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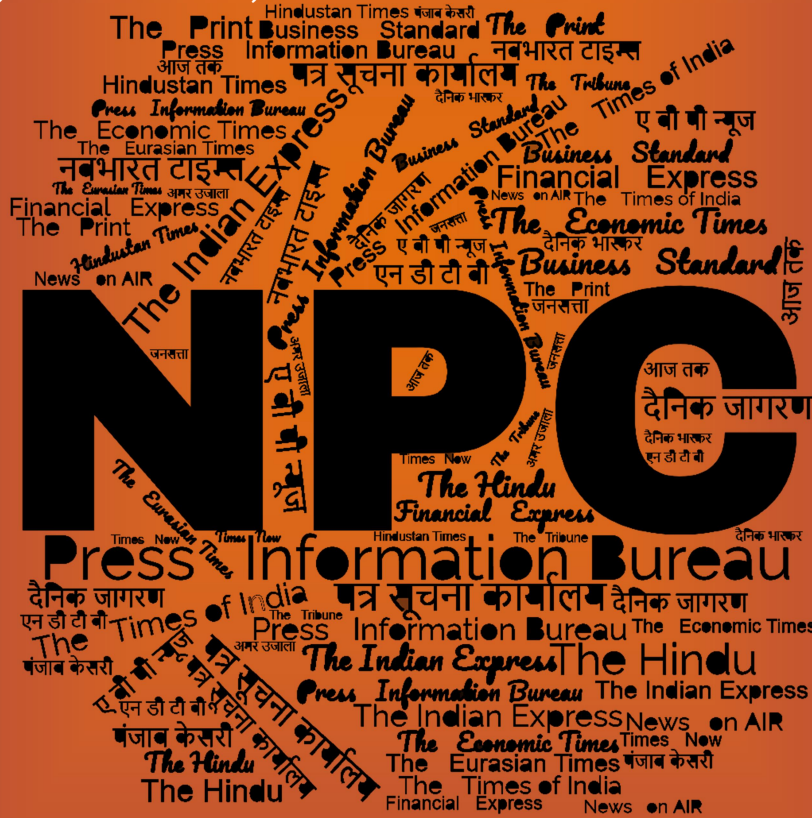
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Defence News

Defence Strategic : National/International



Thu, 02 Mar 2023

Lt-Gen MV Suchindra takes over as Vice-Chief of Army Staff

Lieutenant General MV Suchindra Kumar on Wednesday here assumed the appointment of the Vice Chief of the Army Staff. He has taken over the charge from Lieutenant General BS Raju who will now head the Jaipur based Sapta Shakti Command.

Prior to taking over as the Vice Chief of the Army Staff, Kumar was tenanted the appointment of Deputy Chief of Army Staff (Strategy) at Army Headquarters here. He has experience in intelligence, operations, force structuring, operational logistics and tech infusion in his recent appointments. An alumnus of Sainik School Bijapur and National Defence Academy, Kumar was commissioned into 1 Assam Regiment in 1985. He has commanded 59 Rashtriya Rifles Battalion, an Infantry Brigade and an Infantry Division on the Line of Control(LOC) and the highly active White Knight Corps in Northern Command.

The Officer has held various staff and instructional appointments to include an instructional tenure at Infantry School, Mhow, Senior Operations Officer in the United Nations Sector in Cambodia, Colonel (Policy) in Military Secretary Branch, Indian Army Training Team at Lesotho, Brigadier General Staff (Operations) of a Corps in the Eastern Theatre, Additional Director General Military Intelligence and Director General Military Intelligence at Army HQ.

Kumar has attended the Defence Services Staff College, Wellington, Higher Command Course, Mhow and the National Defence College, New Delhi. He has also attended courses on 'Cooperative Security in South Asia' in Sri Lanka and 'United Nations Senior Mission Leaders Course' in Egypt. His military papers have been published in a number of professional journals.

<https://www.dailypioneer.com/2023/india/lt-gen-mv-suchindra-takes-over-as-vice-chief-of-army-staff.html>



Fri, 03 Mar 2023

CRPF's CSRV Comes under Spotlight as its Pic in Kashmir goes Viral

The Central Reserve Police Force (CRPF) has been using modified Critical Situation Response Vehicles (CSRV), which can accommodate at least three commandos and be raised to reach the

upper floors of a building while shielding them from the bullets, in counter-terror operations in Jammu & Kashmir (J&K)'s urban areas.

CSRVs came under the spotlight after the photograph of one of them at the scene of Tuesday's operation in J&K's Pulwama was circulated on social media.

Two terrorists Aqib Mushtaq Bhatt and Aijaz Ahmad Bhatt blamed for the killing of a Kashmiri Pandit days earlier were shot dead in the operation. An army soldier was also killed and another was injured in the operation.

CRPF officers said they have two CSRVs and one of them was used in Pulwama as the two terrorists refused to surrender and continued to fire indiscriminately at security forces.

The two were hiding in a mosque and were also allegedly involved in the killing of two migrant workers last year.

