

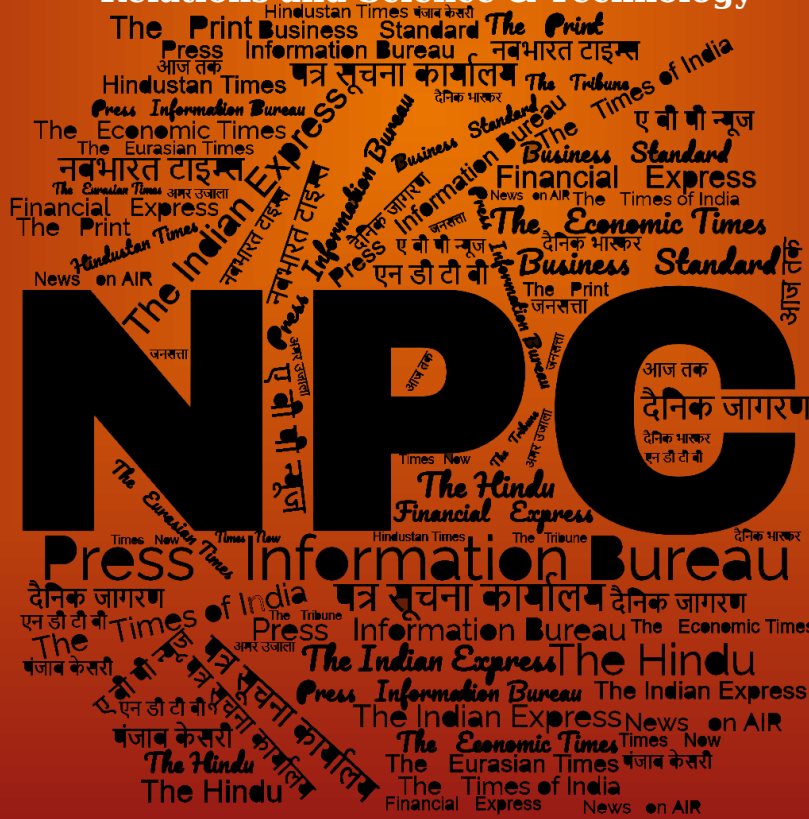
जनवरी
Jan
2024

खंड/Vol. : 49 अंक/Issue : 22
31/01/2024

समाचार पत्रों से चयित अंश Newspapers Clippings

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

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



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केंद्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाउस, दिल्ली - 110 054
Metcalf House, Delhi - 110 054

CONTENTS

S. No.	TITLE	Page No.
	DRDO News	1
	DRDO Technology News	1
1.	Calibration Lab Set up to Issue Accurate Weather Forecast	<i>The Tribune</i> 1
2.	SARVATRA: Know all about Multispan Mobile Bridging System Indian Army	<i>News Nine</i> 1
	Defence News	2-11
	Defence Strategic: National/International	2-11
3.	India-US Cooperation will Act as Force Multiplier for Rules-based World Order: Raksha Mantri Shri Rajnath Singh at Indo-American Chamber of Commerce Conference in New Delhi	<i>Press Information Bureau</i> 2
4.	Indian Navy Responds to the Hijacking of Sri Lankan Fishing Vessel in Collaboration with Seychelles Defence Forces and Sri Lanka Navy	<i>Press Information Bureau</i> 4
5.	INS Sumitra Carries out 2nd Successful Anti Piracy Ops – Rescuing 19 Crew members and Vessel from Somali Pirates	<i>Press Information Bureau</i> 5
6.	Indian Navy’s Heroic Endeavours: Defending the Arabian Sea and beyond	<i>Financial Express</i> 5
7.	India's Greater Capability, own Interest Warrant Helping in Difficult Situations: EAM Jaishankar	<i>The Hindu</i> 7
8.	Over 1000 Paratroopers, Rafale Jets: Army Conducts 'Exercise Devil Strike' in Bengal	<i>India Today</i> 8
9.	Navy Says VLF Station Safe, no Adverse Impacts on Human Health	<i>Deccan Chronicle</i> 9
10.	Russia Says Increasing Air Defence Missile Production	<i>Reuters</i> 9
11.	Taiwan Detects Nine Chinese Military Aircraft, Four Naval Vessels around Nation	<i>The Print</i> 10
	Science & Technology News	11-15
12.	CSIR Committed to Make India ‘Atmanirbhar’ by Developing Indigenous Technologies, Says Director General Dr N Kalaiselvi	<i>Press Information Bureau</i> 11
13.	India, France Join Hands to Use LVM-3, Ariane-6 for Global Satellite Launches	<i>India Today</i> 13
14.	Chandrayaan-2 was Immensely Helpful in Landing SLIM on the Moon: Jaxa	<i>India Today</i> 14

Wed, 31 Jan 2024

Calibration Lab Set up to Issue Accurate Weather Forecast

A calibration laboratory set up by the Defence Geo-Informatics Research Establishment at its research centre in Manali is set to play a crucial role in issuing accurate forecast and warnings of natural disasters related to floods, avalanches and glaciers in northeast India from Manali to Siachen. The laboratory was inaugurated by Shailendra V Gade, Director General and Distinguished Scientist, Defence Research and Development Organisation (DRDO), last week, in the presence of Pramod Kumar Satyawali, Excellent Scientist and Director, Defence Geo-Informatics Research Establishment (DGRE), Manali, and Dr Neeraj Sharma, Project Director of calibration. Gade said the calibration laboratory was a facility for calibrating electronic sensors to collect data pertaining to snow avalanches and other weather conditions.

