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Wed, 19 Jan 2022

The real deal behind selling Brahmos to the Philippines

India will leverage the missile sale to insert itself more deeply in South China Sea disputes while bolstering the anti-China Quad

By Richard Javad Heydarian

Manila: India's sale to the Philippines of its Brahmos supersonic cruise missile marks a key strategic turning point, with New Delhi firmly wading into the South China Sea disputes and Manila taking order of its first major cruise missile system.

Significantly, both countries are locked in long-standing territorial disputes with China, which can now expect to see more of the much-vaunted Brahmos missile system on its disputed borders in the Himalayas with India and in the South China Sea with the Philippines.

Upon closer examination, however, it's unlikely that the Brahmos will significantly alter the balance of military power in the South China Sea, thanks to China's recent deployment of cutting-edge missile defense systems on land and at sea in recent years.

The landmark US\$375 million defense deal, however, is likely just the opening act in India's gradual yet steady emergence as a major defense supplier and strategic partner to Southeast Asian nations – from the Philippines to Indonesia to Vietnam – which have been at the forefront of maritime disputes with a resurgent China.

The Brahmos deal will also potentially serve as a springboard for more concerted efforts by the Quadrilateral Security Dialogue (Quad) powers of India, US, Japan and Australia to enhance the deterrence capacity of smaller, aligned powers in the Indo-Pacific.

Despite its relatively large industrial-military complex, India has long been the world's largest arms importer, just as other Asian powers including Russia, China, South Korea and Turkey have rapidly expanded their weaponry exports.

This was partly a reflection of India's strategic reticence, which doomed earlier plans to export the Prithvi surface-to-surface missiles to Vietnam. But things have changed under the more assertive Narendra Modi government, which aims to increase annual defense exports to \$5 billion by 2025.

In the 2020-2021 fiscal year, India's defense exports hit \$1.13 billion, reflecting the Asian power's growing ambitions to become a major player in the global arms industry.

Brahmos, jointly developed with Russia, is one of India's most advanced weapons. With a range of 290 kilometers and a top speed of Mach 3, Brahmos has significantly improved India's missile capability system since coming to service in 2005.

The highly dexterous supersonic missile system can be deployed on warships, submarines as well as fighter jets, giving the platform's operators a wide range of options in its deployment.



India's Brahmos supersonic cruise missiles are paraded through New Delhi. Photo: Kamal Kishore / Agencies

The Philippines is set to become the first foreign customer for the land-based version of the prized missile system. For the past decade, the Southeast Asian country has been in a catch-up mode to develop a “minimum deterrence” capability amid rising maritime tensions in the South China Sea, mainly with China.

In 2012, just months after a China-Philippine naval standoff over the Scarborough Shoal, then-president Benigno Aquino III oversaw the passage of the Revised AFP Modernization Act, which kicked off a 15-year, three-phased, multi-billion-dollar military acquisition program with a particular focus on enhancing the Philippines’ aerial, naval and strategic deterrence capabilities.

The Brahmos, which is widely expected to be deployed for the defense of the Philippines’ strategic maritime borders, is thus an integral part of the Southeast Asian country’s quest to establish a minimum deterrence capacity against the more heavily armed China.

Last week, India appeared to celebrate the defense deal with the Philippines by successfully test-firing an advanced sea-to-sea naval variant of the Brahmos with “an extended range” from its newly-commissioned stealth-guided missile destroyer INS Visakhapatnam.

Nevertheless, there are widespread doubts as to whether the Philippines’ missile system acquisition will significantly change the balance of military power on the ground and at sea.

As my Asia Times’ colleague Gabriel Honrada pointed out, “The Brahmos may not be as effective as Philippine strategic planners hope due to improving Chinese missile defenses, relative obsolescence of the Brahmos and the Philippines’ limited possible missile stocks.”

Honrada notes “China is operating upgraded HQ-9 surface-to-air missiles that are optimized against supersonic threats on Mischief Reef, Subi Reef, and Fiery Cross Reef in the South China Sea” and “the Chinese missile system features advanced guidance systems, multi-target anti-jamming capabilities and interceptor missiles with maximum Mach 4.2 speeds compared to the Brahmos’ Mach 3.”

He also points out that China’s Type 052D destroyers and Type 055 cruisers are also equipped with the shipborne version of the HQ-9B.

Unless the Philippines acquires a significantly larger stockpile of the Indian-made cruise missiles, China’s “defenses significantly reduce the probability of a successful Philippine-launched Brahmos attack in the hot spot maritime theater.”

The true significance of the Brahmos acquisition deal, however, is its broader strategic implications.

For one, Brahmos Aerospace has developed an upgraded land-based version of the missile system with a range of 500 kilometers. Thanks to a new 200-acre Brahmos manufacturing center, which is set to be completed by 2025, India will be in a position to mass-produce advanced versions of the missile system in the near future.

Crucially, India is cooperating with Russia to develop Brahmos-II, a hypersonic version with a whopping Mach 5 speed and likely range of up to 1,100 kilometers. As a key customer, the Philippines will likely be in a good position to purchase the next-generation versions of the Indian missile technology.

Moreover, Brahmos, a joint venture between the Indian government’s Defense Research and Development Organization (DRDO) and Russia’s NPO Mashinostroyeniya, marks a major non-NATO acquisition by the Philippines, which has historically relied on American-made weapons throughout the past century.

Thus, the BrahMos could serve as a springboard to significantly diversify the Southeast Asian nation’s pool of defense suppliers. That diversification could potentially include Russia, which similar to India has been offering affordable, modern weaponry to the region.

Ultimately, the Brahmos sale could also facilitate India’s burgeoning defense cooperation with key Southeast Asian countries. Currently, Indonesia and Vietnam are also in talks with India to acquire the Brahmos missile system.

