

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

A Daily Current Awareness Service

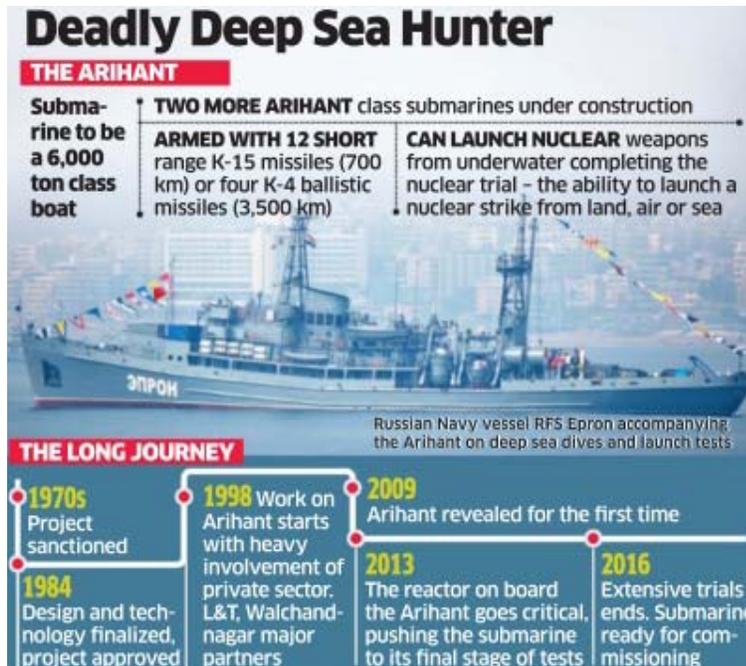


रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाऊस, दिल्ली 110054
Metcalf House, Delhi-110054

India's First Nuke Submarine Ready, Passes Deep Sea Tests

READY TO DIVE Series of low key tests off Vishakhapatnam with Russian deep sea support vessel; commissioning political call; sub to be housed at the under construction INS Varsha naval base

India's first nuclear armed submarine is now ready for fullfledged operations, having passed several deep sea diving drills as well as weapons launch tests over the past five months and a formal induction into the naval fleet is only a political call away. Multiple officials closely associated with the project to operationalize the INS Arihant nuclear missile submarine have confirmed to ET that the indigenously-built boat is now fully-operational and over the past few months, several weapon tests have taken place in secrecy that have proven the capabilities of the vessel. The Arihant, which is the first of five nuclear



missile submarines or SSBNs planned for induction, has also undergone deep sea dives off Vishakhapatnam where it was build. A Russian diving support ship --the RFS Epron that arrived on October 1 -has been accompanying the Arihant on its deep sea dives and launch tests, officials told ET. The Epron -a Prut class submarine rescue vessel -was also the Russian representation for the recently concluded International Fleet Review (IFR) in Vishakhapatnam. India does not currently possess a submarine rescue vessel of this class a vital requirement during weapon firing tests where all possibilities need to be catered for. The Arihant incidentally did not take part in the IFR even though it was ready due to security concerns. The presence of 24 foreign warships, equipped with sensors

and equipment that could pick up vital electronic intelligence being the main deterrent. The Navy has managed to keep under wraps several weapon launch tests from the Arihant over the past five months. The submarine is to be equipped with K 15 (or BO-5) short range missiles with a range of over 700 km and the K 4 ballistic missile with a range of 3,500 km. "It has passed all tests and in many things has surpassed our expectations. Technically the submarine can now be commissioned at any time," a senior official said. Sources told ET that the commissioning date could be as early as next month if the Modi government desires. A communication facility to interact with the submarine has already been commissioned into the Navy. At present, work is already in progress on two more Arihant class submarines at the Ship Building Center (SBC) in Vishakhapatnam which will be larger and more advanced than the first boat. The navy is also accelerating work on INS Varsha a new strategic naval base with underground pens on the Eastern Coast near Kakinada where the nuclear assets would be based. The Navy's Submarine Design Bureau is also presently working on a new class of nuclear powered attack submarines (SSNs) that it hopes to induct within the next 15 years. The plan is to build at least six SSNs in India, with financial sanction given last year for the project that could cost upwards of Rs 90,000 crore. At present, the only nuclear powered platform in service is the INS Chakra, a Akula class SSN on lease from Russia.

It just got bigger Record 843 Cos Register for Goa Defence Expo

Live demos by tanks, bridge-laying systems; Goa venue to be ready by March 20

With the defence sector emerging as a cornerstone for the Make in India initiative the showcase industry event of the ministry of defence Defence Expo is set for record participation this year. The four day event, taking place outside the capital for the first time, already has registrations from 843 companies, with at least 44 nations exhibiting their products.

Senior officials involved in the event have told ET that the participation has hit a new high against the 600-odd companies that registered for the show last year. With Goa set as the new venue for the show, several live demonstration drills have been finalised, something that could never be done at the earlier venue at Pragati Maidan.

While Bharat Forge is set to exhibit involved in the event have told ET that the participation has hit a new high against the 600-odd companies that registered for the show last year. With Goa set as the new venue for the show, sev tems and tracked vehicles like tanks and armoured personnel carriers.

Among the companies that have already registered, the largest delegation is from India (402) followed by the US that has 87 defence firms participating. Russia at 67 comes in third while large delegations are expected from other major manufacturing nations like Germany (37), Israel (35) and France (33).

Officials have told ET that work on setting up a makeshift venue at Goa is to commence on February 25 and the completed facilities are to be handed over to exhibitors by March 20, a week before the show commences.

