

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा
A daily Current Awareness Service

Vol. 43 No. 94 09 May 2018



रक्षा विज्ञान पुस्तकालय
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Army has to be 'firm' in 'sensitive' Kashmir: Mantri

The tourist's death could not have come at a more inopportune time as the peak tourist season is about to kick off.

Defending the tough posture adopted by the Army in dealing with militants in Kashmir and also signalling that the ongoing "Operation All-Out" will continue, defence minister Nirmala Sitharaman has said



that the Army has to be firm with "terrorists" and their supporters but added that the Kashmir issue is "sensitive" and "nuanced". Ms Sitharaman told reporters on the sidelines of the bi-annual Naval Commanders' Conference on Tuesday: "I think we need to understand the (Kashmir) issue which is very sensitive with a great deal of nuances. So, we have to understand first about putting everything back at the doorstep of the army. You can't hold the Army responsible for being firm with terror. We need to be firm with terror."

More than a year old, Operation All-Out is a relentless no-holds barred deadly offensive against militancy in Kashmir that has resulted in a spike in the elimination of marked militants.

Condemning the death of a tourist from Chen-nai in a stone-pelting incident by protesters as "absolutely unfortunate", the minister said: "I don't know whether it (the incident) was inadvertent or (committed) knowingly but it is completely condemnable". The tourist's death could not have come at a more inopportune time as the peak tourist season is about to kick off. "I am sure the CM (Mehbo-oba Mufti) she is keen on getting more tourists to Kashmir because that will also help in restoring normalcy..." she added.



Pokhran-II and How We Hoodwinked the Western Intelligence

May is the cruelest month in the Thar desert of Rajasthan and Pokhran is no exception. In the summer of 1998, Pokhran was host to some unusual and very high profile guests.

Two of our renowned scientists, Dr Rajagopal Chidambaram, Chairman of the Atomic Energy Commission and Dr A P J Abdul Kalam, an aerospace engineer who then headed the Defence Research Development Organisation (DRDO), spent several nights along with a team of nuclear scientists and engineers sleeping in the open.

This was an attempt to see the movement and schedule of the American spy satellites so that the drilling for a deep tunnel could be taken up when the satellite looked the other way. They were dressed in army fatigues to disguise themselves from the prying villagers about the earth-shattering plans of their impending work.

India's Entry into the Big 5

They and the rest of the team were temporarily positioned in Pokhran as personnel of the 58th Regiment of the Army's Corps of Engineers, dressed in their ill-fitting uniforms and freshly issued false Identity cards; Dr Abdul Kalam had taken the name of Maj Gen Prithviraj. It was quaintly appropriate for him as he was the team leader of Prithvi missile project – India's first nuclear-capable ballistic missile with a range of 150 to 250 kms. He was indeed a 'Prithvi Raj'.

On 11 May, 1998, Operation Shakti (Pokhran-II) was initiated with the detonation of one fusion and two fission bombs. On 13 May, 1998, two additional fission devices were detonated, and Prime Minister Atal Bihari Vajpayee shortly convened a press conference to declare India a 'full-fledged nuclear state' to a stunned world.

India had barged into the exclusive club of the 'Big-5' nations; the declared nuclear weapon states under the Nuclear Non-Proliferation Treaty (NPT) who were also the 5 permanent members of the UN Security Council. They were not only in a position of authority but also had the power of the bomb. They had set the rules of the game all along and now the game had changed irrevocably.

This was the second time India was knocking down the world order. The first test, code-named 'Smiling Buddha' was conducted in May 1974.

Prof Raja Ramanna who was the team leader called Prime Minister Indira Gandhi on her office landline, and conveyed the pre-arranged code word 'The Buddha is smiling' to inform that the test was successful. India was a different country then, and the world was much more hostile to us. Not to enrage the superpowers, India soon termed it a 'peaceful nuclear implosion' for fear of attracting sanctions. Nevertheless, sanctions came quick and harsh. We had then hidden and suppressed our intentions. Now, in 1998 it was necessary to hide our actions, though the intention was clear.

