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Theatre command: Show of unity across Defence Forces

By Ajit Kumar Dubey

At a time when the government is moving towards integrating theatre commands, the Andaman and Nicobar Command will make a presentation to the defence ministry on further strengthening the tri-services organisation.

The move comes soon after the defence ministry put in all the manpower including officers of the Air Force, Army and Navy under the operational command of a Vice Admiral of the Navy at the Andaman and Nicobar Command in Port Blair. "Detailed presentations would be made by the Commander in Chief, Andaman and Nicobar Command (CiNCAN) to the Defence Ministry on Thursday and Friday this week on further strengthening the command and its infrastructure to give it more teeth," government sources told Mail Today here.

"The presentation is likely to include the assets of the Air Force and the Army to be placed under the command to give it more fighting capability and firepower," the sources said. Under theatre commands like the ones which exist in the US, all the forces working in a geographical area are put under a theatre command which can be headed by one officer from any of the three services.

Recently, the defence ministry had notified new "statutory rules and orders" to ensure an officer from



any one service can now "exercise direct command" over personnel from the other two services, who are all governed by different acts and rules, in tri-service. The move has been implemented especially for strategically located Andaman and Nicobar Command (ANC), which was established as India's first theatre command in October 2001 but has largely failed to achieve its potential due to internecine turf wars among the three services, general politicobureaucratic apathy, fund crunches and environmental concerns.

After the amendment in rules, the naval commander-in-chief of the ANC can now directly control and discipline Army and IAF officers and other personnel under him, even as similar moves are afoot to eventually bring all land and assets under him. However, sources suggest that there are certain issues among the three services over giving powers to the tri-services command to punish officers from all the three services.

There is also a view that services are not on the same page of the issue of theatre commands over its utility. Defence experts fee the recent Air Force wargame Exercise Gaganshakti showcased that its assets can shift from one theatre to the other within no time and putting them under a dedicated theatre would not be of much us ina country with limited resources. After the government took over in 2014, there was talk about a proposal to create integrated theatre commands for the northern border with China, a western command for Pakistan, a counterinsurgency operations command and one command for the maritime borders. But nothing concrete has come out of it.

The armed forces currently have 17 single-service commands, with only two unified commands in ANC and the Strategic Forces Command to handle the country's nuclear arsenal.



BARC develops cheaper, lightweight bulletproof jackets

Bhabha Kavach weighs 6.6 kg and has passed over 30 tests By Aditya Anand

The Bhabha Atomic Reseach Centre (BARC) has developed a next-generation bulletproof jacket for the Indian armed forces, which is not only cheaper but also much lighter.

Bhabha Kavach, named after nuclear physicist Dr. Homi J. Bhabha, the jacket was developed at BARC's Trombay centre in response to a request from the Central Reserve Police Force (CRPF) and the

Ministry of Home Affairs.

Dr. Kinshuk Dasgupta, scientific officer at BARC's materials group, told The Hindu that the jacket weighs just 6.6 kg in comparison to the 17-kg jackets in use, and has passed over 30 tests carried out by certified agencies. Bhabha Kavach is available in three variants as per the requirement of the armed forces.

A five-member BARC team worked for a year in 2015-16 to develop the jacket, which is being tested by a joint team of the CRPF, Indo-Tibetan Border Police, and the Central Industrial Security Force. The northern command of the Indian Army is also testing a variant of the jacket in Jammu and Kashmir.

THE ECONOMIC TIMES

Thu, 26 April, 2018

India seeks US exemption to buy Russian S-400 air defence missile system

By Dipanjan Roy Chaudhury

The Modi government is in talks with the United States for an exemption to allow India to procure the S-400 air defence missile system from Russia. India needs a waiver from the Countering America's Adversaries Through Sanctions Act (CAATSA) for the proposed deal, estimated to be worth about \$5.5 billion (Rs 39,000 crore), officials told ET.

They said the government has conveyed to the US that India cannot abruptly scale down its reliance on military hardware from Russia given the decadesold history of defence cooperation between the two countries. Sections of US defence establishment and strategic community have also argued in India's favour as they fear that sanctions could adversely impact Indo-US partnership.

"We totally appreciate India's concerns. It was raised in discussions during senior-level meetings last month," Joe Felter, deputy assistant secretary of defence for South and Southeast Asia recently told a news agency. "We also are very concerned because we very much hope to maintain the momentum and the trajectory of this relationship.

We want to deepen our cooperation and not to reduce it." Cara Abercrombie, a visiting scholar with Carnegie's South Asia Programme, who had earlier worked with the US office of the secretary of defence, recently wrote in a paper for the thinktank: "While the US has become its second-largest defence supplier — mainly of aircraft and artillery — India still relies heavily on Russian equipment, such as submarines and missiles, that the US has been unwilling to provide."



Pakistan NSA in Russia to boost ties

The national security advisers of Pakistan and Russia have met in Moscow and discussed the situation in South Asia and the main challenges and threats to global security, media reports said. Russia-Pakistan ties have been improving steadily since the two signed a military cooperation agreement in 2014.

The two countries also held joint military exercises in 2016 and last year, as Moscow and Islamabad made efforts to move past their bitter Cold War hostilities. Pakistan's National Security Adviser Lt. Gen. (Ret) Nasser Khan Janjua visited Moscow this week and met Nikolai Patrushev, Secretary of the Security Council of the Russian Federation, The News reported.

Janjua, who led a high-level inter-ministerial delegation, reaffirmed Pakistan's desire to continue to work together with Russia for further improvement in relationship and to seek enduring peace and stability in the region, it said. This is the first-time ever that inter-ministerial level delegations led by national security advisers of the two countries met each other, the Pakistani newspaper reported. Russia's state-run Tass news agency reported that Patrushev and Janjua stressed their interest in further security cooperation between Moscow and Islamabad.

