

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा
A daily Current Awareness Service

Vol. 42 No. 155 06 Aug, 2017



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Metcalf House, Delhi- 110054

Sun, 06 Aug, 2017

IAF organises 'Know Your Forces' drive for civilians

A guided tour and static display was organised by the Indian Armed Forces at the air force station here for the common people as part of the 'Know Your Forces' drive to attract the youth in joining the IAF. The drive is undertaken by the three-sister services from time to time, a defence spokesperson said.

Various aviation and defence systems, like heavy-lift aircraft IL-76, medium-lift aircraft An-32, the world's biggest helicopter Mi-26, frontline fighter MiG-27/29 were displayed for the visitors at the air force station, he said.

School and college students in the vicinity of Chandigarh were invited, the spokesperson said, adding the aim of the display was to educate them about the role and functioning of the IAF during peace and war. More than 1,600 students witnessed the display, he said. "The students were provided with adequate information regarding opportunities to join the IAF," the spokesperson said.



Sun, 06 Aug, 2017

Indian Navy band joins historic Edinburgh Military Tattoo

A 66-member Indian Navy band has joined the historic Royal Edinburgh Military Tattoo in the UK for this year's musical event where they will mark the 70th year of India's Independence.

The Royal Edinburgh Military Tattoo is an annual series of military tattoos — performance of music — by British Armed Forces, Commonwealth and international military bands and artistic performance teams on the esplanade of Edinburgh Castle in Scotland.

It was first staged in 1950 and since then British and international musicians and acts from over 50 countries have entertained audiences.

The Indian Band, appearing with an array of colourful dancers, comprises one officer and 65 musician—sailors, performing under the baton of Commander Vijay Charles D'Cruz, Director of Music (Navy) and the principal conductor at the event.

More than 1,200 performers from around the world will take part in this year's military musical extravaganza, with the Indian band invited to mark the 70th year of Indian independence and the India—UK Year of Culture.

"Each year, we reach out across the world to find the very best acts and bring them to Edinburgh. We are always looking to bring people together to celebrate the rich differences of our global community.

"There is something for everyone in this show and an opportunity for all of us to be proud," said Brigadier David Allfrey, chief executive and producer of the tattoo.

The theme for this year's week—long event, which runs until August 26, is titled 'Splash of Tartan', celebrating Scotland's Year of History, Heritage and Archaeology.

There will be a total of 25 shows on the Esplanade of the Edinburgh Castle, with each show attracting a cast of over 1,200 musicians and other players. Each show will have an audience of around 8,800 delivering an approximate total audience of 2,20,000 through the month of August.

In addition, the global television audience is estimated to reach between 100 and 300 million people.

Besides the Indian band, there are participants from Australia, France, Germany, Japan, Malta, Monaco and the US, and 20 bands from Britain. "It is our aspiration that, besides showcasing the Indian Navy, the

deployment of our band will personally for each individual member be memorable and collectively enrich their repertoire,” the Indian High Commission in London said in a statement. The tattoo has also launched its first app to provide an interactive guide to the 2017 show.



Sun, 06 Aug, 2017

Fate of India-China Joint Drill Uncertain

By Rahul Datta

The continuing stand-off between India and China in Doklam in Sikkim sector has cast its shadow on the annual joint-military exercise ‘Hand-in-Hand’ between the two nations.

A Chinese delegation supposed to come here to finalise the modalities and dates for the exercise to be held there in October or November has not come yet. The delegation was expected in June and incidentally, the stand-off too commenced the same month.

And as things stand, there is no word so far about any upcoming visit by the Chinese delegation for the meeting. “The Chinese delegation was supposed to arrive here in late June or early July for the meeting as mutually agreed between the two nations for conducting the exercise. However, the Chinese officials did not come and respond to repeated queries of the Indian Government about the delay,” sources said.

The joint drill is alternatively held every year in India and China. Last year, India hosted the event in Pune preceded by the drill taking place in Kunming in China in 2015. Sources said if the present situation in Doklam continues the fate of this year’s exercise is uncertain.

The exercises started in 2007 as part of confidence-building measure between the two nations engaged in a long standing border dispute of more than 4,000 km for the last several decades. The first drill took place in China while the second in India.

