

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा
A Daily Current Awareness Service

Vol. 44 No. 199 16 Oct 2019



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र
Defence Scientific Information & Documentation Centre
मैटकॉफ हाऊस, दिल्ली - 110 054
Metcalf House, Delhi - 110 054

Rajnath Singh praises DRDO for developing technologies to enhance Indian forces

New Delhi: Defence Minister Rajnath Singh today said that Directors Conference of Defence Research and Development Organization DRDO has empowered the country with cutting edge technology. He said, despite various restrictions, limited indigenous capabilities and lack of time, DRDO has succeeded in developing variety of systems, products and technologies needed to enhance the forces.

Addressing Directors Conference of DRDO, Mr. Singh said, Dr. A P J Abul Kalam's contribution to research and missile development programme brought India to list of countries known for their indigenous capabilities. .

National Security Adviser Ajit Doval said, niche technologies make India more secure. He said, technology has to be need-based and we along with our defence services and intelligence agencies have to make a hard assessment of our needs which will give us an edge over our adversaries. Mr. Doval said, armies that were better equipped with higher technologies always called the shots and decided the destiny of mankind.

Army Chief General Bipin Rawat complimented DRDO for making strides in ensuring that requirements of the services are met through home-grown solutions. General Rawat expressed confidence that we will fight and win the next war through indigenized weapons systems and equipment. General Rawat said, while looking at systems for future warfare, we have to start looking at development of cyber-space, laser, electronic and robotic technologies and artificial intelligence.

Navy Chief Admiral Karambir Singh suggested that impetus has to be on niche technology and we must take a closer look at models such as Defence Advance Research Project Agency, DARPA in the US. Admiral Singh said, small time innovators should be encouraged. Defence Minister also gave away Kalam Dare to Dream Award to a young innovators and startups for solving scientific challenges.

<https://theindianawaaz.com/rajnath-singh-praises-drdo-for-developing-technologies-indian-forces/>



Gear up for tech warfare, service Chiefs tell DRDO

By Ajay Banerjee

New Delhi: National Security Adviser Ajit Doval along with Chiefs of three services on Tuesday asked the Defence Research and Development Organisation to be ready for future wars entailing different technology and suggested what conflict could mean some years down the line.

The NSA and the three Chiefs along with Defence Minister Rajnath Singh were at the DRDO 'Directors Conference' here. "The two-day conference that began today will debate multiple issues,"

said DRDO Chairman Dr G Sateesh Reddy as the country's top defence scientists heard out what the forces wanted.

The conference will be deliberating the way forward and the future needs. It will see industry collaboration, service requirements and how the academia will pitch in.

"Start preparing for a non-contact war... If you don't think now, it will be too late," said Army Chief General Bipin Rawat, asking the DRDO to focus on cyber, space, laser, robotics and artificial intelligence.

Air Chief Marshal RKS Bhadauria, Air Force Chief, suggested, "In five years, no one will talk about stealth. The radar development is such that it will pick up even 'low radar cross section' (military parlance for picking up stealth features). We will need data fusion, superb radars and ability to quickly launch missiles."

The IAF Chief, who has been a test pilot for light combat aircraft Tejas was effusive in praise. "The LCA helped technology grow, it's the best we have. The fly by wire and composites that are now 40 percentage of the structures will help in future," he said.

Navy Chief Admiral Karambir Singh made specific suggestions. He said the goal of getting local products to replace imported ones was best left to industry and the DRDO could focus on state-of-the-art weapons. "See, how an organisation like the DARPA of the US became a reality," he said. The DARPA (Defense Advanced Research Projects Agency) is responsible for development of emerging technologies for use by the military.

For his part, the Defence Minister heaped praise on former President and DRDO ex-Chairman Dr APJ Abdul Kalam on the occasion of his birth anniversary. He unveiled a bust of Dr Kalam at the main entrance of the DRDO. "We have to be operationally ready and reduce dependence on imports," said the minister.

<https://www.tribuneindia.com/news/nation/gear-up-for-tech-warfare-service-chiefs-tell-drdo/847708.html>

THE TIMES OF INDIA

Wed, 16 Oct 2019

DRDO must make indigenous fifth generation fighter project happen: IAF Chief

New Delhi: Lauding DRDO for successfully delivering indigenous weapon systems, IAF Chief RKS Bhadauria on Tuesday said that the defence research agency should make the indigenous fifth-generation fighter aircraft happen and it must succeed.

"The Advanced Medium Combat Aircraft (AMCA) must succeed and it needs a lot of attention... it has taken off, it is a DRDO project. In terms of technology, this is one project where DRDO must make it happen," the IAF Chief said while addressing the Defence Research and Development Organisation (DRDO) Director's Conference.

Asserting that the Indian Air Force wants to control the technology and other aspects of the programme, he said, "I am defining the technology of AMCA because it is where we lack. When we take a system from abroad, we get restricted by the technology and weapon available and there is a 10-year cycle if we have to change it. In AMCA, we want to have control."

"We will improve the technologies as we move on. We will ensure that we will maintain an edge," the IAF Chief said.

Bhadauria has already made it clear that the IAF will fully back the indigenous fifth-generation fighter aircraft project being developed by the DRDO.

