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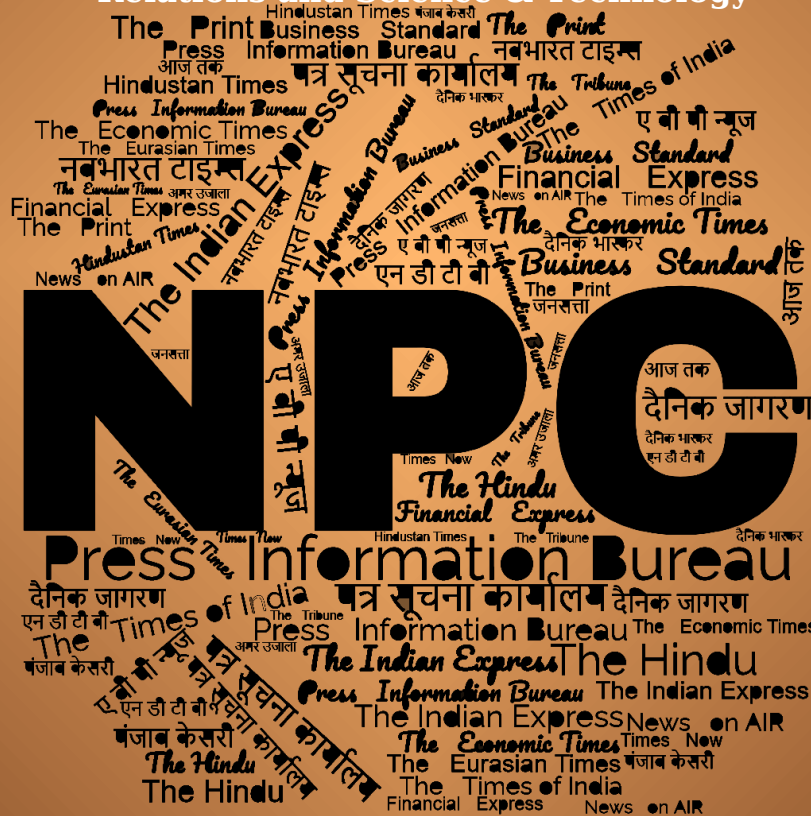
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# समाचार पत्रों से चयित अंश Newspapers Clippings

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## Business Standard

*Tue, 16 May 2023*

### **164 'Positive Indigenisation List' Items Indigenised: Defence Ministry**

In a boost to “aatmanirbharta” (self-reliance) in defence, the Ministry of Defence (MoD) announced on Tuesday that it had met its target of indigenising 164 items on its Positive Indigenisation List (PIL).

These 164 items, which the MoD estimates carry an import substitution value of Rs 814 crore, were scheduled to be indigenised by December 2022.

“(These items) have met the target within the timelines and have been notified by the Department of Defence Production (DDP), MoD,” stated a Press Information Bureau (PIB) release on Tuesday.

“The indigenisation of these items has been achieved by defence public sector undertakings (DPSUs) either through industry partners, including MSMEs (medium, small or micro enterprises) or in-house,” stated the PIB.

The DPSUs-wise list of these indigenised items is available on the MoD’s Srijan Portal (<https://srijandefence.gov.in/NotificationDt12052023.pdf>).

The DDP has notified four separate PILs consisting of a total of 4,666 line replacement units (LRUs), sub-systems, assemblies, spares and components of defence systems.

The first PIL contains 2,851 items; the second contains 107; the third PIL contains 780 and the fourth PIL, which was notified on Sunday promulgated a list of 928 strategically-important spares and components that would face curbs on their import.

The MoD had earlier notified the successful indigenisation of 2,572 defence items, with an import substitution value of Rs 1,756 crore. Now, with the notification of 164 additional items on Tuesday, the total number of indigenised items till December 2022 stands at 2,736, with an import substitution value of Rs 2,570 crore. These indigenised items will henceforth be procured from Indian industry only.

On Sunday, the MoD had promulgated a list of 928 strategically-important spares and components that would face curbs on their import. This so-called “4th Positive Indigenisation List (PIL)” included Rs 715 crore worth of high-end materials and spares the import of which would be permitted only until a specified date. After that date would have to be procured from Indian industry.

[https://www.business-standard.com/india-news/dpsus-indigenise164-defence-items-worth-rs-814-crore-123051600652\\_1.html](https://www.business-standard.com/india-news/dpsus-indigenise164-defence-items-worth-rs-814-crore-123051600652_1.html)

## **MoD Says 2,736 Defence Items Indigenised in Self-Reliance Quest**

The government on Tuesday said that 164 defence items that were under an import ban, and used in platforms including tanks, infantry combat vehicles, missiles and warships, have been indigenised in a fresh push for self-reliance. This has taken the total number of such defence items, including line replacement units, sub-systems and spares, indigenised during the last two-and-a-half years to 2,736.