The hard armour at CSRV's front can also be used to break walls and provide an entry into a building for security personnel.

"The two CSRVs were designed and developed for counter-terror operations in urban or semi-urban areas during 2018-2020. Both are used only in the Valley. The vehicles were modified with the help of the Special Vehicles Branch of Motor Transport Directorate, CRPF headquarters," said a CRPF officer.

The officer added the branch is mandated to work on the design and commission of all types of armoured and specialised vehicles into the force. CSRVs can negotiate small and congested lanes, the officer added.

"It is provided with...a hydro-pneumatic hammer for ramming and breaching the compound boundary wall structure. It also helps in the demolition of any obstruction such as tin sheet boundary at perimeters."

The armoured platform at the front of a CSRV accommodates armed soldiers to engage any target. "The platform can be raised or elevated with hydraulic power to provide an aerial view to the soldiers to effectively engage the enemy," the officer said.

The officer added raising a platform before engaging a target helps at times when they find it unsafe to enter a building from the ground floor.

The CRPF took the concept from The Rook vehicle the US security agencies use in similar operations. CRPF inspector general (Kashmir operations sector) MS Bhatia, said such vehicles boost the morale of personnel. "It has effective bullet-proofing for conventional and non-conventional ammunition. Our personnel know that using CSRV, they can enter any building and can engage the target from any level."

Bhatia said a CSRV can reach even up to the second floor of a building. "It is certainly a force multiplier. The government has focused a lot on the modernisation of weapons and other devices for the force. We now have some of the best gadgets."

The CRPF developed the vehicle's first prototype in 2012 in collaboration with Defence Research and Development Organisation. The bulletproof Anti-Terrorist Vehicles were then inducted for security at the Parliament Complex. The same were modified and then sent to Kashmir.

Another CRPF officer cited the operational requirements and said the design features and broad specifications were finalised in Delhi and the fabrication was undertaken in Greater Noida. “We used the first vehicle on June 3, 2021, when a Pakistan-trained terrorist, Mohammed Amin Malik hid in a CRPF camp, snatched a weapon, and fired indiscriminately. Malik was neutralised that day. No civilian or security personnel were injured that day.”

<https://www.hindustantimes.com/india-news/crpf-csrvc-comes-under-spotlight-as-its-pic-in-kashmir-goes-viral-101677814128264.html>



Thu, 02 Mar 2023

Indian Army Proposes a major Acquisition Plan for 307 Advanced Towed Artillery Gun Systems to Boost Firepower at LAC

The Indian army has put forth a proposal to the Ministry of Defence (MoD) to buy 307 Advanced Towed Artillery Gun Systems (ATAGS). The ATAGS is an indigenous towed artillery gun system project developed by the Defence Research and Development Organisation (DRDO) as a part of the artillery modernisation programme of the Indian army.

According to the MoD, the proposal worth over \$1 billion has been received from the Indian army and is under discussion. It is expected to be cleared soon and sent for clearance by the Cabinet Committee on Security, the MoD clarified.

As per the reports, this would be the first order for the indigenous howitzer which can strike targets up to 50 km. With such an extended range, reports suggest that the ATAGS is classified to be the best gun in its class.

The forces have been conducting trials of the gun in different altitudes and terrain. The ATAGS have been upgraded as per the suggestions made by the users, the officials said.

The ATAGS' firepower

The ATAGS is a large calibre Gun system with the capability to program and fire future Long Range Guided Munitions (LRGM) to achieve precision and deep strike.

The technology and know-how of raw howitzer have been shared with two private firms Tata Advanced Systems and Bharat Forge group by Defence Research and Development Organisation (DRDO) and they would be supplying the system to the forces including over 320 high mobility vehicles.

The system is configured with an all-electric drive mechanism. will ensure maintenance-free and reliable operation over long periods of time.

The trials of the 155mm/52 calibre Advanced Towed Artillery Gun System (ATAGS) were completed at the Pokhran Field Firing Range (PFFR) between April 26 and May 2.

“At the very first, the ATAGS is set to be the most advanced and the first gun in the world which has the capability to fire Bi-Modular Charge System (BMCS) zone 7,” said Bharat Forge’s CMD Baba Kalyani on the rigour and results of the trails.

The BMCS is the key parameter for gun trails as it consists of two types of charges – Lower Zones (LZ) for shorter ranges and Higher Zones (HZ) for longer ranges. The system utilises fully indigenous raw materials, equipment and processes. Debris-free burning is ensured over a wide range of operating temperatures to take care of different weather conditions prevailing in Siachen to Rajasthan. Apart from primary ammunition, secondary ammunition can also be fired with BMCS. The BMCS was extensively evaluated and provisional range tables are generated.

The ATAGS also completed the high-altitude trials in Sikkim where the ATAGS created a new record as it fired at 13,000+ feet height and successfully completed 500+ km in treacherous high-altitude terrain up to 15,400 feet. The recorded range is up to 48 Km for High Explosive Extended Range Full Bore projectile with Base Bleed (ERFB-BB).

