 11-metre-wide vessel can displace 6,000 tonnes of water and its journey towards sea is the first step before its eventual induction into the Navy. It will be able to launch missiles at targets 700 km (437 miles) away.

Soon after the launch, Prime Minister Singh tried to dispel fears, in particular those of Pakistan, by reiterating that it was incumbent upon the country to take all necessary steps to keep pace with global advances. The Advance Technology Vessel Project (ATV) is the perfect example of cooperation among the DRDO, BARC, Navy, and private and public sectors. While the achievement is bound to create ripples within the region, it is necessary for the country's security

What are the implications of Arihant for India's security? What are the likely responses from Pakistan and China? What is the road ahead for India, in further strengthening its naval capabilities?

### ARIHANT: A SHORT INTRODUCTION

This complex project was implemented under a public-partnership model with Russia. Both Prime Minister Singh and Defence Minister AK Antony lavishly acknowledged the contribution of Russia in helping India achieve the 'historic milestone'. With the Indian Navy keen on influencing a wide area in the Indian Ocean, the nuclear submarine has become the apex of its capability. Arihant is powered by an 85-megawatt nuclear reactor and can achieve a speed of up to 44 km an hour (24 knots) under water. When it becomes seaworthy, it will be equipped with anti-ship missiles, torpedoes, sensors and manned by a 100-member crew. The noise levels in the nuclear

submarine are fine and the hull life is around 25 years.

What is a nuclear submarine? It is an underwater vessel powered by a nuclear reactor. While other submarines need to surface for recharging, a nuclear submarine (N-sub) can lurk in the depths of the ocean for months together, making it difficult to detect and target by an adversary. When equipped with nuclear-tipped ballistic missiles, nuclear-powered submarines provide the ultimate riposte. There are also nuclear attack submarines whose role is to track down and destroy an enemy's ballistic missile submarines and other naval targets.

India's aging conventional diesel-powered submarines need to constantly surface to recharge their batteries. INS Arihant (Sanskrit for 'destroyer of enemies') places India in the elite club of 6 nations along with the US, Russia, France, the UK, and China that possess N-sub capabilities. Arihant's induction will complete India's nuclear weapon triad, in terms of its capability to launch nuclear missiles from air, land and water. Since India has a declared policy of 'no first use' of N-weapons, its defence systems must have a survivable and lethal second-strike capability to retaliate against a conceivable first pre-emptive strike by an enemy.

The new stealth nuke weapon packs an awesome punch with 12 nuclear-tipped ballistic missiles in four silos on its 'hump', as also a wide array of anti-ship and land attack cruise missiles and torpedoes. Though it only has a 6,000 tonne surface displacement, less than half the size of the Ship Submersible Ballistic Nuclear (SSBNs) fielded by the Big-5 nations, the 100m-long and 11m-wide Arihant lives up to its Sanskrit name.

INS Arihant will have to undergo harbour, sea and weapon trials before being termed fully operational. The submarine must complete extensive harbour and sea trials before it is commissioned into the Navy.

The Indian Navy needs around 13 more submarines to beef up its fleet. According to Rear Admiral Michael Moraes, Flag Officer (submarines), India may need four SSBNs and nine SSNs as against its current submarine fleet strength of 16. SSBN denotes nuclear powered submersible ships with ballistic missile launch capacity, whereas SSN implies nuclear powered submersible ships. The government has already approved the building of four SSBNs.

Arihant's capability is crucial because of India's declared 'no first use' doctrine. Submarine-based nuclear weapons are the least vulnerable to a surprise attack. And, under the rules of N-warfare, the more suspect a nation's ability to survive a first strike, the more tempted its enemies will be to consider such a strike.

The introduction of Arihant into India's armory is bound to trigger a debate on the country's nuclear doctrine. The present draft nuclear doctrine is an unofficial document that has largely been forgotten. The lack of a doctrine matters. First, doctrines determine how many weapons a country will build and how they will be deployed. Without a doctrine, building weapons can be an open-ended game. It could be economically ruinous and strategically dangerous. As a leading Indian English daily, Hindustan Times editorialized (29 July 2009), "doctrines that match weapons deployment help nuclear adversaries to calibrate the size and nature of their own deterrent. Ambiguity may often result in an arms race." On 30 July 2009, the Hindu said in its editorial that "the launch of Arihant may be just the start of a journey towards realizing its strategic objectives."

The Indian establishment is aware of how dangerous a nuclear arms race can be for a developing country. Prime Minister Singh has clarified that India does not have any aggressive designs and has no intention to threaten anyone. What India requires is an external environment in its periphery and beyond, conducive to its peaceful development that protects its values. At the same time, India must not lag behind or neglect safeguarding its own territory and therefore, has to keep pace with worldwide technological advancements.

