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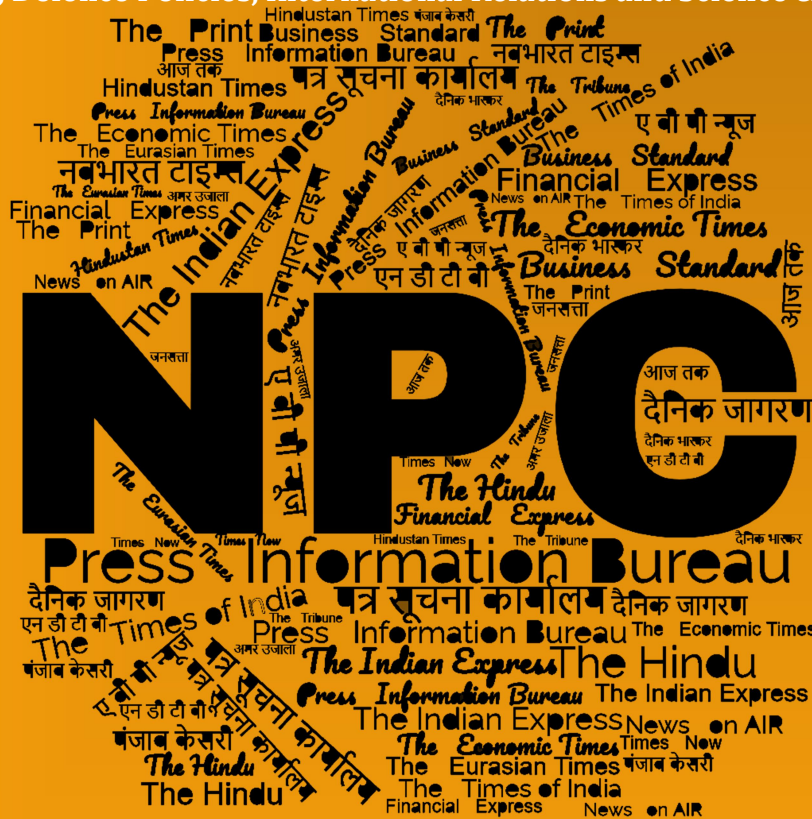
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समाचार पत्रों से चयित अंश Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



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DRDO: भारत हर तरह की मिसाइल बनाने में सक्षम, दुनिया के चुनिंदा देशों में हुआ शामिल

भारत विश्व स्तर का मिसाइल टेक्नोलॉजिकल हाउस है और उसके पास हर तरह की मिसाइल हैं। ये मिसाइल देश की रक्षा करने में पूरी तरह से सक्षम हैं। ये देश की प्रतिरोधक क्षमता को बढ़ाती हैं। यह बात रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के पूर्व प्रमुख जी सतीश रेड्डी ने विशेष साक्षात्कार में कही है। इस समय वह रक्षा मंत्री के वैज्ञानिक सलाहकार हैं।

सेना, वायुसेना और नौसेना की बढ़ रही ताकत

रेड्डी ने कहा कि अत्याधुनिक मिसाइलों के विकास और निर्माण के क्षेत्र में भारत आत्मनिर्भर हो चुका है। अत्याधुनिक मिसाइलों के विकास के मामले में भारत दुनिया के चुनिंदा देशों में शामिल है। वह हर तरह की मिसाइल बनाने में सक्षम है।

भारत अब लंबी दूरी तक जाकर सटीक प्रहार करने वाली अत्याधुनिक मिसाइलें बनाने में सक्षम है। इस तरह की मिसाइलें सेना, वायुसेना और नौसेना के लिए बन रही हैं। हवा से हवा में मार करने वाली अस्त्र मिसाइल अपनी तरह की अद्भुत मिसाइल है। इसी प्रकार से सतह से सतह पर मार करने वाली अलग-अलग क्षमताओं की कई मिसाइलें भारत के पास हैं। हमारे पास क्रूज मिसाइलें भी हैं।

ये सभी मिलकर देश की सुरक्षा क्षमता को मजबूत बनाती हैं। रेड्डी ने कहा, मिसाइलों के विकास के क्षेत्र में भारत दुनिया के शीर्ष पांच देशों में शामिल है। मिसाइल से अंतरिक्ष में घूमते सेटेलाइट को निशाना बनाने का परीक्षण भी भारत कर चुका है। इस क्षमता वाला भारत दुनिया का चौथा देश है। यह क्षमता पहले रूस, अमेरिका और चीन के पास ही थी।

<https://www.jagran.com/news/national-india-is-capable-of-making-all-types-of-missiles-joins-select-countries-of-the-world-23342953.html>

अमरउजाला

Tue, 28 Feb 2023

रक्षा मंत्री के सलाहकार ने कहा- वैश्विक पाबंदियों ने आगे बढ़ने में की मदद, मिसाइल तकनीक में आत्मनिर्भर

रक्षा मंत्री के वैज्ञानिक सलाहकार और रक्षा अनुसंधान एवं विकास परिषद (डीआरडीओ) के पूर्व प्रमुख डॉ. जी सतीश रेड्डी ने कहा कि भारत मिसाइल तकनीक में आत्मनिर्भर बन चुका है और वैश्विक पाबंदियों ने इस आत्मनिर्भरता को हासिल करने में 'मदद' की है।

डीआरडीओ के पूर्व प्रमुख ने कहा, भारतीय मिसाइल कार्यक्रम बहुत आगे बढ़ चुका है और कई मिसाइल सिस्टम विकसित किए गए हैं। सतह से सतह पर मार करने वाली मिसाइल, सतह से हवा में मार करने वाली मिसाइल और हवा से हवा में मार करने वाली मिसाइल, टैंक रोधी मिसाइल और कई प्रकार की मिसाइलें। डॉ. रेड्डी ने कहा कि देश ने आज ऐसी कई मिसाइलें विकसित कर ली हैं, जो कोई भी देश अपने पास रखना चाहेगा। उन्होंने कहा, जब देश ने अपना मिसाइल कार्यक्रम शुरू किया और पृथ्वी और अग्नि का पोखरण से परीक्षण किया तो देश पर कई पाबंदियां लगाई गईं। पहले हम कई उपकरणों और प्रणालियों के लिए विदेशों पर निर्भर थे।

डॉ. रेड्डी ने कहा, आज देश मिसाइल प्रणाली के किसी भी महत्वपूर्ण उपकरण के लिए किसी अन्य देश पर निर्भर नहीं है। हमने सभी प्रणालियां देश में विकसित कीं और उसका घरेलू स्तर पर उत्पादन होता है। उन्होंने कहा, हम भी मिसाइलों के विकास के चरण में थे, इसलिए आप बड़ी संख्या में उप-प्रणालियों या घटकों का इंतजार नहीं कर सकते थे, जो आपको बाहर से मिलते हैं। जिस दिन हमने मिसाइल कार्यक्रम शुरू किया, उस समय के नेतृत्व ने निश्चित रूप से सोचा था कि चलो समानांतर विकास करते हैं। फिर उप-प्रणालियों और महत्वपूर्ण प्रौद्योगिकियों के समानांतर विकास कार्य भी शुरू हुए।

