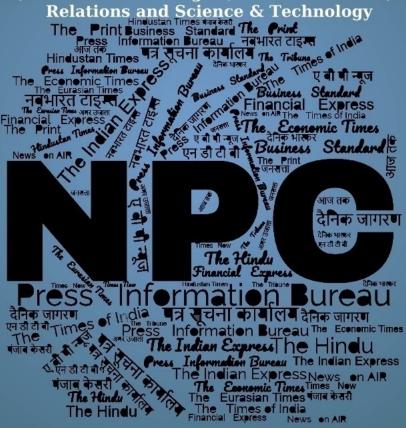
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# समाचार पत्रों से चयनित अंश Newspapers Clippings

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

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### **Defence News**

# Defence Strategic: National/International

## THE ECONOMIC TIMES

Wed, 19 Jun 2024

### Made in India Netra, Pinaka Systems attract European, Southeast Asian interest

At the Eurosatory 2024 Defence Show in Paris, India's indigenous military technologies, including the Netra airborne early warning and control aircraft and the Pinaka multi-barrel rocketlauncher systems, have garnered attention from European and Southeast Asian nations interested in acquiring these advanced systems.

The systems are part of the Indian weapon platforms and technologies on display at the India pavilion at the ongoing Eurosatory 2024 Defence Show in Paris. "Some of the European and South East Asian countries have shown interest in the Netra AEW&C aircraft and the Pinaka rocket launcher systems. We are hoping to progress the discussions with the possible customers for these products," a defence official, familiar with the matter, told ANI.

The AEWC is a system developed by the Centre for Airborne Systems and two of their aircraft are already flying with the Indian Air Force giving wide coverage of the adversaries' activities along both western and northern front of the country.

The Indian forces are going to get 12 more of these airborne systems in different configurations. Pinaka multi-barrel rocket launcher systems developed by the DRDO and manufactured by different private and public sector firms has also attracted interest from some European countries.

The weapon system is one of the first few Indian military terms to have been exported to foreign countries, including Armenia. Private sector companies involved in the project include Larsen & Toubro, Tata Defence and Economic Explosives Limited. As part of larger artillery modernisation plans, the army has a requirement of 23 regiments of the Pinaka MBRL.

India has been making serious efforts towards promoting defence exports that have touched a record Rs 21,083 crore (about USD 2.63 Billion) in the Financial Year (FY) 2023-24, a growth of 32.5 per cent over the last fiscal when the figure was Rs 15,920 crore.

The figures indicate that the defence exports have grown by 31 times in the last 10 years as compared to 2013-14. Indian companies have been able to find global customers for many

indigenous systems including Armenia which has ordered multiple systems in view of its ongoing tensions with Azerbaijan.

https://economictimes.indiatimes.com/news/defence/made-in-india-netra-pinaka-systems-attract-european-southeast-asian-interest/articleshow/111119030.cms



Wed, 19 Jun 2024

## How Integration Of Netra Aircraft & MiG-29UPG Fleet Will Help IAF Boost Air Defence Network

The Netra system, developed by the Defence Research and Development Organisation (DRDO), is a state-of-the-art airborne surveillance platform. It operates as a force multiplier by providing comprehensive situational awareness, monitoring airspace, and delivering critical realtime data to combat aircraft. The integration with the MiG-29UPG, a modernised variant of the MiG-29 equipped with advanced avionics, weapon systems, and enhanced radar capabilities, marks a pivotal advancement in the operational synergy of the IAF's assets.

Developed by DRDO, the IAF currently uses two Netra systems installed on Embraer 145 jets. The two Netra systems currently in service were last used during the 2019 Balakot strikes.

This integration enables seamless communication between the AEW&C Netra and MiG-29UPG fighters, improving interception missions' operational efficiency.

The Netra's ability to detect and track multiple aerial targets over a vast range, combined with the MiG-29UPG's enhanced combat capabilities, ensures a more dynamic and responsive air defence mechanism. Real-time data sharing allows for quicker decision-making, optimised resource allocation, and more effective engagement strategies, enhancing overall mission success rates.