Besides, the gun has a high chamber volume of 25 litres, with the future provision of up-gunning and use of extended-range ammunition with precision capability.

The other top features include an auto-loading and positioning system, automatic ammunition handling system, auto-laying, safety interlocks and muzzle velocity radar.

According to the DRDO, it will ensure the least maintainability and failures

Armament Research and Development Establishment (ARDE) Pune is the nodal laboratory of the DRDO for the design & development of ATAGS, along with other DRDO laboratories.

The development has been done with two industry partners, Tata Advanced Systems Ltd and Bharat Forge Ltd, along with the active participation of other industries.

The reliability of both guns has been proven by firing multiple rounds in various zones, including burst, intense & sustained modes. High accuracy and consistency in range and line with maximum range have been established, the DRDO had said recently.

<https://www.financialexpress.com/defence/indian-army-proposes-a-major-acquisition-plan-for-307-advanced-towed-artillery-gun-systems-to-boost-firepower-at-lac/2997400/>

THEWEEK

Thu, 02 Mar 2023

How will HAL's HTT-40 Help in Pilot Training for New IAF Inductees?

By Abhinav Singh

The news about the approval for procurement of 70 HTT-40 basic trainer aircraft from Hindustan Aeronautics Limited (HAL) is indeed a reason for cheer for the Indian Air Force. This aircraft will be supplied over a period of six years, and the procurement would cost around Rs 6,828 crore. The trainer aircraft will be used by the IAF for fundamental flight training, aerobatics, instrument flying, and close formation flights, as well as for navigation and night flying.

The HTT-40 was awarded the airworthiness certificate in mid- 2022, six years after its inaugural flight.

The HTT-40 has been certified to comply with Preliminary Staff Qualitative Requirements and Federal Aviation Regulation 23 standards following a design evaluation, aircraft systems tests, and flight tests involving HAL and IAF pilots. The approval came from the Centre for Military Airworthiness and Certification, which is part of the Defence Research and Development Organisation (DRDO).

HAL has reported that the tandem-seat HTT-40 has a take-off weight of 2,800kg, a top speed of 450km per hour and a range of 1,000km. The aircraft is operated by a Honeywell TPE-331-12B turboprop engine, with an electronic controller, pressurised fuel system, dual hydraulics, and a glide ratio of 13:1.

“The HTT-40 has air-conditioned cockpits, advanced avionics and hot refueling capabilities, as well as zero-zero ejection seats, which operate at zero altitudes and zero airspeeds. This turbo trainer is fully aerobatic and features a tandem seat. The HTT-40's predecessor, the HPT-32, was afflicted with engine and fuel supply issues, which generated accidents and multiple pilot fatalities. Consequently, the IAF acquired a fleet of 75 Pilatus PC-7 Mk II trainers in 2009 after the HPT-32 was grounded,” Girish Linganna, a defence and aerospace expert and the Director of ADD Engineering Components (India) Limited, told THE WEEK.

As per market sources, HAL has invested \$85 million in the design and development of the HTT-40, comprising the production of two prototypes and a minimum of 550 flight tests. As per the Ministry of Defence, the acquisition of the aircraft will assist the Indian Air Force in addressing the current deficit of basic trainer aircraft for pilot training for new inductees. HAL will deliver 70 HTT-40 aircraft, their associated equipment and necessary training aids, such as simulators, over a span of six years.

“The HTT-40 programme is supported by a supply chain of over one hundred domestic, private small-scale enterprises, providing 1,500 direct and 3,000 indirect job opportunities through local suppliers. Pilots of the IAF will begin their training with flight instruction on these aircraft. During the next two stages, the pilots are educated in operating the Kiran Mark II jet and Hawk advanced jet, respectively,” added Linganna.

Interestingly the 70 HTT is presently composed of 56 per cent Indian-made systems and components, which is expected to increase to 60 per cent. The HTT-40 will be offered to international customers at a cost of approximately \$7 million per unit, according to market sources. Hindustan Aeronautics Limited (HAL) will be constructing the trainer at its facilities in Bengaluru and Nashik, having designed and developed the aircraft.

“The HTT-40 demonstrated superior performance compared to the Pilatus and fulfilled the IAF's performance criteria. During testing, the HTT-40 exceeded the IAF's requirement for top speed of 400 km per hour, reaching 420 km per hour. Additionally, it surpassed the IAF's ceiling requirement of 20,000 feet, achieving 20,200 feet. Furthermore, it requires 800 metres of runway for take-off and landing, which is below the 1,000 metre limit set by the IAF in its Preliminary Staff Qualitative Requirement. HTT-40 also cleared the "six-turn spin test" later,” explained Linganna.

<https://www.theweek.in/news/india/2023/03/02/how-will-hals-htt-40-help-in-pilot-training-for-new-iaf-inductees.html>

India, Italy Elevate Ties to Strategic Partnership, Sign MoU on Defence Cooperation

Ending the chill in the bilateral relationship in the last few years, in what Foreign Secretary Vinay M. Kwatra described as “legacy issues” now behind, India and Italy on Thursday announced the elevation of the bilateral relationship to the level of strategic partnership while also concluding a Memorandum of Understanding (MoU) on defence cooperation.