Confronting a wide range of maritime disputes with China, Vietnam has relied largely on a diverse pool of strategic partners, including Russia, to build up its deterrence capability.

New Delhi is currently also in talks with Hanoi about a possible sale of its surface-to-air Akash missiles, while Indian manufacturer Larsen & Toubro is set to provide high-speed vessels for Vietnam's Coast Guard. Down the road, India could potentially become a major provider of a full range of advanced yet affordable weaponry to China's rivals in Southeast Asia.

As India builds up its increasingly sophisticated arms industry, it could also play a key role in Quad powers' efforts to help smaller nations hold the line in the South China Sea and other major contested maritime zones in the region.

The rapidly institutionalizing Quad, in conjunction with like-minded European powers, has moved towards coordinated efforts aimed at countering China's "vaccine diplomacy", perceived as predatory investment practices and coercive naval activities across the Indo-Pacific.

The sale and even joint-development of sophisticated strategic weaponry is likely the next step in the Quad's strategic overtures to frontline states such as the Philippines, Vietnam and Indonesia.

<https://asiatimes.com/2022/01/the-real-deal-behind-selling-brahmos-to-the-philippines/>



Wed, 19 Jan 2022

Opinion: India gets first Brahmos order, But it's a long way to self-reliance

*New Delhi must evolve an astute and viable long-term blueprint
about the new technologies that it must invest in.*

By Commodore C Uday Bhaskar (Retd)

India has notched up its first major arms export order with the Philippines government, confirming a long-pending proposal to acquire the supersonic Brahmos cruise missile with a 290 km range that is jointly produced by India and Russia. The order is worth \$375 million and will give a much-needed fillip to India's defence exports.



India is listed among the world's top arms importers along with Saudi Arabia and has a relatively modest profile when it comes to military exports. While significant strides in relation to self-sufficiency and indigenisation have been made in some areas of critical strategic relevance – such as nuclear weapons, missiles, space satellites and underwater nuclear propulsion – the conventional military inventory spectrum is dependent to a great extent on imports.

It is a matter of concern and embarrassment that even as the nation prepares for its 75th anniversary of independence, India still imports rifles, the basic personal weapon for a soldier.

However, a concerted effort is being made to redress this dependence and many major indigenous and co-production projects are in the pipeline and will hopefully bear fruit over the next decade.

India Is Yet to Join the 'Top 10' Club

As per global estimates, India currently exports military inventory items worth about \$1.5 billion (2018-19), and this is a marked increase from the previous year when arms exports were valued at \$660 million. The Modi government is determined to increase this figure to \$5 billion over the next few years, and in this context, the \$375-million Brahmos order would be encouraging in reaching this objective.

However, certain structural challenges and constraints merit notice. The global arms market is fiercely competitive and opaque, and both governments and state-supported corporations dominate the domain. Post-World War II, the US and the former USSR were the big boys as regards arms supplies with the UK and France at a remove. Germany and Japan were circumscribed by their imperial history and post-war status.

Predictably, after the end of the Cold War in 1991 and the disintegration of the Soviet Union, there has been a reordering of the listing of major arms-exporting nations in the world. The US and Russia are still in the top tier, and in the last decade, the European nations have been joined by China and Israel. India is yet to join the top 10 arms-exporting nations.

To that extent, the Brahmos is a significant punctuation, but it is to be noted that the missile is a joint design and production effort with Russia. Hence, Delhi cannot decide unilaterally on whom to sell to, and a complex geopolitical subtext comes into play.

For now, the Brahmos will be a boost to the coastal defence capability of the Philippines, which is currently seeking to grapple with Beijing's military intimidation in relation to the South China Sea (SCS) dispute. This modest acquisition of three batteries of the Brahmos will not 'scare' the PLA navy, but the signal of Manila's resolve is potent. It is expected that Indonesia and Vietnam may also opt for the Brahmos, but the China factor in ASEAN geopolitics is a compelling and constraining reality.

Why China, Russia & US Matter

At the global level, there is currently an increasing strategic convergence between China and Russia apropos their discord with the US, reminiscent of the early years of the Cold War. However, Beijing is now the more capable partner by way of comprehensive national power, and Moscow would have its own red lines as far as military exports are concerned where it is a stakeholder – as is the case with the Brahmos.

The other potential constraint as regards the unfettered export of Brahmos is the US and Washington's geopolitical-cum-strategic compulsions. The US is cognisant of the challenge posed by Russia and China individually, and if the Moscow rumble is a reminder of the Cold War past that the Beltway had to carefully navigate, Beijing represents the cyber-COVID-climate change quagmire of the early 21st century.

After the increase in US-Russia tensions that began with Moscow's annexation of Crimea in 2014, the US Congress introduced legislation referred to as the CAATSA (Countering America's Adversaries Through Sanctions), with Russia as the immediate target. Under this act, major Russian entities are on the sanctions list – particularly in the defence sector – and US engagement with them directly or through a proxy is prohibited.

The Russian partner in the Brahmos Aerospace venture is NPOM (NPO Mashinostroyeniya), while the Indian DRDO (Defence Research and Development Organization) is the major stakeholder with a 50.5 per cent holding in this public sector corporation. The US is currently reviewing the Indian decision to acquire the S-400 missile defence systems from Russia against the provisions of CAATSA, and the Brahmos can potentially be brought into the ambit.

However, India has its own strategic relevance in the larger US calculus in relation to the Indo-Pacific and China, and a binary choice may not be a valid option for the Biden administration.

If there is one policy cue for India from the Brahmos deal, it is that military exports are predicated on a nation's proven credibility and competence in specific niches. Given that national fiscal resources for the military sector will remain depressed due to the COVID-19 challenge, Delhi must evolve an astute and viable long-term blueprint about the new technologies that it must invest in to acquire the profile of an autonomous, credible, dependable and affordable military inventory supplier.