Neeraj Sharma, project director of the laboratory, said, "With the help of this laboratory, we will be able to maintain the accuracy and quality of the data collected by calibrating snow and weather-related sensors at regular intervals or as per requirement. We will definitely get its reward in qualitative form in issuing better and accurate forecasts and warnings of natural disasters related to floods, avalanches and glaciers." He said it was the first lab in India for snow avalanche sensors.

Ashwini Kumar Acharya, in-charge of this lab, said the sensors of many automatic weather stations installed on the northeast Indian border Himalayas from the Siachen Glacier would be calibrated here.

<https://www.tribuneindia.com/news/himachal/calibration-lab-set-up-to-issue-accurate-weather-forecast-585937>



Tue, 30 Jan 2024

SARVATRA: Know all about Multispan Mobile Bridging System Indian Army

Quick, static, and strong are the key requirements of the Indian Defence Force to ensure security from external threats. In line with that, the Indian Army focuses on world-class equipment to overcome challenges during war and natural calamities as well. And one of the most trusted equipment of the Indian Army is SARVATRA, a Multispan Mobile Bridging System that helps the Army bridge gaps between two areas caused due to several reasons including natural calamities.

What is SARVATRA?

Designed and developed by Armament & Combat Engineering Systems (ACE) of Defence Research and Development Organisation (DRDO) under the Ministry of Defence, SARVATRA is a Multispan Mobile Bridging System that helps army to construct bridge over flowing water, ensuring strong connectivity between two areas. The production of this easy-to-move bridge is taken care of by Bharat Earth Movers Limited (BEML), Bangalore, Karnataka.

SARVATRA: Ready to use in 100 minutes

This truck-mounted bridge consists of five scissors bridges made of aluminum alloy. Mounted on a separate moving platform, each scissor spans around 15 metres, which together tackle bridge-related obstacles up to a distance of 75 metres. The moving bridge is a one-step solution for multiple challenges posed by the Indian Defence Force and can be developed within 100 minutes. This moving bridge has proved its mettle by ensuring connectivity during several natural calamities, such as earthquakes, floods, and others.

Variants of SARVATRA

While each scissor is mounted on the Tatra 815 trucks, developed by the Czech company Tatra, is being deployed and operationalised using a microprocessor based control system. The bridges can be launched and recovered from both ends, and their height can be adjusted from 2.5 metres to six metres with the help of telescopic legs. The adjustable legs help reduce the visibility of the bridge.

There are two variants of SARVATRA used by the Indian Army including the 15m Sarvatra Bridge System and 20 metres Sarvatra Bridge System. The 20 metres Sarvatra bridge is perfectly designed to fill the 100-meter gap.

<https://www.news9live.com/knowledge/sarvatra-know-all-about-multispan-mobile-bridging-system-indian-army-2423223>

Defence News

Defence Strategic: National/International



**Press Information Bureau
Government of India**

Ministry of Defence

Tue, 30 Jan 2024

India-US Cooperation will Act as Force Multiplier for Rules-based World Order: Raksha Mantri Shri Rajnath Singh at Indo-American Chamber of Commerce Conference in New Delhi

“US capital & technological know-how can help India become a developed nation by 2047; India can be an avenue of de-risking for US companies & provide high returns”

“‘Aatmanirbharta’ doesn’t mean cutting off from global system; It is based on collaboration with friendly countries for shared security & prosperity”

The capital and technological know-how from the US can help India to achieve its goal of becoming a developed country by 2047, while investments here can give the American companies high returns and an avenue of de-risking. This was stated by Raksha Mantri Shri Rajnath Singh while addressing a conference on ‘Strengthening Indo-US Relationship in Amrit Kaal - Aatmanirbhar Bharat’ organised by Indo-American Chamber of Commerce (IACC) in New Delhi on January 30, 2024.

The Raksha Mantri asserted that the Government has laid the groundwork for a strong and self-reliant ‘New India’, and the American investments can play a vital role in realising Prime Minister Shri Narendra Modi’s vision of ‘Viksit Bharat’. Terming it as a win-win situation for both the countries, he stated that India’s fast-growing economy, its demographic dividend, skilled workforce, and huge domestic market guarantee high returns to US companies. He added that to deal with the challenges faced by the rules-based international order & maintain strategic autonomy, it will be necessary for American businesses to de-risk by investing in India.

