

# समाचार पत्रों से चयित अंश Newspapers Clippings

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## India begins manufacturing parts for Rafale fighter jets in Nagpur

*Nagpur facility, joint venture of Anil Ambani's Reliance Defence & French firm Dassault Aviation, initially meant to make parts of only Falcon business jets*

*By Snehesh Alex Philip*

New Delhi: In a first, India has started manufacturing parts for Rafale, some of which could even be used on the 36 French fighter jets ordered by the Narendra Modi government in 2016.

The first set of doors that cover the twin engines of the fighter jets has come out of the Nagpur facility, which is a joint venture of Anil Ambani's Reliance Defence and French firm Dassault Aviation.

"We are seeing India has one of the drivers of the Dassault Aviation products. Be it the Falcon business jet or now the Rafale, every product in the future will have an Indian connection," an official of the French defence major told ThePrint.

Defence sources said the idea is to scale up production of Rafale parts in the coming months.

Asked if the doors will be fitted on board the Indian Rafale fighter jets, another company official said, "It is a may or may not be. It all depends on the rate of production and the quantity of parts available back in France. But the parts manufactured in Nagpur will go up on the Rafale for sure."

### **First 4 Rafale jets expected to arrive in May**

The first four Rafale jets are expected to arrive in India in May. While one squadron of the Rafale fighter jets will be based in Ambala, the other would be in Hasimara, West Bengal.

Industry sources said that what works for foreign Original Equipment Manufacturers is that production in India helps them to meet offset obligations and also to procure materials and products at a much lower rate since the labour cost is less in the country.

The Nagpur facility of Dassault Reliance Aerospace Limited (DRAL) was initially making only cockpits for the French manufacturer's Falcon business jets, besides other parts.

The facility was only meant to manufacture components for Falcon jets and not for the Rafale jets.

But in June 2019, ThePrint had reported that Dassault Aviation is likely to start manufacturing components of the Rafale fighter jets at its India facility, with the wares destined for global customers.

Dassault and Reliance announced their joint venture and the creation of DRAL on 3 October 2016, barely two weeks after India signed a 7.878 billion euro deal for 36 Rafale jets in a flyaway condition.

The DRAL facility was inaugurated in October 2017, in the presence of Dassault CEO Eric Trappier and Anil Ambani.

<https://theprint.in/defence/india-begins-manufacturing-parts-for-rafale-fighter-jets-in-nagpur/363702/>

## **Developed and designed in India!**

### **Check deadly .338 sniper rifles**

*The weapon systems being designed and developed in house are made to offer compact size, rugged build, and highly reliable features*

*By Huma Siddiqui*

New Delhi: For the first time ever an Indian company has managed to indigenously design and develop a complete make in India product for the Indian Armed Forces and which will be exported to a third country too. The Bangalore-based SSS Defence has indigenously designed and developed country's very first sniper rifle platform as well as a family of weapon systems comprising a recon carbine, rapid engagement combat rifle, and a designated marksman rifle. The weapon systems being designed and developed in house are made to offer compact size, rugged build, and highly reliable features.

Speaking to Financial Express Online, Satish Machani, Promoter & MD SSS Defence, said "We are expecting to commence trials on the .338 sniper platform shortly. Having undertaken the ground-up development of the weapon together with accessories and the optics, we are positioning ourselves as a full system provider. The Joint Venture (JV) that we have with Companies Brasileira de Cartuchos (CBC) Brazil for manufacturing ammunition also dovetails with our strategy to ensure that the forces benefit from sustained ammunition supplies. Most countries that have a sniping culture preserve the advantage primarily because there is no shortage of match grade ammunition."

"The market for military exports – both of the end products (rifles, optics and ammunition) and critical components of firearms is one that we intend to focus on from day one. Again, since we own the technology on the weapon systems, we are not weighed down by limits set by foreign partners. On ammunition, CBC and our company have always believed in the regional potential and the India operation will complement CBC's global supply chain," said the Managing Director of the company.

The Defence Procurement Procedure (DPP)- 2016 emphasised importance of 'Buy {Indian-IDDM (Indigenously Designed, Developed and Manufactured)}' to promote indigenous design and development of defence equipment. The IDDM is a strategic channel to achieve import substitution.