देश में रक्षा और एयरोस्पेस क्षेत्र में हजारों स्टार्टअप कर रहे काम

डॉ. रेड्डी ने कहा, देश में रक्षा और एयरोस्पेस क्षेत्र में काम कर रहे स्टार्टअप की संख्या हजारों में है और वे सभी प्रकार की विनिर्माण और विकास गतिविधियों में शामिल हैं। रक्षा और एयरोस्पेस तकनीक में काम कर रहे स्टार्टअप में 23 से 25 साल के युवा काम में जुटे हैं। उन्होंने कहा, स्टार्टअप अब देश में एक आंदोलन है और इनकी संख्या में अभूतपूर्व बढ़ोतरी हुई है। उन्होंने कहा कि लगभग एक दशक पहले इनकी संख्या काफी कम थी। युवा अलग-अलग

दिशाओं में विभिन्न घटकों, स्पेयर पार्ट्स और नई प्रौद्योगिकियों के लिए काम कर रहे हैं। रेड्डी ने उम्मीद जताई कि यह महत्वपूर्ण बदलावों में से एक है और देश को आगे ले जाएगा।

<https://www.amarujala.com/india-news/scientific-advisor-to-defence-minister-said-global-sanctions-helped-to-move-forward-2023-02-28>

ThePrint

Mon, 27 Feb 2023

Thousands of Start ups Working in Defence, Aerospace in India now: Scientific Advisor to Defence Minister

The number of startups working in the defence and aerospace sector in India are now in the thousands and they are into all kinds of manufacturing and development activities, according to Scientific Advisor to Defence Minister and former DRDO chief Dr G Satheesh Reddy.

“Startups working in defence and aerospace technologies also have gone into thousands today. Youngsters (in age bracket of 23-25 years) are working,” Reddy said in an exclusive interview with ANI.

“Startup is now a movement in the country...phenomenal growth the way the number of startups have come up in the country,”

The number of startups all put together about a decade ago was a bare minimum.

“Youngsters are working on various components, spare parts, new technologies which are required – propulsion systems, new engine-related technologies. Startups are working in multiple directions. It is one of important change which has come in the country, which will take India into a new dimension,” he said during the interview.

He particularly mentioned about the iDEX (Innovations for Defence Excellence) of the Department Of Defence Production, which was introduced with a primary objective of self-reliance and indigenization defence sector needs.

Budgetary support of Rs 498.8 crore for five years (2021-22 to 2025-26) to provide financial support to nearly 300 startups/MSMEs/innovators was allocated for iDEX.

“Industries have come up in a big way...Private industries are now developing missiles, bombs and radars,” he further said.

Reddy added that India has become self-sufficient in missile technology with a wide range of missiles in its arsenal, and global restriction regimes helped it achieve self-reliance.

“Indian missile programme has gone a long way and a number of missile systems have been developed. Varieties of missiles have been developed. Surface-to-surface missiles, surface-to-air missiles and air-to-air missiles, anti-tank missiles, and many other varieties of missiles which have been developed in the country. The country has gained a lot of knowledge and has become, I say that, self-sufficient and self-reliant in missile technology today by developing all these

varieties of missiles. Range of missiles that any nation would like to have based on their necessities, the country has developed all these.”

Expressing confidence in the indigenization of the country’s missile programme, Dr Reddy said that India is not dependent for any critical components on any other country today.

“Today I can say that the indigenous content in our missile programme is very, very high. I can definitely say that we are not dependent for any critical sub-systems and things like that on anyone. All these things are developed in the country and the industry is able to produce them and that’s how the missiles are getting developed very fast...,” he said.

<https://theprint.in/economy/thousands-of-start-ups-working-in-defence-aerospace-in-india-now-scientific-advisor-to-defence-minister/1403874/>

Defence News

Defence Strategic : National/International



Mon, 27 Feb 2023

बर्फीले स्थानों पर जवानों को सुरक्षित रखेगा सात पर्त वाला 'हिमवीर' सूट

सियाचिन ग्लेशियर के बर्फीले क्षेत्रों में देश की रक्षा करने वाले फौजियों पर हाइपोथर्मिया और शीत दंश का हमला घातक नहीं होगा। 18 हजार फीट से अधिक ऊंचाई वाले बर्फीले क्षेत्रों में विषम परिस्थितियों में फौजियों को आरामदायक महसूस कराने के लिए रक्षा मंत्रालय की डीपीएसयू डूप कम्फर्ट्स लिमिटेड (टीसीएल) ने हिमवीर सूट तैयार किया है।

सेना के जवान सात पर्त (लेयर) वाला सूट पहनने के बाद बर्फीले स्थानों पर तैनात रहकर सरहद की सुरक्षा कर सकेंगे। 21 हिमवीर (एक्सट्रीम कोल्ड वेदर क्लोदिंग सिस्टम) सेना के जवानों को ट्रायल परीक्षण के लिए दिए गए हैं। शून्य से माइनस 50 डिग्री सेल्सियस के तापमान में भी ओसीएफ का हिमवीर सूट पहन कर सरहद पर आरामदायक महसूस कर पाएंगे। कंपनी के सीएमडी एसके सिन्हा और मुख्यालय के अफसरों के निर्देशन में आयुध वस्त्र निर्माणी (ओसीएफ), शाहजहांपुर में ये विशेष प्रकार के सूट तैयार किए गए हैं।

कानपुर स्थित टीसीएल मुख्यालय के महाप्रबंधक (परिचालन) राजीव शर्मा ने बताया कि अभी तक सेना के पास तीन पर्त (थ्री लेयर) सूट उपलब्ध होता था। अब टीसीएल ने सात लेयर हिमवीर सूट तैयार कर लिया है जिसकी मियाद अधिकतम पांच साल रहेगी। यह सूट पहने फौजी 40 किमी प्रति घंटे की रफ्तार से चलने वाली बर्फीली हवाओं के थपड़े झेल सकेंगे।

अमेरिका से खत्म होगी निर्भरता

उन्होंने बताया कि अभी तक भारतीय सेना को अमेरिका पर इस सूट के लिए निर्भर रहना पड़ता था। आत्मनिर्भर भारत अभियान के तहत इस सूट को तैयार करने के लिए इंजीनियरों ने इसकी डिजाइन व गुणवत्ता पर अनुसंधान करके तैयार किया। टेक्निकल टेक्सटाइल श्रेणी में शामिल सूट में नायलोन व पालीएस्टर फ़ैब्रिक के मिश्रण का उपयोग कर तैयार हिमवीर सूट परीक्षण अंतिम चरण में हैं। सेना से स्वीकृति मिलते ही बड़े स्तर पर उत्पादन कार्य शुरू किया जाएगा। इस पहल से अमेरिका पर से भारत की निर्भरता खत्म हो जाएगी।

टीसीएल कंपनी के सीएमडी एसके सिन्हा ने बताया कि आत्मनिर्भर भारत के तहत कंपनी ने अनुसंधान व विकास शाखा में हिमवीर सूट को बनाने में सफलता पाई है। ये सूट सेना को परीक्षण के लिए दिए गए हैं। सेना से आर्डर मिलने पर स्वदेशी हिमवीर सूट का उत्पादन शुरू होगा।

ये होगी खासियत

- शून्य से माइनस 50 डिग्री सेल्सियस तक प्रभावी होगा सूट।
- 40 किमी प्रति घंटे की गति से चलने वाली बर्फीली हवा झेल सकेंगे।
- सूट में नायलोन व पालीएस्टर फ़ैब्रिक के मिश्रण का उपयोग किया है।
- 18 हजार फीट से अधिक ऊंचाई वाले बर्फीले क्षेत्रों में फौजी पहन सकेंगे सूट।