<https://www.thequint.com/voices/opinion/india-gets-first-brahmos-order-but-its-a-long-way-to-self-reliance#read-more>

स्वास्थ्य विभाग ने कोरोना के मद्देनजर अस्पतालों का फिर से किया अधिग्रहण

देहरादून: स्वास्थ्य विभाग ने कोरोना के मद्देनजर ऋषिकेश और हल्द्वानी में डीआरडीओ के सहयोग से बनाए गए 500-500 बेड के अस्पतालों का फिर से अधिग्रहण कर लिया है। इनका अधिग्रहण मार्च तक के लिए किया गया है। इस अवधि में इन अस्पतालों में आने वाले मरीजों का पूरा खर्च स्वास्थ्य विभाग उठाएगा।

प्रदेश में कोरोना संक्रमण तेजी से बढ़ रहा है। इस समय प्रदेश में कोरोना संक्रमण के 20 हजार से अधिक एक्टिव केस हैं। प्रतिदिन तीन हजार से अधिक नए मामले सामने आ रहे हैं। इसे देखते हुए स्वास्थ्य विभाग अलर्ट मोड पर काम कर रहा है। अधिकांश सरकारी अस्पतालों को पूर्ण रूप से कोविड अस्पतालों में बदल दिया गया है।



(source : IANS) (Photo Credit: (source : IANS))

कोविड केयर सेंटर बनाए जा रहे हैं। इसके साथ ही प्रदेश सरकार ने अब गत वर्ष डीआरडीओ द्वारा ऋषिकेश और हल्द्वानी में बनाए गए 500-500 बेड के दो फ्रेब्रिकेटेड अस्पतालों का भी अधिग्रहण कर लिया है। इन अस्पतालों के संचालन में काफी खर्च आता है। एक अनुमान के मुताबिक एक अस्पताल पर मासिक ढाई करोड़ रुपये खर्च होते हैं। इनमें चिकित्सकों व पैरामेडिकल स्टाफ के वेतन से लेकर दवाओं, उपकरणों के साथ ही बिजली व पानी का बिल भी शामिल है। यही कारण भी था कि कोरोना संक्रमण की दूसरी लहर समाप्त होने के बाद प्रदेश सरकार ने इन अस्पतालों को केंद्र के सुपुर्द कर दिया था। अब क्योंकि कोरोना संक्रमण के मामले बढ़ रहे हैं, ऐसे में स्वास्थ्य महकमे ने एहतियातन इन अस्पतालों का अधिग्रहण करने के साथ ही यहां चिकित्सकों की भी तैनाती कर दी है। यहां मरीजों का उपचार भी शुरू कर दिया गया है।

सचिव स्वास्थ्य डा पंकज कुमार पांडेय का कहना है कि अभी मार्च तक के लिए इन अस्पतालों का अधिग्रहण किया गया है। इसके बाद परिस्थितियों को देखते हुए इसकी समयसीमा को आगे बढ़ाने पर विचार किया जाएगा। उन्होंने कहा कि कोरोना संक्रमण की रोकथाम के लिए स्वास्थ्य विभाग पूरी ताकत के साथ जुटा हुआ है। विभाग के पास सभी आवश्यक दवाएं और उपकरण मौजूद हैं।

<https://www.newsnationtv.com/india/news/chennai-an-arrangement-of-950-bed-with-oxygen-upport-ha-been-done-in-the-chennai-trade-centre-to-accommodate-the-covid19-patient-in-the-wake-of-the-coronaviru-pandemic-in-chennai-on-sunday-january-16-2022-photo-iansparthi-bhan-243463.html>

THE TIMES OF INDIA

Wed, 19 Jan 2022

Lt Gen Manoj Pande appointed as next Army Vice Chief: Sources

New Delhi: Even as the appointment of the next Chief of Defence Staff is awaited, the Government on Tuesday approved the proposal for appointment of Eastern Army Commander Lieutenant General Manoj Pande as the next Vice Chief of Army Staff, sources said on Tuesday. The Eastern Army Commander will be the next Army Vice Chief, sources told ANI.

General Pande would be the successor to Lt Gen CP Mohanty who is scheduled to superannuate on January 31.

General Pande was commissioned into the Corps of Engineers (The Bombay Sappers) in December 1982. He is a graduate of Staff College, Camberley (United Kingdom) and attended the Higher Command Course at Army War College, Mhow and National Defence College (NDC) at Delhi. During his 37 years of distinguished service, Pande has taken active part in Operation Vijay and Operation Parakram.



He commanded an Engineer Regiment along the Line of Control in Jammu & Kashmir, an Engineer Brigade as part of the Strike Corps, an Infantry Brigade along the Line of Control, a Mountain Division in the high-altitude area of western Ladakh and a Corps deployed along the Line of Actual Control (LAC) as also in Counter Insurgency Operations area in the northeast.

Lieutenant General Pande has tenanted important staff assignments and was posted as Chief Engineer at the United Nations Mission in Ethiopia and Eritrea. He was Director-General at Army Headquarters dealing with subjects of discipline, ceremonial and welfare. The post of CDS got vacant after the death of Gen Bipin Rawat in a chopper crash on December 8.

<https://timesofindia.indiatimes.com/india/lt-gen-manoj-pande-appointed-as-next-army-vice-chief-sources/articleshow/88969776.cms>



Wed, 19 Jan 2022

How Indian Armed Forces are using new age tech

The Armed forces are slowly but steadily making progress and embarking on a new era of technological warfare.

