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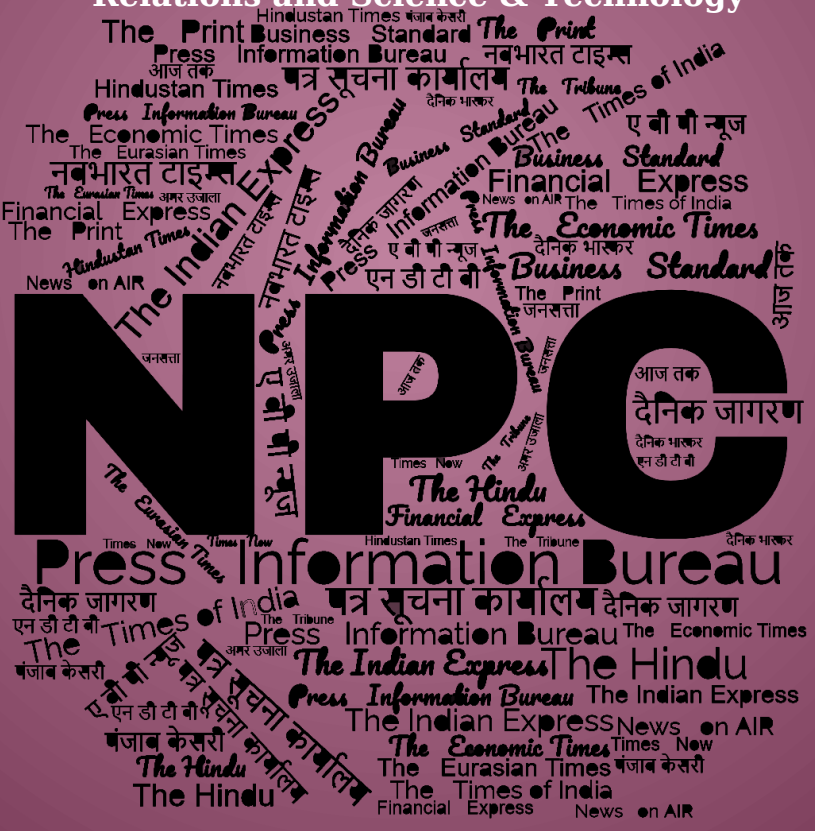

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Mon, 30 Oct 2023

Multinational Collaborative Frameworks must to Tackle Maritime Challenges of Indian Ocean Region: Raksha Mantri at 4th Goa Maritime Conclave

Calls for adhering to international laws for a free & rule-based maritime order

Shri Rajnath Singh urges nations to work together to reduce carbon emissions & switch to sustainable practices to deal with climate change

“Sharing of surveillance data need of the hour to tackle Illegal, Unreported and Unregulated fishing”

Raksha Mantri Shri Rajnath Singh has called for establishing multinational collaborative mitigation frameworks in the Indian Ocean Region to effectively tackle common maritime challenges such as climate change, piracy, terrorism, drug-trafficking, overfishing and freedom of commerce on high seas. He was delivering the keynote address at the fourth edition of Goa Maritime Conclave (GMC) on October 30, 2023.

The three-day conclave, which commenced on October 29, 2023, is being attended by Delegate in Charge of Defence, Comoros Mr Mohamed Ali Youssoufa and Chiefs of Navies/Heads of Maritime Forces/Senior representatives from eleven other Indian Ocean nations - Bangladesh, Indonesia, Madagascar, Malaysia, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka & Thailand.

The Raksha Mantri emphasised that common maritime priorities need to be addressed cooperatively by avoiding selfish interests that make the region less secure and less prosperous. He underlined the importance of respecting the international maritime laws, as enunciated in the United Nations Convention on the Law of the Sea (UNCLOS) 1982.

