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BUSINESS AND POLITICS OF ARMING INDIA

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The Afghan Storm

The South Asian region
faces rough weather as Taliban
takes over Afghanistan





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NEWS BRIEF



India launches \$5.9-billion tender for six futuristic attack submarines

By N. C. Bipindra

New Delhi: India has issued a much-awaited tender documents to two major local shipyards to compete for bagging the \$5.9-billion contract for six futuristic attack submarines for the navy.

The tender kicks off what is the first-ever defence procurement project under the Strategic Partnership policy, first introduced in 2016 for 'Make in India' military programmes.

"As a major initiative towards 'Make in India', (the) Ministry of Defence (MoD) has issued Request of Proposal (RFP) for the first acquisition programme under the Strategic Partnership model for construction of six AIP-fitted conventional submarines named Project 75(India) [P-75(I)] for the Indian Navy, on July 20, 2021," an announcement from the MoD said.

The RFP — government parlance for tender — was issued to shortlisted Strategic Partners (SPs) or Indian applicant companies for the project namely, state-run Mazagon Dock Shipbuilders Limited (MDL) and private sector Larsen &

Toubrro (L&T). "The project cost is over Rs 40,000 crore," the statement said.

Project-75(I) envisages indigenous construction of six modern conventional (meaning, diesel-electric powered) submarines (including associated shore support, Engineering Support Package, training, and spares package) with contemporary equipment, weapons and sensors including Fuel Cell-based AIP (Air Independent Propulsion plant), advanced torpedoes, modern missiles, and state of the art countermeasure systems.

"This would provide a major boost to the indigenous design and construction capability of submarines in India, in addition to bringing in the latest submarine design and technologies as part of the project," the announcement said.

Post receipt of responses to the Expression of Interest (EoI), shortlisting of potential Strategic Partners (SPs) and Foreign Original Equipment Manufacturers (OEMs) was undertaken.

The shortlisted SPs to whom the RFP has been issued would be collaborat-

ing with any of the shortlisted Foreign OEMs, namely Naval Group of France, Thyssenkrupp Marine Systems of Germany, JSC Rosoboronexport of Russia, Daewoo Shipbuilding and Marine Engineering Company Limited of South Korea and Navantia of Spain.

"These five foreign firms are the world leaders in the field of conventional submarine design, construction and all other related technologies. The foreign OEMs will be the technology partner in the SP Model," the MoD statement said.

Foreign OEMs will enable SPs in the construction of submarines, achieving high levels of indigenisation, and Transfer of Technology (ToT) for various technologies.

These OEMs would enable setting up of dedicated manufacturing lines for these submarines in India by providing ToT for submarine design and other technologies and make India the global hub for submarine design and production.

The project would not only aid in boosting the core submarine/ship building industry but would also greatly enhance manufacturing/industrial sector, especially the Micro, Small, Medium Enterprises by development of an industrial eco-system for manufacture of associated spares, systems, and equipment related to submarines.

In order to achieve these objectives, the RFP has key features like mandatory level of indigenous manufacture of platforms, ToT for design, manufacture, and maintenance of submarines and a few critical equipment and systems, setting up of an eco-system in India for such indigenisation and incentivisation for other key technologies.

The overall aim would be to progressively build indigenous capabilities in the public and private sector to design, develop and manufacture complex weapon systems for the future needs of the Indian armed forces.

This will be an important step towards meeting broader national objectives, encouraging self-reliance, and aligning the defence sector with the 'Make in India' initiative of the Narendra Modi government.



India navy expands maritime reconnaissance capabilities with 10th P-8I

By N. C. Bipindra

New Delhi: American aerospace and defence giant Boeing Co. is continuing to expand the Indian Navy's long-range maritime reconnaissance anti-submarine warfare capabilities with the delivery of the country's tenth P-8I aircraft. The patrol aircraft is an integral part of the Indian Navy's fleet and has surpassed 30,000 flight hours since it was inducted in 2013.

This is the second aircraft to be delivered under an option contract for four additional aircraft that the Indian Ministry of Defence awarded in 2016. The Indian Navy was the first international customer for the P-8 and today operates the largest non-US fleet. The P-8 is also operated by the U.S. Navy, Royal Australian Air Force, and the United Kingdom's Royal Air Force.

"In addition to unmatched maritime reconnaissance and anti-submarine warfare capabilities, the P-8I have been deployed to assist

during disaster relief and humanitarian missions. Boeing supports India's growing P-8I fleet by providing training of Indian Navy flight crews, spare parts, ground support equipment and field service representative support. Boeing's integrated logistics support has enabled a high state of fleet readiness at the lowest possible cost," the company statement said July 13.

Boeing is currently completing construction on the Training Support and Data Handling Centre at INS Rajali, Arakkonam, Tamil Nadu and a secondary maintenance training centre at Naval Institute of Aeronautical Technology, Kochi, Kerala as part of a training and support package contract signed in 2019. This new indigenous, ground-based training will allow Indian Navy crew to increase mission proficiency in a shorter time, while reducing on-aircraft training time resulting in increased aircraft availability.



India accepts delivery of Lockheed multirole helicopters in US

By N. C. Bipindra

New Delhi/San Diego: India has taken delivery of the first two of the 24 multirole helicopters made by American major Lockheed Martin Corp., boosting its naval aviation prowess including anti-submarine warfare capabilities.

"On Jul. 16, (the) Indian Navy accepted the first two of its MH-60R Multi Role Helicopters (MRH) from the US Navy in a ceremony held at NAS North Island, San Diego," an official Indian government statement said on July 17.

The ceremony marked the formal transfer of these helicopters from the US Navy to the Indian Navy, which were accepted by Taranjit Singh Sandhu, Indian Ambassador to United States of America.

The ceremony also witnessed exchange of helicopter documents between US Navy Commander Naval Air Forces Vice Admiral Kenneth Whitesell and Indian Navy Deputy Chief of Naval Staff Vice Admiral Ravneet Singh.

MH-60R helicopters, manufactured by Lockheed Martin Corporation, is an all-weather helicopter designed to sup-



NEWS BRIEF

port multiple missions with state-of-the-art avionics and sensors.

Indian Navy is procuring 24 of these helicopters under Foreign Military Sales from the US government. The helicopters would also be modified with several India-unique equipment and weapons.

In order to exploit these potent helicopters, the first batch of Indian crew are presently undergoing training in the US. The induction of these MRH would enhance Indian Navy's three-dimensional warfare capabilities.

"The delivery of the first two MH-60R Romeo helicopters to the Indian Navy marks the beginning of a new era of collaboration and partnership between the United States Navy, the Indian Navy and Sikorsky," Sikorsky Maritime and Mission Systems vice president Hamid Salim said.

"We are committed to stand shoulder-to-shoulder with the United States Navy to support the Indian naval forces in the future through capability upgrades and sustainment as the aircraft transitions to the Indian Navy."

"MH-60R is the most advanced maritime multi-mission helicopter in operation – deployed globally, and its mission performance by far, second to none," Lockheed Martin India vice president and chief executive William L. Blair said.

"We appreciate the tremendous confidence placed in Team Seahawk by the Indian Navy through their selection of the Romeo. We stand committed to making this program a tremendous success in partnership with the United States Navy and the Indian Navy."

Tata-Boeing JV delivers 100th Apache gunship fuselage

By N. C. Bipindra

Hyderabad: Tata Boeing Aerospace Limited (TBAL), a joint venture between the Indian Tata Group and American Boeing Co., has announced the delivery of the 100th fuselage for the AH-64 Apache combat helicopter to Boeing from its state-of-the-art manufacturing facility.