Preparations for Pokhran -II

The Indian intelligence were aware of US spy satellites, and the interest of the CIA in trying to detect our nuclear test preparations since 1995. Therefore, the tests required complete secrecy and also needed to avoid detection by other countries, including our western neighbour who was waiting to carry out its own nuclear tests.

The 58th Regiment of the Army Corps of Engineers was commissioned to prepare the test sites. Its Commander Colonel Gopal Kaushik supervised the test preparations and ordered his "staff officers take all measures to ensure total secrecy." None of his staff were told of the identity of our scientists and engineers who started camping regularly at Pokhran.

Extensive planning was done by a very small group of scientists, senior military officers and senior politicians to ensure that the test preparations would remain totally under wraps. Even senior members of the government had no clue of the planned activities. The scientists and engineers of the BARC and the DRDO were involved in the nuclear weapons assembly, layout, detonation and obtaining test data. A very small group of senior scientists were involved in the detonation process. Work was mostly done during the night, and equipment was returned to the original place to give the impression that it was never moved. Bomb shafts were dug under camouflage netting and the dugout sand was shaped like dunes, a natural sand formation in the Thar. Cables for sensors were covered with sand and concealed using native vegetation. Scientists would not depart for Pokhran in groups of two or three. They travelled to destinations other than Pokhran under pseudonyms, and were then transported by the army.

Three laboratories of the DRDO were involved in designing, testing and producing components for the bombs, including the advanced detonators, the implosion and high-voltage trigger systems. These were also responsible for weaponising, systems engineering, aerodynamics, safety interlocks and flight trials.

The bombs were transported in four trucks of the Army under the command of Colonel Umang Kapur; all devices from BARC were relocated at 03:00 hrs on 1 May 1998. From the Chhatrapati Shivaji International Airport, the bombs were flown in an AN-32 plane to the Jaisalmer army base. They were then transported to Pokhran in an army convoy of four trucks in three trips. The devices were delivered to the device preparation building, which was designated as 'Prayer Hall'.

Nuclear Devices and Detonations

The test sites were organised into two underground groups and were fired separately, with all devices in a group fired at the same time. The first group consisted of the thermonuclear device (Shakti I), the fission device (Shakti II), and a sub-kiloton device (Shakti III). The second group consisted of the remaining two sub-kiloton devices Shakti IV and V. It was decided that the first group would be tested on 11 May and the second group on 13 May. The timing of the tests depended on the local weather conditions, with the wind being the critical factor. By early afternoon, the winds had died down and the test sequence was initiated.

- At 3:43 pm on 11 May, three nuclear devices (specifically, Shakti I, II and III) were detonated simultaneously, as measured by international seismic monitors.

- On 13 May, at 12.21 pm, two sub-kiloton devices (Shakti IV and V) were detonated. Due to their very low yield, these explosions were not detected by any seismic station.

Why did we take so much precaution and extra care to hide our plans and activities? Because we had learnt our bitter lesson in 1974, when Indira Gandhi had asked then Chairman IAEC Dr Homi Sethna, and the team leader of the nuclear weapons program Dr Raja Ramanna to conduct the first nuclear tests, code-named ‘Smiling Buddha’. The world reacted with open hostility in ganging up against us by creating the Nuclear Suppliers Group, which is still keeping India out of this exclusive club.

<https://www.thequint.com/voices/opinion/opinion-pokhran-two-nuclear-testing-india-apj-abdul-kalam-atal-bihar-vajpayee>

The Tribune

Wed, 09 May, 2018

Navy Chief on 5-day US visit from Monday; focus on Indo-Pacific region

Navy Chief Admiral Sunil Lanba will begin a five-day visit to the US from Monday tomorrow during which he will hold extensive talks with the top military brass of the Trump administration to consolidate bilateral naval cooperation, including in the Indo-Pacific region. Admiral Lanba will hold discussions with Defence Secretary James Mattis, Secretary of the US Navy Richard V Spencer, Chairman of Joint Chiefs of

Staff General Joseph F Dunford Jr, Chief of Naval Operations Admiral John M Richardson and Commander of Pacific Command Admiral Harry Harris, a senior Navy official said.