The strategic incorporation aligns with the broader objective of self-reliance in defence production, reducing dependency on foreign technology and fostering innovation within the country.

Further, the enhanced operational efficiency of the IAF through such integrations underscores the importance of modernising military capabilities in response to evolving security challenges. As aerial threats become more sophisticated, the ability to effectively monitor and intercept potential threats becomes crucial.

https://www.timesnownews.com/india/how-integration-of-netra-aircraft-mig-29upg-fleet-will-help-iaf-boost-air-defence-network-article-111112769



Wed, 19 Jun 2024

### **Keltron bags ₹97 crore from Indian Navy**

The Kerala State Electronics Development Corporation Limited (Keltron), a public sector undertaking, has bagged an order worth ₹97 crore from the Indian Navy to manufacture various defence electronics equipment required for underwater operations. The Keltron Equipment Complex at Karakulam, Keltron Controls at Aroor and subsidiary company Keltron Electro Ceramics Limited will be manufacturing the products for the Navy.

Industries Minister P. Rajeeve said on Wednesday that Keltron's manufacturing excellence has resulted in the Navy providing it the orders for strategic equipment.

One of the major components of the order will be the Keltron's proprietary low frequency processing modules for sonar arrays, which are used for detecting and identifying submarines and ships. After testing and quality assurance of the prototypes manufactured by Keltron, two processing modules have been ordered.

Keltron's low frequency processing modules can help detect targets at larger distances. Along with this, Keltron will also manufactures electronic devices such as echo sounder for measuring the depth of sea water, electromagnetic log for calculating the speed of ships, data distribution units and power amplifiers required for sonar for antisubmarine shallow watercrafts.

https://www.thehindu.com/news/national/kerala/keltron-bags-97-crore-from-indian-navy/article68308181.ece

## THE ECONOMIC TIMES

Wed, 19 Jun 2024

## Messe Stuttgart India, Indian Navy collaborate to modernise pan-India logistics infrastructure

Global exhibitor Messe StuttgartIndia on Wednesday said it has collaborated with the Indian Navy to revolutionize logistics infrastructure across the nation. The initiative aims at supporting the Indian Navy in addressing various logistics requirements and offering viable solutions by connecting with worldclass LogiMAT India exhibitors, a statement said.

According to the statement, the Indian Navy will further initiate a tendering process to engage with the leading exhibiting organisations to evaluate and adopt the most viable solutions that align with their strategic objectives and operational requirements.

Messe Stuttgart India had organised a logistics solutions trade fair and exhibition LogiMAT India 2024, from February 28 to March 1, 2024. Building upon the success of LogiMAT India

2024, Messe Stuttgart India is gearing up for an even more impactful edition with LogiMAT India 2025.

In a bid to modernize the Navy's logistics infrastructure, spanning over 60 warehouses nationwide, LogiMAT India's organizers conducted a site visit to Material Organisation, Indian Navy in Mumbai, to gain firsthand insights into the challenges faced and to collaborate with relevant industry players.

Exhibitors including Addverb Technologies, Armstrong Dematic, Racks and Rollers, Nilkamal Ltd, Accio Robotics, and Karcher Cleaning Systems were among those who extended their expertise and solutions to meet the Navy's requirements. LogiMAT India'25 is scheduled from February 13-15, 2025 in Mumbai.

With an anticipated 200+ exhibitors and a projected attendance of 15,000+ visitors, the event is poised to set new benchmarks in the logistics industry.