Italian Prime Minister Giorgia Meloni after bilateral talks with Prime Minister Narendra Modi hoped that India with its G20 Presidency could play a central role in “facilitating a negotiating process for the cessation of hostilities” in Ukraine.

“Today, we are announcing the establishment of a ‘Startup Bridge’ between India and Italy. Another important area of our mutual cooperation is defence. We have also decided to organise the joint military exercises and training courses on a regular basis,” Mr. Modi said in the joint press statement after the talks.

Briefing on the outcome of the bilateral talks, Mr. Kwatra said on the MoU defence cooperation, “In terms of sub-sectors within, it is clear that with legacy issues behind us, the door is now open for industries on the two sides to cooperate more strongly in this area particularly in the field of manufacturing, co-production, co-design and co-innovation, military exercises to be expanded and deepened to all levels of the armed forces and maritime cooperation.”

Welcoming Italy’s active participation in the Indo-Pacific, Mr. Modi said that Italy had decided to join the Indo-Pacific Ocean Initiative (IPOI). “This will enable us to identify concrete themes for enhancing our cooperation in the Indo-Pacific,” he stated.

The two countries also concluded a Declaration of Intent (DOI) on migration and mobility on which Mr. Modi said once the mutual settlements came into being, it “will usher in the new era of mutual cooperation in many fields, especially education.”

In her statement, Ms. Meloni said with its G20 Presidency, India could very much represent the interests of the global south. Talking of the situation in Ukraine, she said, “We hope that India having a G20 Presidency can play a central role in facilitating a negotiating process for the cessation of hostilities for a just peace [in Ukraine]. Keeping the multilateral community united is important and we hope the Indian Presidency can do even more.”

In this regard, Ms. Meloni pledged complete support from Italy for the upcoming G20 summit. “PM Modi knows that he can rely on us, on our cooperation and full round support for the upcoming G20 summit, and to further enhance our relationship. I firmly believe that there is a lot we can do together,” she added. Mr. Modi invited Italy to partner in ‘Make in India’ and ‘Aatmanirbhar Bharat Abhiyan’ while both leaders laid special focus on the areas of renewable energy, green hydrogen, IT, telecom, space among others.

Italy reiterated its strong condemnation of the unlawful and unprovoked aggression against Ukraine by Russian armed forces, the joint statement issued after the talks said. “Italy and India called for the cessation of hostilities and expressed their serious concern about the humanitarian

crisis in Ukraine. The two Prime Ministers discussed the destabilising effect of the conflict in Ukraine and its broader regional and global implications.”

Strategic areas of cooperation

In addition to defence, Mr. Kwatra identified space, cyber and sea as specific strategic areas for cooperation and said work would now begin to identify specific proposals for cooperation. Another area was Humanitarian Assistance and Disaster Relief (HADR) and under it joint exercises to better prepare our systems to respond to such challenges however they occur in the world, he said. Both the leaders also talked of the increasing bilateral trade which last year reached an all-time high of \$15bn. As part of the consultations, a CEO roundtable was held between business delegations of the two sides.

<https://www.thehindu.com/news/national/india-italy-elevate-ties-to-strategic-partnership-sign-mou-on-defence-cooperation/article66572174.ece>



Thu, 02 Mar 2023

Another Milestone in India-Japan Defence Ties: IAF Participates in Ex Shinyuu Maitri

On the sidelines of a joint Army exercise between India and Japan, Dharma Guardian, the Indian Army is participating in Exercise Shinyuu Maitri with the Japan Air Self Defence Force (JASDF). The air exercise is being conducted from March 1 to 2, 2023.

In this year's edition of the air exercise, the Indian Air Force's contingent is being represented by one C-17 Globemaster III aircraft. Meanwhile, the JASDF is participating in the exercise with C-2 transport aircraft. During the two-day exercise, both Air Forces are taking part in various activities divided into two phases.

The exercise's first part comprises of discussions on tactical manoeuvre and transport operations. The exercise's second phase entails flying drills with IAF C-17 and JASDF C-2 cargo aircraft.

Exercise Shinyuu Maitri with JASDF comes at a time when IAF's heavy lift transport aircraft fleet is also participating in Exercise Desert Flag VIII in UAE and Exercise Cobra Warrior in the UK.

Other military exercises with Japan

Over the years, India and Japan have been engaging in various military exercises. The bilateral and multilateral training exercises have catered to strengthen the defence ties between both nations and also served as a platform to enhance operability between the forces.

Dharma Guardian

The Armies of India and Japan are also currently engaged in a joint training exercise, Dharma Guardian. The annual exercise has been conducted in India since 2018. The 4th edition of the

Exercise 'Dharma Guardian' between India and Japan is being held from February 13 to March 2 at Komatsu, Japan.

The joint exercise schedule includes house intervention drills, raids on terrorist hideouts in semi-urban terrain, combat first aid, unarmed combat and close-quarter combat firing where both sides jointly train, plan and execute a series of well-developed tactical drills for neutralisation of likely threats.