All these items were part of different 'positive indigenisation lists' published by the defence ministry to cut the import dependence of defence public sector undertakings (DPSU).

These 164 items have an import substitution value of ₹814 crore, the defence ministry said in a statement.

It said the total import substitution value of the 2,736 items indigenised so far was ₹2,570 crore.

These items will now be procured from the Indian industry only, the statement said.

The deadline for indigenisation of these items was December 2022.

The indigenisation has been achieved by DPSUs either through industry partners, including micro, small & medium enterprises (MSMEs), or in-house, it said.

The ministry's department of defence production has so far published four 'positive indigenisation lists of 4,666 items including LRUs, sub-systems, spares and components that have come under a phased import ban.

The fourth list of 928 items was published last week and brought these items under a phased import ban between December 2023 and December 2029. It included items used in fighter planes, trainer aircraft, warships and different types of ammunition.

It came on the back of three similar lists published by the defence ministry in December 2021, March 2022 and August 2022.

The 928 defence items have an import substitution value of ₹715 crore.

The latest list seeks to promote the local production of several parts of Sukhoi-30 and Jaguar fighter jets, Hindustan Turbo Trainer-40 (HTT-40) planes, magazine fire-fighting systems on board warships, and gas turbine generators.

The components and sub-systems in the previous lists included several items for fighter jets, Dornier-228 planes, multiple systems for submarines, equipment for T-90 and Arjun tanks, BMP-II infantry combat vehicles, warships and submarines, and anti-tank missiles.

India has employed a two-pronged approach to achieve indigenisation through import bans.

One approach relates to banning the import of weapons and systems such as fighter jets, warships, helicopters and artillery guns, while the other covers sub-systems, spares and components that are part of bigger weapon platforms.

As part of the former, India has published four other lists that have imposed a phased import ban on 411 different types of weapons and platforms including light weight tanks, naval utility helicopters, artillery guns, missiles, destroyers, ship-borne cruise missiles, light combat aircraft, light transport

aircraft, long-range land-attack cruise missiles, basic trainer aircraft, airborne early warning and control (AEW&C) systems, and multi-barrel rocket launchers.

These lists were announced during the last three years --- in August 2020, May 2021, April 2022 and October 2022. Import substitution of ammunition, which is a recurring requirement, has been given special emphasis in these lists.

India has taken a raft of measures over the last four to five years to boost self-reliance in defence. Apart from a series of phased import bans, these steps include creating a separate budget for buying locally made military hardware and increasing foreign direct investment (FDI) from 49% to 74%.

<https://www.hindustantimes.com/india-news/government-indigenizes-164-defence-items-worth-814-crore-to-reduce-import-dependence-total-number-now-2736-101684244114921.html>

## THE ECONOMIC TIMES

*Tue, 16 May 2023*

### **India is Fighting a War with its Defence Imports. Is it Winning?**

Indian soldiers, who guard the border at high altitude such as at Siachen, have to wear a special dress — the extended cold weather clothing system (ECWCS). It is a three-layer modular clothing system designed to keep the wearer alive and functioning in temperatures down to -50 degrees Celsius. India has been importing this clothing system for over 25 years from mostly the US and Europe. Only a few year ago, a private Indian company, Aroo, secured orders to indigenously manufacture the dress.

Achieving self-reliance in defence and reducing import dependency for military hardware is important for India to maintain its strategic autonomy. Imagine a country which is dependent on others for even its basic defence needs such high-latitude clothing. The Russia-Ukraine war, which saw western countries scramble to produce weapons to supply them to Ukraine and Russia unable to procure its military supplies from other countries, has underlined the need for self-reliance in defence systems. For India, which is now flexing its diplomatic muscles at the international stage to pursue an assertive foreign policy, defence indigenatison is all the more important. That's what Prime Minister Narendra Modi's Atmanirbhar project has set out to achieve.

#### **The indigenisation push**

In the last few years, India has been trying to indigenise its military supplies at a maddening pace. The government released a few days ago a fresh list of 928 components and subsystems that will only be procured from domestic firms once import bans on them kick in, over a period of five-and-a-half years.

The fourth in a series, the current list focuses on 928 strategically important line replacement units, spares and components that will not be imported as per specified timelines over the next five years. The latest list is for items that will be made indigenously by public sector units and mostly contains items that are to be made by Mazagaon Dockyards Ltd. The last such list was issued in April 2022, when major platforms such as helicopters, light tanks, loitering munitions and a range of missiles and ammunition were put under the 'no import' category. The list included ship-launched cruise missiles, weapon-locating radars, a naval anti-drone system, next-generation offshore patrol vessels and small arms ammunition. In 2021, the Defence Ministry had issued two similar lists.

