



CENTER FOR ARMS CONTROL AND NON-PROLIFERATION

India's Nuclear Capabilities

India tested its first nuclear weapon in 1974, becoming the sixth country to detonate a nuclear weapon. The country's arsenal carries weapons with estimated average yields ranging from [12 to 40 kilotons](#), though exact yields are unknown.

India is [actively](#) pursuing membership to the Nuclear Suppliers Group (NSG) and became a member of the [Missile Technology Control Regime](#) in 2016. India has not signed the [Nuclear Non-Proliferation Treaty](#).

HOW MANY?

India has never publicly released the size of its nuclear arsenal. Independent assessments approximate a stockpile [of 150](#) nuclear warheads. Traditionally, India's nuclear arsenal focused on deterring Pakistan, but India's nuclear posture may begin to take China into account. This may lead to a shift in India's view regarding the role its arsenal plays against Pakistan. The force requirements needed in order to threaten assured retaliation against China [may allow](#) India to pursue more aggressive strategies, with the potential for a first strike against Pakistan. India currently maintains a [No First Use](#) policy, but comments made by Indian officials in August 2019 indicate that New Delhi may be reconsidering this policy. India possesses a full [nuclear triad](#) and is currently pursuing modernization.

Air

Though definite numbers are unclear, India has the ability to deliver approximately [48 nuclear gravity bombs](#) via the Mirage 2000H and Jaguar IS/IB. With the original nuclear bombers getting old, India might be looking for a modern fighter-bomber that could take over the air-based strike role in the future. In 2016, France sold India 36 Rafale aircraft, which are used for the nuclear mission in the French Air Force. Similarly, India could potentially convert the aircraft to serve the same role within the Indian Air Force.

It is also reported that India is developing a ground-launched cruise missile (GLCM) called the [Nirbhay](#), that looks similar to the American tomahawk. This missile has the potential to be both air- and sea-based deployable.

Sea

India has one ship-launched ballistic missile and is developing two submarine-launched ballistic missiles for eventual deployment. The Dhanush, a ship-based ballistic missile, is a variant of the Prithvi-II missile and has a range of [400 kilometers \(km\)](#).

The INS Arihant, India's first ballistic missile submarine (SSBN), was commissioned in 2016 but has undergone repairs after [crippling](#) water damage. India is in the process of creating [two](#) submarine-launched ballistic missiles (SLBM): the K-15 (Sagarika) and the K-4 SLBMs. The K-15 SLBM has a range of over 700 km, and the K-4 SLBM has a range of about 3,500 km.

Ground

India's ground-based nuclear weapons program consists of four operational ballistic missile systems and an estimated 60 warheads. The short-range, road-mobile [Prithvi-II](#) and [Agni-I](#) (also rail-mobile) missiles can travel 250 kilometers and 700 kilometers respectively. The Prithvi-II is difficult to spot via satellite so its deployment location is unknown. It is suspected that the Agni-I missiles are used to target Pakistan, so it is estimated that up to 20 launchers are deployed in western India. The [Agni-II](#) and [Agni-III](#) are both rail-mobile (Agni-II is also road-mobile) and have ranges greater 2,000-3,500 km and 3,000-5,000 km, respectively.

India is further developing the Agni-IV and the Agni-V. [Agni-IV](#) is a rail and road-mobile ballistic missile with a range of approximately 4,000 km, giving it the capability to [strike targets](#) in nearly all of China. The [Agni-V](#) is reportedly road-mobile and has a range of more than 5,000 km, potentially making it the country's first intercontinental ballistic missile (ICBM). India tested its newest and [most advanced](#) ICBM, the 10,000 km range Agni-VI, in December 2018.