The IAF Chief highlighted successful DRDO projects like the LCA Tejas plane and the INDRA radar.

"That is the first time a low-level radar (INDRA) was developed and we were able to utilise it on our critical areas and have a decent low-level pickup. In terms of technology, it was a hugely successful project," he said.

The IAF Chief termed the indigenous Airborne Early Warning and Control aircraft developed by DRDO as another major success for the service.

"It is a huge success, we are looking forward for further development of it. The advantage of indigenous technology is that we are in continuous dialogue and change the specifications and requirements as we go along and get higher performance," Bhadauria said.

<https://timesofindia.indiatimes.com/india/drdo-must-make-indigenous-fifth-generation-fighter-project-happen-iaf-chief/articleshow/71599900.cms>



Wed, 16 Oct 2019

'India was runner-up in defence tech, no trophy for that': Ajit Doval at DRDO meet

NSA Ajit Doval made a strong pitch for the modernisation of India's security, calling for "need-based" development of military technology and improved intelligence networks

By Neeta Sharma

New Delhi: Armies that are better equipped decide the destiny of mankind, National Security Adviser Ajit Doval said at a meeting of Defence Research and Development Organisation (DRDO) Chiefs in Delhi today. Speaking a day after he addressed heads of Anti-Terrorism Squads (ATS), where he attacked Pakistan for making terrorism "state policy" and highlighted pressure exerted by global anti-terror watchdog Financial Action Task Force (FATF) to rein in money laundering operations that financed terror activities, Mr Doval said technology and money were crucial to the success of any military operation.

"Either you're better than your adversaries or you're not there at all. In the modern world technology and money are the two things that influence geopolitics. Who wins... and who loses... depends on which side has preponderance over adversaries on these two factors," Ajit Doval said, adding, "Of these two, technology is more important".

"India's own historical experience on this (the race to develop military technology) has been sad, we were the runner-up. There is no trophy for the runner-up," he said, adding, "India's security vulnerabilities are much greater today and they are going to be much more greater in the times to come".

Making a strong pitch for the modernisation of the country's armed forces and intelligence networks, Ajit Doval also called for "need-based" development of military technology that targeted specific requirements of the Army, Navy, Air Force and other defence services.

"Niche technologies are something that make India more secure. These have to be need-based. We, with our defence services and intelligence agencies have to make hard assessments about what our needs are that will give us an edge over our adversaries," he said.

The Narendra Modi government has made defence modernisation a key agenda.

Earlier this month Defence Minister Rajnath Singh was in France for the delivery of the first Rafale fighter jet. Manufactured by Dassault Aviation, the advanced multi-role jets are widely seen as the best

in their class and offer a significant technological upgrade over the Soviet-era MiG 21s that form the backbone of the Indian Air Force.

The Army will also get upgrades - the S-400 defence missile system is scheduled to arrive from Russia in early 2021. And, earlier this year, the centre cleared a Rs. 40,000 crore plan to build six new submarines and acquire 111 new helicopters at a cost of Rs. 21,000 crore.

The Navy has also seen the commissioning of INS Khanderi, the country's second Scorpene-class attack submarine.

"There is a lot of new technology emerging... how can we integrate systems? Except DRDO no other organisations in the country can perform this task," Mr Doval added.

On Monday Mr Doval made similar remarks to ATS Chiefs, urging them to share evidence and data amongst themselves and build a bank of "quotable and sustainable" evidence that could be presented to global agencies like the FATF.

Modernisation and upgrade plans, however, have been constrained by a defence budget that is dwarfed by that of China. According to a report by news agency PTI, India's neighbours spent US\$175 billion on defence last year.

By comparison, in the 2019 Union Budget, Finance Minister Nirmala Sitharaman set aside only Rs. 3.18 lakh crore. However, import of defence equipment not manufactured in the country was exempt from basic customs duty, offering the armed forces savings of Rs. 25,000 crore.

Defence experts were unimpressed though.

"The capital allocation is not adequate to modernise the armed forces. Everyone was expecting a significant hike in allocation, but unfortunately it did not happen," Laxman Behera, Institute of Defence Studies and Analysis, said. (*With input from ANI*)

<https://www.ndtv.com/india-news/drdo-conference-no-trophy-for-runner-up-ajit-doval-on-developing-military-technology-2116994>

THE TIMES OF INDIA

Wed, 16 Oct 2019

We will fight and win the next war with indigenous weapon systems: Army Chief

HIGHLIGHTS

- *Army chief General Bipin Rawat asserted that India will fight and win the next war with home-grown solutions*
- *In his address at the 41st DRDO Directors Conference, he also said the development of weaponry and other systems should be done keeping "future warfare" in mind*

New Delhi: Army Chief General Bipin Rawat on Tuesday pitched for greater inclusion of indigenous technology in the armed forces and asserted that India will fight and win the next war with home-grown solutions.

In his address at the 41st DRDO Directors Conference, he also said the development of weaponry and other systems should be done keeping "future warfare" in mind.

"And, if we are looking at the contours of future warfare, it may not necessarily be contact warfare. So, there is realm of non-contact warfare. We need to start looking at development of cyberspace, space, laser, electronic warfare and robotics... and, along with that Artificial Intelligence (AI), " Rawat said.

