

# समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा  
A Daily Current Awareness Service

Vol. 44 No. 83 30 April 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

## **DRDO missile was the 1st choice, not Spice-2000**

*The SAAW weapon successfully completed tactical tests with a high degree of accuracy*

*By Coreena Saures*

Hyderabad: The day after the Pulwama attack, the Defence Research and Development Organisation (DRDO) received directions from the highest authorities to prepare to strike back to avenge the deadly terror strike in the Kashmir valley.

Officials from the National Security Agency, Research and Analysis Wing (RAW), the three serving chiefs of the Indian forces, DRDO scientists and other stakeholders met the following day in a high-level security meeting in which it was decided in principle that the Smart Anti-Airfield Weapon (SAAW), developed indigenously by DRDO, be used in retaliation.

DRDO scientists began working on assembling the SAAW to the mother aircraft, the French-origin Mirage 2000 jets that were used in the Balakot attack, according to the IAF. The weapon was specially made to hit the target with a high level of accuracy.

A few days before the operation, the DRDO's SAAW was dropped and instead the Spice-2000 manufactured by the Israeli defence technology company Rafael, was used.

"Scientists at DRDO over two weeks began assembling the SAAW. The smart guide bomb that was assembled was relatively smaller (in size) when compared to the Israeli Spice-2000, if used it has the capability of escaping the enemy's radar. With high accuracy, it has been developed with an equal class of up to 1000 kg. However, SAAW was replaced by Spice-2000," said an insider.

The SAAW weapon successfully completed tactical tests with a high degree of accuracy.

The guided bomb (SAAW) is integrated with a live warhead and has destroyed targets with a high degree of precision in tests conducted at the Chandan range.

<https://www.deccanchronicle.com/nation/current-affairs/300419/drdo-missile-was-the-1st-choice-not-spice-2000.html>



## **Cyclone "fani" forces air force to postpone brahmos missile testfiring**

*The air-launched version of the BrahMos was to be testfired by the Air Force over southern India this week for giving a homegrown weapon system to the force for carrying out Balakot-type air strikes*

New Delhi: In view of the cyclone storm "Fani", the Indian Air Force (IAF) and BrahMos Aerospace have put on hold the testfire of the air-launched version of supersonic cruise missile from a Sukhoi-30 combat aircraft.

The air-launched version of the BrahMos was to be testfired by the Air Force over southern India this week for giving a homegrown weapon system to the force for carrying out Balakot-type air strikes.

"The testfire has been postponed due to the cyclone storm "Fani" for the moment but we will be doing it soon," government sources said.

The cyclonic storm "Fani" on Monday morning was located at 880 km of South-East of Chennai and it will continue to move North-West and change its path to North-East from Wednesday.

The cyclone is expected to intensify into a very severe cyclonic storm by Tuesday.

Seeking to further bolster its ability to destroy major ground targets, the IAF and DRDO are planning to testfire the air-launched version of the world's fastest supersonic cruise missile BrahMos from a Su-30MKI combat aircraft.

Sources in the IAF say that they are very keen for a fast track development of the 290-km strike range missile which can destroy targets on the ground and can be used for Balakot-type air strikes where the planes won't even have to cross enemy borders for the hit.

During Balakot airstrikes, the IAF had used the Spice-2000 bombs launched from a Mirage-2000 fighter aircraft for striking Jaish targets in Balakot town of Pakistan.

With the availability of a BrahMos developed by DRDO, the IAF would be able to destroy similar targets from at least 150 km inside Indian territory.

<https://www.ndtv.com/india-news/cyclone-fani-forces-air-force-to-postpone-brahmos-supersonic-cruise-missile-testfiring-2030485>

## THE TIMES OF INDIA

Tue, 30 April 2019

# China spends four times more than India on defence: SIPRI

By Rajat Pandit

New Delhi: China's military expenditure is almost four times that of India, with the latter's armed forces also getting hobbled by a ballooning revenue expenditure and pension bill. The US, of course, is the world's largest spender on defence, with a military expenditure almost equal to the next eight countries combined.