“A free, open and rule-based maritime order is a priority for all of us. ‘Might is right’ has no place in such a maritime order. Adherence to international laws and agreements must be our lodestar. Our narrow immediate interests may tempt us to flout or disregard the well-established international law, but doing so would lead to the breakdown of our civilised maritime relations. Our common security and prosperity cannot be preserved without all of us committing to cooperatively adhering to the legitimate maritime rules of engagement. Fair rules of engagement are crucial for fostering

collaboration and ensuring that no single country dominates others in a hegemonic manner," said Shri Rajnath Singh.

On climate change, the Raksha Mantri stated that the collaborative mitigation framework can involve the countries working together to reduce carbon emissions and transition to sustainable practices. He pointed out that the world could overcome this problem if all countries accepted the responsibility to cut emissions by investing in green economy and share technology & capital with the needy countries.

Shri Rajnath Singh also referred to Illegal, Unreported and Unregulated (IUU) fishing, a challenge which relates to resource over-exploitation. "IUU fishing endangers ocean ecosystems and sustainable fishery. It also threatens our economic security and regional & global food security. A multinational collaborative effort for compilation and sharing of surveillance data is the need of the hour. It will help in identifying actors with irregular or threatening behaviour, which will have to be countered resolutely," he said.

To put in place these mitigation frameworks, the Raksha Mantri called for collaboration, and sharing of resources & expertise among nations. He elaborated it further by explaining the difference between narrow national self-interest and mutual benefit based on enlightened self-interest of all nations. "The optimal outcome often involves cooperation and building trust among nations, but the fear of being taken advantage of or acting alone in a hostile world can lead to suboptimal decisions. The challenge is to find solutions that promote cooperation, build trust and mitigate the risks. We build trust through dialogues such as GMC, joint exercises, industrial collaboration, sharing of resources, respecting international law, etc. Trust among cooperating countries would lead to optimal outcomes in respect of common maritime priorities," he said.

Speaking on the occasion, Minister of State for External Affairs Smt Meenakashi Lekhi batted for cooperation among IOR nations to ensure peace & prosperity in the region. Underscoring the importance of IOR, she lauded the Indian Navy for protecting the nation's maritime interests and being the first responder in the region in times of crisis.

In his address, Chief of the Naval Staff Admiral R Hari Kumar emphasised the changing nature of threats, both traditional & non-traditional and those emanating from the sea. He added that the GMC offers a valuable opportunity towards developing effective mitigation strategies against such threats, thereby maintaining peace and securing growth in the IOR.

After his keynote address, the Raksha Mantri visited the 'Make in India' stalls, which have been set up at the venue, to enable the visiting dignitaries of the 12 countries to catch a glimpse of the growing capablities of India's defence industry in indigenous manufacturing of state-of-the-art weapons, equipment and platforms.

The theme for this fourth edition is 'Maritime Security in the Indian Ocean Region: Converting Common Maritime Priorities into Collaborative Mitigating Frameworks'. A number of sessions are being held during the conclave, under the aegis of the Naval War College, Goa. Interactions are being held with eminent speakers and subject matter experts focusing on:

Identifying Gaps in Regulatory and Legal Frameworks for Achieving Maritime Security in the IOR. Formulation of a Common Multilateral Maritime Strategy and Operating Protocols for GMC Nations for Collective Mitigation of Maritime Threats and Challenges.

Identification and Establishment of Collaborative Training Programmes with Centre of Excellence across the IOR.

Leveraging Activities Pursued Through Existing Multilateral Organisations in the IOR towards Generating Collective Maritime competencies.

https://pib.gov.in/PressReleasePage.aspx?PRID=1973007

ThePrint

Mon, 30 Oct 2023

Army Successfully Test-fires Rocket & Turret Guns of Indigenous Light Combat Helicopter Prachand

The Indian Army Monday successfully carried out the inaugural firing of 70mm rocket and 20mm turret guns of light combat helicopter (LCH) Prachand.

Sources in the defence and security establishment told ThePrint that the first LCH squadron of the Army, based out of Missamari station, carried out the firing from air force station Likabali in Arunachal Pradesh.