Japan-India Maritime Exercise (JIMEX)

With a particular emphasis on maritime security cooperation, the JIMEX series of exercises started in January 2012. The Indian Navy and the Japanese Maritime Self-Defense Force (JMSDF) engage in the exercise in every two years. The exercise is intended to improve communication and seamanship protocols and streamline interoperability.

Along with the various military exercise, Shinyuu Maitri between India and Japan gives an opportunity for the air warriors of both nations to interact and study each other's operational philosophies and best practices. The air exercise is yet another milestone in the two countries' developing defence cooperation and an opportunity for the IAF to operate in diverse conditions worldwide.

<https://newsonair.com/2023/03/02/another-milestone-in-india-japan-defence-ties-iaf-participates-in-ex-shinyuu-maitri/>



Thu, 02 Mar 2023

Australian Military in India on Exchange Programme

Fifteen officers from the Australian Defence Forces are visiting India from March 1 under the inaugural General Rawat India-Australia Young Defence Officers' Exchange Programme that was announced in 2022.

"During the Exchange Program the Australian officers will be hosted by fifteen officers from the Indian armed forces of similar rank and skillset, and will visit various Indian defence establishments across four cities," the Australian High Commission said in a statement on Thursday. The tri-Service contingent includes four female officers, it stated.

The programme aims to expose young officers from Australia and India to each other's training philosophies and capabilities.

"This is an excellent opportunity for India and Australia to introduce their young defence officers to each other's operational environments and strengthen our bilateral relationship. In 2022, in recognition of the contributions of India's first Chief of Defence Staff, General Bipin Rawat, and the importance of deepening our defence relationship, the Australian and Indian governments announced an Australia-India Young Defence Officers' Exchange Programme named in his honour," Australia's High Commissioner to India Barry O'Farrell said.

The exchange programme is the latest in a series of military to military exchanges between the two countries. It includes visits to the Air Force Academy, the College of Defence Management,

the Defence Research and Development Organisation, Naval facilities in Goa, and other key defence installations.

<https://www.thehindu.com/news/national/15-australian-military-officers-in-india-on-inaugural-general-rawat-exchange-programme/article66571696.ece>



Thu, 02 Mar 2023

Outer Space as a Growing Security and Defence Domain: Strategic Lessons on Cyber Disruption

By Caitriona Heint

An increasing number of states across the globe have been pushing outer space to the mainstream of their key security and defence policy agendas in recent years. In February 2022, the cyber attack publicly attributed to Russia on the day of its invasion of Ukraine, causing a communication outage, sparked even greater attention on the strategic security and defence aspects of space. The activity was quickly referred to as “an eye opener”.

The attack itself disabled the ability to communicate with Viasat’s KA-SAT satellite network which supplies Internet access to citizens not only in Ukraine but in other parts of Europe, too. Despite the apparent objective of disrupting Ukrainian command and control, these attacks against commercial satellite communications networks caused spillover effects in other European countries.

The incident is especially notable because even though it could have impacted government and military objects, it also impacted civilian objects, the Ukrainian population and other parts of Europe outside the zone of conflict. It affected telecommunication systems, caused loss of Internet access and disrupted energy infrastructure, primarily wind farms in Germany. The Ukrainian civilian population were prevented from accessing reliable information during the conflict and EU civilians were impacted due to spillover effects outside the conflict zone. In May 2022, Elon Musk tweeted that while SpaceX’s Starlink satellites had so far resisted Russian hacking attempts, their efforts were increasing.

Continuing, albeit heightened, pursuit of space-based secure connectivity during peacetime and conflict

Despite such incidents and provocations, it is well-recognised that the domains of space and cyber are increasingly important. Indeed, numerous efforts were already underway before the invasion of Ukraine, around the designation of space infrastructure as critical infrastructure, enhancing its resilience and ensuring connectivity. One such example pre-dating the Ukraine war is the European Commission’s 2020 proposal for a Directive on the resilience of critical entities to reduce the vulnerabilities and strengthen the resilience of critical entities or infrastructure within 10 identified sectors that include digital infrastructure and space.

Today, a clear case study now exists on how the ability to deny the use of space to an adversary has become part of modern warfare. The EU is currently raising two pertinent questions in this regard: (1) How many pieces of critical infrastructure in the EU depend on space services?; and (2) How well are these assets and services protected? Not only are these crucial questions unanswered in the EU, but they are relevant to all nations attempting to draw lessons from events of the past year to inform their future strategies. Other cyber-related activities of concern include deorbiting satellites, compromise of ground infrastructures, and disruption of satellite control systems. German Foreign Minister, Annalena Baerbock, recently explained that since Russia's invasion of Ukraine, officials are also learning how Ukraine's cybersecurity authority experts are deploying commercial Starlink terminals to help Ukrainians stay online and how they have dealt with attacks on their energy systems.