These lists contain 2,500 items which are already indigenised and 1,238 which will be indigenised within the given timelines. Of 1,238, 310 items have been indigenised, so far. The Defence Acquisition Procedure (DAP 2020), with a focus on 'Atmanirbhar Bharat' and 'Make in India', introduced major policy initiatives for boosting indigenous defence capability and reduction of reliance on imports. A record 75 per cent of the defence capital procurement budget has been earmarked for domestic industry in 2023-2024, up from 68 per cent in 2022-23.

India is lowering its dependence on foreign suppliers through a mix of policy initiatives that tap into design and manufacturing capabilities of public enterprises, large business conglomerates and even startups. The government has given approval to 45 companies/joint ventures operating in the defence sector with foreign OEMs (original equipment manufacturers), in addition to launching the Innovations for Defence Excellence (iDEX) scheme which aims to create an ecosystem which fosters innovation and encourages technology development in defence by engaging R&D institutes, academia, industries, start-ups and even individual innovators.

The government recently launched iDEX Investor Hub under which more than Rs 200 crore have already been pledged by leading Indian investors. The Hub aims to accelerate investment in the defence sector and give investors a unified view of opportunities and innovations.

### **The turn in defence imports**

Though India remains the world's top arms importer, its imports have begun to decline. Cumulatively, the latest data from the Stockholm International Peace Research Institute (SIPRI) tends to confirm the government efforts to reduce India's dependence on defence imports. SIPRI data reveals India's arms imports declined 11% between 2013-2017 and 2018-2022, attributing it to complexities inherent in India's procurement and acquisition process, diversification and native sourcing of defence items.

Procurement from foreign countries in 2017-18 was Rs 30,677.29 crore, while it went up to Rs 38,115.60 crore in 2018-19 and Rs 40,330.02 crore in 2019-20, Minister of State for Defence Ajay Bhatt had informed the Lok Sabha in February this year. The amount in 2020-21 was Rs 43,916.37 crore and came down to Rs 40,839.53 crore in 2021-22.

India's defence exports have been rising steadily, pointing at its rising manufacturing power. Exports are linked to the local manufacturing capacity and thus to the indigenisation efforts too. The more items and systems India starts making locally, the more items it will have to export. Defence exports reached an all-time high of nearly Rs 16,000 crore in 2022-23, which is more than ten-fold increase since 2016-17, according to a government release.

The defence ministry has set a goal of a turnover of \$25 billion in defence manufacturing in the next five years which includes an export target of \$5 billion worth of military hardware.

### **The challenges**

The defence indigenisation push is led by the public sector units, which are traditionally seen to be less competitive than the private sector. The government has initiated several reforms in the PSUs, including corporatisation of Ordnance Factory Board which operated 41 ammunition and military equipment production facilities. The government restructured it into seven state-owned corporate entities to improve accountability, efficiency and competitiveness.

But the government is also roping in private manufacturers in its indigenisation project, allowing foreign JVs as well as encouraging startups and innovators.

However, experts point out, private manufacturers often fail to meet the quality requirements. Writing in ET, Harsh V Pant of King's College, London, and Kartik Bommakanti of Observer Research Foundation, say that potential defence manufacturers only realise the demanding specifications following the issuance of a tender for a specific weapons system or military item.

This renders them incapable of meeting the quality norms. Consequently, several acquisition efforts to source from indigenous vendors have been scuttled in the past. Therefore, the task and challenge before GoI is in overcoming Indian native industry incapacities or limitations, they argue. This also requires a combination combination of governmental investments, regulatory standards, involvement of academic institutions and Indian Inc stepping up to meet the needs of the armed services.

SIPRI still ranks India as the largest defence importer in the world, demonstrating why india has a considerable distance to cover before even a large proportion, never mind majority, of the defence needs of the Indian armed services are fully met.

<https://economictimes.indiatimes.com/news/defence/india-is-fighting-a-war-with-its-defence-imports-is-it-winning/articleshow/100280582.cms>

## THE ECONOMIC TIMES

*Tue, 16 May 2023*

### **Lt Gen Devendra Sharma Takes over as Western Command's Chief of Staff**

Lieutenant General Devendra Sharma on Tuesday took over as the Chief of Staff of the Indian Army's Western Command. On the occasion, Sharma laid a wreath at the 'Veer Smriti' war memorial and paid homage to the bravehearts of the Western Command, an official statement said.

The Lieutenant General is an alumnus of the National Defence Academy and Indian Military Academy.

In an illustrious career spanning over three decades, Sharma has held varied and significant appointments wherein he commanded an armoured regiment, an armoured brigade, an infantry division and a Corps, all in the Western sector, it said.