As anticipation mounts for LogiMAT India'25, this collaboration between Messe Stuttgart India and the Indian Navy exemplifies a commitment to driving innovation and efficiency in India's logistics landscape, propelling the nation towards greater heights of progress and prosperity, the statement said.

https://economictimes.indiatimes.com/news/defence/messe-stuttgart-india-indian-navy-collaborate-to-modernise-pan-india-logistics-infrastructure/articleshow/111110807.cms

## THE ECONOMIC TIMES

Wed, 19 Jun 2024

# India can be a hub for making submarines in the APAC region, says Thyssenkrupp exec

. India can be a submarine-making hub in the Asia Pacific region, said a top executive at Thyssenkrupp Marine Systems (TKMS), which claims to be the world market leader in conventional submarines. Oliver Burkhard, CEO of TKMS, said demand for submarines is expected from Europe, South America and South Asia.

TKMS has partnered with Mazagon Dock Shipbuilders Ltd (MDL) and the two have jointly bid for the Indian Navy's Project-75I to build six advanced submarines, which are estimated to cost over Rs 45,000 crore.

These submarines are to be made while opting for significant domestic value addition. "This Indian project has the same pattern as we have for South America. India could be the hub for our technology to produce them for some other countries in the Asia Pacific," he said.

This comes at a time when TKMS is being carved out of Thyssenkrupp Group, as the parent company invests in non-polluting technologies (such as green hydrogen) for steel making.

"Making a million tonnes of steel making capacity CO2 free will require a \$1 billion investment in new facilities," Burkhard said. India has been insisting on a transfer oftechnology (ToT) clause in defence supply contracts to wean away import reliance and encourage local manufacturing.

https://economictimes.indiatimes.com/news/defence/india-can-be-a-hub-for-making-submarines-in-the-apac-region-says-thyssenkrupp-exec/articleshow/111120919.cms



Wed, 19 Jun 2024

## Canadian AFVs For Indian Army – Why Delhi Must 'Check' Stryker Deal That Kills Indigenous WhAP & Benefits Trudeau

In an age when the government emphasis is on 'Make in India,' the homegrown Wheeled Armoured Platform (WhAP) is facing tough competition from the American Stryker armored vehicles. US National Security Advisor Jake Sullivan is on an India visit, and the negotiations on the acquisition are nearing finalization.

The Indian Defense Ministry has proposed a three-phase plan for the project. After the limited off-the-shelf purchase of Strykers through the Foreign Military Sales (FMS) route, the joint production will be in India. This would also pave the way for the development of futuristic armored vehicles.

The Strykers are purchased to be deployed in high-altitude areas along the border with China in regions like Eastern Ladakh and Sikkim. The Indian Army is looking to modernize its BMP-II vehicles of Russian origin and replace them with wheeled and tracked Infantry Combat Vehicles.

The Army also requires ICVs for amphibious operations. The Stryker doesn't come in an amphibious variant, for which the Army will be looking at homegrown alternatives.

The Stryker variants include Infantry Carrier Vehicles, Mobile Gun Systems, medical evacuation vehicles, fire support vehicles (ICV), anti-tank guided missile carriers, and reconnaissance vehicles.

It has been 20 years since the Stryker made its debut during Operation Iraqi Freedom II. It was during this operation that the 3rd Brigade, 2nd Infantry Division (now 1-2 Stryker Brigade Combat Team) earned its nickname 'Ghost Soldiers'.

The Ghost Brigade was the first to operate the vehicle. The occupants of the armored vehicle were kept safe from conventional weapons like rocket-propelled grenades. The defeat of Saddam's Army led to the rise of the use of Improvised Explosive Device (IED).

The Stryker's armor was tough before it was hit by a large IED. The Stryker sustained extensive damage, but the crew came out unscathed. It earned the reputation amongst the US Armed Forces that "not only could these trucks bring you to the fight, but they could bring you home."

The Stryker is an 8-wheel drive combat vehicle developed by General Dynamics Land Systems-Canada for the US. It is powered by a Caterpillar C7 engine with 350 horsepower, has a range of 483 kilometers, and can run at a maximum speed of 100 km/h. It has bolt-on ceramic armor for enhanced protection and can withstand improvised explosive devices. It is compatible with Chinook helicopters already in the Indian Air Force's inventory.