According to Machani, "We are clearly the first in the private sector to achieve the "design" ownership and over 80% content by cost (the floor is 50%) on a sniper rifle platform that complied with international standards. Needless to say, we are pragmatic. Many foreign competitors have the advantage of several decades of evolution and government sponsorship to boot. We have tried to do that in 3 years by capitalising on the latest in additive manufacturing, material science, simulation, prototyping and the manufacturing pedigree that our parent Stumpp Schuele & Somappa Springs brings."

Adding, "Most importantly, we can add value in life cycle cost management and the provision of upgrades over a very long period. We hope that the Chief of Army Staff's encouraging words on Indian industry's prowess requiring trust will apply to our areas as well because we're ready to go to business. I would also like to add that there can never be a silver bullet. The process starts with the indictment of a weapon and we're indeed going to be better than everybody else at committing to that journey."

The future infantry small arms & light weapons cover the full spectrum of small arms – both individual and crew-served weapons. These products are set to add new punch to the firepower of infantry squads, Special Forces units, and law enforcement teams. The company has been working on

transformative products designed ground up like carbines, assault rifles, marksman & sniper rifles, and light machine guns.

As has been reported earlier, SSS Defence along with its strategic partner, CBC Global ammunition would be producing a range of standard small & medium calibre ammunition rounds in India in a newly-built factory coming up on an 80-acre land parcel in Andhra Pradesh.

The company has also a range of tactical & military optics which cover a suite of day vision and thermal imaging sights that are specially designed for professional long-range shooting and military/law enforcement sniper teams respectively.

Presently there are tenders for over \$ 5 billion in the pipeline for assault rifles, carbines, sniper rifles and light machine guns.

<https://www.financialexpress.com/defence/developed-and-designed-in-india-check-deadly-338-sniper-rifles/1866127/>



Thu, 13 Feb 2020

## Civilian control must over Army: Gen Rawat

*Says forces at cusp of transformation*

New Delhi: Clearing all doubts and confusion over the responsibilities of the Defence Secretary and the Chief of Defence Staff (CDS), General Bipin Rawat said both had their own charter of works. “There must be some civilian control over the military. I would dare to say civilian control over the military must remain and must be paramount in a democratic country like ours,” he said.

Speaking at the Times Now Summit 2020 in Delhi, General Rawat said the CDS was looking at jointness, integration and ensuring that the priorities for procurements were laid out correctly so that all the three services — Army, Air Force and Navy — move ahead without one service trying to beat the other in procurement system.

“The CDS has to ensure that the budget is better managed and we do not rush to ensure that the budget is utilised,” he said. He also said that the Armed forces are at the cusp of transformation noting that proxy war and cross-border terrorism remained the key security challenges facing India.

Gen Rawat also rejected criticism that the Armed forces were suppressing the rights of the people in Jammu and Kashmir and said required steps were being taken keeping in view ground realities and the threats of terrorism.

Asked about his recent controversial comments that India has deradicalisation camps, he said what he meant was classification of people based on their views and the impact of relentless efforts to deradicalise young people. “When I said camps, I meant groups of people. The classification of people based on their views and the impact of relentless efforts to deradicalise young people. The word camp got misunderstood,” he said. He also said India was not competing with China which aspired to be a global power. — IANS/PTI

<https://www.tribuneindia.com/news/civilian-control-must-over-army-gen-rawat-40884>

## **Defence ministry to have joint secretaries in military uniform**

*By Rajat Pandit*

New Delhi: The Defence ministry will now have joint secretaries wearing military uniforms as a proposal has gone to the government for appointing three Major General-rank officers from the Army, Navy and Air Force to look after the bureaucratic work related to their respective forces.

The newly-created Department of Military Affairs (DMA) under Chief of Defence Staff (CDS) General Bipin Rawat is also working hard to give a presentation on the working of the services to the Parliamentary Standing Committee meeting starting February 17.

"The proposal for appointment of the three joint secretaries of the DMA including Major General Narayanan, Rear Admiral RK Dhir and Air Vice Marshal SK Jha have been sent to the government for final approval," Defence Ministry sources said.

Sources said that the DMA has also sent a proposal for appointment of Lieutenant General rank officers for appointment as Additional Secretaries.

