Deterrence or Danger?

(This editorial is based on the article “Deterrence or Danger?” which appears in The Hindu on 3rd January 2019.)

The completion of the maiden deterrence patrol by India’s first indigenous nuclear-powered ballistic missile submarine is a momentous development in terms of the country’s ability to defend itself in a rough neighbourhood where it faces challenges from certain inimical powers.

It signals not only India’s capability, along with a handful of nations, to build and operate a SSBN (Ship Submersible Ballistic Nuclear) or nuclear submarine armed with ballistic missiles, but is a key step towards a survivable nuclear triad, or the ability to launch a nuclear second strike from sea, air or land in view of the country’s “no first use” policy for its nuclear arsenal.

INS Arihant

- INS Arihant weighing 6000 tonnes is powered by an 83 MW pressurized light water nuclear reactor.
- It will be armed with the K-15 Sagarika missiles with a range of 750 km and eventually with the much longer range K-4 missiles.

- Arihant is capable of carrying nuclear-tipped ballistic missiles, the class referred to as Ship Submersible Ballistic Nuclear.
- SSBNs are designed to prowl the deep ocean waters carrying nuclear weapons and
- provide an assured “second strike” capability — the capability to strike back after being hit by nuclear weapons first.
- Second strike capability is particularly important for India as it had committed to a ‘No-First-Use’ policy as part of its “Nuclear Doctrine”.

Second Strike capability

- The theory is that if country A initiates a nuclear attack on country B in a first strike, country B must be in a position, even after absorbing the nuclear strike, to retaliate with a massive nuclear attack on the enemy country. This is called second strike capability.
- In the event that country A manages to destroy the land and air-based nukes of country B, country B will still have its third leg in the shape of sea-based nuclear-tipped missiles, called SLBMs or submarine-launched ballistic missiles, for use against country A because the sea-based missiles, launched from nuclear-powered submarines, would have remained undetected and hence safe from enemy attack.

Nuclear Triad

> The major nuclear weapon powers, principally the U.S., have developed the myth of a nuclear triad, that consists of land-based, air-based and sea-based nuclear delivery systems.

Importance of INS Arihant

- Only a few countries (United States, Russia, China, India, France, United Kingdom) have the capability of building a nuclear submarine, arming it with nuclear-tipped missiles and deploying it operationally.
- As a nation committed to "no first use" (NFU), it is of critical importance that there should never be a doubt about the credibility of India's nuclear deterrent. It is the iron-clad guarantee of a swift, devastating response that will deter our adversaries from contemplating a first-strike.
- Apart from its strategic significance, INS Arihant is a live example of how the "Make in India" vision has been actualized. The Advanced Technology Vessel (ATV) programme, under which it was built, mobilized a large number of major and minor private-sector companies (including MSMEs), which contributed to the programme by mastering esoteric technologies, to design and fabricate systems for this vessel. The ATV project has created a gene-pool which will contribute ever-increasing indigenous content to the programme in years ahead.

Arihant's Missing Links

- There is no clarity on whether the first deterrence patrol of INS Arihant had nuclear-tipped missiles on board. If not, the deterrence patrol would have been intended for political purposes devoid of any real deterrent utility.
- Without nuclear-tipped ballistic missiles on board the INS Arihant, it might not be any more useful than an ordinary nuclear-powered attack submarine (SSN).
- Even if INS Arihant had nuclear-tipped ballistic missiles on board, it is not clear what ranges they would cover. Reports suggest that it had the 750 km range K-15 missiles on board, which is insufficient to reach key targets in, China or Pakistan unless it gets close to their waters, which would then make the Indian SSBN itself a target.
- While the K-4 missile (3,500 km range) currently under development would give the country's sea deterrent the necessary range vis-à-vis its adversaries, INS Arihant would not be able to carry them on board. The Navy would require bigger SSBNs (S-4 and S-5) to carry the K-4 ballistic missiles. In other words, deterring India's adversaries using the naval leg of its nuclear forces is a work in progress at this point in time.
- The objective of India's nuclear planners is to achieve seamless and continuous sea deterrence, one SSBN with limited range is far from sufficient. Given the adversaries' capabilities in tracking, monitoring and surveillance, India's SSBNs, it would need to invest in at least four more.
- Maintaining a huge nuclear force and its ancillary systems, in particular, the naval leg, would eventually prove to be extremely expensive.
- Finally, the naval leg of the nuclear triad also poses significant command and control challenges. As a matter of fact, communicating with SSBNs without being intercepted by the adversaries' tracking systems while the submarines navigate deep and far-flung waters is among the most difficult challenges in maintaining an SSBN fleet.
- Until such sophisticated communication systems are eventually put in place, India will have to do with shallower waters or focus on bastion control (bastion host is a special purpose computer on a network specifically designed and configured to withstand attacks), which in some ways reduces the deterrence effect of SSBNs, as bastions would be closer to the ports.

Apart from these, there are arguments stating India does not gain anything by escalating the nuclear arms race in the region with INS Arihant.

- It has been universally recognized that the sole justification for having nuclear weapons is their deterrence value. If ever a nuclear bomb has to be used, it has destroyed its raison d'être.
- The initiation of a nuclear attack would mean utter destruction, not just for the two parties involved but also for regions far beyond.
- The Americans got away with their bombing of Hiroshima and Nagasaki, however controversial it was because they had a monopoly of nukes at the time. Today, the

situation is vastly different and far more dangerous. If nuclear weapons fail to deter the outbreak of war involving the use of such weapons, they have disastrously failed in their deterrence mission.
- Whether the external interventions succeed or not in preventing a major war, the target country would have ample time to disperse its land and air-based nuclear assets. The naval leg does not seem indispensable.
- Since Pakistan is still a long way away from having the naval leg of the triad, India's land and air-based nukes are enough as a deterrent.
- China is far ahead of India in many respects. It has more warheads and more nuclear-powered submarines. Both India and China have repeatedly declared adherence to the no-first-use doctrine. So there is no justification for acquiring the naval leg of the triad.
- However, this strategic function makes little sense in the modern Indian context. There is no realistic threat, which the Arihant could counter, that could wipe out India's existing nuclear deterrent.

Way Forward

- One of the arguments in the 1960s and 1970s in favor of atom bombs was that they would be cheaper in the long run. That has not happened. The acquisition of expensive conventional platforms, as well as the ever-expanding nuclear programme, has destroyed that argument.
- India has been in the forefront of the campaign for total nuclear disarmament. It should not at least escalate a nuclear arms race in its own region.
- India has not signed the Comprehensive Nuclear-Test-Ban Treaty (CTBT). India is also opposed to signing the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which it views as discriminatory. Along with the Non-Aligned Movement (NAM), India is a strong advocate for a time-bound disarmament commitment from nuclear-weapon-states (NWS).
- Also, given that India does not have 'first strike' or 'launch on warning' policies, it can adopt a relatively relaxed nuclear readiness posture.
- India is in support of a non-discriminatory, universal, and verifiable Fissile Material Cut-Off Treaty (FMCT). And, India doesn't want the treaty to cover existing stockpiles.
- At the 2015 Conference on Disarmament, India restated its belief that non-discriminatory, multilateral agreements to increase restraints on the use of nuclear weapons will lead to their eventual elimination.
- India also joined all other nuclear-possessing states in boycotting the Treaty on the Prohibition of Nuclear Weapons negotiations in the United Nations in 2017. India views the Conference on Disarmament as the sole vehicle for negotiating a nuclear ban treaty.