His meritorious service has been recognised with the award of Sena Medal for Gallantry, Ati Vishisht Seva Medal for distinguished service and also the United Nations Force Commander's Commendation.

As Chief of Staff at the Western Command headquarters, he will spearhead various operational and administrative initiatives across the Western theatre.

<https://economictimes.indiatimes.com/news/defence/lt-gen-devendra-sharma-takes-over-as-western-commands-chief-of-staff/articleshow/100279182.cms>

## ThePrint

*Tue, 16 May 2023*

### **Imbibe Best Practices from Across World, Adopt Standardized Processes for Enhancing Combat Capabilities: Air Force Chief**

Chief of Air Staff, Air Chief Marshal VR Chaudhari on Tuesday urged the force to imbibe best practices from across the world and adopt standardized processes for enhancing combat capabilities in an exponential manner. Delivering the keynote address of the logistics seminar Vayu 2023 here

today, the Air Chief Marshal said, “This is the best time for all stakeholders from civil and military to think big to leverage the support being provided by the Central government under the ‘AatmaNirbhar Bharat’ (self-reliant India), PM Gati Shakti, National Logistic Policy and other such initiatives.”

The Annual Logistics Management Seminar was held under the theme ‘Leverage Emerging Global Supply Chain to Enhance Logistics Capabilities while Absorbing Disruptions’. He said, “It is imperative that our logistics plans are in sync.”

The CAS also stressed the need for faster collaboration and information sharing for the supply chain and said, “We must develop good and working relationships with friendly foreign countries through intergovernmental agreements, joint ventures and so on enabling not only transfer of technology but also sharing ideas and insights to improve visibility and coordination.”

“This will help logistics of the Air Force to understand better the risks and opportunities in the supply chain eliminate disruptions,” Air Chief Marshal Chaudhari said.

The Chief of Air Staff noted, “We need to visualise, analyze and optimise every aspect of our process, equipment and resources. When all these aspects come together, an efficient chain would be in place, which would be enabled by the seamless digital flow of knowledge.”

Looking at the roadmap for the future, the CAS said, “I am confident that we are on the right track”. The Air Chief Marshal said one small disruption in aircraft, which will take several hours to rectify, can definitely cause massive disruption to the supply chain, especially global supply chain. “This is what we need to identify”.

“What is the weakest link in our supply chain and how do we strengthen this weakest link?” he asked adding that global supply chains have become increasingly complex and interconnected and that the defence sector is not an exception to the trend.

The IAF chief said the Indian Air Force relies heavily on global supply chains for the delivery of critical components, equipment and services to maintain its combat potential at the optimum level.

“Recently, the world has witnessed multiple disruptions like the Covid-19 pandemic, the ongoing conflict in Europe, trade barriers, tariff wars, environmental compliance policies, trade embargoes, sanctions and so on. Such events have highlighted the vulnerability of supply chains to disruptions, exposing the need for the Air Force to enhance its logistical capabilities and leverage emerging technologies to absorb such disruptions and ensure unhindered continuity of operations,” he said.

“A systematic analysis of the causes of disruptions and its consequences on the global supply chain will prepare practices and procedures in support of operations”, said the CAS.

“One way to mitigate such disruptions is to leverage emerging trends such as digitization and automation to enhance our logistic capabilities,” the Air Chief Marshal further said.

He also emphasized that automation technologies such as robotics, autonomous vehicles and drones can streamline logistic operations and improve efficiency by reaching out to remote locations and reducing the reliance on physical labour.

He said, “Another important aspect of enhancing logistics capabilities is the need to build resilience and redundancy into the supply chain. This can involve diversifying suppliers and transportation routes, establishing alternative sourcing options and increasing critical components and equipment. By doing so, we can reduce the risk of disruption and ensure continuity of operation in the event of any unforeseen circumstance.”

<https://theprint.in/india/imbibe-best-practices-from-across-world-adopt-standardized-processes-for-enhancing-combat-capabilities-air-force-chief/1576633/>



## **Automation, Data Analytics should be Exploited to Enhance IAF's Logistics Capabilities: Air Force Chief**

Digitisation, automation and data analytics should be exploited to enhance logistics capabilities of the Indian Air Force, Air Chief Marshal VR Chaudhari said on Tuesday. In his address at a seminar, the Chief of the Air Staff also referred to the disruptions in the global supply chains due to COVID-19 pandemic, Russia-Ukraine conflict, trade barriers and tariff wars, and called for guarding against such vulnerabilities.

"Global supply chains have become increasingly complex and interconnected, driven by the manuscripts of international trade and advances in technology. The defence sector is not an exception to this trend," he said.