The DMA department is an addition to the four existing verticals in the Union Defence Ministry the departments of defence, defence research, defence production and development and ex-service welfare. ANI

<https://timesofindia.indiatimes.com/india/defence-ministry-to-have-joint-secretaries-in-military-uniform/articleshow/74109270.cms>

## **Rear Admiral Sanjay Vatsayan takes over as eastern fleet commander**

*Rear Admiral Sanjay Vatsayan is an alumnus of the National Defence Academy, Khadakwasla, Defence Services Staff College, Wellington, Naval War College, Mumbai and the National Defence College, New Delhi, the release said*

Visakhapatnam: Rear Admiral Sanjay Vatsayan took command of the Eastern Fleet deployed across the Indo-Pacific region, the Indian Navy said on Tuesday.

The Eastern Fleet comprises frontline warships of the Indian Navy which are deployed across this region to safeguard the nation's maritime interest, according to a press release.

The command was handed over to Rear Admiral Sanjay Vatsayan by Rear Admiral Suraj Berry during a ceremony at Visakhapatnam on Monday.

Rear Admiral Sanjay Vatsayan is an alumnus of the National Defence Academy, Khadakwasla, Defence Services Staff College, Wellington, Naval War College, Mumbai and the National Defence College, New Delhi, the release said.

The Admiral, who is a Gunnery & Missile systems specialist, has vast experience at sea and ashore.

According to the release, he has commanded missile vessels Vibhuti and Nashak, the guided-missile corvette Kuthar and has also been the commissioning Commanding Officer of the indigenously constructed state-of-the-art stealth frigate Sahyadri.

He has also held vital appointments dealing with Personnel Policy and Naval Plans at the integrated Headquarters, Ministry of Defence (Navy).

Prior to assuming Command of the Eastern Fleet, Rear Admiral Sanjay Vatsayan was serving as the Assistant Chief of Naval Staff (Policy and Plans) at New Delhi.

Rear Admiral Suraj Berry would be taking over as Chief of Staff of the tri-services Andaman and Nicobar Command shortly, the release added.

<https://indianexpress.com/article/india/rear-admiral-sanjay-vatsayan-takes-over-as-eastern-fleet-commander-6263098/>

## THE TIMES OF INDIA

Thu, 13 Feb 2020

# Women officers selected for permanent commission will be given appointments as per requirements: Indian Army

New Delhi: The Indian Army on Tuesday said that women officers selected for the permanent commission will be given appointments as per organisational requirements in line with the commitments given by the force.

Talking to ANI about the ongoing litigation in the Supreme Court for granting permanent commission to women officers, they said the special Army instructions of September 7, 1992, issued while the women officers were first commissioned in the Army, clearly state that women officers will be liable for service in any part of the world on selected appointments as decided from time to time by the Army headquarters.

"The Indian Army stands by this commitment and has clarified that women officers selected for permanent commission will be given appointments as per organisational requirements," they said. On Monday, sources said that the Army is in favour of granting pension benefits to women officers, who have fulfilled the service conditions.

Sources earlier informed that the induction of women in the Army is progressing well and that these women officers will be given all suitable assignments as deemed fit by the organisation.

All decisions taken towards the smooth integration of women in various assigned roles in the army will be taken in the best interest of the individuals and the organisation, Army sources had added.

In April last year, the Army had kicked off the process of inducting women as jawans by starting their online registration for recruitment in the corps of military police.

<https://timesofindia.indiatimes.com/india/women-officers-selected-for-permanent-commission-will-be-given-appointments-as-per-requirements-indian-army/articleshow/74087057.cms>

## **On eve of Trump's visit, India finalises \$3.5bn defence deals to be inked with US**

*By Rajat Pandit*

New Delhi: India has finalized two more mega defence deals with the US, together worth over \$3.5 billion (Rs 25,000 crore) for 30 heavy-duty armed helicopters, in the run-up to President Donald Trump's visit here on February 24-25.

These soon-to-be-inked deals will take the total value of Indian defence contracts bagged by the US just since 2007 to well past the \$20 billion mark. The \$2.6 billion deal for 24 MH-60 'Romeo' multi-mission helicopters for the Navy and the \$930 million one for six AH-64E Apache attack choppers for the Army are set to be cleared by the Cabinet Committee on Security (CCS) by next week, said sources on Wednesday.

"India will pay an initial 15% installment for the MH-60R helicopters under the US Foreign Military Sales (FMS) government-to government deal. Once the contract is inked, the first lot of the choppers will be delivered in two years. All 24 will come in four to five years," said a source.