Shri Rajnath Singh described India and the US as natural partners who must move forward together in both business and strategic sectors amidst the current global geopolitical scenario. “India and the US support a free, open and rules-based international order. Due to this, there is a lot of alignment in our strategic interests. Besides, our economic relationship is a win-win proposition for both the countries. The current relationship is driven by twin congruence of shared values and aligned interests, which is a guarantee for long sustainability and robustness of ties,” he said.

The Raksha Mantri appreciated that, sensing the need of the present times, India and the US are working together in different fields, including defence technology and space. He made special mention of the Defence Technology and Trade Initiative through which both nations are working towards further strengthening the defence technology partnership. He added that the joint initiative of ISRO and NASA ‘NISAR’ will ensure cooperation in many areas such as earth science, disaster management and climate change.

“India is the largest democracy in the world, and US is another big democracy. When two big democracies cooperate with each other, it will definitely make the democratic world order stronger. This will act as a force multiplier for rules-based order across the globe. Our work together will be beneficial not only to us, but for the entire world,” said Shri Rajnath Singh.

Elaborating on the Government’s vision behind ‘Aatmanirbhar Bharat’, the Raksha Mantri said that the nation is moving forward at the right pace with which it won’t stumble in the times to come. He enumerated the decisions taken by the Ministry of Defence to promote self-reliance, such as earmarking 75% of the defence capital procurement budget for domestic industry in Financial Year, which has helped the country find a place among the top 25 countries which export defence equipment. “The Russia-Ukraine & Israel-Hamas conflicts have not much impacted the defence sector. India has become a strong country, which is capable of securing national interests and giving a befitting reply to anyone who casts an evil eye,” he added.

Shri Rajnath Singh, however, clarified that the aim of ‘Aatmanirbhar Bharat’ is not autarky; not to cut off from the global system; not to work in isolation. It is rather the commitment to collaborate with friendly countries. The ‘Aatmanirbhar Bharat’ campaign promotes companionship based on ‘Vasudhaiva Kutumbakam’ (The World is One Family), he stressed.

Shri Rajnath Singh listed out the sweeping changes made in every sector in India to keep pace with friendly countries. “We have made reforms in FDI and labor laws to attract foreign investment and take advantage of our skilled workforce. We are also working on next-generation infrastructure

projects. Infra sectors like roads, railways, waterways, electricity have made unprecedented progress. India is developing a world class infrastructure,” he said.

The Raksha Mantri emphasised that business & commerce is correlated to the security & defence of the country, terming the connection as deep. He asserted that the Government gives equal emphasis to defence & security and business & commerce, as one cannot move ahead, in today's era, by keeping business & strategic interests separate.

The conference, attended by Ambassador to India Mr Eric Garcetti and representatives of IACC, was organised to bolster the economic and diplomatic ties between India and the US. It was aimed at exploring ways to enhance bilateral trade, investment and collaboration in the context of ‘Aatmanirbhar Bharat’ initiative, which emphasises on promoting domestic manufacturing and reducing import dependency. It provided a platform for experts and business leaders from both countries to discuss opportunities for partnership and growth in various sectors, contributing to mutual economic development and prosperity.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2000644>



Press Information Bureau
Government of India

Ministry of Defence

Tue, 30 Jan 2024

Indian Navy Responds to the Hijacking of Sri Lankan Fishing Vessel in Collaboration with Seychelles Defence Forces and Sri Lanka Navy

In a coordinated multilateral response to the hijacking of a Sri Lankan fishing vessel, the Indian Navy in collaboration with Seychelles Defence Forces and Sri Lanka Navy successfully intercepted and rescued the hijacked vessel.

A hijacking incident was reported onboard the Sri Lankan flagged multiday fishing trawler LORENZO PUTHA 04 about 955 nm east of Mogadishu, Somalia. Three pirates had boarded and hijacked the fishing trawler on 27 Jan 24.

Indian Navy deployed INS Sharda ex Kochi PM 28 Jan and also tasked HALE Sea Guardian to locate and intercept the hijacked fishing vessel. Additionally, efficient operational coordination and Information Sharing through the Sri Lanka and Seychelles International Liaison Officers at IFC IOR, New Delhi resulted in the interception of the hijacked fishing vessel by SCGS Topaz in Seychelles EEZ on 29 Jan 24.

The three pirates surrendered to the Seychelles Coast Guard (SCG) and all six crew members are safe and the vessel is being escorted to Mahe, Seychelles.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2000673>



**Press Information Bureau
Government of India**

Ministry of Defence

Tue, 30 Jan 2024

INS Sumitra Carries out 2nd Successful Anti Piracy Ops – Rescuing 19 Crew members and Vessel from Somali Pirates

Indian Naval Ship Sumitra, having thwarted the Piracy attempt on FV Iman, has carried out yet another successful anti-piracy operation off the East Coast of Somalia, rescuing Fishing Vessel Al Naemi and her Crew (19 Pakistani Nationals) from 11 Somali Pirates.