By Sreejani Bhattacharyya

Just a few days back, Defence Minister Rajnath Singh said that the Defence Research and Development Organisation (DRDO) is adding new chapters such as information technology, artificial intelligence, and robotics in technological warfare. He added that DRDO is working to prevent various present and upcoming dangers in a very futuristic and first-of-its-kind approach. Last year, Ajay Kumar from the Ministry of Defence (MoD) told the media that it will be required

by the Armed forces to migrate to 5G networks soon to make efficient use of unmanned vehicles and artificial intelligence.

New-age technologies such as artificial intelligence, IoT, machine learning, 5G, and quantum computing have now penetrated all major sectors. If properly used, they can be immensely powerful in transforming how these sectors perform. These technologies can completely transform the Indian defence capabilities. The Armed forces are slowly but steadily making progress and embarking on a new era of technological warfare.

Already integrating new-age technologies

- India does not want to fall behind other nations when it comes to embracing new-age technologies. It has already established the Centre for Artificial Intelligence and Robotics (CAIR). It is a DRDO lab that works in the area of R&D in AI, robotics, information and communication security. It has also set up a project called Energy Harvesting Based Infrared Sensor Network for Automated Human Intrusion Detection (EYESIRa) based on IoT mechanisms partially.
- Just a month ago, the Indian Army established the Quantum Lab at Military College of Telecommunication with support from National Security Council Secretariat (NSCS). At the same institution, it set up the Artificial Intelligence (AI) Centre with support from industry and academia.
- Last year, at the e-symposium event organised by SAMDeS along with the FICCI, RKS Bhaduria, IAF Chief Marshal, mentioned IAF's interest in the integration of the AI concepts for combat operations in the future.



How to go ahead

In order to bring about a change in how the systems work for the Armed forces in the country, various steps can be taken. Some are:

- **Effective use of big data with a strong focus on security**

With enormous amounts of data being generated, the right advanced tools in analytics and algorithms can help the Armed forces with critical information. This information can be used to effectively make decisions for national safety and security—even vital predictions can be made from sensitive information. The Armed forces have to work on an organised, clear-cut plan on how to go about with the management and analysis of the data while making sure that nation-sensitive information remains protected.

- **Unmanned warfare mechanisms**

Autonomous and unmanned weapon systems used in surface, aerial and underwater warfare utilise AI. They can differentiate and destroy potential enemy spots and targets, and these also have the capability to accumulate data and can act as centres of data collection and analysis, which can be used in military decision making.

- **Involving private players**

Effective participation from the private sector in building software, products and algorithms for the Armed forces can foster innovation and push India forward in the race to deploy cutting-edge tech. Indian startups are known globally for raising the standards of innovation, and it will be wise of the Armed forces to utilise this potential of the private players of the country. In the last few years, we have witnessed an active interest among private players to cater to the needs of the Armed forces too.

- Last year, conversational AI startup, Gnani.ai launched an integrated speech recognition based solution for use in the Armed forces. It is an end-to-end voice translation system that uses automatic speech recognition (ASR), machine translation and speech-to-text to convert Mandarin to English.
- Torus Robotics, a Chennai-based startup, is developing Unmanned Ground Vehicles (UGV) for the Indian Army. These vehicles can be operated as robots from a safe distance.

- IdeaForge Technology, formed by alumni of IIT-Bombay, has signed a Rs 130-crore deal with the Indian Army to make drones. It will provide the Indian Army with an “undisclosed quantity of a high-altitude variant of ideaForge’s Switch UAV”, the company said.
- The MoD has established iDEX – to promote development in defence and aerospace. It aims to engage innovators and entrepreneurs to bring out technologically advanced solutions that will modernise the Indian military.
- **Collaboration with academia**

IITs, NITs, IISc, and TIFR are home to some of the best minds that bring out innovations with the potential to revolutionise the technological landscape. The Armed forces have to tap into them to bring out cutting-edge products from the labs to real-world situations. A collaborative effort between the Armed forces, industry and academia is vital for integrating new capabilities in the systems.

<https://analyticsindiamag.com/how-indian-armed-forces-are-using-new-age-tech/>

ThePrint

Wed, 19 Jan 2022

Defence ministry’s PMA policy is protectionism. Indian-made arms need export market

The increase in momentum of 'self-reliance' projects by the defence ministry is palpable. But it cannot be successful as a standalone initiative.

By Lt General Prakash Menon, Edited by Srinjoy Dey

Prime Minister Narendra Modi gave a clarion call for Atmanirbhar Bharat on 12 May 2020. He said that self-reliance was the only path to fulfil the dream of building a 21st century India in the post-Covid world. Modi made a distinction between self-reliance and being self-centred in a globalised world, observing how “local manufacturing, market and supply chains” had helped India mitigate its Covid-19 crisis. He emphasised that we had to be more “vocal about local products and help them become global.”

In perspective, the present enthusiasm for ‘atmanirbharta’ or self-reliance is an appropriation and continuation of India’s historical ambition for strategic autonomy – the ability to make independent decisions. Before Independence, it was manifested in the Swadeshi Movement that was driven by a quest for political self-reliance. Post Independence, self-reliance as a phrase or concept has been used by the Planning Commission in all its Five Year Plans until 2014 when Niti Aayog replaced it.



Make in India | Representational image | Commons

Interpretation of Atmanirbhar Bharat

In November 2018, the Niti Aayog released the ‘Strategy for New India @ 75’. It was described as an attempt to “bring innovation, technology, enterprise and efficient management together at the core of policy formulation and implementation.” It identified 41 different areas that require either a “sharper focus on implementing the flagship schemes already in place or a new design and initiative to achieve India’s true potential.” Self-reliance as a strategy hardly made its appearance in the document. It prescribed that import tariffs that seek to promote indigenous industry should come with measures to raise productivity which will provide the ability to compete globally.

