

ARIHANT IS A KEY STEP TOWARDS A NUCLEAR TRIAD

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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 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 is a 6,000-tonne submarine armed with 12 nuclear-capable ballistic missiles with a range of 750 km and the second submarine of its class, INS Arighat, is currently undergoing trials and expected to join service three years from now. India has plans to build three more similar vessels, two of which will be larger in size and capable of being armed with longer range missiles.

The hush-hush "advanced technology vessel" (ATV) project that was launched in the 1970s has found its stride. For long, India's defence scientific establishment faced crucial problems in fabricating a miniaturised nuclear reactor that could be fitted into the hull of a submarine and these efforts benefited from design and technical assistance provided over the years by Russia, which leased nuclear-powered submarines to India in 1988 and 2012 . Unlike land-based or airborne platforms for launching nuclear weapons that can be tracked by adversaries, it is virtually impossible to detect nuclear submarines, making them key for a credible second strike capability.

India cannot afford to rest on its laurels, though. Much more needs to be done . Experts believe a real sea-based deterrence requires at least three atomic-powered submarines, two of which would be on patrol along the eastern and western seaboard while one undergoes a refit at any given time. The submarines will also need to be armed with missiles with a range of up to 5,000 km to give India the wherewithal to counter regional powers; China has a force of more than 60 undersea vessels, including SSBNs. The distance between India officially unveiling its plans for a nuclear triad and the first deterrence patrol took 15 years. Other milestones in this important programme shouldn't take as long.

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