INS Sumitra, Indian Navy's indigenous Offshore Patrol Vessel had been deployed for Anti-Piracy and Maritime Security Operations East of Somalia and Gulf of Aden. The warship on PM 28 Jan 24 had responded to a distress message regarding hijacking of an Iranian flagged Fishing Vessel (FV) Iman, which had been boarded by pirates & the crew taken as hostages. The FV was intercepted by INS Sumitra and following the SOPs and coercive posturing the vessel and her Crew (17 Iranian Nationals) were safely rescued in the early hours of 29 Jan 24. FV Iman was sanitised and released for onward transit.

Subsequently, INS Sumitra was again pressed into action, to locate and intercept another Iranian flagged fishing vessel Al Naemi, which had been boarded by pirates and her Crew (19 Pakistani Nationals) taken hostage. Responding swiftly to the developing situation Sumitra intercepted the FV on PM 29 Jan 24 and through coercive posturing and effective deployment of her integral helo and boats compelled the safe release of the crew and the vessel. The ship also undertook confirmatory boarding to sanitise and also to check on the well-being of the crew who were held captive by the Somali pirates.

INS Sumitra, over the course of less than 36 hours, through swift, persistent and relentless efforts has rescued two hijacked Fishing Vessels along with 36 Crew (17 Iranian and 19 Pakistani) in Southern Arabian Sea approximately 850 nm West of Kochi, and prevented misuse of these Fishing Vessels as Mother Ships for further acts of Piracy on Merchant Vessels.

The Indian Navy has once again proved its commitment in the region to act against all maritime threats in order to ensure safety of all mariners and vessels at sea.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2000473>



Tue, 30 Jan 2024

Indian Navy's Heroic Endeavours: Defending the Arabian Sea and beyond

In the span of the last 36 hours, the Indian Navy has showcased remarkable prowess with not one but two successful rescue operations. On Tuesday, the Navy's INS Sumitra carried out a daring anti-piracy mission off the east coast of Somalia, saving a crew of 19 Pakistani nationals from the clutches of 11 Somali pirates on the hijacked fishing vessel Al Naemi. This followed another

daring mission on Monday, where the Navy rescued 17 crew members from the Iranian-flagged fishing vessel FV Iman.

These events mark the latest chapters in a series of maritime incidents that have unfolded in the Arabian Sea since December of the previous year. From piracy to missile and drone attacks on commercial vessels, the region has been a hotbed of challenges. The most recent missile attack targeted the Marshall Islands-flagged oil tanker Marlin Luanda.

Indian Navy Fights Piracy

The INS Sumitra, a warship armed with determination, intercepted the distressed Al Naeemi, effectively neutralizing the threat posed by the pirates. Following established Standard Operating Procedures (SOPs), the Navy coerced the pirates to ensure the safe release of the 19 Pakistani crew members and the vessel itself. Confirmatory boarding was then undertaken to sanitize and assess the well-being of the crew previously held captive by the Somali pirates.

Both rescue operations unfolded in the southern Arabian Sea, approximately 850 nautical miles west of Kochi. The strategic location played a crucial role in preventing the hijacked fishing vessels from being exploited as mother ships for further acts of piracy on merchant vessels.

In a statement, the Navy declared, “INS Sumitra, over the course of less than 36 hours, through swift, persistent and relentless efforts has rescued two hijacked Fishing Vessels along with 36 Crew (17 Iranian and 19 Pakistani) in Southern Arabian Sea approximately 850 nm West of Kochi, and prevented misuse of these Fishing Vessels as Mother Ships for further acts of Piracy on Merchant Vessels.”

Adding to these heroic feats, the Indian Navy’s INS Visakhapatnam swiftly responded to a distress call from the Marshall Island-flagged MV Genco Picardy on January 18. The guided missile destroyer, currently on an anti-piracy mission in the Gulf of Aden, intercepted the vessels to provide immediate assistance after a drone attack on the night of January 17.

The INS Sumitra, an indigenous offshore patrol vessel, has been actively deployed for anti-piracy and maritime security operations in the waters east of Somalia and the Gulf of Aden. Its rapid response in thwarting hijacking attempts and rescuing crews highlights the Navy’s commitment to maintaining safety and order in these crucial maritime zones.

In a separate incident, Indian Navy’s marine commandos, MARCOS, demonstrated their expertise by foiling a hijacking attempt in the north Arabian Sea. The team boarded a Liberia-flagged vessel, conducting “sanitization” operations and successfully rescuing its crew of 21, including 15 Indians.

Background

The Indian Navy’s vigilance against piracy is not a recent development. Since 2008, the Navy has maintained a continuous 365-day, 24/7 anti-piracy patrol. Over the years, it has played a pivotal role in safeguarding international sea lanes of communication for global maritime trade.

Reflecting on its achievements, in 2011, the Navy successfully apprehended four pirate motherships and 120 pirates in the eastern Arabian Sea, rescuing 73 fishermen and crew members. Although incidents saw a decline in 2013-14, a resurgence occurred in 2017 in the Gulf of Aden and off the Somali coast, leading to reported successful hijackings by 2020.