Air Chief Marshal Chaudhuri said the IAF relies heavily on global supply chains for delivery of critical components, equipment and services to maintain its combat potential at optimum level.

"In recent times the world has witnessed multiple and varied disruptions like COVID-19 pandemic, Russia-Ukraine conflict, trade barriers, tariff wars, environmental compliance policies," he said.

"Such events have highlighted the vulnerability of supply chains to disruptions," he added.

The Chief of Air Staff further said that "to mitigate such disruptions leveraging emerging trends such as digitisation, automation and data analytics should be exploited to enhance IAF logistics capabilities." The Chief of Air Staff was addressing the National Logistics Management Seminar on the theme 'Leverage Emerging Global Supply Chain to Enhance Logistics Capabilities While Absorbing Disruptions'.

During the seminar, prominent speakers, over three sessions, deliberated and discussed issues related to logistics issues in the IAF.

The discussions ranged from future prospects of the domestic aviation industry, modern trends in supply chain management & warehousing, and public procurement initiatives.

<https://m.economictimes.com/news/defence/automation-data-analytics-should-be-exploited-to-enhance-iafs-logistics-capabilities-air-force-chief/articleshow/100281804.cms>

## **Amid Row with China, India Moves to Boost Conventional Missile Arsenal**

India is now stepping on the gas to produce both short-range and long-range conventional missiles for major non-nuclear strikes against enemy targets, even as it also separately consolidates the nuclear-triad for strategic deterrence, amid the continuing military confrontation with China.

Development of the Pralay ballistic missiles with a strike range from 150 to 500-km has been completed by the DRDO, while the long-range land-attack cruise missiles (LR-LACMs) and

submarine-launched cruise missiles (SLCMs), with a 1,000-km range, will also be ready for production within a couple of years, top defence sources told TOI.

The surface-to-surface Pralay tactical missiles and the subsonic LR-LACMs will join the BrahMos supersonic cruise missiles, Pinaka multi-launch rocket systems and other stand-off weapons in the new integrated rocket force (IRF) to be set up in the run-up to the tri-service theatre commands. The Rajnath Singh-led defence acquisitions council has already given the initial nod or “acceptance of necessity (AoN)” for the IAF to induct 120 Pralay missiles, which will be followed by another 250 such missiles for the Army. “All such missiles and rocket systems of the Army, Navy and IAF will be integrated under the IRF for better command and control. This is required especially along the northern borders with China,” a source said.

India plans to keep the IRF and the Strategic Forces Command (SFC), which was set up to handle the country’s nuclear arsenal in 2003, as separate entities. So, the SFC will continue to be in charge of the nuclear-capable Prithvi-II (350-km range), Shaurya (750-km), Agni-1 (700-km), Agni-2 (2,000-km), Agni-3 (3,000-km), Agni-4 (4,000-km) and Agni-5 (over 5,000-km) ballistic missiles as well as nuclear-powered submarines armed with nuclear-tipped missiles (called SSBNs) and fighter jets jury-rigged to drop nuclear gravity bombs.

China’s wide array of land-based nuclear as well as conventional ballistic missiles, incidentally, are both under the People’s Liberation Army Rocket Force (PLARF), which has around 40 brigades.

With the induction of Pralay, India will jettison its policy of having ballistic missiles only with nuclear payloads. “For India, ballistic meant nuclear till now. But both China and Pakistan have conventional as well as nuclear ballistic missiles,” the source said.

With a quasi-ballistic trajectory that can be shaped to defeat missile defence systems, Pralay is capable of delivering a high amount of explosives with accuracy with its guidance system including a state-of-the-art navigation system and integrated avionics. “Pralay will now go for user-trials, even as commercial negotiations for production take place,” the source said.

The LR-LACMs and SLCMs, derivatives of the original Nirbhay missile, in turn, have to be integrated with their launchers and platforms. Integration of the land-based missiles is expected to be completed in a year or so. The SLCMs, in turn, will be tested first on the Russian-origin Sindhughosh-class (Kilo-class) submarines as per the plan. “These cheaper subsonic missiles have longer ranges than BrahMos,” the source said.

A 800-km variant of BrahMos, whose range has already been extended to 450-km from the original 290-km, is also in the works. Concurrently, preliminary design for a smaller, lighter but equally-capable BrahMos-NG missile has also been completed. “This will ensure fighters other than the heavy-weight Sukhoi-30MKIs can also carry BrahMos,” the source said.

<https://timesofindia.indiatimes.com/india/amid-row-with-china-india-moves-to-boost-conventional-missile-arsenal/articleshow/100289836.cms>



*Tue, 16 May 2023*

## **Indian, Chinese Army Officers Meet in Ladakh’s Daulet Beg Oldi Sector, Discuss LAC Issues**

NEW DELHI: Indian and Chinese major generals on Tuesday met in Ladakh’s Daulet Beg Oldi sector and held talks on outstanding border issues between the two countries that have been locked

in a row along the Line of Actual Control (LAC) in eastern Ladakh for more than three years, officials familiar with the matter said.