"The fuselage will be transported to Boeing's AH-64 Apache manufacturing facility in Mesa, AZ, (Arizona, United States), for integration into the final assembly line," a statement from the joint venture company said July 23.

Telangana Minister for Municipal Administration and Urban Development, Industries and Commerce, and Information Technology K. T. Rama Rao and senior officials from Boeing and Tata Advanced Systems Limited (TASL) were present to mark the delivery milestone.

"This is a proud moment for Telangana, and a noteworthy step in the growth of India's aerospace and defence manufacturing. Our government is committed to providing all support necessary to make the state a preferred destination for global aviation and defence manufacturers. I congratulate Boeing and Tata for this milestone," said Rama Rao, on the occasion.

"Tata Boeing Aerospace Limited is



an example of Boeing's commitment towards 'Aatmanirbhar Bharat' (Self-Reliant India) and the co-development of integrated systems in aerospace and defence not just for India, but for the world," Boeing India president Salil Gupta said.

"We have quadrupled our sourcing from India in the past two years to more than \$1 billion. Skilled talent, robust infrastructure, ease of doing business, and a highly responsive government administration –make Telangana an ideal des-

tinuation for the high-end manufacturing work that the aerospace and defence industry demands."

"The achievement of 100th fuselage delivery for AH-64 within three years of the facility being operational reflects our strong ability to industrialize and ramp up complex aerospace programs and deliver with highest levels of quality," TASL managing director and chief executive officer Sukaran Singh said.

"This accomplishment places the Telangana facility as part of the global supply chain for Apache helicopters. Further, it underlines our indigenous manufacturing capability to produce cutting-edge technology and quality defence equipment in the country, and promote the Indian aerospace and defence manufacturing ecosystem, globally."

Tata Boeing Aerospace is Boeing's first equity joint venture in India and is the result of a 2015 partnership agreement with TASL. Spread over 14,000 square metres, the state-of-the-art facility has been producing aero-structures for Boeing's AH-64 Apache helicopter, including fuselages, secondary structures, and vertical spar boxes for customers worldwide.

Recently, Boeing announced the addition of a new production line to manufacture complex vertical fin structures for the 737 family of airplanes. Customers globally operate more than 1,200 Boeing-made Apache helicopters. The helicopter has been fielded or selected for acquisition by the armed forces of 16 countries, including India.





NEIGHBOURHOOD WATCH

Taming the Afghan Storm: India's contribution in economic aid critical

By Pranay Shome

The deteriorating security situation in Afghanistan necessitates that India frames a new Afghan strategy. It is coming back to where it all started two decades back, the Taliban this time is in the driver's seat, it is on a relentless northward march taking town after town, district after district.

It ominously appears the Afghan nation may fall prey to the machinations of the Taliban well before the end of this year. While America is packing its bags and leaving home, ordinary Afghans who fought against the Islamist insurgent group and helped the US are now trembling in fear as to what would happen to them if and when the Taliban comes back to power.

Changes in the Security Scenario

The rapid gains being made by the Taliban and the rapidly deteriorating security situation in Afghanistan, which has put the legitimacy of the democratic government in Kabul at stake, highlights a new changed security scenario with regard to Pakistan and India who are the other primary stakeholders in the Afghan peace process.

Undoubtedly, the possible return of the Taliban has the Pakistani deep state and the military establishment elated, because they would now be in a firm position to dictate the internal affairs of Afghanistan.

It provides Pakistan with the new opportunity to undermine India's position as a key participant in the Afghan

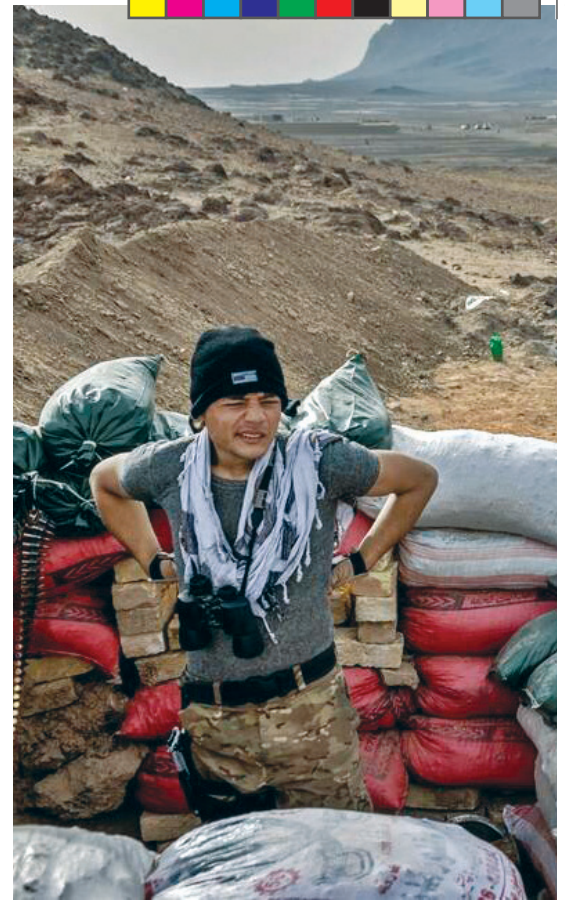
affair and eventually achieve its (Pakistani) objective of strategic depth to use Tilak Devasher's words which he so eloquently articulated in his book 'Pakistan-Courting the Abyss'.

The possible return of the Taliban constitutes a setback for India which has for years remained staunchly anti-Taliban and during the early years of the Taliban rule gave covert support to the Northern Alliance to oppose Taliban rule.

Nevertheless, New Delhi has tried to change its policy of not engaging with the insurgent group in recent years. But that hasn't resulted in many fruitful results given the Taliban's his-

torical closeness to Rawalpindi Generals. From the security perspective, India needs to be worried, given the fact that the Taliban has provided shelter to proscribed Islamist terrorists, who have been blacklisted by the UN.

Also, India cannot rely on the Taliban to remain committed to the Afghan peace accord's terms that they won't let the country become a haven for





terrorist groups like Islamic State and Haqqani Network. India, therefore, is on a pretty patchy turf when it comes to the outcome of the Afghan war.

Enacting a New Strategy

Given the deteriorating security conditions in Afghanistan, it is imperative that the mandarins of India's foreign policy craft a new security strategy that

can deal with India's core regional security concerns following the complete exit of US troops from Afghanistan.

The security strategy can include some elements:

Firstly, helping build a consensus among common Afghans about the need to develop a common social compact in accordance with Afghan cus-

toms, traditions which can harmonize not just the traditional Afghan lifestyles but also conform to modern liberal democratic and cultural principles.

Secondly, collaborating with the Afghan security forces, providing them training, equipment and taking part in joint war exercises can go a long way in dealing with the Taliban militarily. The Afghan armed forces need to be strengthened in order to deal with the Taliban.

Thirdly, holding the Taliban accountable for the human rights abuses that they committed in the past. India should at relevant international platforms make it absolutely clear that the gains in democratic development that Afghanistan made in the past two decades must be strictly preserved and must not be allowed to be tinkered with. The rights and liberties of women, children should be protected, and any violation will not be tolerated.

Fourthly, India must take the place of the US in Afghanistan, not through direct military action but through increasing economic aid. Though, India is one of the largest contributors of foreign aid to Afghanistan yet much more needs to be done.

India needs to invest in new areas where the scope for the development of Afghanistan is immense. India must remain strongly committed to Afghan economic prosperity and development.