The Navy’s escorting of 413 Indian-flagged ships and 2,041 foreign vessels between 2011-2018 has significantly contributed to this effort. By effectively controlling piracy in the Arabian Sea, the Navy has managed to push back the high-risk area (HRA), resulting in reduced maritime insurance rates and hazardous pay for crew members.

With more than 10 warships presently deployed in the Arabian Sea, including INS Kochi, INS Mormugao, INS Kolkata, INS Chennai, and a Talwar Class frigate, the Navy employs a multifaceted approach.

The P8I maritime patrol aircraft, MQ-9B Predator drones, and Dornier aircraft actively engage in monitoring the region. The force is also involved in the active investigation of vessels in the Arabian Sea, including boarding of dhows, showcasing a holistic strategy to address potential threats.

<https://www.financialexpress.com/business/defence-indian-navys-heroic-endeavours-defending-the-arabian-sea-and-beyond-3379157/>

THE HINDU

Tue, 30 Jan 2024

India's Greater Capability, own Interest Warrant Helping in Difficult Situations: EAM Jaishankar

External Affairs Minister S. Jaishankar on January 30 said India's greater capability, its own interest and reputation today warrant that it actually help in difficult situations, in reference to the Indian Navy's deployment of warships in the Red Sea region to deal with attacks on merchant Navy vessels.

The Indian Navy has deployed 10 of its ships in the region, Mr. Jaishankar said responding to a question during an interaction with students at the Indian Institute of Management Mumbai.

"India's greater capability, our own interest and our reputation today warrant that we actually help out in difficult situations," he said.

Mr. Jaishankar said there is a problem of piracy as well as drone attacks on merchant Navy ships in the Red Sea region.

"We will not be considered a responsible country if bad things are happening around our neighbourhood and we say I have got nothing to do with this. When you are in trouble, the neighbourhood will say the same," he said.

Mr. Jaishankar said that in the last 10 years, India has developed a very powerful narrative and pointed to the naval deployment in the Red Sea region.

In this context, he also referred to India's response to earthquakes in Turkiye and its assistance to various other countries, including providing vaccines during COVID-19.

"It wasn't just a vaccine. We actually sent out doctors, including military doctors, to many countries in the Indian Ocean [during the COVID-19 pandemic], so that is where I make the connection with Ramayana," he said.

Asked whether India should "kinetically act" like the U.S. and the U.K. to attacks, a reference to the counter-attacks launched by these two countries on the Houthi rebels in Yemen, Mr. Jaishankar said some countries made that choice.

"At the moment, our choice today is to contribute to the safety and security. We are doing a lot of non-kinetic contributions out there but independently, because at the end of the day we are an independent country," he said.

Notably, Indian warship INS Sumitra rescued 19 Pakistani crew of a fishing vessel after their Iranian-flagged fishing vessel was attacked by pirates in the east coast of Somalia, officials said on Jan. 30.

INS Sumitra has been deployed for anti-piracy and maritime security operations in the east of Somalia and Gulf of Aden.

The ship had thwarted a piracy attempt on Iranian fishing vessel Iman on Jan. 29.

Last week, the Indian Navy contained a fire onboard MV Marlin Luanda, a commercial container oil tanker with 22 Indian crew in the Gulf of Aden, swiftly responding to a distress call from the vessel after it was struck by a missile on the key shipping route that witnessed similar attacks earlier.

Since the rise in attacks on merchant Navy vessels in the Red Sea, the Indian Navy has intensified its deployment in the region.

<https://www.thehindu.com/news/national/indias-greater-capability-own-interest-warrant-helping-in-difficult-situations-eam-jaishankar/article67792311.ece>



Tue, 30 Jan 2024

Over 1000 Paratroopers, Rafale Jets: Army Conducts 'Exercise Devil Strike' in Bengal

The Army conducted a training drill, 'Exercise Devil Strike', in North Bengal between January 22 and 27 with the participation of assets of the Air Force too.

Over 1000 paratroopers from the Eastern Command, along with IAF's GARUDs, participated in the exercise, supported by various aircraft, including Rafale, C-130 Hercules, AN-32, and indigenous ALH helicopters from both branches.

The exercise highlighted the coordination between the Army and the Indian Air Force (IAF), with drills on their integrated approach on a battlefield amid challenging electronic warfare conditions.

The primary objective of the operation was to undertake tasks typically by an airborne force, including aerial deployment of troops, heavy armaments, equipment, and logistical support, as well as the neutralisation of High-Value Targets (HVTs), coordination with advancing ground units, and extraction operations.

Heavy weaponry and equipment were airlifted using the latest Guided Precision Aerial Delivery System (GPADS). Subsequently, the troops conducted drills to eliminate or neutralise targets through direct action, aided by fighter aircraft and attack helicopters targeting spots designated by ground-based para troopers using Laser Target Designators.

Remotely Piloted Vehicles were also employed during action to carry out a Post-Strike Damage Assessment (PSDA) and facilitate re-engagement wherever necessary.

Kicking off with the aerial insertion of specialised troops to secure an airhead within enemy territory through Combat Free Fall (CFF), the exercise then proceeded with the main force deployed via Static Line Jumps.