"The inaugural firing of 70 mm rocket and 20mm turret guns of Light Combat Helicopter #LCH Prachand, was successfully executed, both by day & night. Lt Gen AK Suri, DG Army Aviation witnessed the firing from the leading helicopter of the three attack helicopter formation for real-time validation of the Armament capability of an LCH Squadron," a defence ministry department stated on social media.

The Prachand is India's first indigenous multi-role combat helicopter, developed by Hindustan Aeronautics Limited (HAL). It is designed to meet the needs of the Indian armed forces operating in deserts and mountainous areas. The helicopter is fitted with Shakti Engine, which is co-developed by HAL and France's Safran. The helicopter received operational clearance in 2017.

The helicopter can carry out activities such as Combat Search and Rescue (CSAR), Destruction of Enemy Air Defence (DEAD), operations against slow-moving aircraft and Remotely Piloted Aircraft (RPAs), high-altitude bunker busting operations, counter-insurgency operations in the jungle and urban environments and provide support to ground forces.

A 5.8-tonne class combat helicopter, the Prachand can fly at a maximum speed of 288 kmph and has a combat radius of 500 km, which can go up to a service ceiling of 21,000 feet.

The helicopter will be equipped with Helina missiles, the air force version of which is called Dhruvastra. The Army had inducted its first LCH on 29 September, 2022.

As reported by ThePrint earlier, the Army and Air Force are looking at acquiring Prachand helicopters to deploy along the border with China.

https://theprint.in/defence/army-successfully-test-fires-rocket-turret-guns-of-indigenous-light-combat-helicopter-prachand/1824940/

THE ECONOMIC TIMES

Mon, 30 Oct 2023

Indian Air Force Activates Three S-400 Missile Units on the China, Pak Border

With the Air Force having already operationalised three of its S-400 air defence missile squadrons along borders with China and Pakistan, Indian and Russian officials are set to meet soon to discuss the final delivery schedule for the remaining two squadrons.

India had signed an over Rs 35,000 crore contract with the Russian side in 2018-19 for five squadrons of the S-400 missiles of which three have already arrived in the country but delivery of the remaining two was hindered due to the Russia-Ukraine conflict.

"The three squadrons have already been operationalised in important sectors. While one unit is looking at both China and Pakistan, one each has been earmarked for China and Pakistan fronts," defence sources told ANI.

The Russian and Indian officials would be soon meeting again to discuss the final delivery schedule of the remaining two missile squadrons, sources said.

The Russian side has not been very clear about the final delivery timelines as they are also busy with the conflict with Ukraine.

Sources further mentioned that some reports suggested that the squadrons manufactured for the Indian Air Force were used by the Russians for their own utilization but nothing is confirmed and India is also focused only on getting its own systems.

Meanwhile, the Indian Defence Acquisition Council recently cleared the procurement of the Indian Long Range Surface to Air Missile system under Project Kusha after the development project was cleared by the Cabinet Committee on Security.

The Indian Air Force is working with the DRDO to squeeze the delivery schedule of the LR-SAM.

The three-layered long-range surface-to-air missile (LRSAM) defence system would be able to strike down enemy aircraft and missiles at around 400 Km ranges.

The system would be ably complemented by the existing air defence systems, including the Medium Range Surface-to-Air Missile (MRSAM) of the three services and is already operational.

https://economictimes.indiatimes.com/news/defence/iaf-activates-three-s-400-missile-units-on-the-china-pak-border-meeting-with-russian-officials-soon-to-discuss-final-delivery-schedule/articleshow/104832281.cms

ThePrint

Mon, 30 Oct 2023

Army to Procure 423 E-motorcycles, Plans to 'Gradually Convert' its other Vehicles to Electric Ones

The Army is planning to procure 423 electric motorcycles with the intention of using them in peace establishments and units deployed in plains and semi-hilly terrain, as well as different climatic conditions. A Request for Information (RFI) issued by the defence ministry Monday stated that the electric motorcycle should employ "contemporary technology in all its systems to deliver optimum performance and reliability".