Conclusion

India must remain steadfast to the Afghan situation because a disturbance in Afghanistan will have ramifications with regard to India's regional security concerns. At the same time, New Delhi must be careful of the Pakistani tactics to undermine India's position and must resolutely oppose any such attempts.

(The writer is currently pursuing his honors degree in political science with a specialization in international relations from Jadavpur University. Published in arrangement with Defence Research and Studies. The article is available on dras.in)





INDUSTRY POLICY

Indigenous defence manufacturing: Failed experiments with FDI and Offsets

By Commander S. Shrikumar

At the outbreak of World War I, a key problem facing British Naval Intelligence was the detection, in time, of the German Fleet putting to sea, to enable the British Fleet based at Scapa Flow, to intercept them.

Naval Intelligence knew, that when the German Fleet was not sailing, she lay berthed at the eastern end of the Kiel Canal. The British believed, that with the right equipment, it would be possible to detect the German Commander-in-Chief's wireless communications from onboard his flagship, as the fleet passed through the Kiel Canal into the North Sea.

The scientists at Marconi company set to work and successfully designed a sufficiently sensitive, direction-finding equipment that could accurately identify the bearing of the wanted signal amid the mass of other interfering signals. The equipment took some time to perfect, but eventually, became an important weapon in the British war against German U-boats.

In 1935, Sir Robert Watson-Watt built the first practical radar set. The British Air Ministry adopted his design and used it to detect enemy aircraft during World War II. By the end of the war, radar had become an important weapon in all the branches of the militaries around the world.

A crisis impels people, societies, and nations to innovate and acquire new tools and competencies to beat the crisis.

Since early last year, Indian and Chinese troops have engaged each other in aggressive run-ins along the Line of Actual Control (LAC) in eastern Ladakh. The simmering tensions came

to a boil, in mid-June 2020, leading to actual fighting and casualties on both sides. Currently, an uneasy calm prevails as diplomatic parleys between the two sides attempt to find ways to end tensions, peacefully.

At the height of the tensions at the LAC, the Government of India (GoI) made two key policy announcements with a view to strengthen military preparedness.

In its first announcement, in mid-May 2020, the GoI enhanced the cap on Foreign Direct Investment (FDI) in the defence sector from 49 percent to

74 percent under the automatic route for certain niche technologies. Additionally, the new policy provided for FDI even up to 100 percent, with GoI approval.

FDI in defence was first permitted in 2001. However, in the period since 2001, the expectations of attracting large scale FDI in defence have been belied. Very little FDI has been channelled by foreign defence companies for defence manufacturing through JVs with Indian defence firms.

The actual FDI inflow into the defence sector, in the two decades, from





April 2000 to March 2021 stands at just Rs 61.52 crore (~ \$10.15 million; Source – www.dipp.gov.in). It is instructive to note – as an illustration of the low FDI inflow – that a single Rafale fighter jet procured from Dassault Aviation, France cost India upwards of Rs 600 crore.

The reasons for the low FDI inflow are well known and is largely due to:

- Apprehensions around guaranteed and sustained support to make the investments/JVs financially viable.
- The onerous and somewhat ambiguous policy provisions.
- Fear of award of contracts by the GoI through a nomination to the DPSUs/OFs owing to political compulsions.

Sadly, the causes impeding FDI inflow are likely to persist and any expectation of a reversal in the trend can only lead to disappointment.

The GoI, in its second announcement in late July 2020, granted “spe-

cial powers to the three services for individual capital procurement programs of Rs 300 crore to meet emergent operational requirements.”

Following the grant of the special powers, the armed forces inked/began inking contracts for the procurement of equipment to meet immediate requirements. According to news reports at the time, the armed forces were processing over 100 procurement contracts under the special emergency powers.

The rush, in response to the border crisis, to order equipment from foreign armament suppliers, once again, laid bare India’s vulnerability with regard to its dependence on imports for defence needs. Similar emergency procurements were undertaken, in 1999, during the Kargil conflict. Clearly, not much has changed in the two decades since the Kargil war.

Without a doubt, given the circumstances at the LAC in Ladakh, emergency procurements were essential. However, emergency procurements often have unseen, longer-term consequences.

Equipment procurement from multiple countries leads to – problems of interoperability between equipment, limitations in cross-deployment of personnel, the requirement of separate facilities for training, repair and overhaul, higher equipment/spares procurement costs due to lower efficiencies of scale etc. The Indian armed forces have, for long, grappled with similar problems in past procurements.

Another mechanism, widely believed to hold great promise to help India achieve self-reliance in defence is ‘Offsets’. In traditional procurement, goods or services are exchanged for money. Defence procurement is different. Countries buying arms stipulate that some form of work should directly flow back to them from the contracts that they sign with foreign arms sellers. This flow back arrangement is widely known as ‘offsets’. Offsets are usually stipulated at a fixed percentage of the contract value.

India’s defence offset policy, first published in 2005 has been revised

multiple times in an attempt to progressively make it more effective.

Has the Indian offset policy, now over a decade old, been successful in either bringing in FDI or in attracting high-end manufacturing/technology into the local industry? An honest appraisal would suggest that the policy has worked to only serve the limited purpose of promoting exports of civilian aerospace parts and components.

Some of the reasons for the ineffectiveness of the offsets policy are:

- Policy inadequacies when compared to international offset best practices.
- Extremely moderate thresholds and percentages for offsets (India – Contract value-\$285 million/offset value-30 percent, Malaysia – \$15 million/100 percent, S. Korea – \$10 million/50 percent, UAE- \$10 million/60 percent).
- Non-insistence on the principle of local value addition in both manufacturing and service offset contracts.
- Non-application of the principle of additionality and causality.
- Total freedom to the foreign vendors to choose areas of offsets.
- Lax monitoring of offset contract adherence and progress.

Jurgen Brauer and John Paul Dunne in their book, ‘Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets’, widely considered to be the most comprehensive study of offsets, globally, state that, “neither economic theory nor extant empirical evidence suggests that offset arrangements yield net benefits.”

In a different book, they strongly argue that “offsets do not result in arms acquisition cost reductions, offsets do not stimulate broad-based civilian economic development, neither substantial nor sustained job creation occurs, not even within the military sector, that almost no successful technology transfer into the civilian sector is observed, and that only limited technology transfer into the military sector occurs, often over decades and at a high cost. Moreo-





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ver, whatever technology is transferred is quickly outpaced by continuous technology advances in the main developed countries.”

A crucial issue, overlooked in all the hype around offsets for developing indigenous capability, is that offsets inflate the cost of the main procurement contracts. It is believed that the administrative cost of offsets alone amounts to 7-10 per cent of the contract value.

Clearly, neither greater FDI in defence nor offsets are likely to help India overcome its reliance on imports. In the short-term, attracting FDI or entering offset arrangements with global arms majors for technology transfers/joint development projects/licensed production arrangements is inescapable – to quickly bridge the existing technology divide.

However, in the long-term, self-reliance in defence can only be attained through the acquisition of indigenous capability in Design and Development (D&D) and the manufacture of defence equipment.

This requires a multifold increase in investment in defence R&D (gov-

ernment and private sector), increasing researcher density, shifting focus from applied research to basic research and most importantly, creating a wider defence manufacturing eco-system together with the public/private sector defence firms and the MSMEs. No nation has achieved self-reliance without sustained investments in indigenous D&D capability.

The two World Wars and the years leading up to the wars spurred the frenetic development of several technologies in Europe, the USA and Japan. The technologies, systems, platforms, and strategies developed in response to the wars, fundamentally altered the manner in which the wars were fought and finally won. Israel's geographical location – amidst hostile neighbours, drives and sustains its self-reliance. South Korea's experience in the Korean war spurred the growth of its defence industry.