अलग तापमान में होगी अलग-अलग पर्त

एक, दो और तीन लेवल तक की ड्रेस को शून्य डिग्री सेल्सियस तक पहना जा सकता है। तीन लेवल तक की ड्रेस में हल्का, मध्यम टी शर्ट और लेवल चार में बर्फीली हवा रोकने वाले पवन जैकेट पहनी जाती है। लेवल पांच, छह और सात के सूट को शून्य से माइनस 50 डिग्री सेल्सियस तक के तापमान में पहना जा सकेगा।

सियाचिन और कारगिल के लिए होगी मुफीद

दिसंबर व जनवरी में सियाचिन में तापमान शून्य से माइनस 50 डिग्री सेल्सियस से भी नीचे चला जाता है। यहां वर्ष भर में औसत 20 फीट तक बर्फबारी होती है और बर्फीले तूफान आते रहते हैं। 18 से 21 हजार फीट की ऊंचाई पर मौसम की ऐसी विपरीत परिस्थितियां रहती हैं।

मई और जून में भी यहां सामान्य तापमान माइनस दो डिग्री सेल्सियस रहता है लेकिन अक्सर तापमान माइनस 10 डिग्री सेल्सियस तक भी जाता है। वहीं, करगिल में गर्मी के दिनों में तापमान तकरीबन 18 डिग्री सेल्सियस रहता है, लेकिन रात में ये 10-11 डिग्री नीचे आ जाता है जबकि सर्दियों में भारी हिमपात होने के साथ न्यूनतम तापमान माइनस 48 डिग्री सेल्सियस तक पहुंच जाता है।

<https://www.jagran.com/uttar-pradesh/kanpur-city-seven-layered-himveer-suit-will-keep-jawans-safe-in-icy-places-23342542.html>



Mon, 27 Feb 2023

The Firepower of the Indian Army: Top Guns

The Indian Army is in the midst of a massive modernization drive that will re-equip over a million troops with advanced personal arms. In parallel, the country's paramilitary forces, comprising a million soldiers, need a replacement for the Indian Small Arms Systems (INSAS).

The modernization drive requires the upgradation of pistols, carbines, close-quarter battle weapons, assault rifles, sniper rifles, and light, medium and heavy machine guns with matching ammunition.

What are the top guns of the Indian army?

Negev Light Machine Gun (NG-7)

In 2020, India secured a deal worth \$118 million contract with Israel Weapon Industries(IWI) for procuring 16,479 Negev NG-7 machine guns. The NG-7 fulfils the long-awaited request for a contemporary, state-of-the-art Light Machine Gun (LMG) for the armed forces.

The NG-7 is a light machine gun with a 5.56x45mm calibre with a 20-inch barrel. The NG-7 uses the larger and more powerful 7.62x51mm NATO cartridge. The total length extended is 1,100mm with a retraction range of 1,030mm. But the top feature is the overall weight in this category which is 7.95 Kg. Interestingly, the NG-7 also tops in terms of the rate of firing which is about 600 to 700 rounds per minute.

The NG-7 has been deployed in conflict zones around the world which speaks a volume about its capabilities. In fact, the Indian army has also equipped its frontier troops with NG-7.

AK-203 Assault Rifle

In 2019, India and Russia signed an intergovernmental agreement for setting up Indo-Russian Rifles Private Limited (IRRPL)– a joint venture to manufacture the AK-203 assault rifles. The project was announced by the prime minister to produce new generation assault rifles for the Indian Armed Forces which will replace the INSAS. India's state-owned firms, Advanced Weapons and Equipment India Limited (AWEIL) and Munitions India Limited, collectively hold

a 50.5% stake in IRRPL, with Kalashnikov owning a 42% share, and Rosoboronexport owning the remaining 7.5%.

The delivery of the rifle is delayed as the production is yet to take off under the joint-venture, IRRPL. However, in a press conference, the Army Chief clarified the production timeline of the AK-203 assault rifle, saying the army will receive the 70,000 rifles within 32 months. The Army will get the first batch of 5000 AK-203 by March 2023. Also, the indigenous content in these will be in the range of 5 -17 per cent while the rest will have 100 per cent indigenous sub-parts.

Technically, it is a member of the AK-200 series of assault rifles. The AK-203 is a modernized version of the previous AK-103 with improved ergonomics. It incorporates a new pistol grip and buttstock but AK 203 has a lot of similarities with the previous AK series rifles — AK-74M and AK-103. The top feature includes a Picatinny-type scope rail on top of the dust cover and over the foregrip and it can mount various kinds of optics. The effective range of fire is around 300-400 meters with a significant penetration effect as the AK-203 is meant for 7.62×39 mm ammunition. What makes AK 203 a full package in this category is its ability to mount various accessories, including a 40 mm under-barrel grenade launcher.

Sako TRG (42)

Besides AK 203, the rifle that the Indian Army is now inducting is the Sako TRG -42 from Finland. In fact, the Sako TRG is a favourite among Special Forces worldwide. The Indian army has equipped its soldiers with sniper rifles along the Line of Control under the Northern command.

The Sako TRG-42 is all about design. The impeccable design of Sako TRG includes the simplicity of its structural components of modern firearms. At the same time, the Sako TRG also is known for its ability to disassemble into smaller components.

The Sako rifles have replaced the .338 Lapua Magnum Scorpio TGT by Beretta, and the .50 Calibre M95 by Barrett.

In terms of firepower, it is considered one of the most accurate and trustworthy weapons with an effective range of 1,500 metres. The rifle is designed to fire powerful .338 Lapua Magnum-sized cartridges. and weighs 6.55 kgs without ammunition. The Sako TRG-42 sniper possesses telescopic sights for precision firepower.

<https://www.financialexpress.com/defence/the-firepower-of-the-indian-army-top-guns/2994186/>



Mon, 27 Feb 2023

Will India and Germany Build P75 (I) Submarines Jointly?

German Chancellor Olaf Scholz's visit over the weekend, the first stand-alone one in 11 years highlighted the shift in Euro centric Germany's renewed focus on the Indo Pacific in furtherance of its Indo-Pacific strategy articulated in 2021.

Amongst many things slated to be discussed were cooperation in Green Hydrogen, a free trade arrangement with the EU and a free and open Indo-Pacific. “However, any strategic dialogue on the Indo Pacific is underscored by the importance of a secure maritime environment to ensure rules based order and a Free and Open Indo Pacific,” opines a senior officer who wished to remain anonymous.

Hence defence cooperation, largely not spoken about, should also have figured in the discussion. Financial Express Online has reported earlier that India intends to build six conventional submarines under Project 75(I) in collaboration with a foreign partner and enough Transfer of Technology (ToT) to ensure that the next class of submarines are totally indigenous. According to the officer quoted above, “Germany leads the world in conventional submarine design and technology. The Type 209 submarine programme in collaboration with Germany in the 1980s for four submarines, of which two were built in India in the early 90s, was a benchmark in defence cooperation, predating the present thrust on Make in India by three decades.”

These four submarines continue to be in frontline deployment and have never returned to Germany either for repairs, refit or modernisation, all of which has been undertaken in India with German oversight for certification.