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The formal launch for sea trials of the platform called a cryptic 'S2', lifted the secrecy around the ATV Project, cleared for implementation by Indira Gandhi in 1984, whose first step in steel cutting commenced in 1998. To date, the project is estimated to have cost Rs.30 billion. Though the choice of the word 'Arihant' was objected to by some religious groups in India, the word has common usage and should not be linked to any religion.

## II PAKISTAN'S CONCERNS

The launch of INS Arihant sparked a debate on the concept of 'security dilemma'. Robert Jervis in his article titled "Cooperation under the Security Dilemma" published in World Politics in January 1978, had described how inter-state conflict can arise or worsen. Put simply, actions taken by states to increase their own security can result in a decrease (real or perceived) in the security of their rivals. India was quick to declare that the INS Arihant was a deterrent weapon system and a second-strike capability. There may be perceived targets, smaller it may be, (real or not real) of the strategic weapon system, whose utility may not be perceived in the right spirit.

It is no wonder that Pakistan reacted sharply, almost immediately after the launch of INS Arihant, describing India's action as detrimental to regional peace and adding that it would only increase the arms race within the region. The Pakistani foreign ministry said that "the continued induction of new lethal weapon systems by India is detrimental to regional peace and stability".

However, an editorial in the *Dawn*, a leading Pakistan daily, said it was premature to say that New Delhi's big leap forward would pose a threat. The editorial said that Islamabad must not react to India joining the exclusive club of US, Russia, China, France and the UK. It opined that Pakistan must avoid the imprudent attitude that 'we must have whatever India has', as it would then lead to a dangerous arms race in the region. It pointed out that Pakistan cannot afford such competition with India because of the fact that it is very expensive to purchase a nuclear submarine. Moreover, none of the world's producers currently seem inclined to sell them to Islamabad. In a mature message to the people, the editorial concluded "we must not react to provocations, only genuine threats", not specifying however, where these provocations were emanating from.

The reactions of Pakistan's Navy were interesting to note. Though there was an apparent fear that India's acquisition of Arihant would have destabilizing effects on the security environment not only of Pakistan, but also all the littoral states of

the Indian Ocean and beyond, Pakistan's Navy Chief, Admiral Bashir Noman, saw no major concerns within the country's naval force. In sharp contrast to the reaction of the foreign office, Admiral Noman stressed that the Pakistan Navy's prime objective is to combat terrorism, piracy, and other illegal uses of the sea such as drug trafficking, and protecting the sea lanes of communication in the Indian Ocean. This, however, did not deter the Foreign Spokesman Abdul Basit from remarking that "without entering into an arms race with India, Pakistan will take all appropriate steps to safeguard its security and maintain strategic balance in South Asia".

Reacting to India's launch of Arihant, *Azkar*, Pakistan's Urdu daily, in its editorial of 28 July 2009 said that the movable platform of the submarine will make India capable of targeting missiles inside Gwadar and Karachi. The Left-leaning daily cautioned that the launch may trigger a trend of procuring nuclear submarines among the regional countries, including Pakistan, thereby introducing an arms race in South Asia. Another Pakistani Urdu *Daily Express* editorialized that there could be two different goals of the recent launch of the nuclear submarine: targeting Pakistan or counterbalancing China under the US strategy. The same article observed that India's action has an aggressive design and that it would cause heavy economic burden for the country and people.

It may be recalled that when India conducted a peaceful nuclear explosion in 1974, it had ripple effects in Pakistan. In response to Indian nuclear tests in 1998, Pakistan tested its nuclear weapons. Pakistani defence analysts believe that the nuclear-powered submarine and the satellite launch vehicles planned by India have received a boost from the Indo-US nuclear deal. They believe that the Indian nuclear submarine capability will pose a serious threat to Pakistan's 'brown water' navy and in the years ahead, will add to India's capability to lay blockades and choke the flow of trade from the Gulf, via Suez Canal in the west, and the Straits of Malacca in the east.

As far as India is concerned, Pakistan barely has any credible sea denial capability in the Indian Ocean and almost no sea control capability. However, in view of the trust deficit in Indo-Pak relations, the China factor will always lurk in the background. In the improbable scenario of an Indo-Pak nuclear war, India cannot ignore the inclusion of China in its strategic calculations, just as it cannot forget that in 1971 the US wanted China to intervene. Thus, there continues to remain a great deal of distrust within India even without a nuclear engagement. Therefore, safeguarding its shores and territorial waters ought to get primacy in defence planning. The launch of

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### III MATCHING THE CHINESE?

Some security analysts regard the launching of Arihant as a clear sign that India is looking to blunt the threat from China which has a major naval presence in the region. However, when armed with only the 700-km range, two-stage K-15 SLBMs (submarine-launched ballistic missile), Arihant pales in comparison to the over 5,000-km range missiles of the US, Russia and China.