During the war with China in 1962, India was a young republic, just beginning to find its feet as an independent nation. The defeat in 1962, exposed India's vulnerabilities

and aroused defence consciousness after years of neglect. Several defence reforms have been undertaken since then, but they have largely been piecemeal and ad-hoc and failed to address the root causes that hold back the growth of the Indian defence industry.

In 2021, India, now the fifth largest economy in the world, cannot continue being dependent on imports to meet 70 percent of its defence needs. The current tensions on its borders with China could be the moment for India that spurs the initiation of a planned, determined, and sustained push to acquire capabilities in indigenous D&D and defence manufacturing.

(The writer is experienced in the defence and aerospace sector, specialising in operations, technology management, technology collaborations, joint ventures, defence procurements, defence offsets and government regulatory and policy requirements. He is a former submariner with the Indian Navy. Published in arrangement with Defence Research and Studies. The article is available on dras.in)





PROCUREMENT

MH-60R: Enhancing Indian Navy's maritime aviation capabilities

By Paranjay Sharma

Thanks to the expansion of the global economy, the sea has become a vital strategic waterway for the transportation of goods, resources, and commerce.

As a result, the protection of maritime routes has become a top priority for many countries. Multi-Role Helicopters (MRH) have proven to be one of the most valuable assets for maritime security due to their flexibility and capacity to respond to the needs of diverse theatres of operations.

Reconnaissance, Search and Rescue (SAR), and medical evacuation were the traditional roles fulfilled by military choppers. Modern-day operational capabilities of the helicopter have expanded to include Anti-Submarine Warfare (ASW) and Electronic Warfare.

Helicopters for naval applications frequently operate in harsh and

challenging environments; hence the need to design and build them as flexible multi-role platforms capable of performing a wide range of missions from coastal patrol to SAR, humanitarian support, counterterrorism and piracy, anti-submarine, and anti-surface warfare.

Despite modern networked sensors, extensive use of satellite resources, unmanned aerial vehicles (UAVs), the MRH still remains the fleet's "eyes and ears beyond the horizon".

Boost to Indian Navy's Maritime Security Operations

In 2012, the Indian Navy drafted a key document titled 'Maritime Capability Perspective Plan' (MCP), which envisaged an optimum force mix to address future challenges.

The Plan had laid out an objective for force development and modern-

ization over 2012-27. In pursuance of the same Plan, 24 MH-60R Multi-Role Helicopters (MRH) are being procured under the 'Buy (Global)' Category through Foreign Military Sales, signed on 25th February 2020.

These helicopters are a replacement for the Sea King 42/ 42A helicopters already decommissioned in the 1990s and envisaged to operate from frontline ships and aircraft carriers, providing them with the critical attributes of the flexibility of operation enhanced surveillance and attacking capability.

On 16th July 2021, The Indian Navy was handed over its first two MH-60R Seahawk multi-role helicopters in a ceremony held in San Diego, United States.

As part of the Indian Navy's commitment to the 'Make in India' initiative, the Original Equipment Manu-





PROCUREMENT

Multi-Mission Maritime Helicopter



Proven Performance

Over 300 MH-60R Seahawk helicopters worldwide with over 600,000 flight hours accumulated

International Operations for the U.S. Navy, Royal Danish Navy, Royal Australian Navy and Royal Saudi Naval Forces



Unmatched Multi-Mission Capability

Anti-Submarine Warfare (ASW) / Anti-Surface (ASuW)

Special Operations / Search & Rescue (SAR)

Utility / Vertical Replenishment (VERTREP)

Command and Control (C2)



Superior Maritime Capabilities

Fully Integrated Mission System builds complete situational awareness and actionable knowledge, enabling target engagement both close-in and over-the-horizon.



Most Reliable, Cost Effective

98% Availability (Ready Basic Aircraft)

Less than \$5K (USD) cost per flight hour

Lowest life-cycle cost in its class

facturer, Lockheed Martin, would also be discharging offsets through the transfer of technology to Indian Off-set Partners to manufacture products services.

This would enable absorption of niche technology, skill development and manufacture of eligible products/ services, leading to generation of employment, skilling of MSMEs and indigenous production of products for buy-back by the OEM.

The delivery of the helicopters comes at a time when the Indian Ocean Region is witnessing increasing security threats due to growing militarisation and naval presence by other nations.

Operational Capability of MH-60R Seahawk Choppers

Sikorsky Aircraft manufactures the MH-60R Seahawk, a multi-mission helicopter. Sikorsky has had a long and illustrious history in the helicopter industry. It produced the first hel-

icopter to transport a US president, Dwight D Eisenhower, in 1957.

The US president's helicopter, known as "Marine One," is also a Sikorsky machine. Sikorsky also manufactures the famous UH-60 Black Hawk, a stealth model of which was utilized in the raid that killed Osama bin Laden.

It is thought to be the most advanced maritime helicopter in the world. The helicopter is equipped for a range of missions, including anti-submarine warfare (ASW), anti-surface warfare (ASuW), search-and-rescue (SAR), naval gunfire support (NGFS), surveillance, communications relay, logistics support and personnel transfer, and vertical replenishment (VERTREP).

The helicopter is fitted with a 2,721.55kg (6,000lb) cargo hook for vertical replenishment missions. Lockheed Martin, Owego, is the mission system's integrator.

The MH-60R combines the SH-

60B and SH-60F aircraft's features. An MTS-FLIR, the AN/APS-147 multi-mode radar/IFF interrogator, an enhanced aerial fleet data connection, and a more advanced airborne Active Low-Frequency Sonar (ALFS) are among the sensors onboard (ALFS).

The inclusion of modern Mk-54 air-launched torpedoes and AGM-114 Hellfire missiles improves offensive capabilities. Furthermore, the helicopter's capability of prolonged maritime operations and seamless integration with the P8I (Anti-Submarine Warfare aircraft) and ships at sea makes it a 'Force Multiplier'.

(The writer is Research Associate under training at DRaS. He is law student who has an interest in the areas of National Security and Strategic Studies, Counter-Terrorism Issues, Geopolitical Analysis, International Relations, and Technology Laws. Published in arrangement with Defence Research and Studies. The article is available on dras.in)





Indian Navy's quest for expansive and stronger role in Indian Ocean region

By Commodore G. Prakash

Indian Navy's long-held quest for an expansive and stronger role in the region came from an unexpected quarter. While leaving the Navy House at Kochi after attending a farewell dinner, Rear Admiral Wang Zhongcai of the Chinese Navy vigorously shook the hand of Vice Admiral Anil Chawla, the Flag Officer Commanding in Chief Southern Naval Command, and gushed, 'we must ensure friendship, peace, tranquillity, and prosperity for all'. This was at the end of a symposium held at Kochi in 2018 to mark the

10th anniversary of Indian Ocean Naval Symposium (IONS).

The Chinese Admiral's words reflected the narrative that had prevailed in private conversation as well as official statements by almost every one of the 96 Officers from 26 countries who had attended the four-day event. But there was one important nuance. Almost everyone, who attended the event explicitly acknowledged India's primacy in the Indian Ocean Region (IOR) and exhorted India to do much more in order to maintain good order

in the IOR.

Commentaries elsewhere too have echoed this sentiment. For instance, a 2018 Paper from CSIS, USA, states that 'the Indo-Pacific is increasingly becoming a geostrategic focal point for China and India, as both countries engage in the growing competition. While China has aimed to secure access to strategic ports to gain an economic and strategic advantage, India's role in the region is increasingly seen as a protector of the international order in the region, particularly as it pertains to maintaining





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open sea lanes and freedom of navigation. The Indian Navy remains the primary arm that enables India to shoulder this responsibility.