On Saturday (Feb 25, 2023) soon after the talks between Prime Minister Narendra Modi and the German Chancellor Olaf Scholz, in a special briefing, foreign secretary Vinay Kwatra said that the two leaders took forward their discussions on enhancing defence cooperation.

According to foreign secretary, the two leaders noted that defence cooperation is an important pillar of India-Germany Strategic Partnership. And both sides put forward views on the partnership especially in the field of co-innovation, transfer of technology and co-design can move forward especially in the field of defence.

Was Project 75 (I) discussed?

Whether P 75(I) was discussed is not known, but it would have been in India’s interest to do so and to expedite the P75 (I) programme under an overarching governmental arrangement to enhance India’s currently beleaguered undersea warfare capability.

Ahead of the visit the German ambassador to India Phillip Ackerman had mentioned that this will be on the agenda of talks between the two leaders.

The officer quoted earlier stated that Germany’s submarine building capacity is likely to be fully utilised to counter the emerging security challenges in Europe.

“It could therefore benefit by making India an export hub for expanding its submarine footprint in the Indo-Pacific as more and more countries in the region invest in augmenting their submarine force levels,” he opined.

Ahead of the German Chancellor’s visit it has been reported that the Project 75 (I) which is worth US\$ 5.2 billion would be discussed when the leaders met in New Delhi.

For the project under which six conventional submarines are expected to be built jointly under the Strategic Partnership Model, ThyssenKrupp Marine Systems (TKMS) of Germany is one of two international bidders.

Financial Express Online has reported earlier that Naval Group of France had announced that it was pulling out of the race ahead of Prime Minister Modi's visit to Paris in 2022. And it has cited its inability to fulfil the conditions which were listed in the global tender floated in 2021.

Navantia Group of Spain and Rosoboronexport of Russia too had announced that they were exiting from the competition which left Korean Daewoo Shipbuilding & Marine Engineering (DSME), and TKMS.

It has been reported earlier that P-75I submarines are expected to be equipped with a "sea-proven" fuel cell Air-Independent Propulsion (AIP). Theoretically the two companies left in the fray TKMS and DSME are the only ones with proven AIP and the Ministry of Defence will have to take a decision soon.

Submarines to counter growing presence of China

With the growing presence of the Chinese navy in the Indian Ocean, the Indian Navy is keen to replace its ageing submarine fleet as at this moment 11 out of its 16 submarines are almost decades old.

Whichever foreign OEM is shortlisted, it will have to tie up with a local company in India to build the submarines under the 'Make in India' initiative.

<https://www.financialexpress.com/defence/will-india-and-germany-build-p75-i-submarines-jointly/2994405/>



Tue, 28 Feb 2023

Global Investors Summit-2023: Focus on Growth in Aerospace, Defence

Andhra Pradesh has fixed its focus on becoming the preferred investment location for Aerospace and Defence manufacturing in India by providing favourable policies, a thriving ecosystem, robust ports and airport infrastructure, access to natural resources, skilled workforce, and a conducive business environment.

In a bid to attract investments, the government is all set to highlight the advantages the State can offer to the sector during the Global Investors Summit.

It may be noted that aerospace and defence sector in India is a rapidly growing industry with a focus on indigenisation and self-reliance.

According to an official release, AP is proactively working towards strengthening its aerospace and defence manufacturing sector by implementing favourable policies. The State boasts of significant establishments, including DRDO, BEL, Bharat Dynamics Limited (BDL) and the National Atomic Research Laboratory (NARL).

The aerospace and defence sector in the State is witnessing a surge in investments with several projects currently under implementation. BEL is set to establish a Defence Systems Integration Complex for weapons and radars in Anantapur district and a unit for New Generation Electro-optics and Advance Night Vision Cameras in Krishna district.

An Air Cargo Complex, aimed at boosting the State's logistics infrastructure, near Vizag is also in the pipeline. Other upcoming projects in the sector include Stumpp Schuele Casings' ammunition manufacturing unit in Anantapur district and Premier Explosives' Solid Rocket Propellant Plant in Nellore district.

The State is also set to have DRDO's Missile Testing Facility in Krishna district and a world-class Maintenance, Repair and Overhaul (MRO) facility as part of the proposed Bhogapuram Aerotropolis near Visakhapatnam. Additionally, AP has dedicated infrastructure facilities such as DRDO's Electronic Warfare Test Range, which includes a design, development, production, and assembly unit in Kurnool district.

<https://www.newindianexpress.com/states/andhra-pradesh/2023/feb/28/global-investors-summit-2023-focus-on-growth-in-aerospace-defence-2551626.html>



Mon, 27 Feb 2023

Italian PM to Visit this Week; India-Italy Talks to Focus on Heavy Weight Torpedoes, Indo-Pacific and more

Strengthening of defence cooperation, trade and investments, counter terrorism, Indo-Pacific and more will be agenda of talks when Italian PM, Giorgia Meloni visits India later this week.

Europe's first woman Prime Minister is the chief guest at the Raisina Dialogue which is organised by the Ministry of External Affairs (MEA) and Delhi based Think tank ORF. Prime Minister Narendra Modi will address the Raisina Dialogue which will be soon after the G20 Foreign Minister Meeting in New Delhi.

According to the Ministry of External Affairs (MEA) the Italian PM will be visiting India from March 2-3 and she will be a keynote speaker at the 8th Raisina Dialogue. This is the first bilateral VVIP visit from the European nation in five years. In her State Visit she will be accompanied by her Deputy Prime Minister and Foreign Minister Antonio Tajani and also a high level business delegation.

She will be the second European leader to be a chief guest at Raisina Dialogue, as last year European Commission President Ursula von der Leyen was the chief guest last year when the Russia-Ukraine war had started.

India-Italy Bilateral Relations

For India, Italy has been closely following the European Union's Indo-Pacific Strategy and is keen to participate in it both economically as well as strategically.

Italy has also announced its intentions to take a tough line on China. The Italian leader is expected to visit Beijing later this year and will have a meeting with President Xi Jinping.

PM Modi and the Italian PM met on the sidelines of the G20 summit in Bali last year and the two leaders talked about food and energy security, defence cooperation and other areas of interest.

The two countries are celebrating 75 years of diplomatic relations and later this week when the two leaders meet they are also expected to discuss maritime security, green hydrogen as well as Indo-Pacific.

India-Italy Defence Cooperation

Italy is keen to revive the defence trade between the two countries, after India lifted a ban on the Italian defence major Leonardo from doing business with the Ministry of Defence.

In November 2021, Leonardo S.p.A. and its subsidiary AgustaWestland International UK were dropped from the list of entities restricted from doing any business with the Indian Ministry of Defence. However, AgustaWestland is no longer a separate entity after being merged with Leonardo.

Fast Forward

It has been reported earlier in 2021 that the suspension was lifted as the Indian Navy was not able to find alternatives for procuring 127mm naval guns and heavy-weight torpedoes. For India's first indigenous aircraft carrier INS Vikrant, Italian Fincantieri is the know-how provider for capability enhancement and technology upgrade. Since the Indian Navy's P-75 'Scorpene' class submarines are still with 'heavy-weight' torpedoes, this will be on the agenda of talks.