The weight of the bike, which would seat two soldiers, should not exceed 150 kg and should not be less than 130 kg, it added.

"The overall dimensions and weight should lend itself to suitable handling by one person," said the RFI, adding that the Army was looking at operating electric bikes which would have a minimum service life of eight years or one lakh kilometres. The government has specified that it will invite responses for such vehicles only from Indian Original Equipment Manufacturers (OEM).

The Army further envisages operating the bike in the temperature range of minus 50 degrees Celsius to over 40 degrees Celsius till 45 degrees Celsius.

The RFI also stated that vendors would have to provide battery chargers along with the electric motorcycles. Explaining why the Indian Army needed such vehicles, a source in the defence and security establishment told ThePrint: “In case all channels of communications fail in any situation, the despatch rider (DR) comes in handy to physically deliver messages. Motorcycles are the fastest and the handiest way of transportation in case such events take place.”

“Even as the Army is only looking at e-motorcycles at this point in time, there are plans to gradually convert its medium-lift and heavy-lift vehicles to electric vehicles. However, it will take time and will happen gradually over the years,” the source added.

The source said the electric motorcycles would be used for other versatile duties as well.

“Recce is one example. Whenever Army units despatch troops and equipment to a certain area, they carry along with them motorcycles too. This helps the troops to carry out a sweeping review of the area and give a go-ahead to set up equipment,” the source added.

According to the source, each unit in the Army uses and requires motorcycles, depending on the nature of operations. While some units only have one motorcycle, there are units which require more than 20 at any given point.

The Army is also looking at environment-friendly solutions with the adoption of e-motorcycles, the source informed, adding that the force was seeking to replace its 100-150 CC bikes with e-motorcycles in order to do away with internal combustion engines.

For charging, the source said infrastructure will be made available wherever the units are deployed. In case of power-shortage or frequent power cuts, arrangements will be made to charge the bikes at the nearest Army headquarters.

“Electricity should not be much of a problem because in areas where there is no grid-based power, there are generators to cater to the demand,” said the source.

The Army currently operates vehicles such as the Maruti gypsy to transport four to seven personnel from one point to another. These vehicles are also used for reconnaissance purposes in times of peace as well as conflict.

For heavy transport, the 2.5 tonne Ashok Leyland Stallion is the Army’s mainstay.

https://theprint.in/defence/army-to-procure-423-e-motorcycles-plans-to-gradually-convert-its-other-vehicles-to-electric-ones/1824985/

FINANCIAL EXPRESS
Read to Lead

Mon, 30 Oct 2023

CARACAL Expands Small Arms Offerings and Local Manufacturing in India

UAE-based CARACAL is engaged in negotiations with various state security forces to offer a range of small arms, including the modern CMP 9 submachine gun, CARACAL EF pistol, and sniper rifles.

In an exclusive conversation with Financial Express Online at the inaugural Milipol India event last week, CARACAL's CEO, Hamad Al Ameri, confirmed, "Our Indian partner ICOMM will undertake the complete production of small arms, encompassing the versatile CARACAL EF pistol, modern CMP 9 submachine gun, CAR 814, CAR 816, as well as the CAR 817 tactical rifles, CSR 308 bolt-action sniper rifles, the CSA 338 semi-automatic sniper rifle, CSR 338, CSR 50 anti-material sniper rifle, and CAR 817 DMR tactical sniper rifle."

ICOMM, the Indian firm, has partnered with UAE's CARACAL to facilitate local small arms manufacturing in India. This collaboration, initiated earlier this year during IDEX 2023 in Abu Dhabi, signifies the first-ever technology transfer for defence articles from the UAE to India. Under the 'Make in India' and 'Atma Nirbhar Bharat' initiatives, ICOMM, a subsidiary of Megha Engineering & Infrastructures Ltd (MEIL), will produce CARACAL's entire line of small arms for the Indian market.