The Journey So Far

The Indian Navy has come a long way. From being kept out of the 1965 Indo-Pak war to spectacular all-round brilliance in 1971 to massive expansion from the middle of the 1980s to regional interventions like Op Cactus in support of the Govt of the Maldives in 1988, to the massive Tsunami relief effort in the IOR in 2004 – 05, to steadily expanding exercises with an increasing number of foreign navies, to envisioning the IONS initiative in 2008, to a series of missions in support of the Indian diaspora in troubled areas abroad, to an Indian Prime Minister's assertion in 2013 that India can be a net security provider the IOR, to the present times where the importance of our oceans for national prosperity is figuring increasingly in the Govt's narrative, the Navy has indeed come a long way.

It is essential that the momentum gained till now is put to good use, to build the capacity and capabilities that India needs, to realise our great potential to be a maritime power. Several obstacles need to be overcome for this.

Doctrinal Guidance

Recognising the importance of formal doctrinal documents to guide growth, the Navy started writing its Maritime Military Doctrine and Maritime Strategy from the middle of the 1980s. As doctrinal documents need to be dynamic, the Navy kept amending these with time and today we have excellent guiding documents.

Doctrines reflect the professionalism with which states view their own security and hence these are made known to the world. Clearly enunciated Doctrines provide many advantages. But it is important that they are aligned to clearly thought out National Grand Strategy and National Security Strategy documents, for appearing credible to the world and to ourselves. They

must flow from top to bottom, with everyone from the apex level sharing a common understanding of the nuances of ensuring national security.

Here we have a problem. Shyam Saran, former Indian Foreign Secretary, had stated in 2019 that India 'does not possess an overarching National Security Strategy that comprehensively assesses the challenges to the country's security and spells out policies to deal effectively with them'. No report exists in the public domain about any change in the status quo on this. Further, in a Feb 2020 article titled 'India's Proposed Maritime Strategy', Vice Admiral Pradeep Chauhan, Retired, Director General National Maritime Foundation (DG NMF) lamented that a 'draft National Maritime Policy (which encompasses India's overarching strategy), is sadly, yet to be officially promulgated'. This lack of national-level policymaking is not helpful. There are other challenges too.

Steadily Increasing Threats

The world around us appears to be slipping into chaos. A belligerent China, led by a man who has amassed all the national powers for himself, continues to bring large parts of the world into China's hard hold. Dependency bordering on vassalhood has been forced on several countries who made the error of accepting Chinese economic and military aid.



China continues to interpret international law in whatever way that suits them and steadily militarises the South China Sea, not bothered by the legitimate claims raised by several countries that go by the tenets of accepted international agreements. They continue to confront India in India's northern boundaries, threaten Taiwan with armed invasion and trample on human rights and democracy in Hong Kong, Tibet, and Xinjiang Uygur Au-





onomous Region.

They also prop us Pakistan economically, diplomatically, and militarily, for illegally allowing them to use territory legitimately claimed by India and for being a willing accomplice in needling India. China appears to be galloping along in the third decade of the 21st century, relatively less affected by the COVID pandemic compared to their prospective rivals in the rest of the world and focus their energies on strengthening their military force levels so as to challenge the established world order and emerge at the top. Ironically all this, while publicly declaring that they are rising from a century of humiliation and bullying.

To make matters worse for India in the maritime realm, the Chinese have re-oriented their military growth with sea power as one of the core areas for enhancement. With the frenetic building of Aircraft Carriers, Nuclear Submarines, other large surface ships, Maritime Aircraft, long-range weapons, satellite surveillance capability over ocean areas, and cyber capabilities, the People's Liberation Army - Navy (PLA-Navy) is believed to have

added force levels equalling twice the Indian Navy's strength to themselves in the last decade alone. History has only grim lessons for such unilateral growth in force levels in the past.

Having sustained a flotilla of large ships in the western edges of the IOR for well over a decade for anti-piracy patrols, the PLA Navy has gained both valuable experience in the Indian Ocean as well as great confidence in the ability of their ships to sustain pronged deployment at long distances. Further, the operational flexibility they have gained from having bases in Pakistan, Djibouti, and Sri Lanka for ready use appears to be poised for further enhancement with their continuing attempts to gain access to more bases in several other IOR countries.

Pakistan continues to relentlessly pursue its proxy war on India, despite debilitating poverty and internal troubles. The Pakistan Navy (PN) has steadily shed their British and American past in assets and has increasingly aligned their assets with the Chinese. Further, they have also increased military cooperation with

Turkey, which has, of late emerged as an important manufacturer of military platforms and equipment. This could mean that PN might acquire disruptive new technology like armed Turkish Unmanned Aerial Vehicles of the kind which are believed to have played a decisive part in the recent Armenia-Azerbaijan war. An emerging Turkey-Iran-Pakistan alignment could also be indicative of Pakistan's attempt to slowly distance themselves from Saudi Arabia, and consequently, from American influence. The crystallisation of this alignment would be serious trouble for India, especially the Indian Navy. Alliances, which can step up into the military realm in times of conflict, could be one important hedge for the future. But this would require much maturing.

Alliances

After twenty years of being in Afghanistan, first breaking up the place and then trying to put it back, the United States is leaving indefinite defeat. The helpless state in which they are leaving the Afghan government and their military forces does not instill much confidence in their current and future allies. That the US is leaving for domestic political considerations, discarding pure military advice, is obvious.

A US government that cannot choose the hard military options that have come to characterise US military interventions since World War I, appears to have been dented, with fallouts for future conflicts as part of coalitions. How much can prospective allies depend on a superpower that has apparently lost its stomach for a fight? Further, China's deep economic linkages with the members of the QUAD and other countries that could join the QUAD as additional members may seriously limit the utility of these groupings in a conflict with China.

One practical way the members of these groups can be of use to each other is to simultaneously present challenges to China in their individual capacities while exchanging information among the members of the group for





STRATEGIC AFFAIRS

coordinated action. This will spread Chinese capacities thin, across several fronts. A waypoint check is useful against this background.

Force Levels

As per a Maritime Capability Perspective Plan, the Indian Navy had envisioned a 200-ship fleet by 2027. However, this plan has faced many setbacks. An ORF Paper of Sep. 2020, quoting a Public Accounts Committee report, a speech by the Chief of Naval Staff and other media reports, sums up that 'Indian shipbuilding has fallen short of its promise. Over nearly the past decade, Indian shipyards have faced adverse conditions that have slowed down their warship construction.

As a 2015 report of the Public Accounts Committee of the Parliament noted: The extent to which Indian Navy shipbuilding projects are being delayed and the scale of underestimation reveals a deeper malaise. The report dealt with audit findings that highlighted inadequate shipbuilding practices, frequent mid-course changes, delays in the finalisation of weapon packages, and an underestimation of costs by shipyards. It noted that delays in the conclusion of contracts, lack of adequate infrastructure, non-finalisation of structural designs, and incompetent financial management, are merely symptomatic of a larger problem affecting the system.

Indeed, India's naval ship production endeavours have struggled to deliver results. Faced with various challenging conditions in recent years, shipbuilding programmes have slowed down, with major private shipyards on the brink of a shutdown. Some are struggling to stay afloat and complete projects, overwhelmed by the huge time and cost overruns. Public shipyards, too, are facing headwinds.