The "direct commercial sale" of the six Apaches, in turn, is basically a follow-on order to the 22 such helicopters already inducted by IAF under a Rs 13,952 crore deal inked with the US in September 2015. "The Army should get the deliveries of the six choppers, armed with Stinger air-to-air missiles, Hellfire Longbow air-to-ground missiles, guns and rockets, around 2022- 2023," said a source.

The MH-60Rs, which are armed with Hellfire missiles, MK-54 torpedoes and precision-kill rockets, are considered a "critical operational necessity" for the Navy because its warships are virtually bereft of such helicopters at a time when Chinese nuclear and diesel-electric submarines are making regular forays into the Indian Ocean Region. The 140-warship force has just about a dozen old Sea King and 10 Kamov-28 anti-submarine warfare helicopters operational as of now.

As was first reported by TOI in June last year, the 24 MH-60Rs and six Apache helicopters are part of the several lucrative defence deals worth over \$10 billion being lined up for the US by India over the next two-three years.

The others include six more P-8I long-range maritime patrol aircraft (\$1.8 billion), the National Advanced Surface to Air Missile System-II for the missile shield over Delhi (\$1.8 billion), 30 Sea Guardian armed drones (over \$2.5 billion) and 13 big MK-45 naval gun systems for warships (\$1.02 billion). "These deals will take some time to be finalized and inked," said the source.

During his visit, President Trump is also expected to push the case for a US fighter -- F/A-18, F-15EX or F-21 (upgraded version of F-16) -- to be selected for the mega "Make in India" project to produce 114 jets for the IAF for around \$20 billion. The US is also in contention to supply 57 multi-role fighters capable of operating from aircraft carriers for the Indian Navy.

India and the US have also identified seven defence projects for co-development and production under the bilateral Defence Technology and Trade Initiative (DTTI). These include air-launched small aerial systems (drone swarms), light-weight small arms technology, ISTAR (intelligence, surveillance, targeting and reconnaissance) systems and anti-drone technology called "counter-UAS rocket, artillery and mortar systems", as was reported by TOI in October last year.

<https://timesofindia.indiatimes.com/india/on-eve-of-trumps-visit-india-us-seal-3-5bn-defence-deals/articleshow/74108325.cms>

# रक्षा सौदों को अंतिम रूप देने में जुटे भारत-अमेरिका

जनसत्ता ब्यूरो  
नई दिल्ली, 12 फरवरी।

अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप की भारत यात्रा से पहले दोनों देशों की नजर बड़े रक्षा सौदों को अंतिम रूप देने पर है। इनमें भारतीय नौसेना के लिए 2.6 अरब डॉलर की लागत से अमेरिकी कंपनी लॉकहीड मार्टिन से सैन्य हेलिकॉप्टर खरीदने का समझौता भी शामिल है। अधिकारियों के मुताबिक, भारत द्वारा 1.86 अरब डॉलर की कीमत से मिसाइल रक्षा प्रणाली खरीदने की बातचीत अंतिम दौर में है।

अमेरिका रक्षा उत्पाद निर्माता कंपनी बोइंग ने संकेत दिया है कि वह इस दौरे के दौरान भारतीय वायुसेना को एफ-15ईएक्स इंगल

**भारतीय नौसेना के लिए 2.6 अरब डॉलर की लागत से अमेरिकी कंपनी लॉकहीड मार्टिन से सैन्य हेलिकॉप्टर खरीदने का समझौता भी इसमें शामिल है।**

फाइटर जेट विमान बेचने का प्रस्ताव करने पर विचार कर रही है। बोइंग ने पहले ही भारत को संभावित रक्षा उत्पादों का निर्यात करने के लिए अमेरिकी प्रशासन से लाइसेंस की मांग की है। उसकी नजर भारतीय वायुसेना के लिए 18 अरब डॉलर की लागत से खरीदे जाने वाले 114 लड़ाकू विमानों के करार पर है।