The Navy Chief will also meet Commander of Pacific Fleet Admiral Scott Swift and Commander of Naval Sea Systems Command Vice Admiral Thomas J Moore. “The visit aims to consolidate cooperation between the Armed Forces of both India and USA and also to explore new avenues of defence cooperation,” the defence ministry said. Sources said China’s growing military presence in South China Sea and its rising assertiveness in that region may figure in the talks that Admiral Lanba will have with top US military officials.

The US has been pushing for a broader role for India in the strategically important Indo-Pacific region. In November last year, India, the US, Australia and Japan gave shape to the long-pending “Quad” to develop a new strategy to keep the critical sea routes in the Indo-Pacific free from Chinese influence.



India, the US and several other nations have been calling for freedom of navigation in the disputed South China Sea. The US has been periodically sending naval ships and planes to assert freedom of navigation to the critical sea lanes, much to the chagrin of China. In addition to holding bilateral discussions, Admiral Lanba will also visit the Pacific Command Headquarters at Pearl Harbour, Hawaii, the Naval Surface Warfare Centre (NSWC) in Dahlgren, the Pentagon and Arlington National Cemetery in Washington DC.

The defence and security ties between India and the US have been on an upswing in the last few years as both the countries have concluded a number of major agreements to further bolster strategic ties. The pacts include the Defence Framework Agreement, signed in 2015, which lays a blueprint for collaboration between the defence establishments of both countries, and the Logistics Exchange Memorandum of Agreement (LEMOA) signed in 2016. The LEMOA provides for facilitating reciprocal logistics support between the armed forces of the two countries. In addition, India was accorded Major Defence Partner status by the US in 2016, bringing New Delhi on par with Washington's closest allies for defence-related trade and technology transfer. The Indian Navy cooperates with the US Navy on several fronts which include operational interactions such as the Malabar naval exercise and exchange of white shipping information. Warships from both navies have also been regularly visiting each other's ports. PTI

TIMES OF INDIA

Wed, 09 May, 2018

L&T, BrahMos unveil naval launcher

Larsen & Toubro (L&T) and BrahMos Aerospace have unveiled a new quadlauncher prototype, heralding another attempt to boost the performance of naval warships. The new prototype provides superior firepower compared to the twin canister and has the capability to launch four missiles in a single or salvo (simultaneous) mode. Besides, the quad launcher is suitable for warships which have space constraints to accommodate a vertical launch module.

The quad launcher, which was unveiled after conducting rigorous trials, will hit production once the Navy confirms an order. In that case, the quad launcher will be ready for deployment on naval ships within 18 months, said Jayant Patil, head of L&T's defence business. The quad launcher will be manufactured at L&T's Pune facility. The \$17-billion engineering and construction giant has been associated with BrahMos, a joint venture between Defence Research and Development Organisation (DRDO) and NPO Mashinostroyeniya of Russia.

for the development of naval missile programme since 2000.L&T has been upping its stake on the country's defence market after the government announced plans to cut down dependence on foreign military arms that has made India the world's top importer in the sector. Currently, defence accounts for nearly 4% of L&T's revenues.

<https://timesofindia.indiatimes.com/business/india-business/lt-brahmos-unveil-naval-launcher/articleshow/64086805.cms>



Wed, 09 May, 2018

Andaman & Nicobar Command set to get IAF fighter base

Sources in the Ministry of Defence told The Indian Express that air bases in Car Nicobar and Campbell Bay have been identified as possible bases to station the IAF fighters.

With a view to create a model for integration of three defence services, the government is moving ahead with plans to give more punch to the tri-service Andaman and Nicobar Command (ANC) by permanently stationing fighter jets and other combat platforms on the islands. Sources in the Ministry of Defence told The

Indian Express that air bases in Car Nicobar and Campbell Bay have been identified as possible bases to station the IAF fighters. The IAF currently has only one Mi17V5 helicopter unit and two Dornier aircraft permanently stationed at ANC. There are limitations to the length of the runway, which do not allow the IAF to fully exploit the potential of its more modern aircraft on the island chain. The airstrip at Campbell Bay is being extended to accommodate heavier aircraft. The air base at Car Nicobar is operational, but may need minor upgrades to house fighter jets permanently.