“The larger venue has given space to accommodate as many companies that wish to participate. Work on temporary structures at the venue is starting and would be complete well before time,” a senior official told ET.

India remains world's largest arms importer, with 14% of global share

India continues to remain the world's largest arms importer, accounting for 14% of the global imports in the 2011-2015 timeframe, in yet another indicator of the country's enduring failure to build a strong domestic defence-industrial base (DIB).

The latest data on international arms transfers released by a global think-tank, Stockholm International Peace Research Institute (SIPRI), also shows India's arms imports remain three times greater than those of its rivals China and Pakistan. Its biggest suppliers are Russia, the US, Israel and France.

After India, China ranks second in the global arms import list with 4.7%, followed by Australia (3.6%), Pakistan (3.3%), Vietnam (2.9%) and South Korea (2.6%). China used to top the imports chart earlier but has gradually built a stronger DIB over the last couple of decades to even emerge as the world's third largest arms exporter after the US and Russia.



China ranks second in the global arms import list with 4.7%, followed by Australia (3.6%), Pakistan (3.3%), Vietnam (2.9%) and South Korea (2.6%)

Incidentally , Pakistan is the main recipient of Chinese arms exports, notching up 35% of the total, followed by Bangladesh (20%) and Myanmar (16%). Russia, in turn, is China's largest arms supplier with 59%, followed by France (15%) and Ukraine (14%).

Noting that India's arms exports has jumped by 90% between 2006-2010 and 2011-2015, SIPRI

reiterated the well-acknowledged fact that “a major reason for the high level of imports is that the Indian arms industry has so far arguably failed to produce competitive indigenously-designed weapons”.

As earlier reported by TOI India has spent over \$120 billion on arms acquisitions over the last 15 years, most of them from foreign suppliers, and will spend much more than that in the coming decade. Since it came to office in May 2014 the Modi government has launched a major “Make in India” drive in the defence sector but it's yet to translate into anything concrete on the ground. The import bill is further set to zoom upwards with some major deals, without any Make in India component, in the pipeline. This includes the direct purchase of 36 French Rafale fighters for over Rs 60,000 crore and the Rs 39,000 crore acquisition of five advanced Russian S-400 Triumf air defence missile systems.

Defence minister Manohar Parrikar, on his part, has warned DRDO and its 50 labs as well as the five defence PSUs, four shipyards and 39 ordnance factories to improve their performance and be ready to compete with the private sector in the defence production arena.

Parrikar hopes the new defence procurement procedure (DPP), which will be notified within a couple of months and gives top priority to a new indigenous design, development and manufacturing (IDDM) category under “Buy Indian”, will help bolster the indigenous DIB.

The Indian Express
23 Feb, 2016

Defence Min's nod to manufacturing specialist ammo by pvt players

Defence ministry under the 'Make in India' scheme has given in-principle approval for manufacture of specialist ammunition to private industry for the army. Acting on the recommendations of the Committee on Strategic Partnership, chaired by former DRDO head VK Aatre, the ministry is now processing a note for the approval of the Cabinet Committee on Security (CCS).

During his address to the Combined Commanders' Conference Prime Minister Narendra Modi had flagged the issue of country's high dependence on imported ammunition.

After the proposal is approved by the Union cabinet, the defence ministry will take up the case with the home ministry and the Ministry for Chemical and Fertilisers to grant licenses for manufacture of ammunition in the private sector. The current rules do not allow the private sector to manufacture specialist ammunition.

After discussions with the Ordnance Factory Board (OFB), and representatives of CII, FICCI, PHDCII and ASMKI, and six private firms, the army has decided on seven types of ammunition for procurement from private suppliers. This includes specialist ammunition for T-72 tanks and Bofors artillery guns, GRAD BM-21 charges and electronic fuses; none of them being currently manufactured in India.

The annual cost of this procurement is expected to be in the range of Rs 800 crore.

"The basic aim of this proposal is to ensure that the dependence on import content decreases. In many cases, it will overcome the lack of capacity and capability in the government sector where the OFB has not been able to make these ammunition indigenously. In other cases, we are looking at creating a second or backup option," a senior defence ministry official told The Indian Express.

The armed forces currently source specialist ammunition either from OFB or through imports. As per the CAG report placed in Parliament in May last year, OFB had failed to supply the army with the targeted quantity, leading to shortfalls in supplying up to 73 per cent of the total types of ammunition. In imports,

no procurement of ammunition took place against the nine items initiated for procurement through capital route from 2008 to 2013.

CAG had also warned that as of March 2013, half of the 170 types of ammunition held would not last 10 days of war fighting, a "critical" situation, and 74 per cent were not enough for 20 days of war fighting. As per policy, army is supposed to maintain its ammunition reserves for 40 days of intense war fighting, and 20 days reserves are the 'Minimum Acceptable Risk Level'.

For the year 2014-15, the army had placed an order of ammunition with the OFB for Rs 26,378 crore to make up these deficiencies in War Wastage Reserves. Against this indent, OFB has supplied the army ammunition worth Rs 8,000 crore till December 2015.

HBL Power Systems, Premier Explosives, Bharat Forge, Solar Industries, Micron Instruments, Walchand Nagar Industries, and Precision Electronics attended the exploratory meeting with the army. They were assured by the army officials that it was looking for building a long-term relationship with the private firms.

"The eventual aim of the 'Make in India' proposal for ammunition is to allow indigenous manufacturers to either obtain Transfer of Technology or establish partnership with foreign firms, and the guidelines to that effect for such procurements are under finalization," the defence ministry official said.