In other words, more resilient infrastructures will go some way to ensure that connectivity is maintained even when a cyber attack takes place. Some examples of practical steps taken subsequent to the Viasat attack include the issuance by the United States' Cybersecurity and Infrastructure Security Agency of an advisory for satellite operators to be vigilant, requesting all organisations to lower their threshold for reporting, and sharing indications of malicious cyber activity. The Satellite Industry Association also issued a statement of "commitment to cybersecurity best practices", expressing concern about "evolving attacks by criminals, terrorists, and nation states", while the resilience of satellite networks is said to be turning into a major concern for the US Department of Defense. The US Space Force has started a programme to ensure that commercial satcom networks that support the military are cyber secure, too.

Other notable developments provoked by the war in Ukraine include growing levels of advocacy for space industry cybersecurity standards due to heightened awareness about the vulnerability of satellites. For example, some experts are advocating that the German Federal Office for Information Security guidance for satellites could serve as a model for broader European or international cybersecurity standards for the space industry as it grows and introduces commercial software. Other cybersecurity discussions are ongoing among space agencies from countries such as the United States, Japan, China, Canada, Germany and Italy through the Consultative Committee for Space Data Systems. The Space Information Sharing and Analysis Center also facilitates information exchange about cyber threats, which is especially important as cyber threats evolve along with the growing commercialisation of the satellite industry.

Nearly one year after the invasion, Josep Borell, High Representative of the EU for Foreign Affairs and Security Policy, is seeking to emphasise this growing focus on the security and defence aspects of space. He argues that, among other steps, there is a need to (1) improve common understanding of space threats, reinforce capacity to analyse space-based risks, threats and vulnerabilities, and better understand counter-space capabilities and intentions of competitors; and (2) focus on protecting space infrastructure and making it more resilient, including through protecting supply chains.

Global re-appraisal of strategic security and defence aspects of space: Pivotal before and after the Ukraine invasion

There is heightened awareness about the need to enhance space-based secure connectivity and resilience of space infrastructure. Increasingly too, states are re-examining the strategic security and defence aspects of space. A plethora of national strategies reflecting such rethinking have been released recently or are in the making.

The US government, for example, in December 2021 released the ‘White House United States Space Priorities Framework’ where it noted the present historic moment of rapidly accelerating space activities, resulting in new challenges to global space governance as well as safe and secure space operations. The country intends to bolster its space sectors, including national security, recognising that the domain underpins national security and the ability to respond to crises and space capabilities enable the military. The US therefore intends to protect space-related critical infrastructure and strengthen the security of its space industrial base, emphasising especially an aim to work with the commercial space industry and other non-governmental space developers and operators. It is hoped that this will help improve the cybersecurity of space systems, ensure efficient spectrum access, and strengthen supply chains’ resiliency across the space industrial base. The US also aims to defend its national security interests from the growing scope and scale of space and counterspace threats. It is noted that “[t]he military doctrines of competitor nations identify space as critical to modern warfare and view the use of counterspace capabilities as a means both to reduce U.S. military effectiveness and to win future wars.” Enhancing resilience—through cyber and other means—of the national security space posture is thus described as contributing to strategic stability.

The European Union (EU), for its part, through the High Representative published an article on the European External Action Service website four days before the Ukraine invasion underlining how the classical understanding of “defence” is evolving to encompass other domains such as cyber and outer space. The High Representative explains that work packages on defence and space policies were adopted by the European Commission at the time, given the maturing of space into a strategic domain and recognising that it is an “essential enabler for most of our daily activities, whether the Internet, telecommunications, or the movement of people, ships, aircraft or vehicles.” EU endeavours will include the enhancement of European strategic autonomy in this field, new strategic EU space infrastructure to provide European space-based secure connectivity through a governmental, highly secured communication service and high-speed broadband access service to provide universal access to the Internet and reduce the digital divide. Part of the EU’s agenda is to examine the security and defence aspects of space in line with its Strategic Compass which is associated with a new roadmap on critical technologies for security and defence to boost them through research, development and innovation and reduce strategic dependencies.

Meanwhile, the United Kingdom’s (UK) first National Space Strategy and Defence Space Strategy emphasise the importance of space for the nation and defence. In February 2022, the UK’s Secretary of State for Defence explained how “[d]aily life is reliant on space and, for the Armed Forces, space underpins vital, battle-winning technologies. From space we can deliver global command & control, communications, intelligence, surveillance and reconnaissance, precision navigation, and more. Adversaries understand this reliance and are increasingly able to exploit vulnerabilities, threatening our strategic stability and security.” Like the United States, the UK government highlights that this is a “pivotal moment” for defence where it aims to rapidly operationalise the space domain.

One year since the invasion, the EU’s High Representative, Josep Borell, is also upping the ante, explaining that “[o]ur lives depend increasingly on what happens there, not ‘just’ for the transport sector, IT, telecom or research, but also for core security and defence issues. Moreover, the geo-political competition we see on Earth is projected into space, resulting in a growing level of threat affecting our security.” He notes that cyber-relevant aspects must continue to be

addressed as geopolitical competition does not appear to be waning. The Ukraine war has highlighted the crucial role of space assets and services in security terms, as satellite imagery and communications remain a ‘game-changer’ for the Ukrainian Armed Forces and the citizens alike by providing access to information and situational awareness. In other words, according to Borell, the war against Ukraine has given the EU “extra motivation to enhance security and defence including space” and it is currently working on a new strategy on space security and defence that is expected to be released in March 2023.