सरकार और रक्षा उद्योगों के सूत्रों ने बताया कि दोनों पक्ष संभवतः 2.6 अरब डॉलर में 24 बहु उपयोगी एमच-60आर सीहॉक मैरीटाइम हेलिकॉप्टर भारत को बेचने के करार पर मुहर लगा सकते हैं। सुरक्षा मामलों की मंत्रिमंडल समिति अगले कुछ दिनों में इसकी मंजूरी दे सकती है। अमेरिका ने पिछले साल अप्रैल में भारत को सीहॉक हेलिकॉप्टर बेचने को मंजूरी दी थी। माना जा रहा है कि इस हेलिकॉप्टर से भारतीय नौसेना को जमीन रोधी और पनडुब्बी रोधी लड़ाई में और ताकत मिलेगी। इस हेलिकॉप्टर को पनडुब्बी को खोज कर नष्ट करने के लिए बनाया गया है। सीहॉक ब्रिटेन में बने और अब पुराने पड़ चुके सी किंग हेलिकॉप्टर की जगह लेगा।

## Business Standard

Thu, 13 Feb 2020

### Boeing to offer F-15EX fighter to India, will have two aircraft in contest

*Short of numbers, the IAF has launched the procurement of 114 medium fighters*

*By Ajai Shukla*

New Delhi: Seven of the world's premier fighter aircraft are already competing in the Indian Air Force's (IAF's) global tender for 114 medium fighters. There could soon be an eighth: the F-15EX fighter, developed for the US Air Force (USAF) by The Boeing Company.

On Wednesday, Boeing confirmed to aviation magazine FlightGlobal that it has asked the US government for sanction to offer the IAF its F-15EX.

“While awaiting further definition on the Indian Air Force's requirements, we have requested a license for the F-15 so that we're ready to share the full spectrum of potential solutions across our fighter portfolio when appropriate,” stated Boeing to FlightGlobal.

Boeing would thus be fielding two fighter aircraft in this tender. It has already offered its F/A-18E/F Super Hornet fighter in response to a “Request for Information” (RFI) the IAF floated last year.

Boeing has also offered the Super Hornet in response to a separate RFI the Indian Navy floated for 57 fighters, to be flown off its aircraft carriers.

“We continue to offer the F/A-18 Super Hornet to both the Indian Navy and Indian Air Force, and our F-15 is experiencing a resurgence in interest in the US and around the world,” stated Boeing to FlightGlobal.



Boeing has requested a licence in order to be able to share details of the F-15EX with Indian officials. This is a mandatory requirement under the US government's International Traffic in Arms Regulations (ITAR).

The other fighter manufacturers that have responded to the IAF's RFI include: Lockheed Martin, with its single-engined F-21; Saab with its single-engined Gripen E/F, Dassault with its twin-engined Rafale, Eurofighter GmbH with its twin-engined Typhoon, and Russia with two twin-engined fighters: RAC MiG-35 and Sukhoi Su-35.

The IAF's procurement of 114 fighters follows the cancellation in 2015 of its 2007 tender for 126 Medium Multi-Role Combat Aircraft (MMRCA), and the purchase of 36 Rafale fighters in 2016. Short of numbers, the IAF has launched the procurement of 114 medium fighters in an exercise that closely mirrors the MMRCA tender.

The F-15 Eagle programme, like that of the F-18 Hornet, dates back decades. However, Boeing has developed futuristic versions of both fighters for the decades ahead. The F/A-18E/F Super Hornet is slated to equip US Navy carriers into the 2040s, while the F-15EX (which is still to be named), will provide the USAF with multi-role capability during this period.

The F-15 Eagle, which is flown by several air forces, including that of Israel, has a formidable air-to-air combat record of 104-0. Along the way, Boeing developed a ground strike version called the Strike Eagle. Now, equipped with a new cockpit, airborne electronically scanned array (AESA) radar, integrated electronic warfare suite and fused sensors and data links, the F-15EX is a multi-role fighter capable of the full range of missions.

Capable of flying at Mach 2.5 (two-and-a-half times the speed of sound), the F-15EX is the world's fastest fighter aircraft. It carries 13.5 tonnes of weapons load, more than the Rafale or the Sukhoi-30MKI. And with a range of 1,000 nautical miles (1,850 kilometres), it can strike targets deep inside enemy territory.

Based on publicly available US budget figures, the F-15EX costs \$80.3 million per fighter. The cost of the twin engines and armament could be half that again. However, building the aircraft in India, which involves setting up and certifying a new factory and training workers could take that up significantly, as would adding the cost of spares and weaponry.