India had expressed concerns about the Stryker armored fighting vehicle being underpowered. The Caterpillar C7 350 horsepower engine will struggle at high altitude regions due to the rarefied atmosphere. The US has offered to upgrade the Stryker with the Cummins-developed Advanced Combat Engine with 750 horsepower.

Unlike the F-414 engine deal, the Strykers deal has received mixed reactions from the Indian defense fraternity. They see it as a "terrible" move at every level, considering India has indigenous capability for it.

Shiv Aroor, a senior Indian defense journalist, said: "(It is) wasteful co-production of capability already with firms like Tata, Mahindra, Kalyani, etc. Stryker ecosystem is in Canada, why should GOI (Government of India) benefit Canada." He added: "It is a waste of 'credits' under India-US DTTI (Defence Technology and Trade Initiative)."

#### The Indian Wheeled Armoured Platform

Indian defense giants Tata, Mahindra, and Kalyani had joined hands with the Defence Research and Development Organisation (DRDO) to build the armored vehicle known as the Wheeled Armoured Platform (WhAP). The platform was unveiled at Defexpo 2014 in Delhi. It was tested at high altitudes, and the Indian Army was impressed by its capabilities.

Dr. S. Guruprasad, former director of Research and Development Establishment (Engineers), a DRDO laboratory, at Dighi, told the EurAsian Times: "WhAP is an excellent, proven technology. It has been tested at high altitudes. The Army was impressed by its performance." Unlike the Stryker, WhAP is amphibious.

An armored vehicle has three distinct features: mobility, which defines the capability to negotiate a particular terrain, armored protection, and weapons it carries. WhAP holds well agains Stryker. WhAP can carry 2+9 people, while Stryker can carry 3+8 people. While the Indian combat vehicle weighs 24.5 tons, the Stryker weighs 20.3 tons. WhAP's power-to-weight ratio is 25, compared to Stryker's 17.24.

WhAP also has amphibious capability and nuclear sensors that are absent in Stryker.

Tata has already delivered the first units to the Indian Central Police and Indo-Tibetan Border Police (ITBP), and the vehicles are more likely to operate in the border region of Ladakh. They are priced around 2.6 million euros, about 30 to 50% cheaper than their Western competitors.

The WhAP can achieve a top speed of 100 kmph and has a maximum range of 500 km. It has been tested for high-altitude operations in Eastern Ladakh. WhAP's amphibious drive mode allows it to cross streams at up to 10kph with onboard water jets. The fuel tanks are located outside, improving crew safety.

To protect against landmines, the back-to-back seats are linked to the roof. It has three gun ports and vision blocks for firing on each side. There are two hatches for patrolling and a hydraulics-

operated single rear-opening door. It has NBC (Nuclear, Biological, and Chemical) environmental protection.

At the front end, it has a slanted armored plate, also known as a glacis plate. It is one of the strongest pieces of armor in the vehicle. The inclined position of the armored plate provides superior mine protection.

It is equipped with the Kongsberg 30-mm cannon, which can be fired remotely. It can fire high-explosive incendiary (HEI), armor-piercing incendiary (API), and armor-piercing fin-stabilized discarding sabot tracer (APFSDS-T) rounds with a 30-mm caliber. It has an effective range of 3,000 meters. The 40-mm grenade launchers are used as a secondary weapon. It can accommodate anti-tank missiles or a 12.7mm machine gun.

https://www.eurasiantimes.com/canadian-afvs-for-indian-army-why-delhi/

## **Business Standard**

Wed, 19 Jun 2024

# What is the Tibet-China Dispute Act passed by US Congress last week?

A Bill that aims to counter China's position that it has controlled Tibet since 'ancient times' and to promote dialogue between Beijing and exiled Tibetan spiritual leader, the Dalai Lama, was passed by US lawmakers and went to President Joe Biden's desk last week.

The House of Representatives, the lower chamber of the US Congress, voted 391-26 on June 12 to approve the Promoting a Resolution to the Tibet-China Dispute Act, which had passed the Senate, the upper chamber, last month.