Declining to comment on the shortage of IAF fighter squadrons, the sources suggested that the defence services will have to reprioritise their resources for the task. The IAF currently has 31 fighter squadrons against an authorisation of 42. The Army, sources added, has manpower available under “save and raise” schemes to raise new units for ANC, if required. This is first time after World War II that fighters will be permanently stationed on the Andaman and Nicobar Islands. Although this will strengthen India’s reach over the crucial Malacca, Sunda and Lombok Strait and the Straits of Ombai Wetar and the eastern Indian Ocean Region, the Ministry is also



attempting to create a model integrated theatre command which can then be replicated elsewhere.

ANC was established in October 2001 following the recommendations of the Group of Ministers on National Security, but has failed to realise its full potential because of turf wars among the three services, environmental concerns at the islands and shortage of funds. The Army and the IAF see it mainly as a Navy base, where the Navy has positioned about 19 capital warships in the area and has built two floating docks to repair and refurbish warships. The Army has only one brigade of two battalions under the direct control of ANC. “The issue (of building ANC as a model integrated theatre command) is being pursued vigorously at the highest levels in the Ministry,” sources said, adding that the initial reluctance of the defence services has been “overcome to a great extent”. Sources also said that ministry will soon issue orders granting the Commander in Chief of Andaman and Nicobar Command (CINCAN) power to exercise full and direct control of all assets and men from the three defence services. The new order will empower CINCAN to requisition assets that he deems fit to carry out the charter of operational duties. Defence Ministry had recently notified new “statutory rules and orders” that allow the ANC to “exercise direct command” over personnel from the other two services.

THE ECONOMIC TIMES

Wed, 09 May, 2018

Donald Trump says he'll exit Iran nuclear deal and reinstate sanctions

President Donald Trump said the US will withdraw from the landmark 2015 accord to curb Iran’s nuclear program and that he would reinstate financial sanctions on the Islamic Republic, casting the Mideast into a new period of uncertainty. “The fact is this was a horrible one-sided deal that should have never ever been made,” Trump said at the White House. “We cannot prevent an Iranian nuclear bomb under the decaying and rotten structure of the current agreement. The Iran deal is defective at its core.”

West Texas Intermediate crude fell as much as 4.4 percent after CNN reported that Trump was expected to allow sanctions to go forward on Iran but may not completely pull out of the accord. The commodity was down about 3 percent ahead of the announcement. The president has long criticized the Iran deal, negotiated

under his predecessor Barack Obama, as the “worst” ever. He has complained it doesn’t address threats from the country’s ballistic missile program or its involvement in regional conflicts, and that provisions of the deal that expire in the next decade would allow Iran to resume some nuclear work.

Trump said in a tweet on Monday that he would announce his decision at 2 p.m. Tuesday in Washington, ahead of a May 12 deadline set by US law to continue waiving US sanctions lifted by the accord. Oil prices have climbed in recent weeks as uncertainty over the future of the agreement rose. A resumption of US sanctions would threaten Iran’s ability to attract foreign investment, keeping the country’s output flat or lower through 2025, according to a research note published Monday by Barclays.

It is unclear what may unfold after Trump’s announcement. American and European diplomats have sought to negotiate side agreements aimed at addressing his concerns about the deal. Even the immediate reimposition of sanctions would take time to resolve, as there would be no accounting of violations before November, according to the Congressional Research Service. Russia’s ambassador to the International Atomic Energy Agency, Mikhail Ulyanov, said the Iran deal wouldn’t end immediately as a result of Trump’s action and “we will have a certain amount of time for diplomatic efforts,” according to the Interfax news service.

Last-Ditch Efforts

Diplomats engaged in the talks on side deals had signaled that they were close to a breakthrough, but key allies have been skeptical that Trump would remain part of the current pact, which curbs Tehran’s nuclear program in exchange for relaxing Western financial sanctions. French President Emmanuel Macron and German Chancellor Angela Merkel signaled after meeting with Trump last month that he seemed intent on quitting the agreement. Ali Shamkhani, secretary general of Iran’s Supreme National Security Council, was reported to say Tuesday that “if the U.S. initiates confrontation with Iran, we won’t stay passive.” If the nuclear agreement “gets destroyed due to the U.S. assault, for sure it won’t be to their benefit,” he said, adding that the “biggest loss will be for the Europeans.