"And, if we do not start thinking on it now, it will be too late," he said.

He praised the Defence Research and Development Organisation (DRDO) for its achievements in the last few decades and said India is making great strides in research and development. "We are confident the services will greatly benefit from it," he said.

"India is one of the largest importers of weapons and ammunition, and after 70 years of Independence, it is not a very proud statement to make. But in the past few years, it is changing. DRDO is striving to ensure our requirements of services are met with home-grown solutions," Rawat said. "We are confident that we will fight and win the next war with indigenous weapon system," the Army chief said.

Defence minister Rajnath Singh was the guest of honour at the inaugural session of the two-day event held at the DRDO Bhawan here.

National Security Advisor Ajit Doval, Air Chief Marshal RKS Bhadauria, Navy Chief Admiral Karambir Singh and DRDO chief G Satheesh Reddy were also present on the dais on the occasion.

The defence minister earlier paid tribute to former president APJ Kalam by garlanding his bust at the DRDO premises as the event coincided with the 88th birth anniversary of the distinguished scientist.

"Let us get inspired by his life and work towards realising his dream of making India a developed country through scientific advancement," Singh said.

He also emphasised on the aspects of disruptive technologies that is changing the world and asserted that "India will have to emerge as a leader in this".

Singh also pitched for working on indigenous system towards making the country "fully self-reliant". "All stakeholders must come together and hold interactions and come up with action plans as far as research is concerned, so as to increase our defence capabilities to take India to a new height," the minister said. Doval said, to make a strong and secure India, the role of DRDO would be very important.

<https://timesofindia.indiatimes.com/india/next-war-will-be-won-through-indigenised-weapons-systems-army-chief/articleshow/71593735.cms>

hindustantimes

Wed, 16 Oct 2019

‘Home-made tech will win us future wars,’ says Army Chief Bipin Rawat

National security adviser (NSA) Ajit Doval also underscored the need to develop niche technologies to buttress national security, and retain an edge over India’s adversaries while drawing attention towards the country’s security vulnerabilities and stressing that there were no trophies for runners-up

By Rahul Singh

New Delhi: Batting for greater indigenisation in the military sector, Indian Army chief General Bipin Rawat on Tuesday asserted that India would fight and win the next war with locally produced weapons and systems.

National security adviser (NSA) Ajit Doval also underscored the need to develop niche technologies to buttress national security, and retain an edge over India’s adversaries while drawing attention towards the country’s security vulnerabilities and stressing that there were no trophies for runners-up.

The two made the comments while addressing the country's top military scientists at the Defence Research and Development Organisation's (DRDO) 41st directors' conference.

In his address, defence minister Rajnath Singh asked the scientists to work towards developing cutting-edge technologies to make India not only self-reliant but also a global leader in defence manufacturing.

The comments come at a time when India has set a target of emerging as one of the top five countries in the aerospace and defence sectors in the coming years, with defence goods and services accounting for a turnover of ~1.7 lakh crore by 2025, according to the Defence Production Policy 2018.

The policy said that achieving the target would require an investment of ~70,000 crore and create up to three million jobs. Another goal is to clock military exports worth ~35,000 crore by 2025.

"We are looking at systems for future warfare. We have to start looking at the development of cyber, space, laser, electronic and robotic technologies and artificial intelligence," the army chief said, highlighting the need to sharpen the focus on non-contact warfare. He praised the steps taken by DRDO to meet the military's requirements through home-grown solutions.

Promoting indigenisation under the Make in India scheme and cutting the military's dependence on imported weapons is one of the top priorities of the National Democratic Alliance (NDA) government. India was the world's fourth biggest military spender last year behind the United States, China, and Saudi Arabia, according to data released in April by think tank Stockholm International Peace Research Institute (SIPRI).

Doval said India needed to take a hard look at what its military needed to have an edge over its adversaries as better equipped armies have decided mankind's history. He said, "India's own historical experience on this has been sad, we were the runner-up. There is no trophy for the runner-up. Either you are better than your adversaries or you are not there at all."

The NSA said technology and finances were the two key factors that would shape geopolitics. "Who wins depends upon who has preponderance over their adversaries on technology and money. Of the two, technology is more important," Doval stressed.

He said India also needed to scale up its capacity for technology absorption. "In the world of distributed production for manufacturing of items, systems integration becomes most important. India needs to enhance its capabilities for technology absorption not only in the laboratories but also in production of systems."

Speaking at the inaugural session on the theme, Technology Leadership for Empowering India, the defence minister said the world was changing fast and advanced and disruptive technologies were

TOP 5 INDIGENOUS WEAPONS, SYSTEMS

TEJAS
The Tejas light combat aircraft is in service. The Indian Air Force has already contracted for 40 aircraft and it will soon place an order with Hindustan Aeronautics Ltd for another 83 LCA Mk-1A jets



NETRA
IAF inducted its first indigenously developed airborne early warning and control system in 2017. The Netra AEW&C system has a range of 200km

ASTRA
The user trials of the homegrown Astra beyond-visual-range air-to-air missile have been completed successfully. It will be inducted into the air force

ARJUN
The army raised its armoured regiment equipped with the indigenously built Arjun main battle tank a decade ago. The project earlier hit several lows

AKASH
The locally developed surface-to-air missile system has already been inducted by the air force. State-owned Bharat Dynamics Limited manufactures the 25km range missile system



emerging at a swift pace. “Development of technology should be cost effective and time efficient,” the minister said. The top officials also paid tributes to former president, the late APJ Abdul Kalam, on his 88th birth anniversary. Singh asked the scientists to focus on developing technologies that would remain relevant over the next 15 to 20 years. “There are certain limitations in technology and there is a gestation period for development of products. It is possible that during the gestation period of complex systems, new technical requirements emerge. Spiral development should be given priority for such systems,” he said.