The Ministry of Defence in 2014 had cancelled a €546 million (US \$624 million) contract with AgustaWestland International UK which was at that time a subsidiary of the erstwhile Italian company Finmeccanica. The deal was for the procurement of 12 AW-101 VVIP helicopters and it was cancelled over charges of corruption.

Now, Leonardo S.p.A is allowed to do business in India.

A bilateral defence cooperation deal is being drafted and is likely to be announced during this visit or later in the year when the Italian leader will be in New Delhi for the G20 summit.

After a long time, at the recently concluded Aero-India 2023, Defence Minister Rajnath Singh had held talks with Italian State Secretary for Defence Matteo Peregò Di Cernusco in Bengaluru.

<https://www.financialexpress.com/defence/italian-pm-to-visit-this-week-india-italy-talks-to-focus-on-heavy-weight-torpedoes-indo-pacific-and-more/2994391/>

THE ECONOMIC TIMES

Tue, 28 Feb 2023

India-Japan Step up Military Partnership amid China's Belligerence

By Dipanjan Roy Chaudhury

Expanding defence outreach in the Indo-Pacific region amid China's belligerence, India will hold simultaneous joint army to army and joint military transport aircraft exercises this week with Japan. While the 4th edition of joint military exercise, 'Ex Dharma Guardian', is being

conducted at Camp Imazu in Shiga province of Japan from February 17 to March 2, the Air Self-Defense Force (ASDF) will conduct joint transport exercise, 'Shinyu Maitri 23', with the Indian Air Force on March 1-2. Incidentally the exercises coincide with the G-20 foreign ministers meet in Delhi and the Japanese foreign minister's visit here.

Without naming China's belligerence towards either India or Japan, officials said this edition of joint army to army exercise is crucial and significant in terms of security challenges faced by both the nations in the backdrop of current global situation.

Satoru Nagao, researcher at Hudson Institute think tank in Washington, said long-term observation shows that China's territorial threats to Japan and India have simultaneously escalated. "The number of Chinese coast guard ships entering the waters adjacent to the Senkaku Islands (called the Diaoyu Islands in China) increased sharply in 2012, then stabilised, and increased again in 2019. This is the same frequency and intensity as China's invasion of the Sino-Indo border. This is the reason why Japan and India have decided to strengthen security cooperation in all aspects," Nagao pointed out. Troops of the Garhwal Rifles regiment of the Indian Army and an infantry regiment from the Middle Army of the Japan Ground Self Defence Force (JGSDF) are participating in the exercise this year to share experiences gained during operations in order to enhance interoperability in planning and execution, officials said.

"The joint exercise will enable the two armies to share best practices in tactics, techniques and procedures of conducting tactical operations under a UN mandate, in addition to developing interoperability, bonhomie, camaraderie and friendship between the two armies. The training will focus primarily on a high degree of physical fitness and sharing of drills at the tactical level. During the exercise, participants will engage in a variety of missions ranging from joint planning, joint tactical drills, basics of establishing integrated surveillance grids, including employment of aerial assets," the Indian government said in a statement.

In 'Shinyu Maitri 23', India is deploying IAF C-17 aircraft. The JASDF will be participating with its domestically-developed and manufactured C-2 transport planes. The joint exercise comes close on the heels of last month's inaugural 'Veer Guardian-2023' joint air exercise at the Hyakuri Air Base. Two ships of the Japan Maritime Self-Defense Force (JMSDF) made a port call at Kochi in the recent past.

Analysts believe that the main purpose of Japan and India's recent efforts to strengthen joint exercises is to balance China's ever-expanding military threats in the Indo-Pacific region.

<https://economictimes.indiatimes.com/news/defence/india-japan-step-up-military-ties-amid-chinas-belligerence/articleshow/98284201.cms>

The Statesman

Tue, 28 Feb 2023

Strategic Lessons from the Ukraine Conflict

By Harsha Kakar

In 2017, Manohar Parrikar, as the defence minister, reduced India's ammunition holding from 40 to 10 days on the premise that future conflicts would be short, intense, and swift. This was a follow up of a CAG report which stated that Indian ammunition supplies can only sustain a war

up to 10-15 days. A substantial hike in revenue expenditure in this year's defence budget appears to be to increase ammunition holdings beyond current levels. This was just one of the many beliefs which have been dumped in the dustbin with the Russia-Ukraine war completing one year with no sign of ending.

There are other lessons which merit attention. The most important is that wars can be fought below nuclear thresholds for prolonged durations, especially when one of the participants is a permanent member of the UNSC, employing a veto to any insistence for a ceasefire. Calls from global bodies can be rejected or ignored with no consequences. Further, a major power would be unwilling to stop operations prior to achieving objectives, as it could involve loss of face, prestige and international standing.

Global support to the weaker nation can be expected mainly to stem and embarrass the adversary, rather than on ideology. Direct involvement by allies or even partners would be unlikely as it could expand the conflict drawing them in, implying proxy wars are possibly the new future. In such scenarios, chances of early peace are unlikely. Assistance would remain below designated redlines of the stronger adversary.

Ultimate gainers would be global armament industries, which push governments to get involved. The war is also an opportunity to test weapon systems for the global armament market. Loss of innocent lives can always be justified. Sanctions remain the only tools to be employed, while ensuring they do not impact nations imposing them. This is how future conflicts involving China against any of its adversaries would play out.

Land has historically been the root cause of any conflict and will continue to be so. Thus, primacy will remain with the army with other services creating an environment for ensuring defence or capture of territory. Since land is involved, war can rarely come as a surprise. There would be indicators especially in this technological age where adversaries are monitored 24X7 employing multiple means, though the warning periods may be reduced. This implies that plans and resources to counter the adversary must be in place, especially where borders are unsettled, and the scenario is volatile.

No single service is capable of ensuring victory or creating conditions for victory. This is more pronounced in the Indian scenario where the land dispute involves inhospitable terrain. While air and land power will be directly involved in the conflict, sea power will ensure that the adversary is prevented from opening a third front as also resources needed to prolong operations are denied to him. With the advent of missiles, formidable air defence systems and cheap drones, all based on rapidly evolving technology, the role of airpower will undergo a change. Its employment will have to be dovetailed with other aerial weapon platforms to obtain maximum leverage. As accuracy of missiles increase, their employment will become a new normal as infrastructure destruction would gain precedence, intending to compel the adversary into accepting unacceptable terms and conditions. There will always be a decision dilemma on engaging targets by missiles or airpower. Missiles and drones would be essential to suppress an enemy's air defence systems prior to employment of air power.

The days of air superiority and air dominance appear to have passed. Simultaneously, missiles and specialized UAVs, such as loitering ammunition, have short technological lifespans. Hence, they will need to be domestically manufactured and at an affordable cost to ensure that they are frequently upgraded. Technology will dominate the battlespace.

This brings forth the requirement of developing domestic armament industries. Foreign supplies can be impacted during operations as also nations aligned to the adversary may adopt delaying tactics in continuing supplies during hostilities, necessitating adequate stocks being maintained. Allies and alliances will be an advantage, especially if the adversary is a competitor. India can expect large scale global support in any conflict with China and lesser in a conflict with Pakistan.

Apart from a technology-dominated battlefield, informational and cyber domains will act as force multipliers. Public morale and global perceptions can be influenced by an organized informational campaign, while cyberattacks can impede the adversary in multiple ways including damaging his economy and critical infrastructure. Both these tools must be effectively employed.