Despite credible accomplishments in the 'Float' and 'Move' categories of indigenous production, the lack of technology and equipment continues to affect the 'Fight' category, comprising weapons and sensors. Similarly, delays plague submarine force levels

too. The 30-year submarine building plan envisaged for the period 2000-2030, was supposed to have produced 18 conventional and six nuclear submarines during that period. However, the actual accretion is likely to be only six Scorpens and maybe one or two from the P75-I project. Serious shortages are most likely in the strength of utility helicopters too. All this is not great news.

A discussion that combines poorly with the above setbacks, is the one about a third Aircraft Carrier. On one hand, while India seems to increasingly understand and therefore acknowledge the importance of India's oceans, as apparent from catchphrases and acronyms like Blue Economy and SAGAR, it is unfortunate that the utility of one of the most important symbols of maritime power, the Aircraft Carrier, is being doubted.

It is even worse if the demand on

the Indian Navy is to choose between nuclear submarines and aircraft carriers. Budgetary constraints cannot lead to such illogical choices. All arguments that support the 'future belongs to nuclear submarines' view, empirically fail in the face of the frenetic pace at which the Chinese are building aircraft carriers. The Americans and even the not-so-rich British wouldn't have been building aircraft carriers if they didn't have utility in tomorrow's world.

Sound, settled, command, and organisation structures are great force enablers and even force multipliers. The ongoing preparations to reorganise armed forces into Theatre Commands appear to have chinks. All arguments of the 'look we have been thinking about it for too long, so let us go ahead and do something, start somewhere. We will fine-tune later as we go along, is fraught with dangers. Reforms for the sake of reforms may





set us back, especially with major service-specific disagreements spilling out into the open.

Assurance of sustained funding is important for naval force building. Our challenges in this area are summed up well by Rear Admiral Sudhir Pillai in a recent article in 'India Today', where he writes that no plan on paper can achieve much without budgetary support.

India's economic growth has, however, stalled since 2017. The naval budget has been scaled back from 18 percent of the total defence budget in 2012-13 to 13.66 percent in 2018-19. The modernisation budget of the navy has been scaled back from 8.7 percent in 2015-16 to 4.9 percent in 2018-19.

The operational implication of these cuts needs close consideration. Navies the world over evolve by striking a balance between doctrinal roles and operational imperatives vis-a-vis

fiscal reality. What is essential is to balance the necessities of maritime imperatives against continental strategies by apportioning budgetary support.

Some Way Ahead

While the usual clamour for additional funding, National Security Document, the whole of Govt approach to thwart attempts by the enemy to peddle influence in our region for military gains, and diplomatic effort to gain us bases in the IOR, may not materialise soon enough, Vice Admiral Chauhan provides an interesting way ahead in the face of the challenges we face at the moment.

He makes a distinction between two entities, 'capacity' and 'capability'. By capacity, he means force levels, which will almost always remain short. By capability, he means 'the largely intangible multipliers of whatever capacity is available, incorporating, amongst others, organization-skills, physical and mental (cognitive) training and skill-development including Operational Research and Gaming, administrative, managerial and leadership abilities, a very high level of materials-management including maintenance and supply-chain management, legal acumen and so on, which, as per him, 'India possesses in abundance'.

He goes on to say that 'countries that have excess 'capacity' will always tend to throw 'capacity' at a problem. By corollary, nations that have a surfeit in 'capability' must leverage this ability rather than solely hankering after 'capacity' and lamenting its relative lack.'

That this will not appeal to those in white uniform is acknowledged by Vice Admiral Chauhan, when he says that 'in formulating and executing a maritime strategy geared towards India being a net provider of security in the region, India needs to play to her strengths (capability) rather than to her relative weaknesses (capacity). It is true that available literature on 'capacity' is far more abundant and is, consequently, far more seductive to naval officers who have largely been brought up on a West-inspired diet

of hardware — and hardware-envy.' While we steadily build capacity, leveraging our capabilities might bear some fruit. As to how much this approach will succeed, will first depend upon how much the idea is accepted. As of now, it is part of a 'draft national maritime strategy', which remains yet unpromulgated.

But there is some danger here. In the existing circumstances, the Navy needs to proactively push for capacity building. Otherwise, intangible gains in 'capability' building may be forced on the Navy as a replacement for missing 'capacity'. If the Navy doesn't beat its chest and demand, it will shrink further. Past experience in the enhanced scope of Foreign Cooperation by pressing the Ministry of Defence and Ministry of External Affairs is a case in point. Capacity has to increase and complement capability.

However, the world won't wait for us. Those with interests in the IOR will persist with their efforts. The European Union has already taken the lead in establishing their own information-sharing network in the western parts of the IOR and will shortly extend that capability to the entire IOR. We too are making inroads in the area of data sharing with our IOR – IFC initiative. However, it may be prudent to join forces with others in the region for larger gains.

Continuing in Earnest

In the meanwhile, the men in white continue to persevere at sea, riding into storms to save lives, contributing to the nation's fight against COVID, maintaining constant vigil, and maintaining good order at sea. Those at sea aren't deterred by shortages and hurdles ahead. They do their best with what is at hand. That may probably be the best hedge, as the navy prepares to take on an expansive and larger role in the region.

(The writer served the Indian Navy for 36 years. He is a specialist in Air Warfare and Anti-Submarine Warfare. Published in arrangement with Defence Research and Studies. The article is available on dras.in)



NEWS BRIEF



VICE ADMIRAL GHORMADE TAKES OVER AS INDIA NAVY VICE CHIEF

New Delhi: Vice Admiral S. N. Ghormade has assumed charge as the Vice Chief of Naval Staff from Vice Admiral G. Ashok Kumar at a formal ceremony at South Block on July 31. Vice Admiral Ashok Kumar retired from service after 39 years of glorious work in the Indian Navy.

Vice Admiral SN Ghormade is an alumnus of the National Defence Academy (NDA) at Khadakwasla near Pune; the Naval Staff College at the United States Naval War College, Newport, Rhode Island; and the Naval War College, Mumbai.

The Flag Officer was commissioned in the Indian Navy on Jan. 1, 1984. He is a Navigation and Direction specialist. The Flag Officer has had extensive operational tenures onboard frontline warships of the Indian Navy.

During his career spanning over 37

years, he has been through a myriad of operational and staff appointments. His important operational appointments include Commands of Guided Missile Frigate INS Brahmaputra, Submarine Rescue Vessel INS Nireekshak, and Minesweeper INS Alleppey, and Second-in-Command of Guided Missile Frigate INS Ganga. INS Nireekshak was awarded the Unit Citation for the first time during his command.

His important staff appointments ashore include Assistant Chief of Personnel (Human Resources Development); Principal Director of Personnel, Director Naval Plans; and Joint Director Naval Plans at Naval Headquarters as separate assignments; Director (Military Affairs) at the Ministry of External Affairs (Disarmament and International Security Affairs), Local Workup Team (West); and Instructor at the Navigation Direction School and the National Defence Academy.

The officer also held the coveted

appointments of Flag Officer Commanding Karnataka Naval Area and Flag Officer Commanding Maharashtra Naval Area.

In the rank of Vice Admiral, he has held the challenging and coveted appointments of Director General Naval Operations, Chief of Staff Eastern Naval Command and Controller Personnel Services.

The Flag Officer was holding the tri-service appointment of Deputy Chief (Operations & Training) at Headquarters Integrated Defence Staff prior to taking over the present appointment as Vice Chief of the Naval Staff at IHQ MoD(N).

The Flag officer was awarded the Ati Vishisht Seva Medal on Jan. 26, 2017, and Nausena Medal in 2007 by the President of India, and Commendation by the Chief of the Naval Staff in 2000.