In response to PM Modi’s calls for building an Atmanirbhar Bharat and being ‘vocal for local’, the Ministry of Defence (MoD) in August 2020 identified 101 items that were put under an import embargo to ‘boost local defence industries’. This was followed by another list of 108 items, in May 2021. Artillery guns, assault rifles, corvettes, sonar systems, transport aircraft, light combat helicopters (LCHs) and radars were among the items mentioned in the lists.

Defence Minister Rajnath Singh in mid-December 2021, hinted that though only 209 items have been embargoed so far, it could go up to a thousand. However, a provision to waive the restrictions to cater for exigencies and operational requirements was soon instituted.

The August 2020 list was also accompanied by a bifurcation of the Capital Procurement Budget 2020-2021 for domestic and foreign procurements. Some experts described this as a problematic move that could cause delays if funds have to be reallocated and judgement is distorted on outcomes measured in terms of accretion in military effectiveness.

A gamble

Forced localisation, under the ambit of Preferential Market Access (PMA) policies, is a form of protectionism. It is not uncommon for countries to adopt such policies. In the case of the MoD embargo, it has tinkered with the demand side of the issue. But unless most of those items find an export market, it will be difficult to sustain the initial demand once India's requirements are met. To be competitive internationally, these products require economies of scale apart from a quality advantage. Considering the existing structure of the arms market, success is possible in components of the global supply chain, but it would be more than a gamble for several platforms listed.

The success of the gamble lies in getting foreign Original Equipment Manufacturers (OEM) to establish manufacturing facilities in India. So far, India's attempts to get OEMs to manufacture in India has not been that successful. The prevailing 'off set' provisions that were expected to provide for some indigenisation have mostly been a failure. This might be changing. The defence minister recently went on record to state that the United States, Russia and France have been told that they should produce military platforms, weapons and ammunition in India. He cited the example of France agreeing to produce 'an engine' in India, as a joint venture under the strategic partnership model. If the project is realised, and it's a big 'if', it will mark a milestone in India's ability to leverage its defence imports to achieve indigenisation.

Disappointingly, self-reliance has remained a bridge too far for India's defence sector. There can be no argument that all our efforts must be made to minimise our reliance on the import of arms. The story so far has been that India's military modernisation has been handicapped by inadequacies in its research, industrial base, acquisition systems and production capacities.

New defence production policy

On 10 January media reports indicated that Rajnath Singh asserted that "make in India" would be the focus for military equipment in the future, and that the MoD is formulating a "defence production and export promotion policy" allowing import of only specific items that cannot be produced in India. Armed drones, long-range planes and aircraft engines are some of the items that are said to be in the clear. It is also suggested that India will export some of these products only to countries that are 'friendly'.

Before finalisation of its new policy, the MoD is reviewing the items that are currently allowed to be imported under the "buy global category" of its acquisition procedure so that it can determine more products to be made in India.

On 14 January, media reports indicated the cancellation of deals for the purchase of short-range surface-to-air missiles and a tender for the purchase of 14 choppers for the Indian Coast Guard. Presumably, the speed of these cancellations indicates that it is guided by the existing policy framework enunciated in the Defence Acquisition Procedure 2020. More cancellations can be expected going forward. Procurement delays will be accentuated and raise issues of future military preparedness during a period of expanding national security concerns.

Momentum of self-reliance initiatives

The increase in momentum of self-reliance initiatives by the MoD is palpable, although so far all on paper. The preferred path seems to be the opening up of the private sector through attempts at providing them a level playing field with Public Sector Undertakings while protecting both sectors from foreign competition through 'bans' and cancellation of imports for selected military equipment. While the former is long pending and appropriate, the latter is problematic. It is

difficult to judge the capability of indigenous sources to deliver equipment of requisite quality on time and within the prescribed percentage of indigenous content. Then there is the existing issue of the productivity of indigenous industries and their ability to compete globally. Self-reliance in defence production has to be part of a policy mix and cannot yield successful results as a standalone initiative.

Presently, progress in becoming 'atmanirbhar' in defence has a great reservoir of political patronage. It is a necessary condition but not a sufficient one unless shaped by forces that address the ecosystem of India's defence industrial base. This is a complex and challenging task that must be undertaken. But time is not on the side of India's defence preparedness. It is prudent to be wary of its impact on military effectiveness in an era when the darkening clouds of geopolitical tensions and budget restrictions leave little room for experimentation. Policies adopted now will have a major impact on military effectiveness in the next 5-15 years.

'Atmanirbharta' in Defence is a laudable policy path. Navigating the path will always be easier said than done. Unleashing India's potential has to be its approach. The promise lies in minimising the government's role in the market economy. That is the reason why 'bans' and restrictions can act as impediments towards the realisation of Atmanirbhar Bharat.

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<https://theprint.in/opinion/defence-ministrys-pma-policy-is-protectionism-indian-made-arms-need-export-market/805806/>

THE ECONOMIC TIMES

Wed, 19 Jan 2022

Odisha-based firm Anadrone pips L&T to bag defence contract

By Manu Pubby

Synopsis

While the value of the contract at Rs.96 crore is low when compared to typical defence contracts, the competition saw the Odisha company pitching its product against defence giant Larsen and Toubro. The Shikra MEAT system being manufactured by the company is a localised version of the Banshee Jet 40 system that has earlier been imported by the armed forces.

In the first project to be finalised under the industry-funded Make in India scheme of the defence ministry, an Odisha-based company has signed a contract to supply expendable aerial targets to the Army and Air Force, with officials acknowledging it as a critical landmark that will pave the way for more such opportunities.

The contract to supply 125 of the Manoeuvrable Expendable Aerial Targets (MEAT) and associated equipment, under the Make in India II category - which is meant for research and development projects funded by the industry with an indigenous content of over 50% - was signed this week. This category was introduced as a major step towards engaging the industry in 2016.