The Tribune
23 Feb, 2016

Precise rocket fire and battle of patience for Army

The final hours of a fierce assault on a multi-storey concrete building, which was turned into a bunker by militants, here on Monday were marked by a barrage of precise rocket fire.

The high-explosive shells were fired with precision from several sides and landed inside the rooms of the fourth storey of the building, which housed the headquarters of the Entrepreneurship Development Institute (EDI), where militants were suspected to have barricaded themselves.

Plumes of smoke curled into air as rockets exploded inside the building's attic and several rooms on the fourth storey while unmanned aerial vehicles were used to pinpoint the location of hiding militants.

The EDI campus, which remained the site of a fierce gun battle and siege for three days, is between the National Highway 1A, which connects the state's two capital cities Srinagar and Jammu, and Jehlum river.

The three militants had taken over the sprawling building, located a kilometer outside Srinagar city and which has nearly 60 rooms and is spread over 10,000 square feet, on Saturday afternoon. The militants first ambushed a convoy of paramilitary CRPF vehicles on the highway and then moved into the EDI campus taking vantage positions.

Even as it was initially suspected to be a hit-and-run attack on the paramilitary convoy which went wrong for the militants, the police now believe the militants were on a fidayeen mission — that they had come prepared for a fight and die.

A police official said an earlier attempt to carry out a fidayeen attack was foiled two months ago when fidayeen militants — one a resident of north Kashmir's Sopore and second a foreigner — were intercepted outside the gate of the EDI campus and shot dead.

This time, however, they had no prior intelligence, the police official told The Tribune near the site of the siege as rockets continued to pound the building.

“It was very difficult to move up the stairs as militants had taken positions on the fourth floor. There is only one staircase inside the building and militants had blocked it with chairs. They fired towards the stairs whenever a chair screeched,” the police officer said.

In the first 24 hours, two constables of the paramilitary force, three Commandos of the Army’s Special Forces Parachute Regiment, including two young officers, and a civilian were killed. The Army Commandos, however, had succeeded in securing the first three storeys of the building and were fighting to secure the fourth storey.

The fatalities suffered by the Army’s elite Commando units in the initial assaults to neutralise the militants forced a change in tactic – to go slow and avoid further casualties.

On Monday, the third day of the gunfight, the Army launched the first assault at 5 am. It avoided direct firefights with the militants in which its two Captains and a Lance Naik — all of whom were part of Special Forces units — were killed. Instead, barrages of rockets pounded the fourth storey of the building at specific locations where militants were suspected to have taken shelter. At noon, a fresh exchange of fierce firefight between the two sides was silenced by more rocket fire.

The militants fired their last bullet and a grenade between 1 and 2 pm, and even as rocket fire continued for the next hour, there were no new shots.

The Economics Times
23 Feb, 2016

Pakistani SIT Won't Get Access to Pathankot Airbase for Probe

New Delhi to tell Islamabad Share the details of investigation done so far

India has ruled out the possibility of allowing a Pakistani special investigation team access to the Pathankot airbase, which was targeted by terrorists belonging to the Jaishe-Mohammed. Officials of the external affairs ministry and NIA while making this clear to ET added they expected Pak investigators to probe the role of suspects in Pakistan first.

The statements came a day after Pakistan announced that a SIT will shortly visit India in connection with the probe and India had agreed to it in principle. Government sources said they were ready to share details of investigation conducted by the National Investigation Agency but Islamabad needed to ensure that a detailed probe was conducted into the role of those who perpetrated the attacks.

People familiar with the developments indicated that the visit by Pakistani SIT could take place in the near future and foreign secretary talks would happen only after its visit. Pakistan foreign affairs adviser Sartaj Ajiz had suggested that the dialogue be held simultaneously with the SIT visit.

A government source, pointing to the contradiction in Pak stance on the whereabouts of Masood Azhar, said: “While Pak PM in an interview claimed Azhar is in Afghanistan, Aziz (in an interview to an Indian news channel) appeared to suggest the JeM chief was in police custody since January 14.”

नवभारत टाइम्स
23 फरवरी, 2016

'महासागरों में भारत का साथ चाहता है US'

अमेरिका ने कहा है कि वह दिन दूर नहीं, जब अमेरिका और भारत के पोत पूरे हिंद-प्रशांत सागरों में साथ चलेंगे। दक्षिण चीन सागर में चल रहे मौजूदा विवाद और भारत व अमेरिका की समान चिंताओं के मद्देनजर यहां अमेरिकी राजदूत रिचर्ड वर्मा ने यह अहम बयान दिया है। पिछले हफ्ते एक अमेरिकी आधिकारिक सूत्र के हवाले से रिपोर्ट निकली थी कि दक्षिण चीन सागर में भारत और अमेरिका के युद्धपोत साझा गश्त करेंगे। रिपोर्ट पर चीन की कड़ी प्रतिक्रिया के बाद अमेरिकी अधिकारी ने ऐसी सम्भावना से इनकार किया था, लेकिन अमेरिकी राजदूत ने यहां आयोजित एक बैठक में अपने संतुलित बयान में किसी देश का नाम नहीं लेते हुए इशारों में कहा कि हिंद प्रशांत