ICOMM's design, development, and manufacturing centre in Hyderabad ranks among the largest companies involved in manufacturing missiles, sub-systems, communications, EW systems, radars, electro-optics, composites, loitering munitions, shelters, drones, and counter-drone systems.

CARACAL, with a significant presence in the Asia-Pacific region, has been actively forging partnerships. In 2022, it signed a Memorandum of Understanding (MoU) with India's ICOMM, followed by a licensing agreement at IDEX 2023, and in 2021, an Industrial Cooperation Agreement with Indonesia's PT Pindad for co-producing the CAR 816 for the Indonesian market, with PT Pindad supplying barrels and other components.

The proximity of CARACAL's location in the United Arab Emirates to the Indian market allows for swift after-sales service, a crucial element in the success of CARACAL products, along with competitive pricing, as highlighted by Hamad Al Ameri, the Caracal CEO.

Status of the CQB & Snipers

Regarding the status of the Close Quarter Carbine & Snipers bid, Al Ameri confirmed their response to the Request for Proposal in alignment with the 'Make in India' initiative, emphasizing the incorporation of 65 percent indigenous content. He noted that assault rifles in both 5.56- and 7.62-mm calibres, as well as 9 mm submachine guns, are among their best-selling items. Submachine guns have witnessed substantial growth, particularly among Homeland Security forces, rivalling the Army's demand in some countries.

Al Ameri stated, "We are steps ahead and (have) identified suppliers who can at present make 65 percent of the rifle parts locally. This covers a lot of parts, said Al Ameri. "There are more than 108 parts to the rifle. Some are steel, different kinds of steel, some are polymer. You will also have accessories, like sights, bayonets, and cleaning kits. We have identified local suppliers."

https://www.financialexpress.com/business/defence-caracal-expands-small-arms-offerings-and-local-manufacturing-in-india-3291665/

THE TIMES OF INDIA

Tue, 31 Oct 2023

China and Russia Lash out at US at Chinese Military Forum

At a security forum in Beijing on Monday, China and Russia's military chiefs lashed out at the United States, even as China's second-highest military leader pledged to enhance defence ties with Washington, reported news agency Reuters.

The United States has been concerned by the lack of regular communication between its military and that of China. The worry has grown in light of escalating tensions on various fronts and the potential for accidental confrontations in regions like the South China Sea and near Taiwan.

The Xiangshan Forum, China's biggest annual show of military diplomacy, began on Sunday without a Chinese defence minister, who typically hosts the event, but including a US delegation.Russian Defence Minister Sergei Shoigu seized the platform and issued a warning to the West regarding its involvement in the Ukraine conflict, emphasising the grave dangers it has created.

"The Western line of steady escalation of the conflict with Russia carries the threat of a direct military clash between nuclear powers, which is fraught with catastrophic consequences," Russia's TASS state news agency cited Shoigu as saying at the forum, according to Reuters.

According to Russian state media, Shoigu said "the West intended to inflict "strategic defeat" on Russia in what he called a "hybrid war", and praised Russia-China relations as exemplary."

Zhang Youxia, vice chairman, under President Xi Jinping, of China's Central Military Commission, in a veiled criticism of the United States and its allies, accused "some countries" of trying to undermine China's government.

But Zhang also underlined the need for "improving military ties with the United States".

"We will deepen strategic cooperation and coordination with Russia and are willing to, on the basis of mutual respect, peaceful coexistence and win-win cooperation, develop military ties with the US," Zhang said in an address closely watched by military attaches and diplomats, according to the agency.

Zhang held talks with Shoigu on the sidelines of the forum, China's Xinhua state media reported.

The situation underscores the complex geopolitical landscape and growing concerns surrounding military relations and potential conflicts involving these major global powers.

https://timesofindia.indiatimes.com/world/china/china-and-russia-lash-out-at-us-at-chinese-military-forum/articleshow/104837568.cms

JANES

Mon, 30 Oct 2023

Shielded Assets: Counter-Hypersonic and BMD Sensors in the Asia-Pacific

The United States has embarked on a plan to protect its assets and those of its allies in the Indo-Pacific amid escalating regional security threats. Central to this plan is securing the base of the US 7th Fleet in Guam by providing a multilayered air-defence shield against threats ranging from ballistic missiles to hypersonic glide weapons and cruise missiles.