THE ECONOMIC TIMES

Thu, 13 Feb 2020

## India's fighter jet plan likely to have another contender in F 15EX

*“The Indian Navy and Indian Air Force have distinct operational needs for fighters. While awaiting further definition on the Indian Air Force’s requirements, we have requested a licence for F 15EX so that we’re ready to share the full spectrum of potential solutions across our fighter portfolio when appropriate,” a Boeing spokesperson said*  
*By Manu Pubby*

New Delhi: New Delhi: India's multi-billion dollar programme to acquire new fighter jets could see another contender in F 15EX of Boeing, with the company seeking formal US permission to offer it to India. New Delhi is planning to produce 114 combat aircraft at more than \$15 billion in partnership with a domestic company.

The F 15EX, a heavy fighter jet capable of carrying up to 22 air-to-air missiles or a mix of ground-attack weapons, will be the third American aircraft in the fray. “The Indian Navy and Indian Air Force

have distinct operational needs for fighters. While awaiting further definition on the Indian Air Force's requirements, we have requested a licence for F 15EX so that we're ready to share the full spectrum of potential solutions across our fighter portfolio when appropriate," a Boeing spokesperson said in response to a query after a US official disclosed that export permissions had been sought.

The US company said the licence application is a routine procedural step that will give it flexibility to provide information on the jets when required. "We continue to offer F/A 18 Super Hornet to both Indian Navy and Indian Air Force," Boeing said. The US-made jet will be a challenger to F/A 18 Super Hornet and F 21 (a variant of F 16), which are already on offer. US' F 22 Raptor and Lockheed

Martin's F 35 are not on the table as Washington is reluctant over India's purchase of Russian S 400 air defence systems. The expected entry of the F 15EX, with IAF yet to invite an official expression of interest, will add an interesting mix to the acquisition process. Though in a heavier class than its competitors, it is the fastest aircraft in production and is known for its ability to carry a phenomenal weapon load.

It may be recalled that in the earlier Indian contest for medium multirole combat aircraft, F/A 18 and F 16 failed to make the technical cut during extensive testing. This resulted in a shortlisting of the European Rafale and Eurojet fighters by IAF.

The project is being taken up under the strategic partnership model where an Indian company will manufacture the new jets in India. US firm Lockheed Martin has tied up with Tata Aerospace and Defence for its offering, while Boeing has a tri-party agreement with Mahindra and Hindustan Aeronautics Limited for F/A 18. It is early days yet but, technically, Boeing could go in with a separate Indian partner if the F 15EX offer comes on the table.

<https://economictimes.indiatimes.com/news/defence/indias-fighter-jet-plan-likely-to-have-another-contender-in-f-15ex/articleshow/74110483.cms>