The Chinese fleet of 62 submarines, with at least 10 of them nuclear-powered, for instance, is readying itself for its new JL-2SLBM, which has a striking range of over 7,200 km, capable of rattling even the US. India is still some distance away from the extended range K-5 missile with a 3,500-km strike range. Yet, with Arihant, India has taken a big leap towards developing the all-important third leg of its nuclear triad – the ability to fire nukes from land, air and sea. The first two legs, in the shape of fighters like Mirage-2000s jury-rigged to deliver nuclear warheads and the Agni series of rail and road mobile missiles, are already in place.

Despite the Indian naval expansion, the Chinese are far ahead and have made significant advances in the waters surrounding India. Recently, China demonstrated its growing naval capability when it paraded its nuclear-powered submarines for the first time as part of the celebrations to mark the 60th anniversary of the PLA navy. In the Chinese modernization of defence forces, the Navy has been receiving a lot of attention, so much so that the Chinese Navy is now the third largest in the world, after the US and Russian navies, and much ahead of the Indian Navy.

As China's economic interests grow and demand for resources increases, securing the sea lanes of communication across straits in the Indian Ocean has become critical. This has bestowed on its Navy an increasingly important role and China is liberally investing in modernizing its Navy. With the injection of modern technology such as ballistic missiles and GPS-blocking technology, China is poised to challenge even US' naval superiority.



China seems to be readying to build an aircraft carrier by the end of this decade as it feels that protecting the oceans is vital for its economic security. It is acquiring a number of naval bases along the crucial chokepoints in the Indian Ocean region. This would serve its economic interests as well as expand its strategic reach.

Geography itself endows India with a preponderant strategic advantage in the Indian Ocean. The Chinese, however, have constantly asserted that the Indian Ocean is not India's ocean, though India has never made such a claim. This is indicative of China's growing interest in the Indian Ocean region. After consolidating its power over South China Sea, China's interest in the Indian Ocean is clear from the observations made by the PLA General Logistic Department Director when he said that "we can no longer accept the Indian Ocean as only an ocean of the Indians".

Because of its geographical location, India enjoys certain advantages in the Indian Ocean, which China might find difficult to challenge. It is probably because of this fear that China is expanding its Navy to enhance its strategic profile. India will have legitimate reasons to suspect China's intentions. Given that the intent of both countries is to expand their strategic reach into the Indian Ocean region, each might adopt a sea denial strategy against the other, making the security scenario in the region more complex as a result. A possible Sino-Indian naval competition in the Indian Ocean will not be the best thing to happen as a small spark may escalate into a major confrontation.

Because of its enormous economic interests, India will further its attempt to become a credible and controlling military force within the Indian Ocean. This might put India at odds with China, which would prefer that its Indian Ocean trade routes remain under Chinese control. India therefore, ought to develop a robust survivable deterrent to see that China avoids a direct confrontation with India. The launch of Arihant may be seen from this perspective.

#### IV CONCLUSIONS: THE SEA AHEAD

Like China, India is also modernizing its defence apparatus. The Indian government has already approved the construction of two more nuclear submarines costing around Rs.30 billion. The construction of the hull for the next submarine is underway at a facility in the Hazira port near Surat in Gujarat. When completed, two of the three submarines will be ready for deep-sea deployment, while the third will remain on base as a back-up.

The government had also given clearance for the building of Vanguard-class nuclear ballistic submarines or SSBN, each worth around Rs.100 billion. This will begin once the three Arihant-class submarines are ready. The SSBNs are nuclear-powered submarines capable of launching ballistic missiles and carrying nuclear weapons for a second strike. The Indian Navy had also proposed the building of fast-attack nuclear submarines to escort the SSBNs.

India would also get an Akula-II class nuclear submarine, the 12,000-tonne 'K-152 Nerpa', on a 10-year lease by the end of 2009 as part of a secret contract signed with Russia in January 2004, along with the package deal for the refit of aircraft carrier Admiral Gorshkov and MiG-29K fighters. However, India's long-term goal is to field three SSBNs on its own, much before 2020.

Despite India's defence modernization programs, India's arsenals will be no match for China's. Moreover, India has to have a clear and transparent doctrine so that the neighbouring countries do not feel alarmed. The geographic position of India is such that it is sandwiched between two nuclear weapons states. Though China is engaged in demonstrating its power projection capabilities, the immediate threat to India's security comes from its northern neighbour. All sovereign nations have a legitimate right to remain prepared to defend their national interests. But in doing so, deft diplomacy ought to be the first option in a conflict situation, failing which the world will become very unsafe.

Former Naval officer Raja Menon in a recent Outlook article succinctly observed that India needs at least eight killer submarines. To build 14 submarines from 2010 onwards, at the current rate of accretion, it would take until 2038, by which time Arihant would have become due for pension. Menon has rightly suggested that the government bring out a White Paper on India's Nuclear Submarine Force, and co-opt a panel of strategists, industrialists, and nuclear engineers with bipartisan political support. The Indian expatriate community known for its competence and hired by overseas companies may also be invited to join and manage a project of national importance

*Views expressed are author's own.*



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