"Issues of bilateral military cooperation in information security and countering international terrorism were studied," it quoted the Russian Security Council press service as saying. "The general situation in South Asia and the main challenges and threats to global security were discussed," it added. Janjua arrived in Russia to take part in the ninth international meeting of security chiefs that will be held in Sochi on April 24-26, Tass reported. Janjua gave an elaborate presentation on trends of global power politics. He shared his strategic thinking about evolving security challenges around the globe with particular focus on the region, The News reported.

He also highlighted the common opportunities for Russia and Pakistan. Regional connectivity and prospects of closer cooperation in the fields of space, defence, security, economy and trade, cyber security, intelligence-sharing remained the main focus of the delegation level talks, it said.

Both sides expressed their satisfaction at the positive trajectory and progression of mutual relationship at bilateral and multilateral levels including at the Shanghai Cooperation Organistation and the United Nations. Meanwhile, Pakistan Army Chief General Qamar Javed Bajwa has met Russian Army Commander-in-Chief Colonel General Oleg Salyukov and discussed security and defence-related issues.

Salyukov said Pakistan is a geo-strategically important country and Russia is keen to expand its existing bilateral military-to-military cooperation, the Inter-Services Public Relations (ISPR), the Pakistan Army's media arm, said in a statement yesterday. Bajwa said that Pakistan "reciprocates desire of enhanced bilateral military engagements" with Russia, the statement said.Bajwa said that Russia has recently played a positive role to help resolve complex situations in the region. He also said that Pakistan will continue to play its part to keep conflicts away from the region and seek approaches which bring regional convergences into play rather that the divergences, the statement said.

The chill Pak-US ties, especially after President Donald Trump warned Islamabad against providing safe havens to terror groups, has further pushed Pakistan towards Russia and China.



Thu, 26 April, 2018

Isro's GSAT11 launch postponed, satellite recalled

The launch of India's most powerful and heaviest communications satellite GSAT-11, scheduled for May 25 by private commercial launcher, Arianespace, from a station in French Guiana, has been postponed.

The company said that "additional technical checks" would be performed at Isro's Satellite Centre (ISAC) located in Bangalore.



"The launch of GSA T-11 scheduled during May 2018 from Kourou, French Guyana is rescheduled. The revised launch date will be communicated subsequently," Isro said in a statement.

The GSAT-11 is an advance communication satellite; the heaviest one from Isro's stable, weighing 5.7-tonnes. The space agency lost communication with GSAT 6A, another communications satellite, on March 31, less than three days after it was launched. The GSAT 11 was transported to the launch site in South America in

March. "GSAT 11 will be brought back to India next week for additional checks," a senior Isro official who spoke on the condition of anonymity, said.



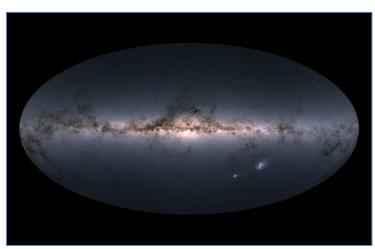
Thu, 26 April, 2018

3-D map of Milky Way to 'revolutionise astronomy'

One of the 450 scientists involved in the project to catalogue over a billion stars said the release of new data was like "opening a chocolate box"

Europe's Gaia satellite has produced a 3-D map of more than a billion stars in the Milky Way galaxy — complete with their distance from Earth, colour, and motion through space. The eagerly-anticipated catalogue, published on Wednesday, was compiled from data Gaia gathered on some 1.7 billion stars from its unique vantage point in space, about 1.5 million kilometres from the earth.

"The dataset is very rich and we believe it will revolutionise astronomy and our understanding of the



over 22 months in 2014-2016.

Shining bright

Milky Way," said Gaia's scientific operations manager Uwe Lammers.

"This catalogue is the most precise, most complete catalogue that has ever been produced. It allows studies which have not been possible before." Launched in 2013, Gaia started operating the following year, gathering data on 1, 00,000 stars per minute — some 500 million measurements per day. Its first map was published in September 2016, based on a year's worth of observations of about 1.15 billion stars.

An update, launched at the ILA international air and space show in Berlin, adds stars and provides more data on each one, from measurements taken

"For some of the brightest stars in the survey, the level of precision equates to Earth-bound observers being able to spot a €1 coin lying on the surface of the moon," said an ESA statement. The new, improved map depicts 1.7 billion stars "for which we can tell where they are in the sky with very high accuracy, and how bright they are," said Anthony Brown of the Gaia Data Processing and Analysis Consortium.

For 1.3 billion of those, "we know their distance and we know how they move through space." There is, furthermore, information on the radial velocities of some seven million stars — indicating the rate at which they are moving towards, or away from, the earth. With all this data, "we can make a map of the whole night sky," said Mr. Brown, who described the end result as "stunning". "You see the whole Milky Way in motion around its axis," he said.

Web of space rocks

Gaia also revealed the orbits of some 14,000 "solar system objects" — mapped as an intricate web of space rocks shooting around the sun. "It represents the most accurate survey ever of asteroids in the solar system," said Mr. Brown. More will be added in future updates. Information sent to the earth by Gaia is collated by 450 scientists from 20 countries. Antonella Vallenari, one of the scientists, likened the data release to "opening a chocolate box".

"It's very, very exciting," she said at the launch event in Germany, webcast live. The full data will be published in a series of scientific papers in a special issue of the journal *Astronomy & Astrophysics*, laying the foundation for decades of further study.