Latest data released by global think-tank Stockholm International Peace Research Institute (SIPRI) show the total world military expenditure rose by 2.6% to \$1,822 billion in 2018. "The five biggest spenders in 2018 were the US (\$649 billion), China (\$250 billion), Saudi Arabia (\$67.6 billion), India (\$66.5 billion) and France (\$63.8 billion), which together accounted for 60% of the global military spending," it said.

Though SIPRI does not go into details, the \$66.5 billion (Rs 4.6 lakh crore) military expenditure figure for India includes defence pensions, which amount to one-fourth of the total. Of the remaining, two-thirds go in for the day-to-day running costs, salaries and the like for maintaining the almost 15-lakh strong Indian armed forces.

Overall, this leaves just about one-fourth of the \$66.5 billion figure



for military modernisation and new weapon systems. So, despite India being the world's fourth largest defence spender by displacing even Russia (\$61.4 billion), its armed forces continue to suffer from critical shortages on several fronts, ranging from fighters and submarines to basic infantry weapons and night-fighting capabilities.

Defence insiders say the Indian armed forces drastically need to slash their non-operational flab and manpower, especially in the 12-lakh strong Army, as well as take to genuine integration in a big way. "There is simply not enough money. The capital allocation for defence already stands at 32-33% of the total central government capital expenditure," said a senior official.

India also needs to build a strong defence-industrial base, shedding its strategically-vulnerable position of being the world's largest arms importer. "Exorbitant arms purchases from abroad, without much long-term planning and inter-Service prioritisation, cannot go on forever," he added.

China, which has registered a defence budget hike for the 24th consecutive year, of course, wants to rival the US on the global stage as well as prevent its military intervention in the Taiwan Strait and the contentious South China Sea.

India, however, has no option but to be ready for its expansionist behaviour both along the 4,057-km Line of Actual Control as well as the Indian Ocean Region. But while China has undertaken rapid military modernisation, including manpower cuts in the 2.3-million People's Liberation Army, while also emerging as the world's fifth largest arms exporter, India has dragged its feet in both reforming its armed forces and boosting indigenous defence production.

China, for instance, has reorganised the PLA into five theatre commands to bolster its offensive capabilities as well as establish better command-and-control structures. Its western theatre command now handles the entire LAC with India instead of the earlier Chengdu Military Region in the east and the Lanzhou Military Region towards the north. India, in turn, has over half-a-dozen separate Army and IAF commands for the "northern land borders" with China, without any forward movement in establishing theatre commands, as was reported by TOI.

<https://timesofindia.indiatimes.com/india/chinas-spends-four-times-more-than-india-on-defence-sipri/articleshow/69105267.cms>



*Tue, 30 April 2019*

## **Army invokes emergency powers for missile deal**

*Set to procure systems from Israel and Russia*

*By Dinakar Peri*

The Army is in the process of procuring Spike-LR Anti-Tank Missiles from Israel and Igla-S Very Short Range Air Defence Systems (VSHORAD) from Russia through a set of new financial powers for emergency procurements sanctioned by the Defence Ministry earlier this month, Defence sources said.

"Under the latest emergency financial powers, armed forces have been given a free hand to procure equipment worth up to ₹300 crore on a priority basis. The Request For Proposal (RFP) for the two deals have been issued and negotiations are ongoing," the source said. Entirely new systems not in use can also be procured under the new powers, the source stated.

Tenders for both deals had gone through regular procurement process earlier. While the Spike tender was cancelled during the cost negotiation phase, the deal for Igla, after repeated delays, is in the cost negotiation phase. However, given the questions that were raised in the earlier deals, clarity is needed on the modalities for purchase through the emergency route.

Under the emergency route, the Army is looking to procure about 12 launchers and around 250 missiles for each system. Deliveries have to be completed in three months, but extendable to six months.