"It is the first contract under Make II. Efforts are being made to drive industry-led research and development in the defence sector," said Sanjay Jaju, additional secretary-defence production, Ministry of Defence. The contract has been signed with Gopalpur, Odisha-based company Anadrone Systems Private Ltd.



"It is the first contract under Make II. Efforts are being made to drive industry-led research and development in the defence sector," said Sanjay Jaju, additional secretary-defence production, Ministry of Defence.

While the value of the contract at ₹96 crore is low when compared to typical defence contracts, the competition saw the Odisha company pitching its product against defence giant Larsen and Toubro. The Shikra MEAT system being manufactured by the company is a localised version of the Banshee Jet 40 system that has earlier been imported by the armed forces.

"The Shikra target solution was the only system able to demonstrate its ability to meet or exceed all of the required operational and performance requirements of the Indian Army and Anadrome was selected as a single source vendor," an Anadrome executive said, adding that at least 50% of the product supplied would have indigenous content.

The company has till now supplied over 600 aerial targets from its Odisha factory in partnership with a UK firm. The Shikra is an aerial target designed to be used over land and sea for training of crew on air defence weapon systems. The expendable drone can be manoeuvred at subsonic speeds to simulate an incoming target for air defence weapons.

<https://economictimes.indiatimes.com/news/defence/odisha-based-firm-anadrome-pips-lt-to-bag-defence-contract/articleshow/88985273.cms>

हिन्दुस्तान

Wed, 19 Jan 2022

'आत्मनिर्भर सुरक्षा' की दिशा में बड़ा कदम, सेना ने प्राइवेट सेक्टर से 96 करोड़ रुपए का करार किया

By Niteesh Kumar

नई दिल्ली: भारतीय सेना ने रक्षा क्षेत्र में आत्मनिर्भरता हासिल करने की दिशा में मंगलवार को अहम कदम उठाया। सेना ने मेन्यूवेरेबल एक्सपेंडेबल एरियल टारगेट के लिए मेक-॥ के तहत एनाड्रोन सिस्टम्स प्राइवेट लिमिटेड के साथ 96 करोड़ रुपये के पहले करार पर हस्ताक्षर किया।

डिफेंस प्रोडक्शन इंडिया ने ट्वीट करके इस समझौते की जानकारी दी। ट्वीट में कहा गया, "भारतीय सेना ने मेन्यूवेरेबल एक्सपेंडेबल एरियल टारगेट के लिए मेक-॥ के तहत एनाड्रोन सिस्टम्स प्राइवेट लिमिटेड के साथ करार पर हस्ताक्षर किया है। यह समझौता 96 करोड़ रुपये का है।"



देश 'आत्मनिर्भर सेना' की दिशा में प्रयासरत

सेना प्रमुख नरवणे ने 15 जनवरी को 74वें सेना दिवस के अवसर पर सेना के एक कार्यक्रम को संबोधित किया। इस दौरान उन्होंने कहा कि देश 'आत्मनिर्भर सेना' की दिशा में प्रयासरत है। उन्होंने कहा कि आईआईटी सहित भारतीय शैक्षणिक संस्थानों के संयुक्त प्रयासों से आर्टिफिशियल इंटेलिजेंस (एआई), ब्लॉकचैन, क्वांटम कंप्यूटिंग, मानव रहित सिस्टम, निर्देशित ऊर्जा हथियार और स्वर्ण ड्रोन जैसी कई नई तकनीकों का विकास किया जा रहा है।

सेना प्रमुख ने कहा, "कोविड महामारी के दौरान पड़ोसी देशों के साथ हमारा आपसी सहयोग और बढ़ा है। संयुक्त राष्ट्र पीसकीपिंग ऑपरेशन में भारतीय सेना का महत्वपूर्ण योगदान हमेशा रहा है। हमारे सेना के आज भी 5,000 से ज्यादा सैनिक विभिन्न पीसकीपिंग मिशन में तैनात हैं, जो देश को अलग पहचान दे रहे हैं।"

<https://www.livehindustan.com/national/story-indian-army-signed-first-contract-worth-rs-96-crore-atmanirbhar-defence-sector-5604131.html>

In new pics, China's race in winter to finish illegal bridge over Pangong

Satellite images indicate that the bridge could be complete in a few months, giving China an edge in the area

By Vishnu Som

New Delhi: A new Chinese bridge being constructed across the Pangong Lake is now more than 400 metres long and once completed, will give Beijing a significant military edge in an area which has been a key flash-point between India and China in Eastern Ladakh.

The bridge, which is 8 metres wide, lies just south of a Chinese army field base on the North Bank of Pangong where Chinese field hospitals and troop accommodations were seen during the standoff between Indian and Chinese troops in 2020.

Satellite images from January 16 indicate that Chinese construction workers are using a heavy crane to help link the bridge's pillars with concrete slabs upon which the tarmac will be laid. Given the extent of the construction, the bridge could be completed in a few months, though road access to Rutog - the main Chinese military hub in the region - will take longer to complete.

The construction of the bridge across the Pangong, first identified by *The Print* earlier this month, and shown here for the first time in high-resolution satellite imagery, gives Chinese forces the ability to quickly mobilise soldiers to either bank of the Lake.

Troops from the North Bank will no longer need to drive nearly 200 kilometres around the Pangong Lake to reach their base at Rutog. That journey will now be cut by approximately 150 km.

"Heavy machinery (crane) has also been set up to support the construction process that is continuing through inclement weather and snow," says Damien Symon, a GEOINT researcher at The Intel Lab. "A fresh track is observed fusing the bridge to a road network near the Khurnak Fort (North Bank of Pangong), which further links it to a well-formed motorable network through the region northwards."