However, the next few years did not see this exchange due to the row over China issuing stapled visas to residents of Arunachal Pradesh and denying a visa to a Northern Command Army chief questioning the status of Jammu & Kashmir.

The Northern Command looks after Jammu and Kashmir.

The annual exercises resumed in 2013 with China hosting it. The fortnight-long drills involving at least 100 soldiers from each side focus on counter-terrorism and urban and rural insurgency besides basic military tactics.

Meanwhile, status quo remains in the face-off in Dokalam involving 300-350 Indian soldiers and more or less the same number of Chinese soldiers. They are at a distance of 150 metres from each other, sources said.

The area resembles a tented colony with the Indian Army pitching more than 10 tents with the capacity of providing cover to more than ten soldiers in each tent. Moreover, the logistical lines to ensure regular food supply and other basic necessities are well in place to ensure minimum hardship to the Indian soldiers at the site located at a height of nearly 14,000 feet.

As regards weather condition, they said it is raining intermittently there and temperatures are hovering between five and six degrees. The Indian soldiers present there are provided with all the protective clothing to withstand inclement weather condition with senior commanders keeping a close watch, sources said.

Sun, 06 Aug, 2017

China Planning ‘Small Scale Military Ops’ To Expel Indian Troops: Expert

China is planning a “small scale military operation” to “expel” Indian troops from the Doklam area “within two weeks”, an article in a State-run daily said on Saturday.

India and China have been locked in a prolonged stand-off in the area in the Sikkim sector since June 16 after Chinese troops began constructing a road near the Bhutan trijunction.

Bhutan has protested to China, saying the area belonged to it and accused Beijing of violating agreements that aim to maintain the status quo until the boundary dispute is resolved.

India says the Chinese action to construct the road was unilateral and changes the status quo. It fears the road would allow China to cut off India’s access to its northeastern states.

“China will not allow the military standoff between China and India in Doklam to last for too long, and there may be a small-scale military operation to expel Indian troops within two weeks,” Hu Zhiyong, a research fellow at the Institute of International Relations at the Shanghai Academy of Social Sciences was quoted by the Global Times.

The “expert” wrote in the daily that the “Chinese side will inform the Indian foreign ministry before its operation.” To peacefully resolve the impasse, India’s External Affairs Minister Sushma Swaraj has said that both the sides should first pull back their troops and hold dialogue.

Swaraj on Thursday again asserted that war cannot resolve anything. She said India was engaged with China to resolve differences and advocated patience.

Her Ministry’s spokesman Gopal Baglay on Friday said India was in close coordination with Bhutan over the Dokal issue. But the Chinese media, particularly the Global Times tabloid, has unleashed a barrage of anti-India rhetoric in recent weeks amid tensions between the two countries.

In Saturday’s article, the researcher also cited a state-run CCTV report about live fire exercises in Tibet recently. Hu continued, “India has adopted an immature policy toward China in recent years. Its development is not at the same level as China’s. It only wants to seek disputes in an area which originally has no disputes to gain bargaining chips.”

The military stand-off comes ahead of the BRICS Summit in the Chinese city of Xiamen early next month, where leaders of Brazil, Russia, India, China and South Africa will meet.

Sun, 06 Aug, 2017

Sri Lankan Navy Commissions India-Built AOPV

Sri Lankan Navy has commissioned an India-built state-of-the-art Advanced Offshore Patrol Vessel (AOPV), the first-ever purchase from a foreign ship builder, to boost its search and rescue capabilities.

Sri Lankan President and Armed Forces commander-in-chief Maithripala Sirisena commissioned the new patrol vessel "SLNS Sayurala" this week at a ceremony at the Eastern Container Terminal of the Port of Colombo.

It is the largest vessel built by an Indian ship builder for a foreign navy to date.

The event was also attended by Flag Officer Commander in Chief Southern Naval Command-Indian Navy Vice Admiral A R Karve.

Built at the Goa Shipyard Ltd (GSL) in India, SLNS Sayurala is the first-ever brand new platform purchased from a foreign ship builder and tailored for the specific requirements of the Sri Lanka Navy (SLN), a navy statement said.

It is expected to conduct patrols, policing, surveillance, reconnaissance, search and rescue, Humanitarian Assistance and Disaster Relief (HADR) and pollution control missions in Sri Lanka's maritime zones, the statement said.