सागर में भारत और अमेरिका के पोत सागरों को सुरक्षित बनाने के लिए साथ चलेंगे। दक्षिण चीन सागर में चीन के बढ़ते आक्रामक तेवर को देखते हुए अमेरिका ने चीन को न केवल कई बार संयम बरतने की चेतावनी दी है बल्कि अपने युद्धपोतों को दक्षिण चीन सागर में चीन के कब्जे वाले विवादित द्वीपों के नजदीक भी भेजा है। भारत ने भी इन द्वीपीय विवादों पर अपनी राय देते हुए बार बार कहा है कि चीन को 2002 में घोषित समुद्री आचार संहिता का पालन अंतरराष्ट्रीय समुद्री कानूनों के अनुरूप करना चाहिए। राजदूत ने कहा कि संयुक्त राष्ट्र सुरक्षा परिषद में भारत को जगह दिलाने के लिए अमेरिका कटिबद्ध है और इसके अलावा अमेरिका दूसरे निर्यात नियंत्रण संस्थाओं में भी सदस्यता दिलाने के लिए कटिबद्ध है। अमेरिका में किसी भी पार्टी की सरकार बने भारत को इनके लिए अमेरिकी समर्थन मिलता रहेगा।

The Hindustan Times
23 Feb, 2016

China almost doubles arms exports, Pak biggest buyer

Islamabad bought 35% of weapons; India remains largest importer

China has become the world's third largest weapons exporters with Pakistan emerging as the top recipient of its arms, according to a report from a leading think tank on Monday.

Communist China, which has the world's largest military, nearly doubled its arms exports in the past 10 years, said the report on global arms trade by the Stockholm International Peace Research Institute (SIPRI). Beijing is now capable of producing advanced weapons and is less dependent on imports.

With its 5.9% share of the global arms market, China is still dwarfed by the US and Russia but Beijing's clout is clearly increasing and Islamabad is making the most of it.

"Pakistan was the main recipient of Chinese exports, accounting for 35%, followed by Bangladesh and Myanmar, accounting for 20% and 16% respectively (all three states are neighbours of India, the leading importer of arms in the region)," the report said.

China is scheduled to transfer eight submarines to Pakistan and two more to Bangladesh, the report said. Beijing and Islamabad are key allies who describe themselves as "allweather friends", and the SIPRI report indicates a further strengthening of their military ties.

China, reports say, has aided Pakistan to set up its nuclear and ballistic missiles programmes, besides supplying conventional arms. The report further said India continued to be the largest importer of major arms in 2011-15, accounting for 14% of the global total. "In 2011-15 India's imports were three times greater than those of either of its regional rivals: China and Pakistan," it said.

Unlike India, which has failed to produce "competitive indigenously designed weapons", China has become increasingly capable of producing advanced hardware, the report said. China imported 25% less arms between 2006-10 and 2011-15.

"While in the early-2000s China was by far the largest importer, it dropped to third place in 2011-15," the report said. It added: "However, China remains partly dependent on imports for some key weapons and components, including large transport aircraft and helicopters, and engines for aircraft, vehicles and ships."

In 2015, China signed orders for air defence systems and 24 combat jets from Russia, indicating that it is "not yet selfsufficient in those categories". China's largest supplier was Russia, which accounted for 59% of the imports, followed by France with 15% and Ukraine with 14%.

US-China in strategic tie Amid SCS turbulaence

China's foreign minister Wang Yi will visit the US from Tuesday, his ministry said, as the two powers grapple over weapons systems on the Korean peninsula and in the South China Sea.

The three-day trip comes with Beijing and Washington at loggerheads over militarisation in the South China Sea, while at the same time trying to find common ground on how to deal with North Korea's nuclear and missile programmes in the wake of Pyongyang's latest tests.

Last week China confirmed that it has "weapons" on Woody Island in the disputed Paracels chain. A US official told AFP that Beijing has deployed surface- to-air missiles on the island, apparently HQ-9s, which have a range of about 200 kilometres.

The US is also beginning talks with South Korea on the possible deployment of an advanced missile defence system on the Korean peninsula. China opposes the proposed Terminal High Altitude Area Defence System (THAAD), with foreign ministry spokeswoman Hua Chunying warning today that it should not be used as a front to "undermine China's own legitimate (security) interests".

The move comes in response to Pyongyang's launch of the Kwangmyongsong-4 satellite, which most in the international community viewed as a disguised ballistic missile test, violating multiple UN resolutions banning it from the use of ballistic technology.

The rocket came just a month after the North's fourth nuclear test. Hua anticipated an "in-depth exchange of views" on the issue when Wang goes to Washington for talks with US Secretary of State John Kerry, referencing previous "close communication and coordination" on the matter between the US and China.

"After the DPRK's nuclear test and satellite launch, we support the UN Security Council in passing new and effective resolutions against the DPRK," she told a regular briefing, referring to North Korea.

Tensions in the South China Sea - through which a third of the world's oil passes - have mounted in recent months after China transformed contested reefs in the Spratly islands further south than the Paracels into artificial islands capable of supporting military facilities.

Beijing's military facilities in the area come under "the exercise of self-defence rights granted by international law" and "have nothing to do with militarisation," Hua said. "China deploying necessary national defence facilities on its own territory is no different from the US deploying defence facilities on Hawaii," she added. China controls all of the Paracels, though Hanoi and Taipei have overlapping claims.

The Economics Times
23 Feb, 2016

South China Sea not a US-versus-China battle, says commander of the US Navy's 7th Fleet

SYDNEY: The commander of the US Navy's 7th Fleet says he is wary of the situation in the South China Sea being painted as a battle between the United States and China.

US Navy Vice Adm. Joseph Aucoin also said Monday that the presence of a Chinese missile system on a disputed island will not stop the US military from flying over the region.

China says patrols by US Navy vessels and military aircraft have raised concerns about stability and peace in the area.