The Spike-LR (Long Range) being procured is a different variant from the one tested and shortlisted as part of the earlier procurement for over 8,000 missiles and 300 launchers along with technology transfer. As contract negotiations dragged on, the deal was cancelled in January last year and it was decided to procure a smaller number — 170 launchers, 4,500 missiles and 15 simulators — through an Inter-Governmental Agreement (IGA) and make up the balance requirement with an indigenous Man Portable ATGM currently under development.

Before the IGA was concluded, validity trials of the Infrared Seeker (IR) of the missile were to be held during the Indian summers as the missile “did not perform as desired in the previous trials during peak summer temperatures in the desert,” according to another source. However, the IGA has not made progress so far. The Spike-LR (Long Range) has a range of 4 km. It is so far not clear if additional trials would be performed as part of the emergency procurement. Some defence officials indicated that testing was not required as the missile is operational and in service across the world and that if needed tests would be carried out in the home country (Israel).

### **VSHORAD deal**

The deal for VSHORAD, to replace the legacy Igla systems in service, began in 2010 and has since seen several trials and re-trials with three contenders in the fray — MBDA of France, Rosoboronexport of Russia and SAAB of Sweden. Eventually, all three were declared technically complaint last year.

While the benchmark price determined was just over \$2 bn, Rosoboronexport’s bid was much lower at around \$1.47 bn, while SAAB’s bid was at about \$2.6 bn and MBDA around \$3.68 bn. This led to a division within the Ministry on how to proceed given such low bid from the Russians compared to the benchmark price, but eventually Igla-S was declared the winner. “The deal is currently at the Contract Negotiation phase,” the source said.

Officials said the emergency procurements were one of critical procurement and not related to the acquisitions through the regular route, in a bid to assure that these would not impact the regular deals.

In the case of VSHORAD, the other two vendors lodged protests and wrote a series of letters to the Defence Ministry on several occasions alleging procedural violations favouring Igla-S which were rejected.

<https://www.thehindu.com/news/national/army-invokes-emergency-powers-for-missiles-deal/article26984091.ece>

## **Loosening the purse strings**

**New emergency financial powers were approved by the MoD for three services early this month. A look at some relaxations:**

**Financial limit: ₹300 crore**

■ Services have free hand to procure critical equipment of the day

■ Two deals under this new route - Spike-LR Anti-Tank Missiles from Israel and Igla-S Very Short Range Air Defence Systems (VSHORAD) from Russia

**Timeframe: Deliveries to be completed in 3 months, extendable to six months**



## **Raja Mandala: Rethinking India's space policy**

*As innovation and geopolitical rivalry put great strain on the old order in outer space, Delhi will need pragmatism, skill in shaping new rules*

*By C. Raja Mohan*

As it looks beyond its first anti-satellite weapon test last month, India needs to come to terms with a number of factors that are transforming the political and economic nature of outer space. Four issues demand India's attention. And all of them call for a reorientation of India's national strategy towards outer space. First is the unfolding drift towards the weaponisation of outer space. Over the last two decades, India has joined other powers in developing space assets for passive military uses of outer space — such as surveillance, targeting and military communication. It now needs to prepare for an outer space that might become an active military theatre.

In intercepting and destroying a satellite in orbit, India has signalled its determination to deter threats to its growing number of space assets. But Delhi has a long way to go before it can claim effective deterrence against such attacks. For the great powers are investing heavily in developing a wide range of capabilities to conduct space warfare. These include systems that are far more sophisticated than the one India tested. In February this year, the Trump administration announced its decision to set up a space force — the sixth arm of the military after army, navy, marine corps, coast guard and the air force. Meanwhile, China and Russia are said to be well on their way to deploying space weapons. To effectively secure its interests in outer space, India will need a comprehensive military space policy and the necessary investments to realise its goals.

Second, the challenge of the rapid expansion of commercial space and the growing role of the private sector. India's national space programme has been quite successful in mobilising an advanced technology for development. The Indian Space Research Organisation has also been conscious of the need to draw industry, both public and private sector, to participate in the space endeavour over the decades. While its capabilities for the construction, launch and delivery of satellite services are impressive, India must now wrestle with the exponential growth of the space market. Today's global space business is estimated to be \$350 billion and according to some estimates it could nearly triple in the next two decades.