The talks between the division commander-level officers came weeks after the top-level military dialogue between corps commanders of the two armies.

The 18th round of corps commander-level talks on April 23 yielded no outcome, though the Indian Army and the Chinese People's Liberation Army (PLA) agreed to maintain security and stability along LAC, stay in close contact and continue dialogue through military and diplomatic channels, and work out a mutually acceptable resolution of the remaining issues.

Dialogue below the corps commander level to discuss border issues is a routine affair, the officials said, asking not to be named. "Division commanders and brigade commanders regularly hold talks with their Chinese counterparts on border issues," said one of the officials.

The last breakthrough along the LAC came in September 2022 when the two armies pulled back their front-line troops from Patrolling Point-15. The troop pullback took place after the 16th round of corps commander-level talks on July 17, 2022.

Despite four rounds of disengagement from Galwan Valley, Pangong Tso, Gogra (PP-17A) and Hot Springs (PP-15), the Indian and Chinese armies still have more than 60,000 troops each and advanced weaponry deployed in the Ladakh theatre.

Problems at Depsang in the Daulet Beg Oldi sector and Charding Nullah Junction (CNJ) in the Demchok sector are still on the negotiating table, as previously reported.

Defence minister Rajnath Singh on April 27 raised the LAC issue with his Chinese counterpart General Li Shangfu while stressing that the violation of existing agreements had eroded bilateral relations, and the development of India-China ties was based on peace and tranquillity at the borders. Singh told Li that all issues at LAC needed to be resolved in accordance with existing bilateral agreements and commitments.

After the April 27 talks, former Northern Army commander Lieutenant General DS Hooda (ret'd) described Singh's stand as the standard Indian position that the ongoing standoff has impacted bilateral relations which can only improve if the PLA disengages and then pulls back additional forces.

"To me, this indicates that both sides have probably reiterated their respective positions and there is no substantive move forward. However, it is good that high-level political contacts are taking place because ultimately the resolution will come at the political level," Hooda then said.

<https://www.hindustantimes.com/india-news/indian-and-chinese-major-generals-hold-talks-on-border-issues-in-ladakh-s-daulet-beg-oldi-sector-101684251675094.html>



Wed, 17 May 2023

## **Defence Secretary's Washington Visit a Sign of Closer Military Ties Between India-US?**

*By Srinjoy Chowdhury*

Defence Secretary Giridhar Aramane's visit to Washington DC, beginning tomorrow and just weeks before Prime Minister Narendra Modi's is perhaps a sign of closer military ties between the two countries.

Aramane will be meeting Dr Colin Kahl, the under Secretary of defence for policy. Kahl was national security advisor to Joe Biden, when he was Vice President, under President Barack Obama.

Prime Minister Modi is likely to be in Washington DC on 21-22 of June. And as for defence issues, atmanirbharata and Make in India for the World, is likely to be on the agenda. Several of the world's largest defence manufacturing companies like Boeing, Lockheed Martin and GE are American and India will be keen to see some of them set up manufacturing facilities in India. Joint research and development is also an option, particularly in regard to high-tech materials. The US and India are already close partners. They're both in the Quad and the I2U2 (the other countries being Japan and Australia in the Quad and the United Arab Emirates and Israel in the I2U2) and regularly participate in the Malabar and other exercises.

India is also on the lookout for about 110 fighter planes for the Air Force and at least two American planes are possible options.

<https://www.timesnownews.com/india/defence-secretarys-washington-visit-a-sign-of-closer-military-ties-between-india-us-article-100286814>

## THE ECONOMIC TIMES

*Tue, 16 May 2023*

### **Chinese Warships Return to West Pacific for Live-Fire Drills**

Two Chinese warships have ventured into the Western Pacific for live-fire exercises, the military said on Tuesday, shortly after one of China's two aircraft carriers returned from a patrol, in its latest projection of force into more distant waters.

The destroyer Dalian and guided-missile frigate Huangshan sailed to an unidentified area of the West Pacific "not long ago" and conducted attack and defence drills, the Southern Theatre Command of the People's Liberation Army said in a statement.

"The joint training in unfamiliar and complex waters is of great significance in exploring the boundaries of new equipment effectiveness, testing the practical application of new warfare method," the command said, citing a training officer.

The exercises in more distant seas in the West Pacific came soon after a carrier group led by the Shandong, one of China's two operational aircraft carriers, returned to its home port this month after sailing around Taiwan and into the Western Pacific.