Aucoin says the US is not using the patrols to single out China and wishes the situation wasn't portrayed as "US versus China."

US secretly agreed N Korea talks before nuke test: report

The US government secretly agreed to talks with North Korea aimed at formally ending the Korean War just days before Pyongyang conducted a nuclear test, The Wall Street Journal reported.

The talks were offered despite a longstanding condition that North Korea first move to cut its nuclear arsenal. Instead the nuclear weapons program was to be part of the talks, the Journal said in its Monday edition.

The 1950-1953 Korean War ended in an armistice, but no formal peace treaty.

The US State Department acknowledged the exchange, insisting that it was in accordance with US goals.

"To be clear, it was the North Koreans who proposed discussing a peace treaty," State Department spokesman John Kirby told the Journal.

"We carefully considered their proposal, and made clear that denuclearization had to be part of any such discussion," said Kirby. He said the North rejected this.

"Our response to the North Korean proposal was consistent with our longstanding focus on denuclearization," Kirby said.

The Journal, citing unnamed US officials familiar with the events that took place at the United Nations, said the rapprochement broke down when North Korea conducted its nuclear test in January.

The newspaper said that this was one of several failed efforts to discuss denuclearization with North Korea made during President Barack Obama's second term in office.

Pyongyang shocked the world and earned a global rebuke in January when it announced it had successfully tested a hydrogen bomb.

On February 6 it defiantly launched a satellite-bearing rocket, a move the West sees as a cover for a ballistic missile test in violation of UN Security Council resolutions.

On February 18 Obama signed off on new sanctions against North Korea to punish the reclusive Asian nation.

The measures tighten sanctions on anyone importing goods or technology related to weapons of mass destruction into North Korea, or anyone who knowingly engaged in human rights abuses.

UN warns of nuclear material falling into terrorist hands

The head of the UN nuclear agency is warning of the dangers of nuclear material falling into the hands of terrorists and is urging world nations to apply an agreement meant to minimise such dangers.

Yukiya Amano of the International Atomic Energy Agency says 11 more nations must agree to adhere to the Amendment to the Convention on the Physical Protection of Nuclear Material before it can enter into force.

He said today that its application would "reduce the likelihood of terrorists being able to detonate a ...'dirty bomb,'" which can spread radioactivity over a wide area. It would also reduce the risk of an attack on a nuclear power plant.

Russia set to ask to fly over US with advanced digital cameras

Russia will ask permission on Monday to start flying surveillance planes equipped with high-powered digital cameras amid warnings from US intelligence and military officials that such overflights help Moscow collect intelligence on the United States.

Russia and the United States are signatories to the Open Skies Treaty, which allows unarmed observation flights over the entire territory of all 34 member nations to foster transparency about military activity and help monitor arms control and other agreements.

Senior intelligence and military officials, however, worry that Russia is taking advantage of technological advances to violate the spirit of the treaty.

Russia will formally ask the Open Skies Consultative Commission, based in Vienna, to be allowed to fly an aircraft equipped with high-tech sensors over the US, according to a senior congressional staffer, who spoke on condition of anonymity because the staff member wasn't authorised to discuss the issue publicly.

The request will put the Obama administration in the position of having to decide whether to let Russia use the high-powered equipment on its surveillance planes at a time when Moscow, according to the latest state department compliance report, is failing to meet all its obligations under the treaty.

And it comes at one of the most tension-filled times in US-Russia relations since the end of the Cold War, with the two countries at odds over Russian activity in Ukraine and Syria.

"The treaty has become a critical component of Russia's intelligence collection capability directed at the United States," Admiral Cecil D. Haney, commander of the US Strategic Command, wrote in a letter earlier in 2016 to Representative Mike Rogers, chairperson of a House subcommittee on strategic forces.

"In addition to overflying military installations, Russian Open Skies flights can overfly and collect on department of defence and national security or national critical infrastructure," Admiral Haney said.

"The vulnerability exposed by exploitation of this data and costs of mitigation are increasingly difficult to characterise."

A state department official said on Sunday that treaty nations had not yet received notice of the Russian request, but that certification of the Russian plane with a "digital electro-optical sensor" could not occur until this summer because the treaty requires a 120-day advance notification. The official spoke on condition of anonymity.

US, Russia reach deal on ceasefire in Syria

The United States and Russia agreed on Monday on a new ceasefire for Syria that will take effect on Saturday, US officials said, even as major questions over enforcing and responding to violations of the truce were left unresolved. Where in Syria the fighting must stop and where counterterrorism operations can continue also must be addressed.

The officials said the new timeline for the hoped-for breakthrough comes after the two former Cold War foes, which are backing opposing sides in Syria's civil war, agreed on terms for the "cessation of hostilities" between Syrian President Bashar Assad's government and armed opposition groups. Those sides must accept the deal by Friday.

The truce will not cover the Islamic State, the al Qaeda-linked Nusra Front and any other militias designated as terrorist organisations by the UN Security Council.

Both the US and Russia are still targeting those groups with airstrikes. An announcement was expected after presidents Barack Obama and Vladimir Putin speak by telephone on Monday, according to the officials, who weren't authorized to speak publicly on the matter ahead of time and demanded anonymity.

The war has killed more than 250,000 people, created Europe's worst refugee crisis since World War II and allowed the Islamic State to carve out territory across Syria and neighbouring Iraq.

The Asian Age
23 Feb, 2016

Iran, Russia hold talks on missile defence upgrade

Iran negotiated with Russia at the weekend over buying an upgraded version of the S-300 surface-to-air missile defence system, which it requires to meet its military needs, a foreign ministry spokesperson in Tehran was quoted as saying.