The EU is certainly not alone in its re-appraisal of the security and defence aspects of space. Following the ‘U.S.-India initiative on Critical and Emerging Technology’ agreed in May 2022, the inaugural meeting which was led by the National Security Advisors of India and the US in January 2023, agreed to deepen their technology partnership and launch new initiatives between both governments, industry and academia in domains such as space. Similarly, analysts note how regional rivalries in the Asia Pacific have escalated within the space domain, with developments in security space capabilities and strengthening of multilateral security cooperation frameworks that in this case are said to be primarily driven by China’s achievements in space and counterspace aspects.

Mitigating future spillover effects: International consensus, implementation of frameworks of responsible state behaviour, and confidence-building

Subsequent to Russia’s targeting of critical infrastructure in Ukraine and the spillover effects on civilians, diplomatic efforts have been made to call attention to violations of international law and the undermining of the rules-based order and agreed normative framework for responsible state behaviour in cyberspace. This framework is laid out through the UN Group of Governmental Experts’ consensus reports and reaffirmed by the preceding UN Open Ended Working (UNOEWG) prior to the current iteration. For one, statements made on behalf of Germany to the UN OEWG Intersessional in December 2022 specified that Germany and its partners have adopted a joint practice of attributing cyber incidents. Recent attributions include the spillover effects from Russia’s cyber-attacks against Ukraine on critical infrastructure in Germany, which can be clearly traced to Russia’s cyber attacks against Ukrainian targets. Many other statements indicating such public attribution to Russia from the EU, EU Member States, and countries such as the United States, Australia, Canada, the UK and New Zealand assert that this activity amounted to Russia’s violation of the normative framework for responsible state behaviour in cyberspace. However, accountability and norms implementation continue to remain unresolved and subject to ongoing negotiation. Other ground-breaking questions on international law that have come to light include Ukrainian officials’ requests that the International Criminal Court investigate whether certain Russian cyber attacks supporting its kinetic military operations that targeted Ukraine’s critical infrastructure and civilians could constitute war crimes.

In addition to such challenges to normative frameworks and international law, European officials further note that as a result of the Viasat attack, they learned that (1) this is a quickly evolving threat landscape; (2) such spillover effects are concerning because there is risk that a nation not directly involved in a conflict could be dragged into it; and (3) this type of spillover scenario can make it difficult to determine international law questions surrounding what is considered to be armed attack and where this threshold is crossed. Another concerning new trend brought to light in this conflict, which could have inherently destabilising effects, is the increasing involvement of so-called ‘hacktivists’ from both sides of the conflict. This trend is raising questions

surrounding how international and national law can deal with this development, where hacktivists were primarily part of civil society movements in the past.

To conclude, these serious challenges provide examples of questions that require further examination globally to promote stability in the near future. In the meantime, practical cyber cooperation measures between states could be initiated to begin exploring these real-life scenarios that have arisen relating to the protection of space-related critical infrastructures. Engagement could take place through the many existing bilateral, regional/sub-regional and global cyber cooperation mechanisms. Examples include the ongoing work of the Organization for Security and Co-Operation in Europe (OSCE) and ASEAN Regional Forum on cyber confidence building measures. Moreover, an “open, informal and cross-regional group of states” to advance confidence-building measures within the UN OEWG has also been convened within the second iteration of the UN OEWG. There could be potential for this group to examine these questions in its future endeavours at the global level. Other practical state cooperation measures that could be considered on this subject include information exchange on relevant incidents and changing risks that present themselves in this domain; sharing good practices and information on revised legislative and regulatory solutions; and cooperating on capacity building, including through engagements that can involve relevant non-government stakeholders.

<https://www.orfonline.org/expert-speak/outer-space-as-a-growing-security-and-defence-domain-strategic-lessons-on-cyber-disruption/>



Fri, 03 Mar 2023

Taiwan's Military to get Major Boost, Inks \$619 Million Arms Deal with US; China Objects

The United States on Wednesday (March 1) approved a potential sale of \$619 million in new weapons to Taiwan as it reports large-scale Chinese air force incursions nearby. According to the Pentagon, the US State Department approved the potential sale which includes 200 anti-aircraft Advanced Medium Range Air-to-Air Missiles (AMRAAM) and 100 AGM-88B HARM missiles that can take out land-based radar stations.

"The proposed sale will contribute to the recipient's capability to provide for the defence of its airspace, regional security, and interoperability with the United States," the Pentagon said in a statement.

Taiwan's defence ministry, meanwhile, said the missiles would "effectively defend the airspace to deal with threats and provocations from the Communist military" and would bolster defence stockpiles, the news agency Reuters reported. The ministry added that American defence companies Lockheed Martin and Raytheon Technologies are the principal contractors. The above companies have been sanctioned by China for selling weapons to Taiwan.