While the new bridge has been constructed in an area held by China since 1958, it remains clear that India considers the construction of this bridge to be entirely illegal. It is located almost exactly along India's perception of the International Boundary in the sector. To this end, it is a "potential stepping stone towards further infrastructure encroachment into the disputed territory or as an instrument of Chinese military logistics, it presents a more controversial picture," says Sim Tack, Chief Military Analyst at Force Analysis.

The External Affairs Ministry, which has been monitoring the Chinese construction activity, says, "This bridge is being constructed in areas that have been under illegal occupation by China for around 60 years now. As you are well aware India has never accepted such illegal occupation."

While New Delhi has "increased significantly the budget for development of border infrastructure and completed more roads and bridges than ever before," as per the foreign ministry, it is clear that the new Chinese bridge across Pangong is a direct response to the Indian Army's aggressive move to occupy the Kailash heights in the South bank of the Pangong Lake in September 2020. At the time, Chinese military deployments in the area were significantly threatened by the Indian Army which "forced them to redeploy troops from other locations through the strenuous time-consuming terrain around the lake," says Mr. Symon. Worried about Indian deployments on the ridges from where they could be targeted, "Chinese forces initiated road construction projects snaking around the topography. These roads have now slowly branched towards the bridge, but have yet to be connected."

While Indian and Chinese forces backed off from their hair-trigger alert and de-escalated tensions on both banks of Pangong Lake in February 2021, the construction of the new bridge is a

clear reminder of how China continues to build up access in areas which it may consider as potential flash-points.

Indian and Chinese military leaders held a 14th round of military talks last week at Chushul-Moldo in Eastern Ladakh, in the same broad area described in this report, an area which saw some of the worst tensions in 2020. Though the talks failed to achieve any breakthrough, both India and China agreed to keep talking, a refrain heard time and again over the last two years with real progress being rarely reported.



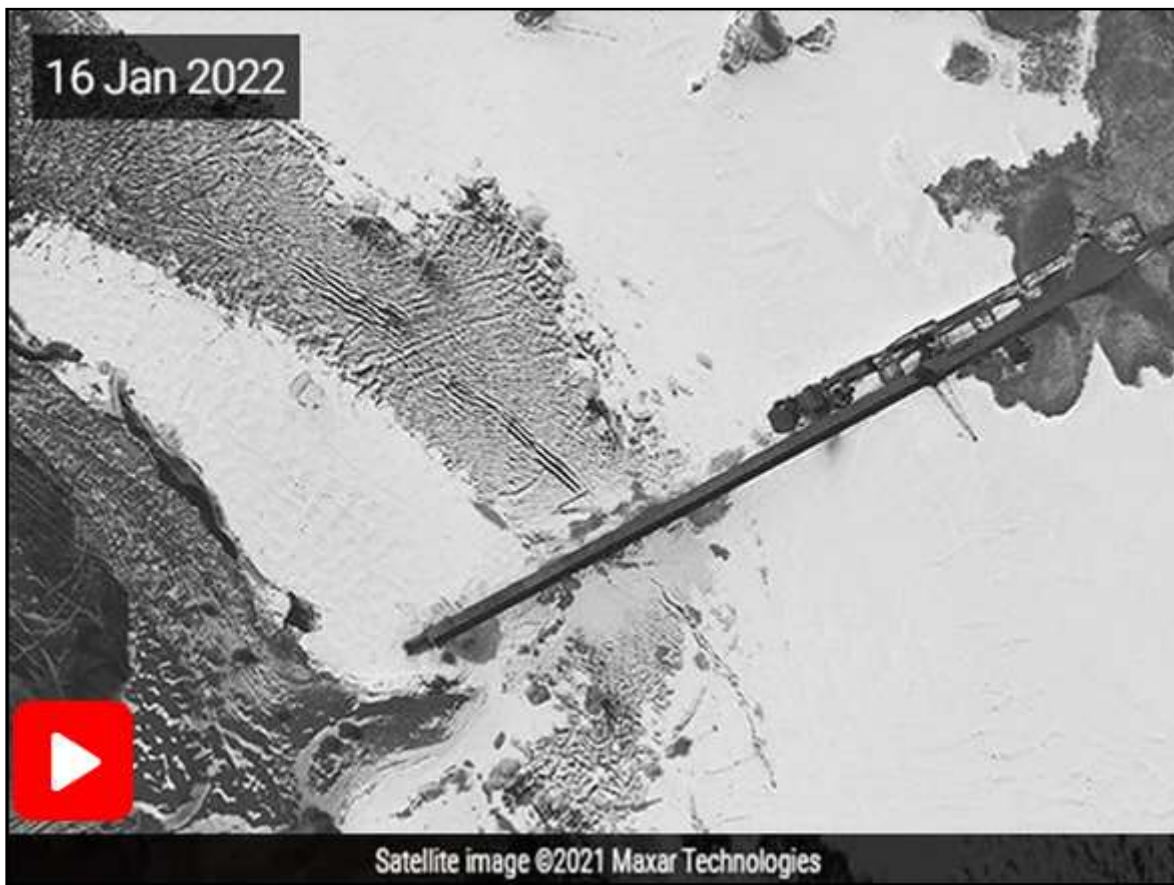
China's bridge across frozen Pangong Lake will link roads on North and South Banks. [High-res here](#)



China's illegal bridge across a frozen Pangong Lake is seen being constructed with a heavy crane in satellite images. [High-res here](#)



China's illegal bridge across Pangong Lake is seen to be a response to Indian Army moves dominating the Kailash heights during the 2020 face-off. High-res here.