Iran was blocked from obtaining the S-300 before it reached a deal with world powers last July on curbing its nuclear programme, with Russia having cancelled a contract to deliver an older version of the system in 2010 under pressure from the West.

Russia now hopes to reap economic and trade benefits from the nuclear deal and the lifting of sanctions on Iran in January.

Russian defence minister Sergei Shoigu visited Tehran on Sunday.

Commenting on the visit, ministry spokesperson Hossein Jaber Ansari told state news agency IRNA: "Iran is negotiating with Russia for providing its military needs... One of the main issues is buying the next-generation S-300 missile system."

Defence minister Hossein Dehghan was quoted as saying by the Fars agency on February 10 that Iran would start taking delivery of the S-300 within two months.

Iran has also shown interest in buying the more advanced S-400 system, though no negotiations were being conducted at the moment, Russia's RIA news agency reported last week.

It was not clear if by "next generation" Mr Ansari was referring to the S-400, which Russia says can hit missiles and aircraft up to 400 km away.

Israel has expressed "dismay" at Russia's decision to lift the ban on supplying S-300 missiles to Iran, which does not recognise Israel as a nation and has said it will use all its power to destroy it.

Mr Ansari also said Mr Shoigu met Iranian President Hassan Rouhani on Sunday to convey "President (Vladimir) Putin's special message ... regarding bilateral relations and some regional issues."

India's pollution levels beat China's: study

Greenpeace analysed NASA's satellite data on particulate matter from 2003 to 2015 in India and China

The average Indian was exposed to more particulate matter than the average Chinese citizen in 2015 — the first time that has happened in the 21st century — according to a report released here on Monday.

Greenpeace analysed NASA's satellite data on particulate matter from 2003 to 2015 in India and China, and found that pollution levels in China peaked in 2011 and then started to gradually reduce. India, however, saw a spike over the past decade, the last year being the worst on record. The study looked at the aerosol optical depth (AOD), which is the amount of fine solid particles and liquid droplets in air.

After a public outcry, China implemented a national air pollution action plan in 2013, that included stricter emission norms for coal-based power plants and industries, and greater enforcement of standards. The results of these measures show in the satellite data — there is a slight reduction in pollution in Central and Eastern China.

The levels in India have increased over the years, with north India being the most polluted part of the country. The biggest jump was seen in West Bengal, Bihar, Uttar Pradesh and the National Capital Region. With a population-weighted analysis, the report found that the average citizen in India was exposed to more pollution in 2015 than his or her Chinese counterpart.

The report said that the AOD levels in Indian cities — Patna, Kolkata, New Delhi, Gorakhpur, Kanpur and Varanasi — all went up from 2005 to 2015. But not all of the highly-polluted big cities are covered by the air pollution monitoring network. There are 89 cities with a population of more than five lakhs, but only 17 have continuous air quality monitoring systems. The National Air Quality Index covers 23 cities with 39 stations, as opposed to 1,500 monitoring stations in China. Among the most polluted cities that lack continuous monitoring data are Durgapur, Gorakhpur, Asansol, Shiliguri, Bareilly and Ludhiana.

Meanwhile, China's actions led to a 17 per cent reduction in PM_{2.5} from 2010 to 2015, while India saw a 13 per cent increase over the same period. In comparison, the United States saw a 15 per cent decrease.

Comparing the situation in India and China, Greenpeace East Asia air pollution specialist Lauri Myllyvirta said: "China is an example of how determined policies and tougher enforcement can turn the tide on air pollution to people's benefit."

Mr. Myllyvirta, one of the authors of the report, said India too needed to adopt strict and time-bound measures. Sunil Dahiya, a campaigner with Greenpeace India, said India should set a deadline for meeting air quality standards.

The Indian Express
23 Feb, 2016

Now, govt cyber cell to counter 'negative' news

Every time a negative narrative surfaces, a possible counter would be initiated — through press releases, briefings or press conferences, depending on the intensity or standing of the post," said sources.

THE GOVERNMENT plans to set up a special media cell to track content online, and counter news and comments that it decides are negative or provocative.

Last month, the National Security Council Secretariat (NSCS) proposed that a National Media Analytics Centre (NMAC) be created to keep monitor and analyse round-the-clock blogs, web portals of TV channels and newspapers, and social media platforms such as Facebook, Twitter, Instagram and YouTube, among others.

“The government will keep a watch on the narrative in all such threads. Every time a negative narrative surfaces, a possible counter would be initiated — through press releases, briefings or press conferences, depending on the intensity or standing of the post,” said sources.

Last August, the government had directed all ministries to set up quick response teams — comprising senior ministry officials, nodal officers from the Press Information Bureau and independent experts — to defend its case in the face of negative news.

Sources said that the NMAC proposal is based on tracking software designed by Ponnuram Kumaraguru, an Assistant Professor at Delhi-based Indraprastha Institute of Information Technology.

The software will generate relevant tags to highlight “belligent” comments or social media chats, they added.

At a deeper level, the software would comb posts and comments to classify them into negative, neutral and positive categories while highlighting relevant text, sources said. It will also show up if the negative posting was factually correct or “an intentional canard”, they said.

“The software would also help recall the past pattern of the writer to check the number of times he took a negative or positive stand, his background, and preferences of websites and areas of interest to judge whether they were aimed at fomenting trouble or radicalisation,” said sources.

They said the objective is to come up with “instant counters” on social media to plug resentment triggered by news items so that personal opinions do not snowball into public protests and threaten law and order.