Navy chief Admiral Karambir Singh highlighted the need for the military to stay technologically current. “When we speak of warfare, it is changing at a rapid pace because it is being driven by technology. It is very necessary for us to have a technologically up to date force. For us, maintaining the right technological mix is crucial,” he said.

Experts said indigenisation was the key and had to be expedited. “Our efforts towards indigenisation have been sluggish. A lot more needs to be done to become self reliant in the defence sector and become less dependent on weapon imports. It is also equally critical to identify the best technologies in the world and infuse them into our system through the transfer of technology,” said former Northern Army commander Lieutenant General BS Jaswal (retd).

<https://www.hindustantimes.com/india-news/home-made-tech-will-win-us-future-wars-says-army-chief-bipin-rawat/story-NO3oUkx1uTwTF64uw15jLO.html>

नवभारत टाइम्स

Wed, 16 Oct 2019

अगला युद्ध स्वदेशी शस्त्र प्रणालियों के साथ लड़ेंगे और जीतेंगे : सेना प्रमुख

नयी दिल्ली: सेना प्रमुख जनरल बिपिन रावत ने मंगलवार को सशस्त्र बलों में स्वदेशी प्रौद्योगिकी को व्यापक रूप से शामिल करने की वकालत करते हुए कहा कि भारत अगला युद्ध देश में ही विकसित समाधानों के साथ लड़ेगा और जीतेगा। 41वें डीआरडीओ निदेशक सम्मेलन को संबोधित करते हुए जनरल रावत ने यह भी कहा कि शस्त्रों और अन्य प्रणालियों का विकास भविष्य के युद्धों को दिमाग में रखकर होना चाहिए। उन्होंने कहा, “अगर हम भविष्य के युद्धों की रूपरेखा की ओर देखें तो जरूरी नहीं कि ये आमने-सामने से लड़े जाएं। हमें साइबर क्षेत्र, अंतरिक्ष, लेजर, इलेक्ट्रॉनिक युद्ध और रोबोटिक्स के विकास के साथ कृत्रिम बुद्धिमत्ता (एआई) की ओर देखना होगा।” रावत ने कहा, “और अगर हम इस बारे में नहीं सोचते तो बहुत देर हो जाएगी।” उन्होंने पिछले कुछ दशकों में रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) की उपलब्धियों के लिए उसकी तारीफ की और कहा कि भारत अनुसंधान और विकास के क्षेत्र में नये कीर्तिमान गढ़ रहा है। सेना प्रमुख ने कहा, “हमें विश्वास है कि सेनाओं को इससे बहुत लाभ मिलेगा।” रावत ने कहा, “भारत हथियारों और गोला-बारूद के सबसे बड़े आयातकों में से एक है और आजादी के 70 साल बाद भी ऐसा कहना कोई गौरव की बात नहीं है। लेकिन पिछले कुछ सालों में यह स्थिति बदल रही है। डीआरडीओ सेनाओं की जरूरतों को पूरा करने के लिए प्रयासरत है जो स्वदेशी समाधानों से निकली हों।” यहां डीआरडीओ भवन में आयोजित दो दिवसीय उद्घाटन सत्र में रक्षा मंत्री राजनाथ सिंह विशिष्ट अतिथि थे। राष्ट्रीय सुरक्षा सलाहकार अजीत डोभाल, वायु सेना प्रमुख एयर चीफ

मार्शल आर के एस भदौरिया, नौसेना प्रमुख एडमिरल करमबीर सिंह तथा डीआरडीओ के प्रमुख जी सतीश रेड्डी भी इस अवसर पर उपस्थित थे। रक्षा मंत्री ने शुरुआत में डीआरडीओ परिसर में स्थित पूर्व राष्ट्रपति एपीजे कलाम की प्रतिमा पर माल्यार्पण कर उन्हें श्रद्धांजलि दी। कलाम की 88वीं जयंती के मौके पर सिंह ने कहा, “हम उनके जीवन से प्रेरणा लें और भारत को वैज्ञानिक उपलब्धियों के माध्यम से विकसित देश बनाने के उनके सपने को पूरा करें।” उन्होंने दुनिया को बदलने वाली विनाशकारी तकनीकों के पहलुओं पर भी जोर दिया और कहा कि “भारत को इसमें नेतृत्व की भूमिका में उभरना होगा”। सिंह ने देश को पूरी तरह आत्मनिर्भर बनाने के लिए स्वदेशी प्रणाली पर काम करने की वकालत की। डोभाल ने कहा कि मजबूत और सुरक्षित भारत बनाने के लिए डीआरडीओ की भूमिका बहुत अहम होगी।