A press release on the website of Jeff Merkley, the Democratic senator from the US state of Oregon who had introduced the Bill in the Senate, said that the US Congress had passed the "bipartisan Bill to enhance US support for Tibet and promote dialogue between the People's Republic of China (PRC) and the Dalai Lama towards a peaceful resolution of the long-standing dispute between Tibet and China".

The release added, "The Promoting a Resolution to the Tibet-China Dispute Act now goes to President Biden, who is expected to sign it into law."

#### What does the Bill aim to do?

In essence, the Bill aims to harden Washington's position on Tibet and pressure Beijing into resuming negotiations with the Dalai Lama.

No formal dialogue between Chinese and Tibetan authorities has happened since 2010.

The Bill aims to direct funds to counter what it describes as "disinformation" from China about Tibet's history, people and institutions.

The Bill also refutes Beijing's claim that Tibet has been part of China since ancient times. And, going a step further, it would make it official US policy that the dispute over Tibet's status is unresolved.

It would also make it policy that Tibet refers not only to the Tibet autonomous region, as defined by Beijing, but also Tibetan areas of the Chinese provinces of Qinghai, Gansu, Yunnan, and Sichuan.

The Act aims to enhance US support for Tibet. It would empower US State Department officials to "actively and directly counter disinformation about Tibet from the Chinese government, rejecting false claims that Tibet has been part of China since 'ancient times'," said the release from Merkley's website.

The Act will also push for negotiations "without preconditions" between the Chinese government and the Dalai Lama or his representatives or the democratically elected leaders of the Tibetan community.

Finally, it will also make it the US State Department's responsibility to "coordinate with other governments in multilateral efforts" towards the goal of "a negotiated agreement on Tibet".

#### CCP's status quo in Tibet 'not acceptable'

"The people of Tibet deserve to be in charge of their own future, and, today, Congress has voted to stand with Tibetans in their struggle for freedom and self-determination," said Merkley, co-chair of the Congressional-Executive Commission on China, according to the release.

Merkley added that the Act would help "counter misinformation from the Chinese government about Tibet" and would push for "negotiations between the PRC and Tibet to end this longstanding dispute".

"I look forward to President Biden swiftly signing this Bill into law... the people of Tibet cannot wait any longer," said Merkley.

"Our bipartisan Bill will refresh US policy towards Tibet and push for negotiations that advance freedom for the Tibetan people and a peaceful resolution to the CCP's conflict with the Dalai Lama," said Indiana's Republican Senator Todd Young.

Young added that Congressional passage of the Bill "further demonstrates America's resolve that the CCP's status quo – both in Tibet and elsewhere – is not acceptable".

"Let the overwhelming passage of our strong, bipartisan Bill be a clear message to the Tibetan people: America stands with you on the side of human dignity, and we support you in your quest to secure the basic rights to which you are entitled under international law," said Democratic US Representative Jim McGovern, who is also a member of the Congressional-Executive Commission on China.

"The PRC has systematically denied Tibetans the right to self-determination and continues to deliberately erase Tibetan religion, culture, and language. The ongoing oppression of the Tibetan people is a grave tragedy, and our Bill provides further tools that empower both America and the international community to stand up for justice and peace," added McGovern.

#### What is China's position on Tibet?

China claims that Tibet has been under central Chinese rule for over 700 years.

However, Tibetan activists have argued that the region was self-governed for extended periods.

While the Dalai Lama has not recognised Beijing's historical claim over Tibet, he has also said that he does not seek political independence for the region.

In April, the Chinese foreign ministry said that any talks with the Dalai Lama would not address the question of Tibetan autonomy. Instead, any such talks would only concern his "personal future" or that of his close associates.

At present, the US State Department considers the Tibet autonomous region and other Tibetan areas to be a part of China.