The feedback on covert or overt posts would be passed on to security agencies or higher authorities for possible intervention, they said.

The NMAC proposal suggests an inter-ministerial committee of officials from NSCS and the Home, I&B and External Affairs ministries for analysis, coordination, information dissemination and feedback on public perception and national security.

The NMAC would be the third observation post for the NDA government after the New Media Wing, the online eyes and ears providing daily reports on the world of social media, and the Electronic Media Monitoring Centre (EMMC) that monitor 600-plus channels round the clock.

As reported by The Indian Express on August 29, the 200 content auditors at EMMC sends hourly reports and text messages of news breaking on any channel to top bureaucrats including the Principal Secretary to the Prime Minister, the National Security Advisor and the Cabinet Secretary.

The New Media Wing trawls websites, including micro blogs, as well as traffic relating to news breaks on the social media sites to pick up government relevant trends. It then undertakes a “sentiment analysis” to gauge public opinion.

The proposal for NMAC was sent to PIB director-general Frank Noronha by Deputy National Security Advisor Arvind Gupta for setting it up at the National Media Centre, said sources. However, they added, a four-member committee formed to examine the proposal has opposed locating it at NMAC due to “lack of space”.

When contacted, Noronha declined to comment on the contours of the NMAC. Gupta and Kumaraguru did not respond to an emailed questionnaire or answer phone calls seeking comment.

NASA working on crunching a Mars trip to three days

NASA researchers are working on a technology that could harness the power of light and may be the key to cutting down travel time to Mars from months to as little as three days.

Philip Lubin, from the University of California, Santa Barbara, is developing the 'photonic propulsion' system where lasers can propel spacecraft with giant sails to the Red Planet.

The system relies on the momentum of photons - particles of light - to move forward. However, instead of photons from the Sun's rays, Prof. Lubin's design would be given a push by giant Earth-based lasers.

In a video for NASA 360, Prof. Lubin explained that the technology is very much readily available, and that the system could easily be scaled up. With our current technology, it is estimated it will take humans around five months to reach Mars, *ScienceAlert* reported.

"There are recent advances that take this from science fiction to science reality," said Prof. Lubin.

When a spacecraft is launched, the thrust comes from burning a chemical, such as rocket fuel. This fuel weighs down the spacecraft.

It is an inefficient system when compared to using light or other electromagnetic radiation to accelerate objects.

"Electromagnetic acceleration is only limited by the speed of light while chemical systems are limited to the energy of chemical processes," Prof. Lubin said.

The system is not designed to send humans across interstellar distances. Instead, Prof. Lubin proposes wafer-thin spacecraft that can get close to the speed of light.

Apollo 10 astronauts heard odd `music' on far side of moon

Apollo 10 astronauts heard an "eerie" and "outer spacey" music as they passed around the dark side of the Moon, it has been revealed in an audio, declassified by Nasa.

The sounds came about as the astronauts took part in a test that saw them travel further from the Earth than ever before -2,20,820 nautical miles -and far out of contact with Earth.

"That music even sounds outer-spacey , doesn't it?" one of the astronauts asks. "You hear that? That whistling sound?" "Boy , that sure is weird music," lunar module pilot Eugene Cernan says in the notes. "We're going to have to find out about that," his colleague command module pilot John Young says.

Particles in space might have interfered with the astronauts' radios, scientists have suggested. The Cassini spacecraft picked up same sounds from Saturn -though the charged particles come from moving through Saturn's environment, but the Moon doesn't have an atmosphere or magnetic fields.

The sounds might also have come about as the two radios interfered with one another. But astronauts have suggested that the scientists would have been used to hearing those kinds of sounds.

It also isn't clear known why the information stayed secret. But it is likely that it was kept hidden because of the US policy of encouraging astronauts to stay quiet about unusual psychological events in space, so that public trust in the space missions would stay strong.

Light power to let us reach Mars in 3 days

Nasa researchers are working on a technology that could harness the power of light and may be the key to cutting down travel time to Mars from months to as little as three days. Philip Lubin, from the University of California, is developing the 'photonic propulsion' system where lasers can propel spacecraft with

giant sails to the Red Planet. The system relies on the momentum of photons -particles of light -to move forward.

The Asian Age
23 Feb, 2016

Tech may help divert Earth-bound asteroids

A new approach that uses a spacecraft to crash at high speeds into an asteroid headed for a collision with the Earth may prevent the potentially devastating consequences of an impact, scientists say.

Asteroids headed for Earth, if found early enough, can be acted upon to prevent the impact, researchers said.

One technique to divert an asteroid, called kinetic impact, uses a spacecraft to crash into the body at high speeds, they said.

This approach delivers the momentum of the spacecraft, while also providing an additional boost of momentum through the production of impact crater ejecta exceeding the asteroid's escape velocity.

Researchers at Lawrence Livermore National Laboratory have been studying the effectiveness of the kinetic-impactor strategy by carrying out 3D simulations of the process.

They have found that asteroid deflection by kinetic impact is sensitive to a range of asteroid characteristics, including strength, porosity, rotation and shape.

These and other asteroid properties may not be well constrained before an actual deflection mission is staged, leading to variability in the deflection outcome. By simulating a range of initial conditions for the target asteroids, researchers were able to quantify, for example, how greater target strength decreases the delivered momentum impulse and how, for an asteroid of constant size, added porosity can result in more effective deflections, despite the dampening of the shock waves produced during an impact.

In this model, asteroid Golevka (approximately 500 meters across) is impacted by a 10,000 kg mass travelling at 10 km per second along a principal axis of the asteroid.