In New Pics, China's Race In Winter To Finish Illegal Bridge Over Pangong

<https://www.ndtv.com/india-news/images-show-chinas-illegal-bridge-over-ladakh-flash-point-pangong-lake-2714103>



Wed, 19 Jan 2022

Japan conducts bilateral exercise with Indian Navy in the Bay of Bengal

According to a tweet published by the Japan Maritime Self-Defense Force on January 18, 2022, Uraga-class mine countermeasure vessel JS URAGA and Awaji-class minesweeper JS HIRADO conducted a bilateral exercise with the Shivalik-class frigate INS Shivalik and Kamorta-class corvette INS Kadmatt in the Bay of Bengal.

The Uraga class was a series of 2 mine countermeasure vessels for the Japan Maritime Self-Defense Force. They were all built and commissioned in the 1990s.

The class has a length of 141 m, a beam of 22 m, and a draft of 14m, she can reach a top speed of 22 knots (41 km/h).

Like the 05LST, the main engine was also equipped with the 12V42M-A (9,900bhp / 600rpm), a 4-cycle V-type 12-cylinder medium-speed diesel engine manufactured by Mitsui Engineering & Shipbuilding.



JS Hirado, INS Shivalik, and INS Kadmatt (Picture source: Japan Maritime Self-Defense Force)

INS Kadmatt (P29) is the second of four anti-submarine warfare corvettes built for the Indian Navy by the Garden Reach Shipbuilders and Engineers of Kolkata under Project 28. She was inducted into the Eastern Naval Command of the Indian Navy.

The Kamorta-class corvettes or Project 28 are a class of anti-submarine warfare stealth corvettes currently in service with the Indian Navy.

<https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2022/january/11275-japan-conducts-bilateral-exercise-with-indian-navy-in-the-bay-of-bengal.html>

Outlook

Wed, 19 Jan 2022

Israel says it successfully tests long-range missile defence

Israel said Tuesday it has successfully tested a system designed to intercept ballistic missiles outside the earth's atmosphere

Israel said Tuesday it has successfully tested a system designed to intercept ballistic missiles outside the earth's atmosphere. The Arrow Weapon System is part of an array of missile defenses Israel has developed in recent years to protect itself in any future conflict with archenemy Iran or regional militant groups, such as the Lebanese Hezbollah or the Palestinian Hamas in the Gaza Strip, both allies of Iran.

The Defence Ministry said the system detected the target and fired two Arrow 3 interceptors at it, calling the mission a success. "With every step forward, with every development, we equip the state of Israel with the capabilities to defend itself against developing threats," Defence Minister Benny Gantz said in a statement. "Our systems provide Israel with the freedom to maneuver strategically."

The system was developed by Israel Aerospace Industries, a state-run defence firm, in cooperation with the US Missile Defense Agency. "This test was designed to challenge every

element of the Arrow Weapon System, and it performed beautifully," said Vice Adm Jon Hill, director of the agency. "MDA remains committed to assisting the government of Israel in upgrading its missile defence capability against current and emerging threats."

Israel's shorter-range missile defenses were on vivid display during last year's 11-day Gaza war when the Palestinian militant group Hamas fired over 4,000 rockets at Israel. The military says it intercepted around 90% of the rockets it targeted, with the others mostly falling in open areas.

<https://www.outlookindia.com/international/israel-says-it-successfully-tests-long-range-missile-defence-news-33633>

Science & Technology News



Wed, 19 Jan 2022

Novel design method proposed for reflective optical system with low tilt-error sensitivity

By Liu Jia

Characterized by large aperture and long focal length, the reflective optical system has the advantages of small number of optical elements and simple optical structure. But the intrinsic aberration and the misalignment derived aberration increase exponentially with the increase of focal length and aperture, resulting in a significant degradation of the optical system imaging quality caused by just a small amount of misalignment.

In a study published in *Optics Express*, Prof. Meng Qingyu and his Doctoral student Qin Zichang from Changchun Institute of Optics, Fine Mechanics and Physics (CIOMP) of the Chinese Academy of Sciences (CAS) proposed a comprehensive reflective optical system design method with low tilt error sensitivity. This method not only optimizes the imaging performance of the system and controls the tilt error sensitivity of the optical system, but also considers the uniformity of the sensitivity of each mirror of the system.

Using the method of geometric optics, the researchers established the mathematical analysis models of single-mirror system and two-mirror system. Through the theoretical derivation of the relationship between the variety of optical path difference (OPD) caused

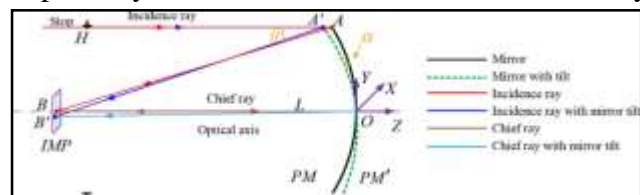


Fig. 1. Mathematical model of single-mirror optical system. Credit: DOI: 10.1364/OE.447556

by the tilt of optical system and the parameters of optical system, they concluded that the system with large incidence angle has greater variety of OPD and higher sensitivity when the tilt error applied, and the tangent slope at the intersection of ray and mirror is the key factor to determine the error sensitivity of optical system. Based on the above finding, the researchers proposed the evaluation function S of tilt error sensitivity of optical system, and established a desensitization design method of reflective optical system. Taking an off-axis three-mirror optical system with a focal length of 100mm and an F-number of 5 as examples, they compared the tilt error sensitivity of the two systems before and after the desensitization design by using the proposed method. The results showed that this method is effective.

More information: Zichang Qin et al, Design method for a reflective optical system with low tilt error sensitivity, *Optics Express* (2021). DOI: 10.1364/OE.447556

Journal information: *Optics Express*

<https://phys.org/news/2022-01-method-optical-tilt-error-sensitivity.html>