He has succeeded Vice Admiral Ashok Kumar, during whose tenure as



the vice chief, the Indian Navy saw an increase in budget allocation with 100 per cent utilisation of allocated budget with impetus on capital acquisition.

Vice Admiral Ashok Kumar proactively pushed for adopting 'Atmanirbhar Bharat' Mission with the navy allocating more than two-third of capital procurement from indigenous sources, 39 out of 41 ships and submarines for Indian Navy are being constructed in Indian Shipyards.

The first ever procurement case under the Strategic Partnership Model for Project 75(I) submarines was successfully progressed for issuance of Request for Proposals during his tenure. Many other instances of technological advancements, capability enhancements and research and development projects with Defence Research and Development Organisation (DRDO) and Defence Public Sector Undertakings were progressed during his illustrious tenure.

INDIA SUCCESSFULLY TESTS AKASH-NG SURFACE- TO-AIR MISSILE

New Delhi: Within a span of three days between July 21 and 23, India's defence research agency successfully flight-tested a new generation surface-to-air missile from the Akash family of locally-made

air defence weapon systems, increasing the chances of its induction into the Indian armed forces soon.

The Defence Research and Development Organisation (DRDO) successfully flight-tested the Akash-NG missile from Integrated Test Range (ITR) off the coast of Odisha for the first time during this round of series of tests on July 21.

"The flight trial was conducted at around 12:45 p.m. from a land-based platform with all weapon system elements such as Multifunction Radar, Command, Control and Communication System and launcher participating in deployment configuration," a DRDO statement said that day.

Developed by the Hyderabad-based Defence Research and Development Laboratory (DRDL) in collaboration with other DRDO laboratories, the missile launch was witnessed by the representatives of the Indian Air Force (IAF).

In order to capture flight data, the ITR deployed a number of range stations like, Electro Optical Tracking System, Radar, and Telemetry. "The flawless performance of the entire weapon system has been confirmed by complete flight data captured by these systems. During the test, the missile demonstrated high manoeuvrability required for neutralising fast and agile aerial threats," the statement said on July 21.

"Once deployed, the Akash-NG weapon system will prove to be a force multiplier for the air defence capability of the IAF. Production agencies Bharat Electronics Limited (BEL) and Bharat Dynamics Limited (BDL) also participated in the trials."

On July 23, DRDO carried out the second successful test of the locally made new generation air defence missile against an high-speed unmanned aerial target, validating a key function of the weapon system.

"(The) Defence Research and Development Organisation (DRDO) conducted a successful flight-test of New Generation Akash (Akash-NG) missile from Integrated Test Range, Chandipur off the coast of Odisha," a Ministry of Defence statement said that day.

"The test was carried out against a high-speed unmanned aerial target which was successfully intercepted by the missile," the statement said.

"The flight test has validated the functioning of complete weapon system consisting of the missile with indigenously developed Radio Frequency Seeker, Launcher, Multi-Function Radar and Command, Control and Communication System."

The Akash-NG test was carried out amidst inclement weather conditions proving the all-weather capability of the weapon system.

The system performance was validated through the data captured by a number of Radar, Telemetry and Electro Optical Tracking Systems deployed by ITR, Chandipur. A team of Indian Air Force (IAF) officers witnessed the test.

India's Minister of Defence Rajnath Singh has congratulated the DRDO, BDL, BEL, IAF and the Industry for the successful tests. He said the development of this state-of-the-art missile system will prove to be a force multiplier for air defence capabilities of the IAF.

DRDO Chairman and Government of India's Department of Defence Research and Development Secretary Dr. G. Satheesh Reddy applauded the efforts of the team and said the missile will strengthen the IAF.





NEWS BRIEF



INDIA SUCCESSFULLY TESTS MAN-PORTABLE ANTI-TANK MISSILE FOR MINIMUM RANGE

New Delhi: India has said its defence research agency has successfully flight-tested the locally made Man Portable Anti-Tank Guided Missile (MPATGM) for a minimum range, boosting the ground forces' lethality against enemy battle tanks.

Today's test has also increased the chances of the weapon system's induction into the Indian Army after user validation in the next few months, in a major success of the 'Atmanirbhar Bharat' (Self-Reliant India) initiative of the Narendra Modi government.

The low weight, fire-and-forget MPATGM was tested by the Defence Research and Development Organisation (DRDO). The missile was launched from a man portable launcher integrated with thermal site and the target was mimicking a tank, according to a DRDO statement on July 21.

"The missile hit the target in the direct-attack mode and destroyed it with precision. The test has validated the minimum range successfully. All the mission objectives were met. The missile has already been successfully flight tested for the maximum range," the statement said.

The missile is incorporated with state-of-the-art miniaturized Infrared Imaging Seeker along with advanced avionics. The test brings the development of indigenous third generation MPATGM close to completion.

Minister of Defence Rajnath Singh has congratulated the DRDO and the industry for the successful test. DRDO Chairman and Government of India's Department of Defence Research and Development Secretary Dr G. Satheesh Reddy congratulated the team for the successful test.



INDIA DRDO LOCALLY DEVELOPS HIGH STRENGTH BETA TITANIUM ALLOY

New Delhi: India has said its defence research agency has locally developed a high strength, metastable Beta Titanium alloy containing Vanadium, Iron and Aluminium on an industrial scale, boosting applications in aerospace structural forgings.

Defence Research and Development Organisation (DRDO) laboratory, Defence Metallurgical Research Laboratory (DMRL) that is based in Hyderabad, developed these alloys, which are already being used by many developed nations in recent times as beneficial substitute for the relatively heavier traditional Ni-Cr-Mo structural steels to achieve weight savings.

"The excellent forgeability of high

strength-to-weight ratio Ti-10V-2Fe-3Al alloy facilitates manufacture of intricately configured components for aerospace applications with potential for significant weight savings," a DRDO statement said on July 20.

"Some of the components, which may be forged from this alloy, include slat/flap tracks, landing gear, and drop link in landing gear, among several others."

The high strength Beta Titanium alloys are unique due to their higher strength, ductility, fatigue, and fracture toughness, making them increasingly attractive for aircraft structural applications.

Furthermore, their relatively lower lifetime cost, owing to superior corrosion resistance in comparison to steels, is an effective trade-off to justify the use of this expensive material in India too.

The DMRL has carried out raw material selection, alloy melting, thermo-mechanical processing, ultrasonics-based Non-Destructive Evaluation (NDE), heat treatment, mechanical characterisation, and type certification in active collaboration with several agencies.

Aeronautical Development Agency (ADA) has identified over 15 steel components which may be replaced by Ti-10V-2Fe-3Al alloy forgings in the near future with a potential of 40 per cent weight savings.

The landing gear drop link is the first component forged successfully by ADA at Hindustan Aeronautics Limited (HAL) at Bengaluru with DMRL's involvement and duly certified for airworthiness.

India's Minister of Defence Rajnath Singh has congratulated DRDO and the industry for indigenous development of high strength, metastable Beta Titanium alloy, which will be useful for aerospace structural forgings.

DRDO Chairman and Government of India's Department of Defence Research and Development Secretary Dr G. Satheesh Reddy applauded the dedicated efforts by the teams involved in the indigenous development of this technology.





MILITARY STRATEGY



Even 2-day Passex can teach invaluable lessons on maritime operations

By Commodore G. Prakash

An official US Navy (USN) statement available online, from Commander Task Force 70/ Carrier Strike Group 5 dated Jun. 24, 2021, titled 'The US, India elevate combined joint maritime training with multi-axis integration', announces, that the US Navy (USN) and Indian armed forces (again) joined together to conduct integrated sea and air engagements off the coast of India on Jun. 23 and 24.