This major military boost to Taiwan comes as it reported on Thursday a second-day large-scale Chinese air force incursions into its air defence identification zone. The defence ministry said that during the last 24 hours, it spotted 21 aircraft.

Beijing opposes the arms sales

The Chinese foreign ministry said on Thursday that it firmly opposed the new US arms sale package for Taiwan and that Washington should stop sales to, and military contact with Taipei.

"China urges the US side to abide by the one-China principle and the provisions of the three Sino-U.S. joint communiqués, stop arms sales to Taiwan and stop U.S.-Taiwan military ties, and stop creating factors of tension in the Taiwan Strait," foreign ministry spokesperson Mao Ning said.

"China will continue to take resolute and strong measures to firmly defend its sovereignty and security interests," she added.

The foreign ministry spokesperson also emphasised that Taiwan is an inseparable part of China's territory. "The root cause of the tension in the Taiwan Strait is the DPP authorities' pursuit of Taiwan independence and secession, as well as some countries' attempts to use Taiwan to control China," she said.

<https://www.wionews.com/world/taiwans-military-to-get-major-arms-boost-from-us-china-reacts-567761>

Science & Technology News

THE ECONOMIC TIMES

Thu, 02 Mar 2023

SpaceX Launches US, Russia, UAE Astronauts to Space Station

SpaceX launched four astronauts to the International Space Station for NASA on Thursday, including the first person from the Arab world going up for an extended monthslong stay.

The Falcon rocket bolted from Kennedy Space Center shortly after midnight, illuminating the night sky as it headed up the East Coast.

Nearly 80 spectators from the United Arab Emirates watched from the launch site as astronaut Sultan al-Neyadi - only the second Emirati to fly to space - blasted off on his six-month mission.

Half a world away in Dubai and elsewhere across the UAE, schools and offices broadcast the launch live.

Also riding the Dragon capsule that's due at the space station on Friday: NASA's Stephen Bowen, a retired Navy submariner who logged three space shuttle flights, and Warren "Woody" Hoburg, a former research scientist at Massachusetts Institute of Technology and space newbie, and Andrei Fedyayev, a space rookie who's retired from the Russian Air Force. "Welcome to orbit," SpaceX Launch Control radioed, noting liftoff occurred four years to the day after the capsule's first orbital test flight. "If you enjoyed your ride, please don't forget to give us five

stars." The first attempt to launch them was called off Monday at the last minute because of a clogged filter in the engine ignition system.

"It may have taken two times, but it was worth the trip," Bowen said.

NASA's space operations mission chief, Kathy Lueders, said Thursday's launch enhanced a night sky already showcasing a conjunction of Venus and Jupiter. The two planets have appeared side by side all week, seeming to grow ever closer.

"We added a bright new star to that night sky tonight," she told reporters.

The space station newcomers will replace a U.S.-Russian-Japanese crew that has been up there since October. The other station residents are two Russians and an American whose six-month stay was doubled, until September, after their Soyuz capsule sprang a leak. A replacement Soyuz arrived last weekend.

Al-Neyadi, a communications engineer, thanked everyone in Arabic and then English once reaching orbit. "Launch was incredible. Amazing," he said.

He served as backup for the first Emirati astronaut, Hazzaa al-Mansoori, who rode a Russian rocket to the space station in 2019 for a weeklong visit. The oil-rich federation paid for al-Neyadi's seat on the SpaceX flight.

The UAE's minister for public education and advanced technology, Sarah al-Amiri, said the long mission "provides us a new venue for science and scientific discovery for the country."

"We don't want to just go to space and then not have much to do there or not have impact," said the director general of the UAE's space center in Dubai, Salem al-Marri.

The Emirates already have a spacecraft orbiting Mars, and a mini rover is hitching a ride to the moon on a Japanese lander. Two new UAE astronauts are training with NASA's latest astronaut picks in Houston.

Saudi Prince Sultan bin Salman was the first Arab in space, launching aboard shuttle Discovery in 1985. He was followed two years later by Syrian astronaut Muhammed Faris, launched by Russia. Both were in space for about a week.

Al-Neyadi will be joined this spring by two Saudi astronauts going to the space station on a short private SpaceX flight paid by their government.

"It's going to be really exciting, really interesting" to have three Arabs in space at once, he said last week. "Our region is also thirsty to learn more."

He's taking up lots of dates to share with his crewmates, especially during Ramadan, the Muslim holy month which begins this month. As for observing Ramadan in orbit, he said fasting isn't compulsory since it could make him weak and jeopardize his mission.

Bowen, the crew's leader, said the four have jelled well as a team despite differences between their countries. Even with the tension over the war in Ukraine, the U.S. and Russia have continued to work together on the space station and trade seats on rides there.

"It's just tremendous to have the opportunity to fly with these guys," Bowen said.

<https://economictimes.indiatimes.com/news/science/spacex-launches-us-russia-uae-astronauts-to-space-station/articleshow/98355063.cms>