The 105.7 metre-long and 13.6 meter-wide vessel can also be used for external fire-fighting missions.

Sayurala features a range of modern facilities and advanced technological instrument and is capable of achieving the maximum speed of 26 knots and cruising speed of 12-14 knots. It has a displacement of 2,350 tonnes.

Equipped with a landing facility and hangar for an advanced light helicopter (ALH), the vessel can accommodate a total of 118 crew members.

The SLN signed the contract for two AOPVs on February 17, 2014 and officially initiated the construction of SLNS Sayurala in May the same year.

It took delivery of the first AOPV on July 22 and transported the vessel to Sri Lanka on July 28.

The second AOPV is currently under construction in India and is slated to join the SLN fleet by next year.

THE ASIAN AGE

Sun, 06 Aug, 2017

US Army grounds China-made drones

Cyber vulnerabilities cited as reason for halt in use of UAVs

New York: The US Army has ordered its members to stop using drones made by Chinese manufacturer SZ DJI Technology Co Ltd because of “cyber vulnerabilities” in the products.

An August 2 Army memo posted online applies to all DJI drones and systems that use DJI components or software.

It requires service members to “cease all use, uninstall all DJI applications, remove all batteries/storage media and secure equipment for follow-on direction.”

The memo says DJI drones are the most widely used by the Army among off-the-shelf equipment of that type.

DJI said in a statement that it was “surprised and disappointed” at the Army’s “unprompted restriction on DJI drones as we were not consulted during their decision.”

The privately held company said it would contact the Army to determine what it means by “cyber vulnerabilities” and was willing to work with the Pentagon to address concerns.

Analysts at Goldman Sachs and Oppenheimer estimated in 2016 that DJI had about 70 percent share of the global commercial and consumer drone market. Goldman analysts estimated the market, including military, to be worth more than \$100 billion over the next five years.

The move appears to follow studies conducted by the Army Research Laboratory and the navy that said there were risks and vulnerabilities in DJI products.

Army has ordered its members to stop using drones because of cyber vulnerabilities. Chinese firm says it was surprised by the decision. Studies said there were risks and vulnerabilities in DJI products

IIT Delhi team develops a new antibacterial drug-delivery system

By R. Prasad

The nanoconjugates will be useful for cancer patients suffering from bacterial infections

A new antibiotic drug-delivery system that improves the efficacy of drugs thereby reducing the dosage used for treating bacterial infections has been tested in a lab by researchers at the Indian Institute of Technology (IIT) Delhi. A peptide, which has not been approved for clinical use, bound to gold nanoparticles was able to kill *E. coli* and *Salmonella typhi* more efficiently at lower dosages.

“Drug delivery becomes better and the bioavailability improves when the drug is conjugated [bound] to gold nanoparticles. So reduced dosage is sufficient to kill the bacteria. Reducing the dosage of antibiotics used is one of the strategies to reduce the possibility of drug resistance setting in,” says Dr. Neetu Singh from the Centre for Biomedical Engineering, IIT Delhi, and one of the corresponding authors of the paper published in the journal *Scientific Reports*.

Bioavailability - The peptide in a free form may not be bioavailable as it gets degraded relatively fast. In a free form, the peptide is also not able to effectively kill the bacteria by engaging with the bacterial membrane and disrupting it, while the nanoconjugate fares better on these counts. The challenge was to arrive at an optimum number of peptides that are bound to nanoparticles to get the best results. When there are too few or too many peptides bound to the nanoparticles the antibacterial activity gets compromised. “There is significant antibacterial activity when about 1000 peptides are bound to a nanoparticle,” says Dr. Singh.

The peptide called sushi-peptide bound to nanoparticles was able to kill 50% of bacteria at much lower concentration (400 nM) while the free peptide’s antibacterial activity was not significant at the same concentration, says Smita Patil from the Centre for Biomedical Engineering, IIT Delhi and one of the first authors of the paper.

Besides normal cells infected with bacteria, the peptide bound to nanoparticles will be particularly useful in the case of cancer patients suffering from bacterial infections. “Rapid metabolism at the cancer site sucks all nutrients and leads to nutritional deficit in the body. When chemotherapy is given even the bacteria already present in the body but kept under check become disease-causing,” says Dr. Pankaj Chaturvedi, cancer specialist at the Tata Memorial Hospital, Mumbai.