As war prolongs, the world moves on. War news will remain global headlines for some time, subsequently relegated to back pages. Only nations involved will remain concerned. Global bodies will regularly demand peace, but their calls will be ignored. The aggrieved will seek regaining of its territory, while the aggressor will continue till its objectives are met. Global concern would remain only till nations overcome economic dependency on warring nations. Europe appears to ignore the conflict now that it has overcome dependency on Russian gas as well as Ukrainian wheat.

For the aggressor, military power ascendancy, better economy and a stronger industrial base are no guarantor for victory, as Russia has witnessed. The scenario can be reversed with support from allies, will of the people, strength and determination of its leadership. An experienced army, such as India's, can reverse the scenario rapidly. Training and equipping are therefore vital and should never be ignored. Threatening employment of nuclear weapons will remain unacceptable. A grinding war, as is currently unfolding in Ukraine, benefits Ukraine while it is punishing on Russia.

The Russia-Ukraine war has already cost the globe in excess of USD 70 Billion, with thousands dead and millions displaced. Can we afford another one?

While wars are unnecessary, they will remain a reality for nations seeking to change the status quo believing they possess the authority and power to do so. Leaders secure for life, such as Xi Jinping and Vladimir Putin, will attempt to amalgamate perceived territory, hoping to go down in history as the greatest leader the country has ever witnessed. Nations in their periphery must be prepared for aggressive actions, not 'if' but 'when'.

<https://www.thestatesman.com/opinion/strategic-lessons-from-the-ukraine-conflict-1503157989.html>

THE ECONOMIC TIMES

Tue, 28 Feb 2023

US Lawmaker Warns India against Chinese-tainted Russian Weapons

A top US lawmaker has cautioned India against "compromised" Chinese elements in technology it may have imported from Russia in view of growing ties between Moscow and Beijing. "We don't want to be in a situation where for some reason, the Russians somehow have given technology that's compromised by the CCP to India or others that could be taken advantage of by

the CCP," said Raja Krishnamoorthi, the top Democrat and the ranking member of the newly established House Select Committee on the Strategic Competition Between the US and the Communist Party of China (CCP), in an interview.

"I think there's just a very detailed conversation that's probably happening and should happen between our governments with regard to a whole range of technology now that we believe that it's critical to our collective security," he added.

The compromised parts could give the Chinese a window into the Indian defence systems, and/or into American hardware being used by Indians.

As India and the US have deepened and broadened defence cooperation, with Indian purchases of American military hardware at an all-time high, Washington DC has had concerns that its sensitive-technology military hardware sold to India can be accessed by Russia through their equipment that flood Indian armories. This has been cited as a chief concern by Americans as they press India, without success, to cancel its order of the Russian S-400 air missile defence system. They also say that the presence of Russian equipment impeded interoperability between the militaries of India and the US.

Asked about India's ties with Russia, the lawmaker, who was born in New Delhi and came to the US when he was three, said, "I understand the historical ties between the Indians and the Russians. And I also understand the practical nature of the relationship. I hope that over time, the US can prove to be a reliable source of security equipment. But also, we can deepen our ties so that the Indians aren't as dependent on the Russians for certain critical items."

India has indeed been diversifying military purchases in recent years and it has substantially cut dependence on Russia and the US has been among the countries that are rushing in to fill that space, along with others, by, among other things, upgrading India's access to sensitive technology at par with close allies.

Americans have publicly urged India to review ties with Russia in view of this growing proximity. "I do think that the CCP and the Russians have entered into a rather unholy relationship right now with regard to Ukraine with regard to other matters that I don't think are in the best long term interests of the world," said Krishnamoorthi, who had earlier served on the House Permanent Select Committee that oversees the work of America's 17 intelligence agencies.

Ties between Russia and China have grown dramatically close in recent times, specially 2022, when Presidents Vladimir Putin and Xi Jinping declared their relationship has "no limits". The two countries said in a joint statement after their meeting in February 2022, "The new inter-state relations between Russia and China are superior to political and military alliances of the Cold War era. Friendship between the two States has no limits, there are no 'forbidden' areas of cooperation."

Congressman Krishnamoorthi is a rising star in the Democratic party and he breaks new ground as the lead Democrat on the China committee - over the claims of other Democrats.

"I'm honoured to be the first Indian American to ever lead either Democrats or Republicans on any select committee or standing committee in Congress," he said, adding, "I'm honoured to have the opportunity to to work on this particular assignment. I think leader (Hakeem) Jeffries (the top Democrat in the House of Representatives and Minority Leader) is to be strongly commended for the new voices that he's bringing to leadership and the discussion of these critical issues in this

Congress - makes him the first Indian American ever to lead a standing or a select committee for both Democrats and Republicans."

This panel - variously called the China Committee and the tough-on China committee - was set up by this new Republican-led House in an overwhelmingly bipartisan vote by Republicans and Democrats. Republican Mike Gallagher, a China hawk, is the chairman.

Krishnamoorthi said the committee's charter is to "to investigate and report upon the economic, technological and national security challenges posed by the Chinese Communist Party, also known as the CCP, to the United States."

<https://economictimes.indiatimes.com/news/defence/us-lawmaker-warns-india-against-chinese-tainted-russian-weapons/articleshow/98289188.cms?from=mdr>

ThePrint

Mon, 27 Feb 2023

Thales says going to Hire Over 500 People in India this Year

The French defence major company Thales is going to hire more than 12,000 people worldwide in 2023 to support its growth trajectory and over 500 people in India for its engineering centres in Bengaluru & Noida.

In 2023, Thales plans to hire more than 12,000 new employees to support its strong growth trajectory in its three core markets: Aerospace, Defence and Security, and Digital Identity and Security.

The Group will be hiring all over the world and expects to take on 5,500 new employees in France, 550 in India, 1,050 in the United Kingdom, 600 in Australia, and 540 in the United States.

A record level of recruitment in 2022, with 11,500 new hires (50% more than in 2021) worldwide.

Success in creating jobs during the COVID public health crisis, particularly by continuing hiring for engineering centres in Bengaluru and Noida.

Thales is recruiting people in a range of job profiles for its engineering operations in India in every discipline across all its business segments, and in particular for its sites in Noida and Bengaluru.

It is recruiting people on permanent or fixed-term contracts as well as providing several internal mobility opportunities in Thales in India and across the globe.

At these sites, Thales is mainly seeking hardware engineers, software engineers, systems architects, experts in digital technologies and project managers, offering them the opportunity to help to build a safer, greener, more inclusive world.

Thales is working to improve the gender balance in its workforce. In 2022, women accounted for 25% of new hires in India and represented 22% of the Group's India workforce.

In addition, Thales lays particular emphasis on nurturing future talent through internships. In India, for example, 80 students have already joined the company as interns this month. These opportunities can be an important springboard to permanent employment for these young people: each year, about 80% of the students on work-study and internship programmes are hired in engineering roles on fixed or indefinite-term contracts.

Innovation at Thales is part of building a future by harnessing the talents of 35,000 R&D engineers and a portfolio of 20,000 patents in specialised fields such as quantum technologies, AI, lasers, cybersecurity and more. In 2023, for the 10th year, Thales was listed as one of the world's 100 most innovative companies, in Clarivate's Top 100 Global Innovators™[?] 2023, a global benchmark for innovation.