Further, a quote from Rear Admiral Will Pennington, the US Commander,

included in the statement, reads, "our nations share a common interest in a secure Indo-Pacific and working collectively with like-minded nations to provide full-spectrum awareness and defense of the vast Indian Ocean expanse ensures stability in the region." This assertion on the continued pursuit of the common good is important.

That this Passex – the first one after the previous IN-USN Passex conducted on Jul. 2020, when the Galwan incident of Jun. 15, 2020, was still in the limelight – could be conducted

without much ado, despite the unfortunate USN declaration that USS John Paul Jones had carried out a 'Freedom of Navigation operation in the Arabian Sea' on Apr. 7, 2021, indicates that Indo-US military engagement has matured adequately enough to overcome occasional indiscretions.

The inclusion of an Indian Air Force (IAF) aircraft in the exercise was a novel step too, although the unfortunate IAF decision to announce their involvement, without mentioning the navy, underscored some of the chal-





MILITARY STRATEGY

allenges enroute to setting up of Theatre Commands.

The Exercise

For the record, the USN was represented by Nimitz-class aircraft carrier USS Ronald Reagan, Arleigh Burke-class guided-missile destroyer USS Halsey and Ticonderoga-class guided-missile cruiser USS Shiloh. The Indian Navy was represented by the Kolkata-class guided-missile destroyer INS Kochi and the Russian-built Talwar class frigate INS Teg.

As for the aircraft, while the Indian Navy deployed P8-I Long-Range Maritime Patrol aircraft, maritime air dominance fighter MiG-29Ks, Seaking 42B helicopters and Kamov Airborne Electronic Warfare (AEW) helicopters, the IAF deployed Sukhoi Su-30MKI fighters from their 222 Squadron earmarked for maritime operations, Airborne Warning and Control Systems (AWACS), Airborne Early Warning and Control Systems (AEW&CS), and air-to-air refueller aircraft.

The Indian Navy's MiG 29Ks operated from the shore as India's only aircraft carrier, INS Vikramaditya, was unavailable to, as she is undergoing a refit. The US Navy deployed F/A-18 fighters, E2D AEW&CS aircraft and MH60R Anti-Submarine Warfare (ASW) helicopters.

A Deficiency that Stood Out

As per an official Indian release, the two-day exercise aimed to 'strengthen bilateral relationship and cooperation by demonstrating the ability to integrate and coordinate comprehensively in maritime operations.

High tempo operations planned during the exercise included advanced Air Defence exercises, cross-deck helicopter operations and anti-submarine exercises.' That is a lot of activity, especially for a short duration Passex.

Though US Navy too has expressed satisfaction with the exercises, two things mentioned in the press release, namely, high temp operations and advanced Air Defence exercises couldn't have been done optimally in the ab-



sence of INS Vikramaditya with her full air assets.

Further, as the absence of INS Vikramaditya forced the MiG 29Ks to operate from shore like the IAF fighters, the exercises had to be conducted closer to land. With the exercises being conducted closer to land, an opportunity to undertake intense multi-nation maritime air operations at long distances from shore in the vast expanse of the Indian Ocean, our real area of operations in the future, were seriously limited.

Any exercise surely contributes to enhancing interoperability among participating forces. But beyond that, the exercises of Jun. 23/24 provided two important interlinked lessons for the future, especially for the impending Maritime Theatre Command.

Lessons

The two important interlinked lessons from this exercise are, the dire need for the Indian Navy to have at least

two operational aircraft carriers all the time, and the role of shore based IAF airpower for the future Maritime Theatre Command.

Airpower at sea is critical for Air Defence, ASW, AEW, Surveillance, Surface/Shore strike, Communication and Search and Rescue (SAR). The most important characteristic of airpower to undertake most of these tasks at sea is that it must be ready at hand, always. Immediate availability of airpower 24x7 is an inescapable requirement at sea, especially for Air Defence and ASW.

Air Defence situations develop rapidly at sea and extreme measures like round-the-clock Combat Air Patrol (CAP) are mounted for safety. With the Chinese steadily increasing their ability to fly their anti-ship missile-armed Strike and Long-Range Maritime Patrol (LRMP) aircraft from shore bases in the Indian Ocean and with their Carrier Battle Groups all set to mature and proliferate, credible air





threat to our units when far away from the Indian mainland is a reality that requires to be countered.

Shore-based air force aircraft, even when operating with airborne refueler aircraft, can never be available on call for Air Defence, at even moderate distances out to sea.

Here, the persistent warning by the air force against the use of airpower in penny packets has special merit. With the air force too facing a dire shortage in their force levels, professional opinion from the air force during a conflict can justifiably be expected to divert available airpower to operations over land, thus precluding any such effort over the sea.

Considering the fact that we are destined to fight the same enemies over land and sea, there is no conceivable scenario where IAF airpower, especially Air Defence assets, can be diverted in large quantum to the maritime domain, as a sizeable amount of IAF assets will have to be kept ready

for Air Defence in multiple sectors overland while bracing for and when engaged in a conflict. Aircraft carriers alone can provide airpower for Air Defence at sea, all the time.

Token flying undertaken by a few aircraft to relatively short distances at sea during planned exercises proves nothing but the ability of aircraft to physically fly, which is something that doesn't need any proof. But in the face of the fight for the scarce budget, arguments based on the lessons from token actions are often used to buttress professional arguments. This is dangerous.

The dangers of failing to understand the stark difference between carrier-based and shore-based aircraft in battles fought at great distances is available from the infamous Operation Black Buck in the 1982 Falklands War.

This episode, which involves the Royal Air Force, is a classic example of an avoidable waste of resources in the midst of a war. IAF aircraft can con-

tribute effectively to anti-ship strikes closer to land. This needs to be worked on, so as to free naval assets for operations deeper out to sea. This is important for the efficient employment of air assets in the future Maritime Theatre Command.

As for ASW, immediate ASW requirements in the area of operations are handled by large multi-role helicopters (MRH). While MRH carried by our big fleet ships in ones and twos do contribute to ASW, the fleets depend on aircraft carriers for providing a large part of the Multi Role Helicopter requirement.

Further, only aircraft carriers can operate fixed AEW&C aircraft – an absolute necessity even today – whenever we are fortunate to acquire them in the future. Aircraft carriers also remain the only platforms that can provide repair facilities for integral aircraft during a conflict.

With only INS Vikramaditya being available now, the situation is grim. To have at least two operational aircraft carriers all the time, the navy requires at least three carriers in its inventory. While the impending operationalisation of INS Vikrant in the coming years will enhance carrier availability to some extent, it is only a third carrier that can assure the quantum of integral air power that the navy needs at sea, all the time, on both the coasts.

Large ships, especially aircraft carriers take a long time to design and build. We cannot afford to lose the skills we have developed in building the new Vikrant. We can delay, or at worst discard the second indigenous aircraft carrier, only at great peril.

The way our neighbourhood is shaping up, it won't take long before the impact of our failure will be there to be seen, clearly. Even a short two-day international exercise can give lessons of lasting value.

(The writer served the Indian Navy for 36 years. He is a specialist in Air Warfare and Anti-Submarine Warfare. Published in arrangement with Defence Research and Studies. The article is available on dras.in)



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AUGUST 2021

Taking Up the Mantle

VAdm Ghormade takes over as Indian Navy vice chief from VAdm Ashok Kumar