## Possible Contenders

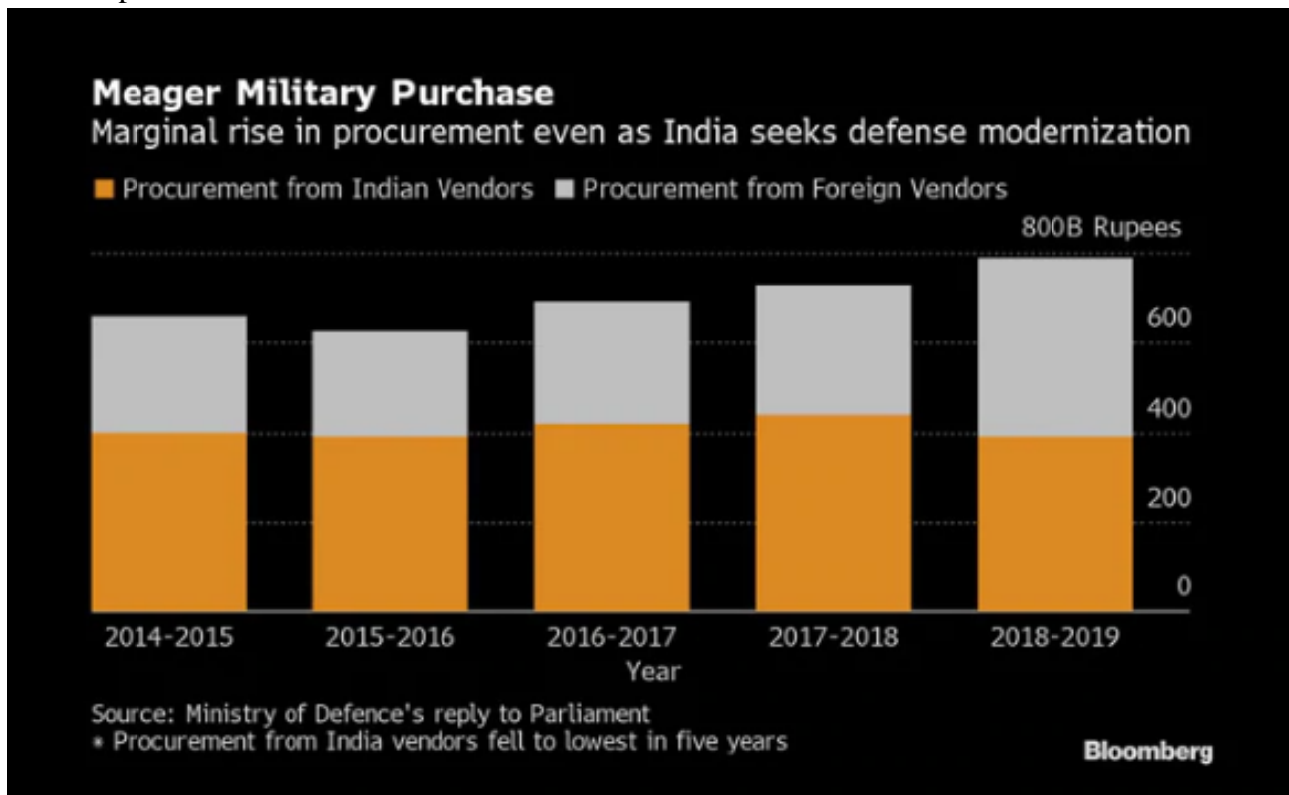
 <p><b>F 15EX</b></p>  <p><b>EUROFIGHTER</b> Though the jet qualified on performance grounds in last contest, it is unlikely to take part in competition</p>  <p><b>AMERICAN F 21</b> An upgraded version of F 16, to face stiff competition from Gripen; not yet known if the final technical requirements will give it a chance</p>  <p><b>FRENCH RAFALE</b> Has the best chance to make it, has already been ordered for IAF, India-specific enhancements paid</p>	 <p><b>RUSSIAN SU 35 AND MIG 35</b> Modern tech requirements offer little chance to these platforms; officials say Russian tech unable to match up with the rest of the world lately</p>  <p><b>AMERICAN F/A 18</b> The Super Hornet in contention for IAF order but has a better chance for Navy's requirement of 57 carrier-borne fighters</p>  <p><b>SWEDISH GRIPEN</b> A versatile fighter jet but is being seen as a direct competitor to the indigenous LCA that is being ordered in large numbers by IAF</p>
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# Military deals with India remain a pipe dream for Lockheed, Saab

*India's inability to speed up the modernization of its weaponry to guard the border with arch rivals Pakistan and China shows the Modi-led administration's challenge to transform an industry plagued by red tape*

*By Anurag Kotoky, Bibhudatta Pradhan*

Global companies from Lockheed Martin to Sweden's Saab AB are offering military hardware from submarines to helicopters to Prime Minister Narendra Modi's government as part of his \$250 billion defense modernization program. But bureaucratic delays and a funding crunch has made future deals next to impossible.



Airbus SE won a \$1.7 billion contract to supply transport planes to the Indian Air Force in 2015 -- it's first military agreement in the South Asian nation since 1962. Five years later, that deal is yet to be signed.

India's inability to speed up the modernization of its weaponry to guard the border with arch rivals Pakistan and China shows the Modi-led administration's challenge to transform an industry plagued by red tape. While New Delhi is the world's fourth-biggest military spender, its air force, navy and the army are still equipped with weapons that are largely obsolete.

"The defense procurement procedure needs major, thorough reforms, not just an update," said Jon Grevatt, the Asia-Pacific defense industry analyst with Jane's, adding the complex approval processes and lack of finances are the main drag on military modernization. "Unless the Modi government really introduces major reforms into its procurement process then we will continue see delays."

## **No Orders**

An air of despondency hung over the gathering of top arms manufacturers last week in Lucknow, a nineteenth century battleground city in northern India. Executives heard PM Modi and Defense Minister Rajnath Singh extolling the need to modernize, collaborate and export out of India, while remaining silent on future orders.