However, Washington has not explicitly taken the position that Beijing's occupation of Tibet in the 1950s was in accordance with international law.

https://www.business-standard.com/external-affairs-defence-security/news/china-may-face-major-us-challenge-to-its-control-of-tibet-soon-here-s-how-124061301077 1.html

## THE ECONOMIC TIMES

Wed, 19 Jun 2024

# China's 'salami-slicing strategy' against Philippines in disputed sea

Ramming boats, building militarised islands and threatening perceived trespassers -- China is escalating confrontations with the Philippines in a bid to push it out of the South China Sea, analysts say. One of the most perilous flashpoints between the two nations is a submerged reef called the Second Thomas Shoal, where in 1999 the Philippine navy intentionally marooned a decrepit World War II ship to assert the country's territorial claims.

Still home to a small garrison of Filipino marines, the crumbling BRP Sierra Madre sits around 200 kilometres (120 miles) from the western Philippine island of Palawan and over 1,000 kilometres from China's nearest major landmass.

It requires frequent resupply missions, which China's coast guard has sought to thwart by firing water cannon at Philippine boats -- and sometimes colliding with them. The Philippines on Wednesday accused China's coast guard of ramming and boarding its navy boats at the Second Thomas Shoal. A Filipino sailor lost a thumb in the confrontation, according to the Philippine navy.

"Beijing is seeking to take control of the Second Thomas Shoal," said Helena Legarda, lead analyst at the Mercator Institute of China Studies in Berlin. "(China) is waiting for the ship to collapse or to become unliveable, forcing Manila to remove its contingent of marines." That would leave Beijing poised to seize control of the reef, Legarda said, strengthening its foothold in a waterway rich in oil and gas deposits and through which trillions of dollars in trade passes every year.

Beijing claims sovereignty over almost the entire South China Sea despite competing claims from the Philippines and other Southeast Asian nations. It rejects an international ruling that its assertions have no legal basis. Wang Yiwei, director of the Institute of International Affairs at Renmin University of China, insisted Beijing was "very restrained" in defending what it sees as its territory. - 'Bow down to Chinese power' - But other analysts point to increasingly bold Chinese actions to strengthen its presence. Duan Dang, a Vietnam-based maritime security analyst, said Beijing was employing a "salami-slicing strategy".

That includes boosting "military, coast guard, and militia vessels at It requires frequent resupply missions, which China's coast guard has sought to thwart by firing water cannon at Philippine boats -- and sometimes colliding with them. The Philippines on Wednesday accused China's coast guard of ramming and boarding its navy boats at the Second Thomas Shoal. A Filipino sailor lost a thumb in the confrontation, according to the Philippine navy.

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It has since deployed vessels that the Philippines says harass its ships and prevent its fishermen from accessing the fish-rich lagoon. China has also engaged in a vast program of island-building, arming the artificial outposts with missile systems and even runways for its fighter jets. Beijing ripped up roughly 6,000 hectares (15,000 acres) of reef to create about 1,300 hectares of new land for artificial islands in the Spratlys, according to research from the US-based Centre for Strategic and International Studies released in 2022.

The militarised islands enable Chinese vessels to patrol as far south as Indonesia and Malaysia. Beijing has also sought to enforce its sovereignty claim with new rules that -- since Saturday -- allow its coast guard to detain foreigners who trespass in the disputed waters for up to 60 days. China aims to "coerce the Philippines into surrendering its lawful rights and entitlements under international law" in the South China Sea, said Jay Batongbacal, a professor at the University of the Philippines College of Law.

"These confrontations are all part of its steady employment of force... against the Philippines, to make it bow down to Chinese power," he told AFP. - 'Global consequences' - Experts told AFP it was highly unlikely Beijing wanted war with Manila. But President Ferdinand Marcos has warned that Beijing would come "very close" to an act of war if it wilfully killed a Filipino citizen. The United States has also urged China to rein in its behaviour. The Biden administration has said that "an armed attack" against Philippine public vessels, aircraft, armed forces and coastguard anywhere in the South China Sea would invoke a mutual defense treaty between the two countries.