(यह आर्टिकल एजेंसी फीड से ऑटो-अपलोड हुआ है। इसे नवभारतटाइम्स.कॉम की टीम ने एडिट नहीं किया है।)

<https://navbharattimes.indiatimes.com/india/the-next-war-will-be-fought-with-indigenous-weapons-systems-and-the-army-chief-will-win/articleshow/71596347.cms>

EASTMOJO

Wed, 16 Oct 2019

How DRDO's bio-digester tech will improve sanitation in Mizoram

Patented system contains an aerobic microbial inoculum that degrades human excreta into water and gases; treated water can be used for gardening & flushing

By Ezrela Dalidia Fanai

Aizawl: The Defence Research and Development Organisation (DRDO) handed over the bio-digester technology used for the development of bio-toilets to the Public Health Engineering Department (PHED) of Mizoram at Aijal Club in Aizawl recently.

The function was chaired by PHED secretary Amjad Tak. Addressing the function, Defence Research Laboratory, Tezpur, director Dr SK Dwivedi said that the introduction of bio-toilets in Mizoram is a milestone in the history of sanitation and that due to the abundance of water supply, the state will benefit much from the technology.



Dr Dwivedi explained that the bio-digester has been researched by the DRDO for 25 years. It contains the anaerobic microbial inoculum (AMI) that degrades human excreta into water and gases. He added that the technology is eco-friendly and easily adoptable for individual to community level for different climates and conditions -- from hot and plain regions to cold and mountainous terrains. He also stressed that continuous feedback mechanism must be maintained from scientists at Tezpur.

The bio-toilet is a preferable choice for space constrained urban areas and conserves water with a low maintenance cost. The treated water from the reactor tank becomes colourless and odourless which can be reused for gardening and flushing.

The bio-digester technology is patented by DRDO and can be replicated only by those having licence. At present, the department of Mizoram PHE is the only licensing authority in the state.

<https://www.eastmojo.com/mizoram/2019/10/14/how-drdo-bio-digester-tech-will-improve-sanitation-in-mizoram>

Contribution of APJ Abdul Kalam to ISRO and DRDO

Contribution of APJ Abdul Kalam to the field of space science and technology in India is hailed by engineers and scientists even today

The country celebrates Student's Day on the birth anniversary of legendary scientist, engineer and politician APJ Abdul Kalam today i.e. 15 October. Contribution of APJ Abdul Kalam to the field of technology is being reaped by thousands of scientists and engineers, and millions of Indians even to this day. Fondly known as the 'Missile Man' for the initiatives he took while he was associated with the Defence Research and Development Organisation (DRDO) and the Indian Space Research Organisation (ISRO) technologies developed by him are being used by the organizations even in present times.

"Excellence is a continuous process and not an accident," believed the former President of India, and that is exactly what he did in DRDO and ISRO in order to make India a superpower in space science and technology.

Contribution of APJ Abdul Kalam to DRDO

Dr Kalam started his career at DRDO after graduating from the Madras Institute of Technology. He joined the Aeronautical Development Establishment (ADE) of the Defence Research and Development Organisation as a scientist after becoming a member of the Defence Research and Development Service (DRDS).

Kalam apparently started his career by designing a small hovercraft at DRDO. In 1965, Kalam independently started work on an expandable rocket project at the institution, and in 1969 he received the government's approval and expanded the programme to include more engineers.

During his tenure at DRDO, Kalam directed two projects namely Project Devil and Project Valiant, which aimed at developing ballistic missiles from the technology of SLV programme. Kalam also played an instrumental role in developing missiles like Agni and Prithvi under the Integrated Guided Missile Development Programme (IGMDP) of which he was the chief executive.

Kalam is also credited with playing a major role in the Pokhran-II nuclear tests, which were carried out during his stint as the Chief Scientific Adviser to the Prime Minister and Secretary of the Defence Research and Development Organisation from July 1992 to December 1999. Kalam has even received the Bharat Ratna for his contributions to scientific research and modernisation of defence technology in India.

Contribution of APJ Abdul Kalam to ISRO

Dr Kalam was part of the Indian National Committee for Space Research (INCOSPAR), which was set up by Dr. Vikram Sarabhai, father of Indian space programme. INCOSPAR, the team of rocket engineers of which Kalam was a part, set up the Thumba Equatorial Rocket Launching Station (TERLS) that is used by ISRO to launch sounding rockets even today.

Kalam was also the project director of India's first Satellite Launch Vehicle (SLV-III) which successfully deployed the Rohini satellite in near-earth orbit. Kalam has also played a contributory role in the development of Polar Satellite Launch Vehicle (PSLV).

Kalam has also won the prestigious Padma Bhushan and Padma Vibhushan for his contributions to ISRO and DRDO, as well as for his role as a scientific advisor to the Government of India.

<https://www.dqindia.com/contribution-apj-abdul-kalam-isro-drdo/>

Varsity Instruments opens new facility to manufacture defence sector products

Hyderabad: Varsity Instruments, a wire harness manufacturer, has set up a ₹ 30 crore manufacturing facility at the Hardware Park near the GMR Hyderabad International Airport near Shamshabad.

The investment coincides with its 50th year in business. It has been supplying wiring harness, electrical wiring and other products for over half a decade.