EU trade with Iran has nearly tripled since 2015. Following the visits by Merkel and Macron, UK Foreign Minister Boris Johnson was in Washington this week to make a last-ditch argument to persuade Trump to remain in the accord, arguing that it is flawed but can be improved by the side agreements.

Johnson met this week with Vice President Mike Pence, National Security Adviser John Bolton, Secretary of State Mike Pompeo and other administration and congressional officials. Trump foreshadowed his decision on Monday, complaining on Twitter about the Iran agreement and deriding former Secretary of State John Kerry for meeting with Iranian Foreign Minister Javad Zarif two weeks ago at the United Nations to discuss salvaging the deal. “He was the one that created this MESS in the first place!” Trump said of Kerry.

Saturday Deadline

Under legislation passed by Congress, Trump has until Saturday to decide whether to keep waiving sanctions on banks of foreign countries that haven’t reduced Iranian oil imports, according to an analysis by the Congressional Research Service. Under that law, those sanctions have to be waived every 120 days.

Trump last agreed to waive the sanctions in January, but his frustration with the agreement has only grown since then. Declining to waive the restrictions again means an assessment of whether foreign countries are violating the sanctions would be due Nov. 8, according to the CRS study. Israeli Prime Minister Benjamin Netanyahu said Sunday that the 2015 accord is fatally flawed and must be “fully fixed or nixed” to stop Iranian aggression sooner rather than later. His comments came as Iranian President Hassan Rouhani warned that the U.S. would face “historic” regret if it pulled out.

Netanyahu’s Role

Netanyahu delivered a televised presentation last week on secret Iranian files his country’s intelligence services obtained that he said prove that Tehran sought to build a nuclear weapon in the past despite its government’s denials. Trump watched the presentation, and White House Press Secretary Sarah Huckabee Sanders issued a statement declaring that the Israeli intelligence proved “Iran has a robust, clandestine nuclear weapons program.”

The White House later corrected the statement online to say Iran “had” a nuclear program, blaming a clerical error. Netanyahu did not claim that Iran currently has a nuclear program. Members of Trump’s own party are split. Representative Mac Thornberry, chairman of the House Armed Services Committee, said Sunday he “would counsel against” Trump quitting the accord. Representative Ed Royce, who heads the

House Foreign Affairs Committee, agreed, saying in a statement Tuesday, "I fear a withdrawal would actually set back these efforts" to stop Iran's nuclear activities. But House Majority Leader Kevin McCarthy has said he's "very comfortable" that the president is standing up to Iran.

Business Standard

Wed, 09 May, 2018

Exoplanet atmosphere free of clouds discovered

Scientists have detected an exoplanet atmosphere that is free of clouds, a finding that may improve our understanding of the planets beyond our solar system. Using 8.2m Very Large Telescope in Chile, researchers from the University of Exeter in the UK studied the atmosphere of WASP-96b when the planet passed in front of its host-star. This enabled the team to measure the decrease of starlight caused by the planet and its atmosphere, and thereby determine the planet's atmospheric composition.

Just like an individual's fingerprints are unique, atoms and molecules have a unique spectral characteristic that can be used to detect their presence in celestial objects. The spectrum of WASP-96b shows the complete fingerprint of sodium, which can only be observed for an atmosphere free of clouds. WASP-96b is a typical hot gas giant similar to Saturn in mass and exceeding the size of Jupiter by 20 per cent. The planet periodically transits a Sun-like star 980 light years away in the southern constellation Phoenix, researchers said. It has long been predicted that sodium exists in the atmospheres of hot gas-giant exoplanets, and in a cloud-free atmosphere it would produce spectra that are similar in shape to the profile of a camping tent.