Shanghai-based international relations scholar Shen Dingli told AFP there was a "possibility that Washington could get drawn into an armed conflict in the South China Sea". "One consequence of US involvement would be that... China restrains itself," Shen said. "Another result would be that US deterrence fails," he added. "Whichever happens, the consequences would be global."

https://economictimes.indiatimes.com/news/defence/chinas-salami-slicing-strategy-against-philippines-in-disputed-sea/articleshow/111105794.cms



Wed, 19 Jun 2024

## After 'Super Success' Against Russia, Taiwan Gears-Up To Deploy TOW 2B Anti-Tank Missiles To Check China

Amid the delay in US arms delivery to Taiwan, Minister of National Defense Wellington Koo announced on June 17 that Taipei would receive all shipments of the TOW 2B anti-tank missiles from the United States by the end of 2024.

Taiwan had ordered 1,700 TOW missiles and 100 launchers in 2015, with delivery expected in 2022. However, none of them were delivered. Koo said all the missiles were anticipated to be delivered by the end of this year, even though the initial batches of missiles were rejected in earlier US Army evaluations. The total cost of the sale stood at US\$268 million.

The delivery of the TOW is expected to bolster Taiwan's firepower. With its "top attack" capability, the TOW 2B anti-tank missile can target bunkers and armored vehicles. It can also destroy incoming landing craft during anti-landing operations. The US Defense Security Cooperation Agency stated that the missiles were a significant step towards Taiwan's goal of "developing an integrated ground defense capability."

The Taiwanese Army currently uses outdated, wire-guided TOW 2A anti-tank missiles. These missiles have a shorter range and are prone to deviate from their intended path if obstructed by the terrain. Upgrading to new weapon systems would significantly enhance the country's armed forces' anti-armor capabilities.

The new missiles, which the US military first deployed in 2012, have an effective range of 4.5 kilometers and a top strike mode that targets armored vehicle tops, where they are most vulnerable.

The TOW 2B can hit a target within 23 seconds of being launched, which improves the anti-armor team's ability to engage hostile armored vehicles rapidly.

Besides Taiwan, Ukraine has been armed with the TOW 2B, and Kyiv's forces have extensively deployed the weapon to take on Russian ground vehicles.

While any cross-strait conflict between the two states is expected to take place on the sea and in the air, it is believed that Taiwan would need significant ground-based firepower to expel Chinese tanks that might roll inside the island state as part of an invasion.

The deliveries of the missiles come at a time when Taiwan is reinforcing its military to combat the lingering threat of a Chinese invasion. Last month, for instance, the Chinese People's Liberation Army (PLA) conducted two-day intensive military drills, sending heavily armed warplanes and staging mock attacks as punishment for Taiwan's election of its new pro-democracy President Lai Ching-te.

There have been concerns that China could use these recurrent military drills to eventually launch an invasion of the self-ruled island that it considers a renegade Chinese province. Several military pundits have noted that Beijing could launch an armed attack by 2027.

Taiwan is developing an overall strategy to thwart any potential invasion. In addition to readying troops for combat, the self-ruled island has undertaken a modernization drive, much of which depends on arms purchases from the United States.

The US, on its part, has ignored China's warnings and accusations and continued to sell sophisticated weapon systems to Taiwan. However, despite high-end purchases, severe delays have marred Taiwan's ability to ensure combat preparedness against Beijing.

#### **US Arms For Taiwan Have Been Delayed**

Koo stated that the TOW missiles were just one of the three systems whose delivery was running behind schedule. The other two were the F-16 Viper fighter jets and the AGM-154 Joint Standoff Weapons.

The Defense Minister said Taiwan had asked the United States to finish all deliveries by the end of 2026. Two prototype F-16s will be sent for flight testing before the end of this year.

Taiwan understands that to stave off a Chinese military invasion, it is critical to have highly agile aircraft that can detect, track, and attack targets at a distance. In 2019, the US allowed Taiwan to buy F-16 fighter jets from Lockheed Martin Corp. This agreement would make the island home to the largest F-16 fleet in Asia, with over 200 aircraft.