As part of the US defence budget for fiscal year (FY) 2024, the US Missile Defense Agency (MDA) has been allocated resources for expanded capability in ballistic missile defence (BMD) and hypersonic missile defence. The US Army is responsible for cruise missile defence with the Patriot and AN/MPQ-64 Sentinel radar systems. To boost survivability, the MDA has proposed a novel distributed command-and-control (C2) architecture featuring underground missile launchers and mobile C2 sites.

Long-range discrimination radar (LRDR)

According to FY 2024 budget documents, the Guam-deployed Aegis Ashore programme – designated ‘Aegis Guam' – will feature radars based on Lockheed Martin's AN/SPY-7 system. The SPY-7, which is an improved SPY-1 radar (also developed by Lockheed Martin), features an active electronically scanned array (AESA) front-end that is intended to be fitted on newbuild Aegis-capable warships.

Jason Wrigley, Lockheed Martin's director of business development, told Janes, “[SPY-7] is the radar that will go on the Aegis systems in Spain for their F-110 class [frigate], the Canadian surface combatant, and the two new ships in Japan.”

https://www.janes.com/defence-news/news-detail/shielded-assets-counter-hypersonic-and-bmd-sensors-in-the-asia-pacific

Science & Technology News

INDIA TODAY

Mon, 30 Oct 2023

NISAR: NASA-ISRO Mission to Provide New Insights into Changing Forests, Wetlands

In a bid to better understand the impact of climate change on Earth's ecosystems, NASA and the Indian Space Research Organisation (ISRO) are set to launch the NISAR radar satellite mission in early 2024.

The mission will provide detailed insights into two key ecosystems - forests and wetlands - which play a crucial role in naturally regulating greenhouse gases in the atmosphere.

The NISAR satellite, equipped with advanced radar systems, will scan nearly all of Earth's land and ice surfaces twice every 12 days. The data collected will help researchers understand the capture and release of carbon in these ecosystems.

Forests store carbon in their trees, while wetlands hold it in their organic soil layers. Any disruption to these systems can accelerate the release of carbon dioxide and methane into the atmosphere, contributing to global warming.

Paul Rosen, the NISAR project scientist at NASA’s Jet Propulsion Laboratory, highlighted the importance of the mission, stating that the radar technology on NISAR will provide a sweeping perspective of the planet in space and time, offering a reliable view of how Earth's land and ice are changing.

Forestry and other land-use changes account for about 11% of net human-caused greenhouse gas emissions. NISAR's data will improve our understanding of how the loss of forests around the world influences the carbon cycle and contributes to global warming.

The radar will penetrate forest canopies, bouncing off tree trunks and the ground below, allowing researchers to estimate the density of forest cover and track changes over time.

Wetlands, despite constituting only 5 to 8% of the land surface, hold 20 to 30% of the carbon in Earth's soil. When wetlands flood, bacteria digest organic matter in the soil, making wetlands the planet's largest natural source of the potent greenhouse gas methane.

Conversely, when wetlands dry out, the stored carbon is exposed to oxygen, releasing carbon dioxide.

NISAR will monitor flooding in wetlands, tracking seasonal and annual variations as well as long-term trends.

Coupled with data on greenhouse gas release, this information should inform the management of wetland ecosystems. Bruce Chapman, a NISAR science team member and JPL wetlands researcher, emphasized the need to reduce our impact on wetland areas to prevent exacerbating climate change.