Delhi must promote a massive expansion of the private sector's role in space to ensure that India gets a reasonable slice of the growing global space business. In the early decades of space technology development, private sector companies worked for and with the government programmes. Today in the US and more broadly the West, the private sector is taking the lead. Consider for example, the business of launching satellites that has been a government monopoly until recently. As the private sector seeks a larger share of the launch business, Elon Musk's Space X has already made a big impression in the US. Other private companies like Blue Origin (US), OneSpace (China), and Interstellar technologies (Japan) are all joining the fray.

Meanwhile, the idea of deploying a constellation of small satellites is gaining great traction. Space X and Amazon have announced plans to put hundreds of satellites in low earth orbit to provide broadband internet around the world. Besides launching rockets and satellites, private sector companies are driving innovation and contributing to the transformation of the space business. Their ambitions now extend to space tourism and the mining of asteroids.

Third, as space becomes the site for expansive commercial enterprise, national space agencies are under pressure to redefine their role. Until recently, the national agencies were the researchers, investors, developers and champions of the space programme at the political level.

This all-encompassing role of the national agencies was necessary when space technology was in its infancy. It was a precondition for countries like India that embarked on the space journey with limited resources and capabilities. As the knowledge and capabilities begin to spread and the number of actors in the space domain grows rapidly, the national space agencies must necessarily redefine their role. While NASA has gone through multiple reinventions, the structure remains essentially unaltered in India.

Instead of trying to do everything, the national agencies could focus on a few critical objectives — to promote a dynamic national ecosystem for space research and development both within and outside the government, lay out a long-term vision for space policy, identify priorities, anticipate potential challenges, and become the face of the space programme at home and abroad.

Fourth, the need to promote effective domestic and international regulatory frameworks for the development of space programmes. After the ASAT test, many in India pointed to the importance of Delhi having the capabilities to shape the security order in outer space. They recall that India's inability to conduct an atomic weapon test before the Nuclear Non-proliferation Treaty was finalised in 1968 had severely undermined India's position in the global nuclear order.

In the near term, though, it is even more urgent to develop commercial space laws at home that attract investment, clarify property rights, limit liability for space operators and set standards for space products and operations. Externally, India must prepare for the inevitable evolution of the global space regime centred around the 1967 Outer Space Treaty that insisted on peaceful uses of outer space, barred the national appropriation of celestial bodies, and declared outer space to be "common province of mankind".

As technological innovation, commercial competition and geopolitical rivalry put great strain on the old order in space, Delhi will need all the strategic pragmatism, legal acumen and diplomatic skill in shaping new rules for the regulation of outer space. Above all it needs collaboration with allies and partners in outer space.

*(The writer is director, Institute of South Asian Studies, National University of Singapore and contributing editor on international affairs for The Indian Express).*

<https://indianexpress.com/article/opinion/columns/mission-shakti-anti-satellite-weapon-isro-drdo-india-space-missions-5701517/>



*Tue, 30 April 2019*

## **RAW, DRDO, NTRO to participate in two day cyber-exercise from Defence Ministry**

New Delhi: The Defence Ministry is carrying out a two-day cyber exercise, wherein agencies including RAW, DRDO, National Technical Research Organisation (NTRO) and National Security Council are learning how to tackle the threats faced in the cyber domain. "The exercises are being held on scenario building and response on April 29-30. The exercise is represented by services, NSCS, NTRO, CERT-in, DRDO, NIC, CSRC, Academia and Industry," said Army spokesperson Lt Col Mohit Vaishnav.

"This exercise shall incorporate all best practices which were recommended during the cyber workshop held earlier with a view to exercising options at different levels to seek synergised response based on the assessment of the situation and own capability," he said. The scope of the exercise would encompass the threat landscape and its impact, incident reporting and response framework, procedures for information exchange, attribution, evidence gathering and malicious service takedown,