Wiring is a major deliverable in just about all electro-mechanical equipment. From aeroplanes to semiconductor capital equipment, the key component, tying all the technological innovations together in these machines, is the wiring. As the level of complexity of these machines increases, so does the complexity of the wiring. It supplies these for missile systems and Hyderabad has emerged as a hub.

Niranjan Kandukuri, Managing Director, Varsity Instruments, told *BusinessLine*, “We are celebrating 50 years of excellence in the industry and have launched our new manufacturing facility at Shamshabad. We are associated with all mission critical projects in aerospace for decades now providing customised high quality cable harnesses and solutions for our customers.”

“We have an order book of over ₹ 100 crore,” he said.

Rama Manohara Babu, Director, Advanced Systems Laboratory (ASL), DRDO, Hyderabad inaugurated the new facility.

Established in 1968, the company was primarily an authorised distributor of Test and Measuring instruments for the defence sector and later it started supplying electronic passive and RF components. The company has undergone a transformation into manufacturing custom built solutions for DRDO from 2007.

The new facility located at TSIIC Hardware Park, Shamshabad, is spread across 44,000 sq ft and focusses on designing and manufacturing of cable harnesses in all types of Electronic Warfare Weapon Systems for various applications including missiles.

Understanding its customers’ requirements, the company works closely with its partners to design, build prototypes and manufacturer the custom designed products; additionally, providing technical support at both on site and also at the manufacturing facility.

Cable harnesses are being planned for diverse applications including space actuation and motion controls, flight interconnect harnesses, military aerospace and unmanned aerial vehicles.

<https://www.thehindubusinessline.com/news/national/varsity-instruments-opens-new-facility-to-manufacture-defence-sector-products/article29682820.ece>

Centre to set up single agency to process defence exports

AJAI SHUKLA

New Delhi, 15 October

In a fresh initiative to boost the export of Indian defence products, Defence Minister Rajnath Singh on Friday will launch the Indigenous Defence Equipment Exporters Association (IDEEA) in New Delhi.

The IDEEA will be a non-profit association with the stated objective of making India "one of the top three defence equipment exporters in the world". The association will effectively be a nodal agency for receiving and processing export inquiries from all prospective customers across the globe.

Sanjay Jaju, a defence ministry

official who interfaces with industry, had announced in June the creation of a Defence Export-Import Portal that "will post export opportunity leads that our sources have obtained, which exporters can follow up and translate into business". The IDEEA, it appears, is the outcome of this promise.

The IDEEA is directed towards achieving the defence ministry's ambitious aim, stated in the Defence Production Policy of 2018 (DPrP-2018), of exporting defence products worth \$5 billion (₹35,000 crore) annually, by 2025.

Given that defence exports were worth ₹11,000 crore in 2018-19, achieving this target requires



After a sortie in Tejas last month, Defence Minister Rajnath Singh talked about the export potential of the fighter

defence exports to more than triple in six years. The 2018-19 export figure was itself a more than two-fold jump

over the preceding year's exports worth ₹4,682 crore, according to the defence ministry's website.

The ministry assesses that enhanced exports would be essential for meeting the DPrP-2018 target of making India one of the world's top five defence producers, with an annual defence production turnover target of \$26 billion (₹1.8 trillion).

India's current defence production is ₹90,000 crore per year, said Jaju. Export markets would be crucial for absorbing production levels that are double of this, given that the defence capital allocation is currently ₹1.08 trillion.

The defence ministry has moved gradually towards creating an enabling environment for exports. The first step was to loosen barriers by gaining Indian entry into the four

global export control regimes. India has already obtained membership of the Missile Technology Control Regime, the Wassenaar Arrangement, and the Australia Group. New Delhi is now lobbying for entry into the fourth -- the Nuclear Suppliers Group.

Meanwhile, as an export promotion measure, the government has steadily increased the levels of foreign direct investment (FDI) permitted in defence. If this continues, foreign defence firms might soon be allowed a majority stake in joint ventures (JVs) they set up in India.

In 2016, the prevailing 26 per cent FDI cap in defence manufacturing was raised to 49 per cent

through the automatic route. Additionally, FDI above 49 per cent was permitted through case-by-case government sanction "wherever it is likely to result in access to modern technology or for other reasons to be recorded".

So far, this has failed to spur foreign investment. The defence sector has received FDI worth just \$0.18 million (₹1.26 crore) from April 2014 to December 2017, the defence ministry told Parliament on March 7, 2018.

The biggest recipient of Indian defence exports is currently the US, which has imported nearly ₹5,000 crore worth of equipment. Next comes Israel, and then the European Union.

THE ASIAN AGE

Suicide drones, AI-based spy tech at top Army meet

The Army Design Bureau has brought around 40 companies to display their weapons during the Army Commanders' Conference

By Pawan Bali

New Delhi: Indian Army's top commanders on Tuesday checked high tech weapon systems, including counter-drone systems, suicide drones, artificial intelligence-based surveillance systems, drones capable of ferrying loads in high altitude like Siachen among others for induction as it prepares for hi-tech warfare.

The Army Commanders' Conference is being held in the national capital from October 14-19, 2019. "These are the top commanders of the Indian Army. The idea was that they can check these weapons, discuss these weapons and see if they are required according to their specific requirements. These commanders also have high financial power to directly buy equipment," said sources.