"We have been looking at more than twenty exoplanet transit spectra," said Nikolay Nikolov from the University of Exeter. "WASP-96b is the only exoplanet that appears to be entirely cloud-free and shows such a clear sodium signature, making the planet a bench-mark for characterisation," said Nikolay, lead author of the study published in the journal Nature. Until now, sodium was revealed either as a very narrow peak or found to be completely missing.

This is because the characteristic 'tent-shaped' profile can only be produced deep in the atmosphere of the planet and for most planet clouds appear to get in the way, researchers said. Clouds and hazes are known to exist in some of the hottest and coldest solar system planets and exoplanets. The presence or absence of clouds and their ability to block light plays an important role in the overall energy budget of planetary atmospheres.

"It is difficult to predict which of these hot atmospheres will have thick clouds," said Jonathan J Fortney, a professor at the University of California, Santa Cruz (UCSC). "By seeing the full range of possible atmospheres, from very cloudy to nearly cloud-free like WASP-96b, we will gain a better understanding of what these clouds are made of," said Fortney.

The sodium signature seen in WASP-96b suggests an atmosphere free of clouds. The observation allowed the team to measure how abundant sodium is in the atmosphere of the planet, finding levels similar to those found in our own solar system. "WASP-96b will also provide us with a unique opportunity to determine the abundances of other molecules, such as water, carbon monoxide and carbon dioxide with future observations," said Ernst de Mooij from Dublin City University in Ireland.

3D-Printed Weapons May Put Global Security at Risk

Three-dimensional (3D) printing technology is also susceptible to hacking, which could allow sabotage by hackers who maliciously instruct 3D printers to introduce flawed instructions or algorithms into mission-critical parts of airplanes.

The rapid growth of 3D printing technology could make weapons easily accessible to military adversaries, violent extremists and even street criminals, putting the global security at risk, researchers warn. Three-dimensional (3D) printing technology is also susceptible to hacking, which could allow sabotage by hackers who maliciously instruct 3D printers to introduce flawed instructions or algorithms into mission-critical parts of aeroplanes, they said. "Lone-wolf attacks may become more lethal when individuals have ready access to 3D printers," said Trevor Johnston, lead author and an associate political scientist at RAND Corporation, a US-based research organisation.

"Even in countries like the US, where gun control laws have done little to restrict access to semi-automatic weapons, additive manufacturing could increase the risk of violence and murder," said Johnston. Additive manufacturing may also indirectly support the survival and rise of pariah states like North Korea, which could avoid the costs of withdrawing from the international community by producing complex items domestically, skirting international sanctions. From an economic perspective, by decentralising manufacturing individuals and firms may choose to produce locally rather than importing goods. 3D printing could, therefore, weaken international connections currently sustained by complex, multi-country supply chains, researchers said.

That, in turn, may create upheaval in labour markets - and subsequent social conflict. "Unemployment, isolation and alienation of middle and low-skilled labourers may be exacerbated by additive manufacturing, potentially leading to societal unrest in both developed and developing countries," said Troy Smith, an associate economist at RAND. "The potential security implications of large masses of unemployed, disconnected people are substantial," Smith said. Researchers posit that the relative risk and cost of future threats will depend in part on the evolution and regulation of additive manufacturing hardware (printers), raw materials and software (intellectual property). Threat prevention will be more effective if focused on material controls. By limiting supplies of rare or dangerous raw materials, regulators can at least ensure that some of the most destructive weapons (eg nuclear or dirty bombs) do not become readily accessible.

By monitoring online communities, law enforcement may be able to curtail digital exchanges of lethal creations. Unfortunately, the efforts of domestic law enforcement may be ineffectual on this front, the authors write. Alternatively, law enforcement may themselves hack additive manufacturing software to disrupt potential attacks or limit their destruction. In all likelihood, these preventive measures will not stop the spread of new risks connected to 3D printing, researchers warn. There is little that regulation, export controls, treaties and law enforcement can do to fully prevent a motivated, well-financed, organised actor from eventually acquiring new technology. As such, policymakers should particularly focus on measures that mitigate the potential impact and cost of these future threats. While fraught with risks, policymakers should begin to address the hard security questions that additive manufacturing will bring.