In addition to tracking ecosystem changes, NISAR will collect information on land motion, aiding researchers in understanding the dynamics of earthquakes, volcanic eruptions, landslides, and subsidence and uplift. It will also track the movements and melting of glaciers and sea ice.

https://www.indiatoday.in/science/story/isro-nasa-nisar-mission-forest-wetlands-changing-ecosystem-2455485-2023-10-30

THE TIMES OF INDIA

Tue, 31 Oct 2023

Nuclear Energy Keeps Chandrayaan-3 Propulsion Module Going

Chandrayaan-3 has an untold success: The mission’s propulsion module now orbiting Moon is powered by nuclear technology.

Confirming it to TOI on Monday, Atomic Energy Commission chairman Ajit Kumar Mohanty said he is happy that India’s nuclear sector could be part of such an important space mission. Isro officials said the propulsion module is equipped with two radioisotope heating units (RHU) generating one watte designed and developed by BARC. RHUs keep the spacecraft at their operational temperatures.

Chandrayaan 3 project director P Veeramuthuvel on Sunday said Isro may soon use nuclear resources to maintain instruments in future rovers. Isro officials said that the RHUs could not be installed on Chandrayaan 3’s Vikram lander and Pragyan rover because it would have increased their mass.

They were placed in the propulsion module for experimental and demonstration purposes. “They have been functioning flawlessly,” said an official. “It’s the first major joint project of Isro and BARC.”

Spacecraft which have used radioisotope heater units include Nasa’s Galileo spacecraft to Jupiter, Cassini to Saturn and Voyagers 1 and 3.

https://timesofindia.indiatimes.com/home/science/nuclear-energy-keeps-chandrayaan-3-propulsion-module-going/articleshow/104834737.cms

FINANCIAL EXPRESS
Read to Lead

Tue, 31 Oct 2023

US Space Force Partners with Indian Start-ups in Ground-Breaking CRADAs

The United States Space Force, in collaboration with the Air Force Research Laboratory (AFRL), has entered into its first-ever Cooperative Research and Development Agreements (CRADAs) with two Indian space startups, 114AI and 3rd ITECH.

The purpose of these agreements is to facilitate cooperation in cutting-edge technologies without the exchange of federal funds to industry partners.

These CRADAs signify a significant step in advancing innovation in Earth observation sensors and space domain awareness, as stated in AFRL's media statement. They entail the exchange of expertise, access to laboratory space, and provision of equipment. The agreements come in the wake of a landmark meeting in June between Indian Prime Minister Narendra Modi and US President Joe Biden. During this meeting, they launched the India-U.S. Defense Acceleration Ecosystem (INDUS-X) to enhance cooperation in the defense industry and technology sharing.

Furthermore, Prime Minister Modi, during his first official state visit, signed up India to the NASA-led Artemis Accords. These accords establish norms for space exploration and exploitation and are a crucial component of the United States' strategy to prevent future conflicts in space. This strategy is particularly important as nations seek access to orbital real estate, including cislunar space, water resources, and strategic minerals.

The Artemis Accords also serve as a diplomatic counterweight to China, which has been expanding its space portfolio and lunar ambitions.

It is worth noting that both 114AI and 3rd ITECH are not newcomers to the US space market ecosystem. Both companies have previously signed strategic partnerships with General Atomics-Aeronautical Systems (GA-AS) in San Diego. 3rd ITECH and GA-AS joined forces to co-design and co-develop cutting-edge semiconductor technology. Simultaneously, GA-AS formed a separate agreement with 114ai to apply artificial intelligence tools to multi-domain awareness.

Furthermore, 114ai gained recognition back in 2020 by winning an award during the US-UK-sponsored "International Space Pitch Day." This competition, supported by the UK Defense and Security Accelerator (DASA) and Starburst Accelerator, invited startups from around the world to showcase their innovations. 114ai was among the ten startups from the UK, the US, and Australia to receive kick-start funds.

In conclusion, these CRADAs mark a significant milestone in international space cooperation, with India and the United States working together to advance technology and strengthen their positions in the rapidly evolving space industry.

https://www.financialexpress.com/business/defence-us-space-force-partners-with-indian-start-ups-in-ground-breaking-cradas-3292015/