Army Chief Gen. Bipin Rawat has complimented his force for steadfastly facing various challenges along the eastern and western border, saying it has responded to difficult operational situations in the most "innovative" manner.

In his address at a conference of top commanders of the Army, Gen. Rawat particularly mentioned about the Army foiling operations by Pakistan's Border Action Team (BAT) along the Line of Control, and activities by terrorists in the hinterland in Jammu and Kashmir, sources said.

Israel-based company showed loiter ammunition which are basically suicide drone, which loiters in the sky until the target is detected and then destroys it. "These are drones which double as missiles for precision strikes. They can also be used for surveillance purpose," said a senior official.

Counter drone systems were also displayed which can detect an incoming UAV and destroy it. "High altitude drones were too shown which can take load of upto 50 kilograms at places which are over 9,000 feet."

"There are many posts which are in very difficult terrain, so during war like situation these drones could be used to supply weapons and other essential equipment rapidly," said the official.

Artificial intelligence-based systems were shown which can detect changes in large areas for surveillance purposes, electro-optical devices which can help to keep an eye on enemy during night and perimeter security devices were also shown to the officers.

The Army Design Bureau has brought around 40 companies to display their weapons during the conference.

<https://asianage.com/india/all-india/161019/suicide-drones-ai-based-spy-tech-at-top-army-meet.html>

TIMESNOWNEWS.COM

Wed, 16 Oct 2019

Army Chief General Bipin Rawat bats for synergy with NIA to tackle security threats, better conviction rate

The Army Chief stressed on the need for a synergy between the armed forces and the investigating agency to reinforce the resolve to fight terrorism and anti-national activities

New Delhi: Indian Army Chief General Bipin Rawat on Tuesday stressed on the importance of working closely with the National Investigation Agency to crack down on anti-national elements and forces that work with the motive to destabilise peace and harmony in the country.

The Army Chief stressed on the need for a synergy between the armed forces and the investigating agency to reinforce the resolve to fight terrorism and anti-national activities.

"There has been an effective and large number of convictions and this could happen due to synergy among the security forces and the agencies. Such synergy with the law enforcing agencies will be reinforced," Army Chief General Bipin Rawat said.

General Rawat was addressing Army Commanders and staff at the Army Commander's Conference in New Delhi on Tuesday, where he also spoke about operational readiness, effective conduct and well synergised operational readiness of the Indian Army.

Army Chief General Bipin Rawat on National Investigation Agency (NIA): There has been effective and large number of convictions and this could happen due to synergy among the security forces and the agencies. Such synergy with the law enforcing agencies will be reinforced. <https://t.co/Q3SBLlOwl7> pic.twitter.com/gOHZDtX6Lx

— ANI (@ANI) October 15, 2019

Earlier in the day, the Army Chief called for better inclusion of indigenous technology in the armed forces and said that India will fight and win the next war, if and when it happens, with home-grown solutions.

“If we are looking at the contours of future warfare, it may not necessarily be contact warfare. So, there is a realm of non-contact warfare. We need to start looking at the development of cyberspace, space, laser, electronic warfare and robotics...and, along with that Artificial Intelligence... And, if we do not start thinking on it now, it will be too late,” news agency PTI quoted General Rawat as saying.

National Security Advisor Ajit Doval also today emphasised on the need to have modern technological advancements to equip security forces for better combat readiness.

“Either you’re better than your adversaries or you’re not there at all. In the modern world, technology and money are two things which will influence geopolitics. Who will win, will depend upon who has preponderance over their adversaries on these two. Of the two, technology is more important,” Doval said at the 41st DRDO Directors Conference.

<https://www.timesnownews.com/india/article/army-chief-general-bipin-rawat-bats-for-synergy-with-ia-to-tackle-security-threats-better-conviction-rate/504174>



Wed, 16 Oct 2019

Russian troops rush to fill void left by U.S. troops in northern Syria

Ceylanpinar, Turkey : Russia moved to fill the void left by the United States in northern Syria on Tuesday, deploying troops to keep apart advancing Syrian government forces and Turkish troops. At the same time, tensions grew within NATO as Turkey defied growing condemnation of its invasion from its Western allies.

Now in its seventh day, Turkey's offensive against Kurdish fighters has caused tens of thousands to flee their homes, has upended alliances and is re-drawing the map of northern Syria for yet another time in the 8-year-old war.

Russia moved quickly to further entrench its role as a power broker after President Trump ordered the pullout of American forces in northeastern Syria. The American move effectively abandoned the Kurdish fighters who were allied with the U.S. and cleared the way for Turkey's invasion aimed at crushing them.

Desperate for a new protector, the Kurdish administration struck a deal with the Russia-backed government of Syrian President Bashar Assad, whose forces on Sunday began moving into Kurdish-administered areas to shield them against Turkey.

Syrian troops waved flags in the streets after they rolled into Manbij, a flashpoint town west of the Euphrates River that Turkey had been aiming to capture and wrest from Kurdish control. Video by Russian journalists with the troops showed what appeared to be an abandoned outpost where U.S. forces had been stationed.