China is modernizing its military and its formidable missile forces and navy fleet, with new vessels such as cutting-edge cruisers, are posing a concern for the U.S. and its allies.

"China's aircraft carrier is not a homebody and cannot just stay at home," Song Zhongping, a military commentator with Hong Kong's Phoenix TV, told Reuters, referring to the Shandong.

"There will be more and more of these distant sea travels in future. Also China has quite a lot of warships." In March, China's first domestically produced amphibious assault ship, the Hainan, along with a destroyer, a frigate, and a supply ship completed their first distant sea training after a 30-day trip into the South China Sea and the Western Pacific, the Southern Theatre Command said.

Despite China's military expansion, it could be more than a decade before it can mount a credible carrier threat far from its shores, defence analysts say.

<https://economictimes.indiatimes.com/news/defence/chinese-warships-return-to-west-pacific-for-live-fire-drills/articleshow/100272406.cms>

## **With Eye on Ukraine, Top Chinese General Calls for Unconventional Warfare Capabilities**

Drawing lessons from the Ukraine crisis, a top Chinese general urged greater integration of novel capabilities, including artificial intelligence, with conventional warfare tactics ahead of any confrontation with the West.

A new genre of hybrid warfare has emerged from the Ukraine conflict, with the intertwining of "political warfare, financial warfare, technological warfare, cyber warfare, and cognitive warfare," General Wang Haijiang, commander of the People's Liberation Army's (PLA) Western Theatre Command, wrote in a front-page article in an official newspaper on Monday.

In the name of national security and to fend off perceived threats from the West, Chinese efforts to prepare the country for security challenges have not relaxed despite a slowing economy and COVID-19. Defence spending is set to rise for the eighth straight year in 2023.

The scale and sweep of Chinese military preparations are closely watched not just by the West, but also by China's neighbours and democratically governed Taiwan, which China claims as its own.

"At present and in the future, local conflicts and turmoil are frequent, global problems are intensifying, and the world has entered a new period of turmoil and change," Wang wrote in Study Times.

"Various 'black swan' and 'grey rhinoceros' events may occur at any time, especially with the containing, encircling, decoupling, suppressing, and military threats of some Western nations," he continued.

Despite the hundreds of billions of dollars poured into defence spending, China's armed forces do not have much recent experience in a hot war, with its last - and brief - military conflict in 1979 with Vietnam.

The ability to win is needed to maintain national security, Wang wrote.

The PLA's combat-readiness in a hypothetical war has become a focus in recent months as China flexes its military muscle over Taiwan, putting itself in potential conflict with the United States.

Washington has a policy of "strategic ambiguity" over whether it would intervene militarily to defend Taiwan, but is bound by law to provide the island with the means to defend itself.

China will seek new military advantages by building up capabilities in areas such as artificial intelligence, information networks, and aviation and space, Wang said.

In a separate rare critique in January reflecting on lessons learned from the Ukraine war, the PLA Daily noted Russia's military flaws, including the need to improve its "situation awareness" in the battlefield.

<https://m.economictimes.com/news/defence/with-eye-on-ukraine-top-chinese-general-calls-for-unconventional-warfare-capabilities/articleshow/100266699.cms>

*Tue, 16 May 2023*

## **South Korea's KF-21 Passes 'Combat Assessment' to Accelerate Production**

Korea Aerospace Industries (KAI) KF-21 fighter aircraft has passed a “provisional combat suitability evaluation”, the Defense Acquisition Program Administration (DAPA) said on 16 May.

DAPA said the milestone – achieved following two years of trials – is intended to accelerate aircraft manufacturing ahead of the initial KF-21 production phase in 2024.

KAI's first KF-21 prototype was rolled out in April 2021 and had its maiden flight in July 2022.

According to DAPA, the provisional combat suitability evaluation has assessed factors such as the KF-21's durability, structural integrity, manoeuvrability, and performance – including its speed, combat radius, and landing distance – in more than 200 ground and flight tests in the past two years.

The evaluation also assessed the performance of key systems onboard the aircraft including avionics, weapons, and its locally developed active electronically scanned array (AESA) radar.

“In addition, the evaluation will allow initial production to proceed,” said DAPA. It added that the evaluation process will enable industry to proceed with plans to develop production capability before the start of initial aircraft manufacturing in 2024.

DAPA said a follow-on combat suitability evaluation will be conducted following the initial manufacturing phase. DAPA plans to start mass producing the KF-21 by mid-2026.

The Republic of Korea Air Force (RoKAF) has previously cited a requirement to procure 120 KF-21 aircraft to replace its ageing fleets of F-4E Phantom and F-5E Tiger II fighter aircraft, which were inducted from the mid-1970s. The RoKAF seeks the induction of 40 KF-21s by 2028 and 80 units by 2032.