Upon successful completion of their mission objectives, the para troopers seamlessly linked up with ground forces and practised extraction manoeuvres. In another layer of complexity to the multidimensional exercise, underwater diving teams carried out a diversionary attack near the Teesta Barrage.

<https://www.indiatoday.in/india/story/india-army-conducts-exercise-devil-strike-in-bengal-over-1000-paratroopers-rafale-jets-take-part-in-drill-2495402-2024-01-30>



Tue, 30 Jan 2024

Navy Says VLF Station Safe, no Adverse Impacts on Human Health

The Indian Navy on Tuesday dismissed apprehensions over the potential health and environmental impacts of the VLF (very low frequency) communications station it will establish in Vikarabad district.

Captain Sandip Das of the Navy told reporters at a press conference that was addressed by forests and environment minister Konda Surekha that the Navy understood the misgivings of the local population and its experience of running a similar facility, INS Kattabomman in Tirunelveli in Tamil Nadu, operational since 1990, has shown no ill-effects on people, as well as flora and fauna in and around the station.

At INS Kattabomman, around 800 personnel, including civilians, work and that in addition, nearly 1,200 members of their families live within the station compound. In the 33 years of its existence, no evidence of any adverse health impacts were found.

Capt. Das said the station in Vikarabad, just as the facility in Tirunelveli, will provide a boost to the local economy. He also said that the forest department will have strict oversight over the project during its construction and use of the land allotted to the Navy.

He said that in deference to the wishes of the local people, the Navy had included a 27-km long peripheral road to the project to provide full access to the more than 400-year-old Damagundam Ramalingeswara Swami Temple.

<https://www.deccanchronicle.com/nation/current-affairs/navy-says-vlf-station-safe-no-adverse-impacts-on-human-health-880461>



Tue, 30 Jan 2024

Russia Says Increasing Air Defence Missile Production

Russia is increasing production of air defence missiles, Defence Minister Sergei Shoigu said in video footage released on Tuesday, adding there were "key issues" that needed to be addressed.

The release of the footage by the defence ministry follows hits by drones launched from Ukraine on Russian cities and energy infrastructure while Moscow presses on with its military campaign against Kyiv.

Shoigu was shown inspecting defence industry facilities in the Urals industrial city of Yekaterinburg and touring factories producing sea- and ground-launched cruise missiles and air defence systems.

"There has been a significant increase in the volume of production. We have more than doubled production of the missiles we need for air defence," he said at one factory.

"But there are some key issues we need to address. And we need to address them quite vigorously. There is the question of engines, and there is the question of the establishment of launcher production."

The defence ministry published the videos on its Telegram messenger channel.

Russian officials have in recent months flagged rapid improvements in the country's military industrial capacity, aimed at bolstering Russia's military in its deadlocked campaign against Ukraine.

Over the recent weeks, attacks, some of which have been claimed by Ukrainian officials or blamed on Kyiv by the Kremlin, have hit Russian cities and oil and gas facilities.

<https://www.reuters.com/world/europe/russia-says-increasing-air-defence-missile-production-2024-01-30/>

ThePrint

Tue, 30 Jan 2024

Taiwan Detects Nine Chinese Military Aircraft, Four Naval Vessels around Nation

Taiwan's Ministry of Defence detected nine Chinese military aircraft and four naval vessels around Taiwan between 6 am (local time) on Monday and 6 am (local time) on Tuesday, Taiwan News reported.

In response to China's action, Taiwan sent aircraft and naval ships and deployed air defence missile systems to monitor the People's Liberation Army (PLA) aircraft, according to Taiwan's Ministry of National Defence (MND). During that time, No PLA aircraft crossed the Taiwan Strait median line.

Furthermore, one Chinese balloon was detected crossing the Taiwan Strait median line at 139 km (75 NM) northwest of Keelung on Monday at 3:09 pm (local time). The balloon travelled east and then disappeared at 3:10 pm (local time), according to Taiwan News report.

So far in January, Taiwan has detected 291 Chinese military aircraft and 132 naval ships. Since September 2020, China has intensified its use of grey zone tactics by incrementally increasing the number of military aircraft and naval ships operating around Taiwan.

Grey zone tactics is an "an effort or series of efforts beyond steady-state deterrence and assurance that attempts to achieve one's security objectives without resort to direct and sizable use of force, Taiwan News reported.

On Monday, Taiwan's Ministry of National Defence (MND) detected seven Chinese military aircraft, six naval vessels, and one balloon around Taiwan between 9 am (local time) on Sunday to 6 am (local time) on Monday, Taiwan News reported.

According to Taiwan's Ministry of National Defence, one of the seven People's Liberation Army (PLA) aircraft, entered the southwest air defence identification zone (ADIZ). The aircraft was identified as an unmanned aerial vehicle that came within 170 km (92 NM) of Eluanbi.

The Taiwan Ministry of National Defence said it monitored the situation with its intelligence, surveillance, and reconnaissance systems. In response, Taiwan's MND said it deployed combat patrol aircraft, and dispatched naval vessels and land-based air defence missile systems.