With its broad range of businesses, and an industrial and academic footprint spanning across 68 countries, Thales offers a wealth of long-term and highly diversified career opportunities.

Thales expanded its India presence recently (22 February 2023) by opening its 1st Design Center, which is an extension of Thales' Engineering Competence Centre in Noida and will be a hub for innovation, research, and development in the country.

“There is meaning in what we do at Thales, particularly in these times of upheaval and transformation. Day after day, our people around the world are driven by the same goal – harnessing human intelligence and technology to drive progress in our societies. Joining Thales is a ticket to some of technology's great human adventures and a chance to be part of a learning organisation that places a premium on a collective endeavour,” said Patrice Caine, Chairman & Chief Executive Officer, of Thales.

“Our belief in providing employees with dynamic environments and opportunities to innovate is closely aligned with our objective of supporting the Aatmanirbhar Bharat vision of the country. Through our Engineering Competence Centres and our supply chains, we enable our employees in India to work in cross-functional and inter-geographical teams on technologies that drive the sustainable development of our societies. As we ramp up our recruitment programme for the country, we are excited to welcome new colleagues to Thales in India,” said Ashish Saraf, VP and Country Director for India, Thales.

Thales (Euronext Paris: HO) is a global high technology leader investing in digital and “deep tech” innovations — connectivity, big data, artificial intelligence, cybersecurity and quantum technology — to build a future we can all trust, which is vital to the development of our societies.

The company provides solutions, services and products that help its customers -businesses, organisations and states – in the defence, aeronautics, space, transportation and digital identity and security markets to fulfil their critical missions, by placing humans at the heart of the decision-making process.

Thales has 77,000 employees in 68 countries. In 2021, the company generated sales of EUR16.2 billion.

Present in India since 1953, Thales is headquartered in Noida and has other operational offices and sites spread across Delhi, Hyderabad, Bengaluru and Mumbai, among others. Over 2,000 employees are working with Thales and its joint ventures in India. Since the beginning, Thales has been playing an essential role in India's growth story by sharing its technologies and expertise in Defence, Transport, Aerospace and Digital Identity and Security markets. Thales has

two engineering competence centres in India – one in Noida focused on digital identity and security business, while the one in Bengaluru focuses on hardware, software and systems engineering capabilities for both the civil and defence sectors, serving global needs.

<https://theprint.in/world/thales-says-going-to-hire-over-500-people-in-india-this-year-2/1404356/>



Mon, 27 Feb 2023

IDEX 2023: Poly Defence Unveils XC-150 UAV

China's Poly Defence exhibited its indigenously developed fixed-wing vertical take-off and landing (VTOL) multirole autonomous XC-150 unmanned aerial vehicle (UAV) at IDEX 2023 in Abu Dhabi.

The XC-150 is a tactical UAV designed to conduct intelligence, surveillance, and reconnaissance (ISR) and strike missions. The UAV can take off and land with the help of three fixed landing legs at a maximum altitude of 4,000 m, in what a company official described as “strong breeze conditions”, and it can cruise in level flight in “gale conditions”. The UAV requires a take-off and landing clearance of 8×10 m, and can be deployed in 30 minutes.

Speaking to Janes, a Poly Defence official said, “The development of the UAV started a few years ago primarily to support ISR missions, and the armed capability is yet to be worked on.”

The design of the XC-150 includes high-mounted tapered straight wings spanning a length of 6.9 m, a twin-boom-mounted tail, which has an inward-canted vertical stabiliser joined by a horizontal stabiliser at the top, and a nose-mounted electro-optic/infrared (EO/IR) turret. An additional payload and a battery can be integrated ahead of the wings.

As exhibited, the UAV has twin booms in the mid-wing section ending in the tail, each fitted with four electrically powered rotors (two upward and two downward), which enable VTOL operations. Forward flight is via a pusher propeller driven by a gasoline engine. The aircraft has an endurance of 12 hours when carrying a payload of 20 kg.

<https://www.janes.com/defence-news/news-detail/idx-2023-poly-defence-unveils-xc-150-uav>

THE ECONOMIC TIMES

Mon, 27 Feb 2023

China Urges Peace in Ukraine after U.S. Warns Against Aiding Russia

China said on Monday it sought dialogue and a peaceful solution for Ukraine despite U.S. warnings that Beijing might be considering weapons supplies for its ally Russia's invasion. Air-raid sirens blared in the capital Kyiv and other cities overnight and a Russian missile killed one

person in the western town of Khmelnytskyi, Mayor Oleksandr Symshyshyn said on the Telegram messaging app. The all-clear sounded after daybreak.

China, which declared a "no limits" alliance with Russia shortly before the invasion a year ago, has refused to condemn the onslaught and last week published a 12-point plan calling for a ceasefire and gradual de-escalation by both sides.

Kyiv struck a receptive tone on some aspects of the plan while reiterating there could be no peace without a total Russian withdrawal - a non-starter for Moscow.

"I really want (victory) to happen this year. For this we have everything - motivation, confidence, friends, diplomacy," Ukrainian President Volodymyr Zelenskiy said in a post on the Telegram messaging app on Monday.

China's foreign ministry said it had kept contact with all sides in the crisis including Kyiv and its position was clear.

"The core is to call for peace and promote dialogue and promote a political solution to the crisis," foreign ministry spokesperson Mao Ning told a news briefing in Beijing.

Kremlin spokesman Dmitry Peskov said on Monday the Chinese plan should be analysed in detail and account for the interests of all sides, but for now Moscow saw no signs suggesting a peaceful resolution was feasible.

"We are paying a great deal of attention to the plan of our Chinese friends ... This is a very long and intense process," Peskov told reporters.

China's proposals have cut little ice among Ukraine's NATO military alliance supporters, who say they are trying to dissuade China from supplying lethal aid for Russia's lumbering invasion, possibly including "kamikaze" drones.

Moscow's forces are incurring high losses in trench warfare as they struggle to make further gains in eastern Ukraine while Kyiv eyes a counter-offensive with advanced Western weapons, including battle tanks, pledged over the coming months.

Washington believes Beijing is considering military aid to Russia. "If it goes down that road it will come at real costs to China," U.S. National Security Adviser Jake Sullivan told CNN.

Casting the Ukraine war as a battle for Russia's survival against a rapacious West, Russian President Vladimir Putin last week hailed "new frontiers" in ties with Beijing and indicated that his Chinese counterpart Xi Jinping would soon visit Moscow.

'NO FLEEING'

NATO and the West say their objective is to help Kyiv repel an imperial-style land grab by Moscow, which has derided its fellow former Soviet republic as an artificial state.

Putin's framing of the war as an existential threat to Russia accords him greater freedom in the types of weapons he could one day use, including possibly nuclear firepower.

Dmitry Medvedev, an ex-Russian president and close ally of Putin, said the supply of arms to Kyiv risked a global nuclear disaster - reiterating apocalyptic rhetoric seen as an effort to deter deeper Western involvement with Russia struggling for battlefield momentum.

Ukraine's outnumbered but better organised and nimbler forces repelled Russia's attempt to seize Kyiv early in the war and later retook swathes of occupied territory in the east and south.

But after a year of war that has killed tens of thousands of soldiers and civilians on both sides and laid waste to Ukrainian cities, Moscow still controls nearly a fifth of Ukraine, which it claims to have annexed.