However, the delivery of these planes has been delayed. In 2023, Taiwan's former Defense Minister Chiu Kuo-cheng stated that disruptions in the supply chain had delayed the delivery of 66 F-16V advanced fighters.

Congressmen from the US have also expressed worries over Taiwan's efforts to refurbish its fleet and have demanded that Taiwan be provided with new Lockheed Martin F-16 Block 70/72 aircraft. Earlier this year, Taiwan's former military chief, Chiu Kuo-cheng, said that the United States was trying to expedite the delayed delivery of much-needed weapons ordered by Taiwan as the island sought to fortify its defenses.

The F-16 Vipers, for one, are expected to be instrumental in thwarting a Chinese invasion. The aircraft will be armed with the AGM-154 stand-off weapons, among other weapons.

Additionally, reports have indicated that the delivery of the first 38 M1A2T Abrams tanks, initially slated for the middle of this year, has likely been delayed until the fourth quarter.

The report stated that based on the computation of the baseline M1A2 model's monthly production rate of approximately four, the Taiwanese military should have received about 30 M1A2Ts for training and trial purposes by now. However, there have been unexplained and unwarranted delays.

As per a previous report from Washington-based think tank, the Cato Institute, there is a significant backlog of weapons worth US\$19.1 billion that Taiwan has ordered, some of which have been postponed for more than ten years. Traditional armaments account for the highest amount, valued at US\$10.87 billion, followed by asymmetric weapons valued at US\$5.4 billion and ammunition valued at US\$2.84 billion.

According to Cato's report from March 5, the asymmetric weapons that were delayed were the MQ-9B unmanned aircraft, the Harpoon coastal defense missiles, and the Stinger missiles. In addition, conventional weaponry like MK-48 heavyweight torpedoes, AGM-9X Block II missiles, and AGM-84H Standoff Land Attack Missile Expanded Response (SLAM-ER) systems have also been overdue.

Nonetheless, the US is working to expedite the deliveries, as witnessed by the recent announcement regarding the TOWs. US officials have expressed optimism that the sector would soon catch up, attributing the backlog to reasons including the COVID-19 epidemic, the crisis between Russia and Ukraine, and delays in the supply chain.

https://www.eurasiantimes.com/after-super-success-against-russia-taiwan-gears/

## Science & Technology News



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### **Boeing Starliner's return to Earth pushed to June 26**

Boeing Starliner's return to Earth from the International Space Station with its first crew of astronauts has been pushed back to June 26, a NASA official said on Tuesday.

NASA astronauts Butch Wilmore and Sunita Williams were launched aboard Starliner June 5 and arrived at the ISS following a 24-hour flight, in which the spacecraft encountered four helium leaks and five failures of its 28 maneuvering thrusters.

Starliner's first flight with astronauts is a crucial last test in a much-delayed and over-budget program before NASA can certify the spacecraft for routine astronaut missions and add a second U.S. crew vehicle to its fleet, alongside SpaceX's Crew Dragon.

The new delay of the return of Starliner is intended "to give our team a little bit more time to look at the data, do some analysis and make sure we're really ready to come home," Steve Stich, NASA's commercial crew program manager, said during a news conference.

NASA is targeting a departure no earlier than June 26, leaving open an opportunity for further extensions of time at the ISS. Starliner, while designed for future six-month missions, can stay docked to the ISS for a maximum of 45 days during its current mission.

The return to Earth is expected to last about six hours and target a location in the desert of Utah, New Mexico or other backup locations, depending on local weather conditions.

The latest in-flight problems follow years of other challenges Boeing has faced with Starliner, including a 2019 uncrewed test failure where dozens of software glitches, design problems and management issues nixed its ability to dock to the ISS. A 2022 repeat uncrewed test had a successful docking.

https://indianexpress.com/article/technology/science/boeing-starliner-return-earth-9402805/