A U.S. military spokesman, Col. Myles B. Caggins, confirmed U.S. troops had completed their pullout from Manbij. During the withdrawal, contacts were kept open with the Turks and Russians to ensure the several hundred American forces there got out safely, U.S. officials said.

U.S. troops have had outposts in Manbij since 2017, when they went in to avert a battle over the town between Turkish and Kurdish fighters.

Now Russia was playing that role. Outside Manbij, Russian troops patrolled front lines between Turkish and Syrian army positions to keep them apart, Russia's Defense Ministry said.

"No one is interested" in fighting between Syrian government troops and Turkish forces, said Alexander Lavrentyev, Moscow's envoy for Syria. Russia "is not going to allow it," he told Russian state news agencies.

Kelly Craft, the U.S. ambassador to the United Nations, told reporters Washington is "deeply concerned" that Russian troops are patrolling between the two sides.

Russia has been a staunch ally of Assad for decades and entered the Syrian conflict in 2015, providing air cover that eventually turned the tide of the war in his favor. The Russian military has shipped weapons to Damascus, trained thousands of troops and put its advisers in key Syrian military units.

In the first week of the Turkish assault, at least 154 fighters from the Kurdish-led Syrian Democratic Forces have been killed, as well as 128 fighters from Turkish-backed Syrian factions, according to the Syrian Observatory for Human Rights, a monitor of the war. It said at least 69 civilians have been killed in Syria. Turkey says six of its soldiers have died, as well as at least 20 Turkish civilians killed by Kurdish mortar fire across the border.

Despite the Syrian and Russian deployments, Turkey insisted it would capture Manbij. Asked on Sky News if Turkey's military was willing to fight Assad's army, Vice President Fuat Oktay said, "We hope it's not going to happen, but again we are determined to get control over Manbij."

Mortar fire from Manbij killed two Turkish soldiers and wounded seven others, the Turkish Defense Ministry said. An Associated Press team later saw up to 200 Turkish troops along with armored vehicles crossing near Manbij and Kobani, a border town that is not yet secured by Syrian forces. Farther east on the border, Turkish and Kurdish forces were in heavy battles over the town of Ras al-Ayn, captured by Turkish troops days earlier.

A U.S. official said the approximately 1,000 U.S. troops being withdrawn from northern Syria will reposition in Iraq, Kuwait and possibly Jordan. The U.S. forces in Iraq could conduct cross-border operations against the Islamic State group in Syria as they did before creating the now-abandoned partnership with Syrian Kurdish-led forces, the official said, speaking on condition of anonymity to discuss sensitive planning for a U.S. pullout.

After opening the way for the Turkish assault with its pullout, Washington is now trying to restrain its fellow NATO member.

Mr. Trump on Monday announced sanctions aimed at Turkey's economy. The U.S. called on Turkey to stop the offensive and declare a ceasefire, while European Union countries moved to broaden an arms sale embargo against their easternmost ally.

The White House said Tuesday that Vice President Mike Pence will travel to Turkey on Wednesday, leading a delegation including Secretary of State Mike Pompeo and national security adviser Robert O'Brien. Pence said Monday that Mr. Trump spoke directly to Turkish President Recep Tayyip Erdogan, who promised not to attack the border town of Kobani, which in 2015 saw the Islamic State group's first defeat in a battle by the U.S.-backed Kurdish fighters.

The U.N. Security Council planned a closed meeting Wednesday on the situation, requested by Germany and other EU members. "Everybody hopes that ... we can do something to bring back the parties to the peace process," said the current Security Council president, South Africa's U.N. Ambassador Jerry Matjila.

NATO ambassadors also will meet on Wednesday in Brussels on Turkey's offensive, said alliance Secretary-General Jens Stoltenberg.

Erdogan defended Turkey's offensive in a column in The Wall Street Journal, urging the international community to support Ankara's effort to create what it calls a resettlement "safe zone" for refugees in northeastern Syria, or "begin admitting refugees."

"Turkey reached its limit," Erdogan wrote of the 3.6 million Syrians in his country. He said Turkey's warnings it would be unable to stop refugee floods into the West without international support "fell on deaf ears."

Turkey said it invaded northern Syria to create a zone of control the entire length of the border and drive out the Kurdish fighters, which it regards as terrorists because of their links to Kurdish insurgents in Turkey.

Instead, after the Kurds' deal with Damascus, a new de facto carving up of the border appeared to be taking shape.

Turkish forces control the beginnings of a truncated zone roughly in the center of the border about 60 miles long between the towns of Tel Abyad and Ras al-Ain.

Syrian government troops were moving into or increasing their presence in areas on either side of that enclave, including Manbij to the west and the cities of Qamishli and Hassakeh in the far northeastern corner of Syria.

Though they gain protection from the Turks by the deal with Damascus, the Kurds risk losing the virtual self-rule they have enjoyed across the northeast — the heartland of their minority community — ever since Assad pulled his troops from the area seven years ago to fight rebels elsewhere.

The U.N. humanitarian aid coordinator said at least 160,000 civilians in northeastern Syria have been displaced amid the Turkish operations, mostly from Ras al-Ayn and Tal Abyad, where people are fleeing south.

<https://www.cbsnews.com/news/russia-in-syria-russian-troops-fill-void-left-by-trumps-troop-withdrawal-in-northern-syria/>