Furthermore, the MND said the Chinese balloon was detected 125 km (68 NM) southwest of Taichung at an altitude of 6,700 m (22,000 feet) at 7:27 pm (local time) on Sunday, Taiwan News reported.

The balloon flew in an easterly direction over northern Taiwan and disappeared at 8:52 pm (local time) on Sunday over the northern end of Taiwan's central mountain range.

<https://theprint.in/world/taiwan-detects-nine-chinese-military-aircraft-four-naval-vessels-around-nation/1946007/>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Science & Technology

Tue, 30 Jan 2024

CSIR Committed to Make India 'Atmanirbhar' by Developing Indigenous Technologies, Says Director General Dr N Kalaiselvi

"CSIR Aroma Mission best example of the council's 'Atmanirbhar' initiatives"

NIO launches unmanned underwater vehicle to study deep sea

The Council of Scientific and Industrial Research (CSIR) is committed to make India 'Atmanirbhar' by developing indigenous technologies, said Dr N Kalaiselvi, the Director General of SCIR. She was speaking at a press conference held on the 'Role of CSIR in building an Atmanirbhar Bharat', at CSIR-National Institute of Oceanography (NIO), Dona Paula, Panaji, on Monday, January 29.

"CSIR, through its 37 laboratories across the country, are involved in all aspects of their research and development to what extent they can bring in 'Atmanirbharta' for indigenization of technologies, through which we can ensure that the country will become self-sustainable in the coming years. Thanks to Mother Nature, India has all the raw material sources to achieve that mission," she said.

Dr N Kalaiselvi, who is also the Secretary of Department of Scientific and Industrial Research, said that the country has to prepare itself for its current and future scientific requirements as the world today is moving ahead in an unpredictable manner. “Therefore, the CSIR has already prioritized that any research happening under its aegis should have a component called indigenization,” she said.

Talking about the success stories of Atmanirbhar’ initiatives of the CSIR, Dr Kalaiselvi said that the CSIR’s this year’s Republic Day Tableau had highlighted the unleashing of a Purple Revolution ushered through Lavender cultivation in Jammu & Kashmir. CSIR’s scientific interventions have led to the phenomenal growth of lavender cultivation and development of lavender products taking lavender from lab-to-market and creating several agri-start-ups in J&K. CSIR developed an elite variety of lavender suitable for cultivation in temperate regions of J&K and provided free saplings and end-to-end agro-technologies to farmers and also installed distillation units for essential oil extraction in several regions of J&K. The success of Lavender cultivation in J&K earned it the sobriquet, ‘Purple Revolution’.

The Tableau had also showcased PRIMA ET11, India’s first women friendly, compact, Electric Tractor indigenously developed by CSIR, under agro-mechanical technology.

“We are from the scientific fraternity. We can just hand over a technology to a startup. Once the technology is transferred, it becomes the responsibility of the startup to take it to greater heights. But we are not doing that. CSIR handholds the startups and walks along with them throughout their journey. More than 300 agri-startups in Jammu and Kashmir are being supported by CSIR as a remote mission,” the DG said, adding that a minor contribution of the CSIR is now giving a greater confidence to the Jammu and Kashmir people.

She further explained how India, which had been importing lemongrass oil for years, became an exporting country by 2023, all thanks to CSIR’s Aroma Mission. In the year 2023, the country has exported 600 million tons of lemongrass oil, she said.

Dr Kalaiselvi also mentioned about the hydrogen hydrate producing manufacturing facility under the CSIR that was dedicated to the nation by Prime Minister Narendra Modi in 2022. “While launching the facility, the Prime Minister had promised that commercial production of the hydrogen hydrate will start within one year. In the year 2023, the first batch of commercial production of hydrogen hydrate started. Today, it is a 10,000 tonnes per annum-manufacturing plant.” The hydrogen hydrate is now finding its application in chemical industries, processing industries, and several other chemistry-related and pharmacy-related industries.

Talking about the Sustainable Aviation Fuel (SAF) technology, Dr Kalaiselvi said that two aircrafts that took part in the Republic Day flypast were SAF, an indigenously developed technology in the field of aviation. “We have now signed an agreement with Airbus. The Airbus will be making use of our SAF technology. A few more private players are also in talks with us,” she said.

C-BOT by NIO

Dr Kalaiselvi on Sunday launched C-Bot, an underwater unmanned vehicle indigenously developed by the NIO. C-Bot can carry a number of equipment, sensors and gadgets to 200 metres deep into the water, which will help the scientists study the undersea ecosystem. “We have plans to develop an updated version of C-Bot which can go for deep diving thousands of meters into the sea,” she said.

The underwater vehicle will help greatly in studying temperature, humidity and climate related topics. It will help collect samples and take photos, study growing biology in extreme environment,

“Actually, the entire Indian Ocean is our target. the total 71 million square kilometers... A lot of studies have taken place in the Pacific and Atlantic. But in Indian Ocean, there are very few

countries studying so there is a very large need to study the entire Indian Ocean,” Dr Kalaiselvi said.