Russia's forces are focusing on taking full control of the eastern Donbas industrial region but have managed only minor advances despite being replenished by hundreds of thousands of conscripts and reservists.

Russia's defence ministry said on Monday its forces had destroyed a Ukrainian ammunition depot near the city of Bakhmut, also shooting down four U.S.-made HIMARS missiles and five drones launched by Ukrainian forces. Russia has made the capture of Bakhmut a priority in its drive to seize the Donbas.

In Luhansk province, the largely Russian-occupied northern half of the Donbas, Moscow has escalated shelling and infantry assaults in the embattled Bilohoryvka, Svatove-Kupiansk and Kreminna areas, Ukraine's Luhansk governor said on Monday.

"There is no fleeing, our units do not leave territory ... Of course, everything can change at any moment," Serhiy Haidai told state television.

"On the other hand, Western offensive heavy equipment is on the way and therefore in any week the military command can conduct an operation following the same plan as they did in the Kharkiv region." he said, referring to Ukraine's recapture of a northeastern sector from Russian forces last year.

Reuters could not independently confirm battlefield reports of either side.

<https://economictimes.indiatimes.com/news/defence/china-urges-peace-in-ukraine-after-u-s-warns-against-aiding-russia/articleshow/98278522.cms?from=mdr>

THE ECONOMIC TIMES

Mon, 27 Feb 2023

Japan to Buy 400 Tomahawk Missiles from US: PM Fumio Kishida

Japan will purchase 400 Tomahawk missiles from the United States, Prime Minister Fumio Kishida said Monday, as his government beefs up the country's defences with eyes on threats including China.

"Our country's plan is (to acquire) 400 units" of the cruise missile, Kishida told the lower house budget committee without elaborating, citing the military sensitivity of the purchase.

Earlier this month, the defence minister said Japan has set aside 211.3 billion yen (\$1.5 billion) to buy the missiles in the coming fiscal year, rather than dividing the procurement over several years.

Kishida's government wants to dramatically expand Japan's defence capacity in the face of China's growing military clout and nuclear-armed North Korea's unpredictable missile tests.

Russia's invasion of Ukraine has also stoked fears that China may move to take over Taiwan, a self-governed democracy claimed by Beijing.

Japan has a pacifist post-war constitution, which limits its military capacity to ostensibly defensive measures.

But last year it updated key security and defence policies, explicitly outlining the challenge posed by China and setting a goal of doubling defence spending to the NATO standard of two percent of GDP by 2027.

<https://economictimes.indiatimes.com/news/defence/japan-to-buy-400-tomahawk-missiles-from-us-pm-fumio-kishida/articleshow/98277084.cms>

Science & Technology News

 **The Indian EXPRESS**

Tue, 28 Feb 2023

NASA Names Solar Physicist as Agency's Science Chief

NASA announced on Monday it has picked a longtime solar scientist who heads its heliophysics division to become the U.S. space agency's science chief.

Nicola Fox, former top scientist on the Parker Solar Probe mission studying the sun, was named as NASA's associate administrator for the agency's Science Mission Directorate.

A memo to agency employees from NASA chief Bill Nelson, obtained by Reuters, first announced Fox's appointment. He lauded Fox's past work on missions to better understand the sun and how solar wind affects satellites and planets.

"She has been instrumental in making this complex area accessible to the public," Nelson said. "Her work already spans so many areas of importance to the agency."

NASA later announced Fox's appointment publicly on Monday, saying her new role was effective immediately. Fox will lead NASA's science directorate, a unit with an annual budget of roughly \$7 billion that oversees some of the agency's best-known programs from the robotic hunts for past life on Mars to exploring distant galaxies with the James Webb Space Telescope.

She will also oversee a NASA study group formed in 2022 to help the U.S. military detect and characterize UFOs, or so-called Unidentified Aerial Phenomena – mysterious objects that the White House and Pentagon officials see as threats to U.S. airspace.

Fox succeeds Thomas Zurbuchen, a Swiss-American astrophysicist who had led the directorate since 2016 before his retirement in December. Sandra Connelly, formerly Zurbuchen's deputy, had led the directorate in an acting capacity.

<https://indianexpress.com/article/technology/science/nasa-science-chief-nicola-fox-8470997/>

Technical Glitch Delays NASA-SpaceX Launch of Next Space Station Crew

NASA and SpaceX postponed the launch of the next long-duration crew to the International Space Station early on Monday, minutes before the rocket was due to lift off, citing a problem with ground systems used to monitor the flow of an engine-ignition fluid.

Members of the four-man crew – two U.S. astronauts, a Russian cosmonaut and an astronaut from the United Arab Emirates – have since exited the spacecraft and returned to their quarters to await word on when the next launch attempt will be made, the U.S. space agency said.

The countdown had seemed to be progressing smoothly until about 2-1/2 minutes before launch time, when NASA and SpaceX, the rocket company founded by billionaire Elon Musk, announced during NASA's live webcast that the flight was being scrubbed for the day.

NASA said engineers decided they needed to investigate “an issue preventing data from confirming” the proper loading of a liquid chemical called TEA-TEB used to ignite the first-stage rocket engines for launch.

Mission managers have already opted to forgo the next launch opportunity early on Tuesday, due to an unfavorable weather forecast, NASA said.

Instead, NASA and SpaceX are looking to a possible launch window at 12:34 a.m. EST (0534 GMT) on Thursday, though no decision has been made as flight teams continue working to resolve Monday's technical glitch, the space agency said.

The SpaceX launch vehicle consisting of a Falcon 9 rocket topped with its Crew Dragon capsule remains in place at Launch Complex 39A of NASA's Kennedy Space Center in Cape Canaveral, Florida, ready to fly.

The trip to the International Space Station (ISS), a laboratory orbiting about 250 miles (420 km) above Earth, was expected to take about 25 hours, and the astronauts are expected to spend six months conducting a wide range of science experiments in microgravity.

Designated Crew 6, the mission marks the sixth long-duration ISS team that NASA has contracted to flown aboard SpaceX since Musk's California-based company began sending American astronauts to orbit in May 2020.

The latest ISS crew is led by mission commander Stephen Bowen, 59, a one-time U.S. Navy submarine officer who has logged more than 40 days in orbit as a veteran of three space shuttle flights and seven spacewalks.

Fellow NASA astronaut Warren “Woody” Hoburg, 37, an engineer and commercial aviator designated as the Crew 6 pilot, will be making his first spaceflight.

The Crew 6 mission also is notable for its inclusion of UAE astronaut Sultan Alneyadi, 41, only the second person from his country to fly to space and the first to launch from U.S. soil as part of a long-duration space station team.

Rounding out the four-man Crew 6 is Russian cosmonaut Andrey Fedyaev, 41, who like Alneyadi is an engineer and spaceflight rookie designated as a mission specialist for the team.

Fedyaev is the latest cosmonaut to fly aboard an American spacecraft under a ride-sharing deal signed in July by NASA and the Russian space agency Roscosmos, despite heightened tensions between Washington and Moscow over Russia's invasion of Ukraine.

The Crew 6 team will be welcomed aboard the space station by seven current ISS occupants – three U.S. NASA crew members, including commander Nicole Aunapu Mann, the first Native American woman to fly to space, along with three Russians and a Japanese astronaut.

<https://indianexpress.com/article/technology/science/nasa-spacex-crew-6-technical-glitch-8471042/>

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