A historic mandate about six years ago handed PM Modi a unique opportunity to aggressively buy arms, without fearing the political opposition that often derails such purchases. But implementation has been poor. The prime minister has missed that window of opportunity, at least seven executives said, asking not to be identified as they still do business with the government.

## **Meager Military Purchase**

A Defense Ministry spokesman wasn't immediately available to comment.

About 60% of defense spending goes to paying salaries for India's 1.3 million soldiers -- one of the world's largest standing armies. What's left is spent on past purchases, leaving the forces with obsolete equipment and not enough ammunition.

India's spending in the year starting April 1 will be \$47.34 billion, of which \$16.2 billion is for capital expenditure and of that, about 90% is devoted to existing obligations and committed liabilities. That leaves little to meet demands for weapons purchases and modernization.

## **Time Lag**

The political leadership is well aware of the need for modern weapons. The mainstay for Indian Army's artillery are the Swedish-designed Bofors guns bought in the 1980s, while the air force and navy have an aging fleet of Soviet-era aircraft and warships.

The process to buy fighter jets took more than a decade. What started as a requirement for 125 jets was pruned by two-thirds. When talks stalled over price and quality guarantees, the government scrapped the purchase in 2015 and bought 36 Rafale jets separately.

Aiming to develop a robust military industrial base, Modi government has revised defense procurement procedures, pushed for long-term strategic partnerships between Indian companies and global equipment manufacturers, further eased overseas investment regulations and diversified weapons suppliers.

Still, a parliamentary panel said implementation of the strategic partnership model which envisaged private players building military platforms like submarines and fighter jets in partnership with major global defense companies remains a non-starter. That's mostly because of a lack of coordination in attracting foreign defense companies to set up local manufacturing, according to the 2018 report.

## **Technology Transfer**

Saab AB pulled out of the race to locally build submarines after it realized it would have to assume all liabilities but wouldn't have control over the venture. The company, which is pitching its Gripen jets to the government with billionaire Gautam Adani's defense business, has now made clear it wants control of the venture if it's required to transfer state-of-the-art technology to its local partner.

During the last three financial years till 2019, 149 capital acquisition contracts were signed and of these, 58 contracts worth about \$20 billion were placed with foreign vendors, the defense ministry told parliament in December. These are small ticket items only, the company executives said, not submarines, jets or helicopters. Procurement from Indian vendors also fell to its lowest level in five years to financial year 2019.

"We are at least convinced that Saab and also other global original equipment manufacturers would be willing to transfer more technologies to India, if we have majority of control," said Ola Rignell, chairman and managing director of the Saab India Technologies Pvt. Ltd.

<https://www.ndtv.com/india-news/military-deals-with-india-remain-a-pipe-dream-for-lockheed-saab-2179393>

# Scientists develop hand-held explosive detection device

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Indian scientists have developed a handheld, easy to handle explosive detection device capable of detecting lethal explosives like RDX and TNT using visual detection technology.

The device has been developed by Dr CV Yamagad and a group of fellow scientists at the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru, an autonomous science and technology institute under Department of Science and Technology (DST).

The device uses a compact sensor for trace-level detection of explosives and toxic metal salts. It is an easy to handle detection device and can be easily installed without the need for prior calibration, unlike the existing devices that are cumbersome to move needing repeated calibration, according to a

DST note published in the Ministry of Science and Technology website.

Giving details of the working of the device, Dr Yamagad said it employs a fluorescent material called coordination polymer (COP), a hybrid system originating through interaction between organic and inorganic moieties (a part of portion, especially a lesser share). This system being electron rich acts as an electron source.

The explosive materials containing nitro groups are electron-deficient and act as an electron sink. A charge-transfer complex or an association of two or more molecules is formed between these electron sources and sink that is non-fluorescent, and hence the fluorescence intensity decreases drastically, which can be

observed visually, the scientist explained. The sensing of explosives can be done in solution as well in thin-film forms. At present, different devices being in use for sensing explosive materials suffer from major drawbacks such as their large size, and need for repeated calibration, etc. The newly developed device can be easily transported and used in various places such as airports, rail stations, and shopping complexes owing. It is compact in size and easy to handle.

The visual detection technique makes the device compatible to be used without calibration. A prototype of the device has been developed and demonstrated in the Bengaluru India Nano-2018 expo under a collaborative project with Tata steel.