

Celebrating the Golden Jubilee



50 years of submarines with the Indian Navy

While this article concentrates on the urgent requirements of the Indian Navy in general, it also focuses on its Submarine Arm, because in December 2017, this Arm celebrated its Golden Jubilee and also inducted its first conventional submarine after 17 years.

Between 5–9 December, senior brass of the Indian Navy and thousands of veteran submariners (officers-sailors) along with their spouses (some flew in from USA, Canada, UK, Australia & New Zealand), met at the beautiful city of Vishakapatnam (or ‘Vishak’ as ‘the city of destiny’ is generally referred to), to celebrate Golden Jubilee of the Submarine Arm. History records that our first four submarines, inducted between 1967 to 1970 to form the 8th Submarine Squadron were based in Vishakapatnam, which also has our first submarine base (INS *Virbahu*) and Submarine Training School (INS *Satavahana*) besides being the home port for our first SSN, INS *Chakra* (1988-91) and our present SSN, SSBN units.

Apart from get togethers, issue of first day covers, book releases etc, other notable

events included an international submarine-building seminar on 7 December, where I chaired one of the four sessions, a Presidential Banquet hosted by the CNS on 7 December for the President, while on 8 December 2017, the President reviewed a ceremonial naval parade at the naval base in Vishakapatnam, where the President’s Colour was presented to the Submarine Arm

of the Indian Navy on the 50th anniversary of its founding.

The Indian tri-colour was first hoisted on our first submarine INS *Kalvari* at Riga, Latvia, on 8 Dec 1967. Amongst the many veterans who attended the parade was 89 year old Commodore KS Subramanian, the first Commanding Officer of India’s first submarine INS *Kalvari* (he flew in from the USA).



The author in front of INS Kalvari

The original *INS Kalvari* was de-commissioned on 31 May 1996, but its reincarnation rejoined the Indian Navy on 14 December 2017, when PM Modi formally commissioned the first French designed *Scorpene*-class submarine (built by Mazagaon Docks Limited, Mumbai) as *INS Kalvari*.

It was nostalgic indeed when many veterans (including 89 year-old Commodore KS Subramanian from the commissioning crew of the original *INS Kavari*) were present. Five more indigenous *Scorpene*-class submarines will hereafter join the Navy, at the rate of one every year.

My wife and I attended all the Golden Jubilee functions in Vishakhapatnam, while I also attended the commissioning ceremony of the new *INS Kalvari* at Mumbai, by PM Modi on 14 December 2017. Personally for me it was great meeting two generations of a submariner family linked to *INS Kalvari*: the commissioning CO of the new *INS Kalvari* (Captain SD Mehandale) and his father veteran submariner Commander DG Mehandale).

As a former naval officer and submariner, it is my hope that the President, Prime Minister and Raksha Mantri will separately find time to spend a few hours underwater

in a submarine as was done in the past by Prime Minister Rajiv Gandhi, President APJ Abdul Kalam and Defence Minister George Fernandes. Given the recent tragic sinking of the 32-year old Argentinean submarine *ARA San Juan* on 15 November 2017, with loss of her entire crew of 44, it is vital that Indian Navy gets funding for additional submarine since 11 of its 13 conventional subs have crossed their designed life of 25 years, and eight of these are over 30 years old.

With India joining the Joint Secretary level talks in Manila in November 2017 for the proposed quadrilateral or 'Quad' of USA, Japan, India and Australia, to ensure



INS Kalvari, commissioned at Mumbai on 14 December 2017 by Prime Minister Modi



8 December 2017 during an evening dinner at Visakhapatnam (from left to right): Rear Admiral and Mrs Ashokan, Vice Admiral and Mrs Srikant, Vice Admiral and Mrs AK Singh and Rear Admiral and Mrs JV Ravindran. Serving officers are in uniform



*Photo taken on 8 December 2017 at Visakhapatnam, with the President of India. V/Adm AK Singh is seated front row fifth from the left. The submarine *INS Sindhu Kirti* forms an impressive back drop*

safety and freedom of seas, this essentially maritime organisation, if it fructifies, will require India to increase the size of its largely home-built navy by greatly increasing its very modest naval annual budget of about \$5 billion or about \$15 billion in PPP terms (Chinese Navy budget is \$40 bn in dollar terms and about \$ 60 billion in PPP terms) starting with the next budget in February 2018. It is doubtful if the proposed Quad, would take the form of a military alliance, but may result in sharing real time intelligence and MDA (Maritime Domain Awareness), co-operation in tracking Chinese submarines and warships in the Indian Ocean, along with possible co-ordinating activities to combat piracy and maritime terror - nonetheless, with or