After chemotherapy the immunological response gets damaged as cells responsible for protecting against bacteria are reduced in number. So the person becomes vulnerable to infection. “Antibiotics by itself cannot kill all the bacteria. The inherent immunological response should be able to challenge the bacteria once antibiotic treatment is completed. Since this does not happen, the bacteria develop drug resistance,” says Dr. Chaturvedi.

Folate receptors - Specific receptors called folate receptors are present in large numbers on the surface of cancer cells. Folic acid added to the nanoconjugates is recognised by these receptors and help in the binding process. “Once the nanoconjugates enter the cancer cells they interact with the bacteria and kill them by disrupting the cell membrane. The nanoconjugates have 40% better antibacterial activity compared with free peptides,” says Rohini Singh from the Department of Chemical Engineering, IIT Delhi, and one of the first authors of the paper. The nanoconjugate is not toxic to cancer cells and targets only the bacteria.

“We would next like to study if our nanoconjugates can be used on antibiotic-resistant strains and also understand the fate of gold nanoparticles used for making the nanoconjugates,” says Dr. Neetu Singh. Instead of gold nanoparticle, biodegradable polymers can be used. The only condition is that the peptide should be able to interact with the bacterial membrane. A few more studies have to be carried out before the nanoconjugate can be tested on animals.

Bullet train may come faster than expected

By Rakesh Ranjan



Expect the country's first bullet train project to roll down the tracks at a rapid pace. Prime Minister Narendra Modi and Shinzo Abe will together lay the foundation stone of the 508-km corridor between Ahmedabad and Mumbai during the Japanese premier's visit to India in September. Sources said the groundbreaking ceremony will be performed in Ahmedabad keeping in view the Gujarat assembly polls slated for November-December this year. They said the bullet train project will be showcased as the biggest achievement of Modi who will start the project from his home state. Also, the BJP will be going to polls with the PM as the party's face in the state. It takes about seven hours to travel on rail between the two cities and the bullet train aims to reduce it to about two hours. To ensure the dream project does not get delayed, Indian Railways is all set to hire a consultant who will look into land acquisition and other financial issues.

It will be the responsibility of the consultant to see that full compensation is paid to every land owner and also ensure jobs to their family members, said a senior railway board official dealing with the bullet train project. The initial detailed project report (DPR) prepared by the Japanese authorities, which is providing technical assistance to Indian Railways, suggested constructing a major portion of the corridor on surface. But the DPR was modified to take the elevated route primarily to avoid delays. As officials put it, the change would do away with legal and environmental hurdles regarding land acquisition. PM Modi too has been pushing his ministers to speed up the bigticket projects that have often encountered legal barriers in several states. According to a railway ministry official, approximately 850 hectares of land would be required for the bullet train project. Since the project was earlier planned on surface, it would have required more land. This, however, would escalate the project cost, sources said.

"The consultant would prepare a comprehensive report on the quantity of land to be acquired and its socioeconomic impact. The consultant will maintain a record of the trade and industries that will be affected due to land acquisition. Accordingly, the compensation along with job to the affected families will be ensured," a top railway official said. For an elevated corridor, compensation amount to land owners will be little. Also, it will ensure speedy execution of the project. Already more than 440 rail projects are stuck over land acquisition. This, according to a CAG report of 2015, has resulted in cost overrun of `1.07 lakh crore. Railways also faced major hurdles in acquiring land for its ambitious dedicated freight corridors that will significantly decongest the railway network and increase the speed of passenger trains. Officials said while the Indian Railways will acquire the financial assistance and bullet train technology from Japan, it will ensure maximum job opportunities to Indian companies in construction of the project.

Out of the 508 km length, 450 km of work will be awarded to Indian companies while only 52 km will be given to Japanese companies. Further, work on seven km of under-sea rail track will be open for foreign players as Indian does not have the technology for constructing under-sea rail tunnel so far. India's bullet train, at the speed of 320 km per hour, will match the speed of the leading high-speed train systems across the world. The project will cost approximately `1 lakh crore and the funding of the project is being done by Japan International Cooperation Agency (JICA). Railway officials said the actual work on project would begin by 2018 and the work will be completed by 2023.