

## Indian Navy's Torpedo Quest: A Tight Race for Kalvari-Class Submarines



The Indian Navy is on the cusp of acquiring crucial heavyweight torpedoes for its Kalvari-class (Scorpene) submarines, with cost negotiations underway for an initial order of 48 units. This procurement is a vital step to bridge a critical operational gap, as the six domestically built Kalvari-class submarines have been relying on older torpedo systems, limiting their full combat potential. The competition has narrowed to two primary contenders: France's Naval Group, offering its F21 torpedo, and Italy's Whitehead Alenia Sistemi Subacquei (WASS), with its Black Shark torpedo.

The urgent need for these advanced torpedoes stems from the strategic imperative to enhance India's underwater warfare capabilities. The Kalvari-class submarines, built by Mazagon Dock Shipbuilders Limited (MDL) in collaboration with France's Naval Group, are designed for diverse missions, including anti-surface and anti-submarine warfare. However, past procurement delays and controversies have meant that these modern submarines have not been equipped with their intended primary armament.

Both the F21 and Black Shark torpedoes are formidable contenders, each bringing advanced features to the table. The F21, developed by Naval Group, boasts a fiber-optic data link for real-time intelligence gathering and mission path adaptation, coupled with strong resistance to countermeasures. It has previously been tested by the Indian Navy and found technically compliant.

On the other side, WASS is offering its Black Shark torpedo, which has a complex history with India, having been implicated in corruption allegations in 2013 that led to a temporary blacklisting of its parent company, Leonardo. However, with the lifting of this ban, the Black Shark has re-entered the race. This torpedo emphasizes advanced electronic counter-countermeasures (ECCM) and fiber-optic wire guidance. WASS is reportedly emphasizing a strong "Make in India" component, proposing phased technology transfer and local production partnerships with Indian companies like Bharat Dynamics Limited (BDL) and Larsen & Toubro. This approach aligns with India's long-term goal of manufacturing over 200 heavyweight torpedoes domestically.

The competition is exceptionally close, with cost-effectiveness emerging as a significant differentiator. Intelligence sources suggest the Italian offering may present a more competitive price point. However, France's established partnership through the Scorpene program and Naval Group's proven operational experience remain strong factors. While India is also developing its indigenous Varunastra heavyweight torpedo through the Defence Research and Development Organisation (DRDO), the immediate need for compatible torpedoes for the Kalvari-class necessitates foreign acquisition as an interim solution. The final decision will be pivotal in shaping the Indian Navy's underwater offensive capabilities for years to come.