Photo taken on 5 December 2017 at Visakhapatnam (left to right) are veteran Submariners Vice Admiral AK Singh (author of this article), Commodore BS Uppal, Rear Admiral JMS Sodhi, Commodore KS Subramanian (89 years old), first CO of our first Submarine INS Kalvari, Commodore Arun Kumar



Veteran Submarine Captain MNR Samant is flanked V/Adm AK Singh on the left and by Commodore S. Kaput on the right

specialists. However, since I am unaware of the results of the Indo-US talks on building a 65,000 ton aircraft carrier (IAC2) in India, perhaps with the latest electric propulsion and EMALS (Electro-Magnetic Aircraft Launch System), I have not written about that yet, but had commented about this in other media (“N-carriers vs N subs”), and am happy that the Navy has finally decided that IAC2 will not be nuclear-propelled.

without the quad, the Indian Navy needs additional funds and political support.

I write this with the experience of visiting and being briefed at various ship, submarine, aircraft, missile building facilities in India and abroad. An encouragement our domestic industry needs is long term investment and economies of scale. I may add that infrastructure development for maritime operations in our long neglected strategically located A&N and L&M islands needs to be accorded very high priority.

While the Indian Navy is doing extremely well with about 34 indigenous ships-submarines building and another 20 more expected to be contracted for in Indian shipyards, some critical shortcomings remain: three items which would need urgent government approval for domestic production, which include conventional and nuclear subs (SSK, SSN, SSBN) SSN, Mine Counter Measures Vessels, light (4 tons) and medium (over 12 tons) multi-role ship-borne helicopters. Indeed the Indian Navy which has over the last 60 years built up a large team of highly competent warship and submarine design specialists, now needs to consider inducting aircraft, helicopter, UAV design specialists as well. And since Artificial Intelligence (AI) is the future of human progress and also warfare, its vital for the Navy to create a cadre of AI



The Kilo-class boat INS Sindhuvijay



INS Sindhurakshak

I now refer to some articles criticising the Indian Navy for ‘abandoning’ the indigenous LCA (Navy) jet fighter project, and sending an RFI (Request for Information) for 57 foreign twin-engined jet fighters needed to operate from the indigenous aircraft carrier Vikrant (IAC1) when it becomes operational in 2021 and also for the planned IAC2. The actual facts about LCA (Navy) are that the ADA-designed Tejas LCA, made for the IAF was one ton heavier than envisaged and the Naval version which required additional modifications (a drooped nose for better pilot visibility and strengthened undercarriage with tail hook for arrestor wire landing system on a carrier) was two tons overweight. Trials ashore on the Shore Based Test Facility at Goa, which replicates an aircraft carrier flight deck on land, indicated that the LCA (Navy) in its present form could not take off within the 195 metre deck runway space with

any worthwhile load, neither could it land on the carrier. But true to its faith in indigenisation, the Indian Navy continues to fund the naval version of LCA Mk2, with a more powerful American engine GE 414, replacing the present GE 404 which powers the LCA Mk1.

Most critically, with rapid growth of the Chinese Navy and its increasing presence in the IOR, it is time for the government to give an urgent and sustained boost to India’s Navy. Given enormous in-house expertise available and capability built up of domestic vendors, for nuclear submarines, India urgently needs to commence domestic production of SSNs in a separate production line. The only Indian platform capable of stealthily tracking Chinese warships in the Indian ocean and also patrolling in the western Pacific to deter China is the SSN. Hopefully, the February 2018 defence budget will bring good news for a home-built balanced three-dimensional Indian Navy.



The author, Vice Admiral Arun Kumar Singh is a submariner, who was trained in the former USSR on nuclear submarines and missiles. His important appointments as a two star included ACNS (Submarines), Flag Officer Submarines, Flag Officer Commanding Eastern Fleet. As a three-star he served as DG Indian Coast Guard, C-in-C Andaman & Nicobar Command, and finally retired in 2007 as FOC-in-C, Eastern Naval Command.