CSIR-Jigyasa Program

CSIR-Jigyasa Student-Scientist Connect Program is an initiative of CSIR to promote scientific temper through student scientist connect program. The Jigyasa program is aimed at school and college students along with teachers to inculcate the culture of inquisitiveness on one hand and scientific temper on the other. The program will also enable the students and teachers to practically live the theoretical concepts taught in science by visiting CSIR laboratories and using the knowledge to take up small projects, compete in quiz and also apply to their knowledge for the betterment of society.

Dr Kalaiselvi said that NIO is a role model on how to stay connected with the student community as under Jigyasa Program, several students visit the institute. “It is important to stay connected with the student community as they are the next generation scientific leaders. The NIO has facilities which help students to get real-time experience of sea diving through virtual reality. The NIO has already instilled an interest for science and technology in a number of children in Goa. There are students who visit NIO from other states also,” she said.

Prof. Sunil Kumar Singh, Director, NIO, was also present at the press conference.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2000560>



Tue, 30 Jan 2024

India, France Join Hands to Use LVM-3, Ariane-6 for Global Satellite Launches

In a significant move to bolster their presence in the global satellite launch market, NewSpace India Limited (NSIL) and Arianespace SAS, France, have inked a Memorandum of Understanding (MoU) during French President Emmanuel Macron's visit to India.

This strategic partnership aims to leverage the strengths of both companies to address the growing demand for commercial satellite launch services.

The MoU, signed amidst the backdrop of President Macron's visit, underscores the deepening space collaboration between India and France. The agreement was one of several deals finalised during the visit, which also included discussions on various other sectors, highlighting the multifaceted relationship between the two nations.

Under the terms of the MoU, NSIL's heavy-lift launch vehicle, LVM-3, and Arianespace's Ariane-6 will be at the forefront of this joint endeavor. Both launch vehicles are poised to play a crucial role in meeting the needs of the global launch service market, particularly for heavier communication and earth observation satellites, as well as for deploying satellites that form part of mega constellations.

The global launch service market is witnessing an unprecedented demand for satellite launches, with a significant number of missions planned for Geostationary Transfer Orbit (GTO) and Low Earth Orbit (LEO).

The partnership between NSIL and Arianespace is timely, as it aligns with the market's trajectory over the coming decade, which anticipates a substantial requirement for launching a diverse array of satellites.

This collaboration not only marks a milestone for NSIL and Arianespace but also represents a leap forward for the Indian space industry. It reflects India's growing capabilities and readiness to cater to the international market, further solidifying its position as a key player in the global space economy.

The MoU between NSIL and Arianespace is expected to create a synergy that will accelerate the development of a robust commercial space economy, benefiting stakeholders across the globe.

With this partnership, both entities are set to expand their offerings and provide comprehensive solutions to meet the evolving demands of satellite operators worldwide.

<https://www.indiatoday.in/science/story/india-and-france-join-hands-to-use-lvm-3-ariane-6-for-satellite-launches-2495345-2024-01-30>



Tue, 30 Jan 2024

Chandrayaan-2 was Immensely Helpful in Landing SLIM on the Moon: Jaxa

The Japan Aerospace Exploration Agency (Jaxa), which successfully executed a pinpoint lunar landing with its Smart Lander for Investigating Moon (SLIM) said that it could not have done it without India's Chandrayaan-2.

The mission, which saw SLIM touch down on the moon's surface with unprecedented accuracy, was significantly aided by high-resolution data from India's Chandrayaan-2 mission and extensive imaging from the United States' Lunar Reconnaissance Orbiter (LRO).

The collaborative effort shows the importance of shared knowledge and resources in advancing space exploration.

Jaxa has expressed profound gratitude to the Indian Space Research Organisation (ISRO) for providing critical observation data that played a pivotal role in selecting the final landing site for SLIM. This data allowed the team to make informed decisions about the lander's destination, ensuring a safe and precise arrival on the lunar terrain.

Moreover, the LRO's contribution was not limited to post-landing analysis. The orbiter supplied a wealth of image data that was instrumental during the site selection process. The LRO, known for its detailed mapping of the moon's surface and its search for water ice, has been a cornerstone in planning future missions, including NASA's Artemis program.

SLIM's successful landing at the Sea of Nectar, just south of the Theophilus crater, on January 19, 2024, ensured the lander's moniker, "Moon Sniper," reflecting its ability to land within a projected 100-meter-long ellipse.

This achievement marks a significant milestone for Jaxa, which has previously contributed to international space efforts with projects like the Kibo module for the International Space Station and the Hayabusa probe that returned asteroid samples to Earth.

Looking ahead, Jaxa reaffirmed its commitment to developing technology and gathering data that will bolster international exploration efforts. The agency's future plans include continued collaboration with other nations, such as the upcoming Lunar Polar Exploration mission in partnership with India, set for launch after 2025.

<https://www.indiatoday.in/science/story/chandrayaan-2-was-immensely-helpful-in-landing-slim-on-the-moon-jaxa-2495318-2024-01-30>