DAPA and KAI had not responded to Janes

<https://www.janes.com/defence-news/news-detail/south-koreas-kf-21-passes-combat-assessment-to-accelerate-production>

## **The Tribune**

*Tue, 16 May 2023*

### **1,419 Nuclear Warheads in Arsenal: US**

In an attempt to pressure Russia to rejoin a bilateral treaty to limit number of nuclear weapons, the US has declared that it has 1,419 deployed nuclear warheads in its arsenal.

The US Department of State released the information publicly although it had decided earlier not to share the data. The release follows a scare that spread on Ukrainian social networks that during the Russian strike on an ammunition depot in Khmelnytsky, Ukraine, a large batch of British depleted uranium (DU) tank ammunition was also destroyed. The disclosure by the US followed claims by pro-Russian figures that there was a clear spike in gamma radiation in Khmelnytsky on or about May 12th. “Considering how little gamma radiation comes from depleted uranium, this clear spike

indicates that there was a very large stockpile of DU munitions that was destroyed, raising the uranium dust into the air,” an expert said.

In February this year, Russia had walked out of the New Strategic Arms Reduction Treaty (New START), which had come into force in 2011 and was extended for a further five years in 2021. It limits the number of strategic nuclear warheads that the US and Russia can deploy.

Despite Russia suspending its participation, the US State Department said in a statement on Tuesday, “US continues to view transparency among nuclear weapon states as extremely valuable for reducing the likelihood of misperception, miscalculation, and costly arms competitions.”

<https://www.tribuneindia.com/news/world/1-419-nuclear-warheads-in-arsenal-us-508522>

## Science & Technology News

# ThePrint

Tue, 16 May 2023

### Two Companies are Conducting Trials to Develop Dengue Vaccine, says DG ICMR

Two companies are conducting trials to develop dengue vaccine, Director General, Indian Council of Medical Research Dr Rajeev Bahl told ANI on Tuesday.

According to the vaccine trials status, Panacea has done phase I/II and the trials have been completed on 100 adults between the ages of 18 and 60 years.

The primary objective of the study is safety evaluation, immunogenicity, and viremia assessment. Now the company plans to start phase 3 randomised trials, double-blind, placebo-controlled trials on 10,335 healthy adults aged 18 to 80 yrs at 20 sites of the ICMR. These trials were approved in January 2023. Speaking to ANI, Dr Bahl said, “The company which was supposed to make the products three months ago could not do so. However, now the company would be ready in August. So those trials will be initiated in phase three.”

“Till now we can’t say anything even about efficacy as well,” he said further.

According to the presentation by ICMR during press briefing another company Serum Institute of India (SII) has completed phase one trials on 60 adults with the aim of safety evaluation.

<https://theprint.in/india/two-companies-are-conducting-trials-to-develop-dengue-vaccine-says-dg-icmr/1577185/>

## The Indian EXPRESS

Tue, 16 May 2023

### ISRO to Launch Navigational Satellite for its Constellation in May end

The Indian Space Research Organisation (Isro), in the third launch of the year, will fly NVS-01 to augment the seven-satellite navigation constellation NavIC on May 29. Not only will it be the first

launch of a navigational satellite under the new moniker NVS, but it will also beat the space agency's record during the three pandemic years.

There were only two Isro launches each in 2020, 2021, and 2022.

The two launches that have already happened this year were also significant as the first one resulted in the induction of the new Small Satellite Launch Vehicle into the existing Isro fleet and the second established the heaviest rocket LVM Mk3 as a dependable commercial launcher.

In addition to the launch scheduled for May end, the space agency is also planning to launch big-ticket missions like its first solar mission Aditya-L1 during the third quarter of the year. Later this year, Isro is also likely to attempt two test vehicle missions as a precursor to the first unmanned flight of the Gaganyaan mission.

The NVS-01 satellite will replace the navigational capabilities of another satellite IRNSS-1G in the constellation. It will retain its communication and messaging capabilities.

The navigational capabilities of a couple of satellites were hampered after the atomic clocks on board malfunctioned. The location of objects for satellite-based navigation is determined by very precisely measuring the time it takes for the signals to return from the ground.

After the failure of some of the imported atomic clocks, India decided to develop its own atomic clocks as well.

One of the satellites IRNSS-1A was replaced by the space agency in 2018 – the first replacement satellite launched in 2017 was lost after the heat shield containing the satellite did not open when it was supposed to.

At present, there are four major global navigation systems—the US global positioning system, the Russian GLONASS, the European Galileo, and the Chinese Beidou. There are two regional navigational systems in the world—Japan's Quasi-Zenith system and India's Navic.

<https://indianexpress.com/article/technology/science/isro-launch-navigational-satellite-navic-constellation-8612182/>