The final change in asteroid velocity for this example is approximately one millimetre per second.

The kinetic-impact approach is one of the most mature technologies for deflecting a hazardous asteroid, researchers said.

For cases where the warning time is known well in advance and the asteroid is not too large, it is the preferred deflection mechanism, they said.

"Asteroids are naturally diverse, and researchers have little direct information about their mechanical properties," said Megan Bruck Syal, lead author on the paper published in the journal Icarus.

The Tribune
23 Feb, 2016

Internet of Things has successful trial

London: Swedish communication technology giant Ericsson, French telecommunications company Orange and US technology giant Intel have successfully conducted the world's first extended coverage trial for Internet of Things (IoT) using EC-GSM-IoT (Extended Coverage-GSM-IoT) technology in Paris. IoT is a futuristic system where one can control almost everything - from TV to refrigerator, from air-cooling to coffee machine - with smartphone. Cellular networks optimised for IoT will be operational in 2017. IANS

Tech world turning imagination real

Big Data, Internet of Things, Wearables, 3D touch, biometric scanners... all concepts that turned into real-life products in the past months. 2016 will also see some interesting buzz words become reality. HT tells you what to watch out for:

Cognitive computing is the simulation of human thought process in a computerised model. It might be complicated as far as engineering side is concerned, but IBM Watson, a cognitive system that enables a new partnership between people and computers, is bringing more and more products with this concept to life. For instance, Elemental Path's CogniToys has come up with a little talking-and-listening dinosaur toy (in pic), which is driven by Watson, and will be available by March. Children can talk with this toy, and even learn learning math skills, or ask it to recite a poem. On similar lines, more than 140 SoftBank Mobile stores in Japan are using the world's first humanoid robot – Pepper – to have complete conversations with its customer. Pepper can recognise the principal human emotions and adapt behaviour to the mood of interlocutor. Though chances of seeing a Pepper in India very slim, but if you are keen to see cognitive computing into action, do visit Hennna Hotel in Nagasaki, which is manned only by robots.

Information of Everything

While we already know about the Internet of Things, and IT giant Cisco went ahead and called it the Internet of Everything, 2016 is definitely going to be about the "Information of Everything". From the Oral-B toothbrush that can tell you about hygiene, to your wearables sending data to the cloud, and fitness experts sending you information on how to get fitter, faster and better, this year is going to be the age where information about everything will spread across the world, and everyone will be online. But some of this data might be private, and if you are worried about security, it is important to understand what is being shared from your devices. Apps such as Intel Security's McAfee Mobile Security available for Android and iOS, and the DTEK Privacy app, which comes pre-installed on the newlylaunched Blackberry Priv, let you know how the apps are using the resources on your phones to help you protect your information.

Voice Control

For years, humans have tried give commands to their computers. But, Siri from Apple changed the way we used voice with our phones. Soon, Google Now and Cortana followed suit, and you could see people talking to their phones, instead of just talking into them. Now, we voice our commands to our phones, to say, setup calendar meetings, or pull up information. Then, the time came to merger these devices with others. With Siri on the Apple TV, you can now select your favourite show on the TV, and ask the app to tune the same. Siri does not give you all the answers, but Amazon is doing this with Alexa on their device called Echo (in pic), which can not only play your favourite music when you ask, but it can also add stuff to your shopping list, convert units, help you spell words, and much more. The world completely voicebased computing is not far away anymore.

3D Printed Couture

What if you are invited to a party, and you've nothing to wear? Sounds familiar? In this age of fashion, it has become a universal problem. With 3D printers easily available these days, how about standing out in a party wearing a 3D printed dress? Recently, 3D printed garments has moved out of the research labs and are up for grabs. Designer Anouk Wipprecht has created an open-source movement, which lets you work with them, and millions of other people across the world, to print your own 3D clothes, while another designer Danit Peleg boasts of designing textiles and manufacturing clothes, all from her home printer. With several techniques added to 3D printing to create wearable technology, your clothes can even react with your body needs to bring in a new colour, or even change shape as you gain/lose weight.

No patents for standalone software

Start-ups, software developers will continue to have the freedom to innovate.

Mere computer programmes — those not in conjunction with a novel hardware — will not be granted patent in India, according to the latest guidelines of the Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM). The Office of CGPDTM supervises the working of Intellectual Property Rights (IPR) laws in India. In the guidelines released on February 19, the CGPDTM agreed with a Parliamentary panel which had observed that computer programmes as such are not intended to be granted patent. The fresh guidelines issued by the CGPDTM follows its stay on its August 2015 guidelines which had given rise to some confusion in this regard owing to certain "ambiguities" regarding whether Computer Related Inventions (CRIs) are patentable. The new guidelines have been aligned to the Patents Act. The objective of the guidelines is to bring out clarity in terms of exclusions expected under sub-section 3(k) of the Patents Act so that eligible applications of patents relating to CRIs can be examined speedily, the CGPDTM said. The sub-section 3(k) says mathematical methods or business methods or computer programme per se or algorithms are not patentable. The CGPDTM asked the patent examiners to rely on a three stage test in examining CRI patent applications. "Properly construe the claim and identify the actual contribution; If the contribution lies only in mathematical method, business method or algorithm, deny the claim," it said. "The computer programme in itself is never patentable... If the contribution lies in the field of computer programme, check whether it is claimed in conjunction with a novel hardware and proceed to other steps to determine patentability with respect to the invention," it added. Prasanth Sugathan, counsel, at the Software Freedom Law Center (SFLC), a non-profit organisation, told *The Hindu* "The implication of these guidelines is that start-ups and software developers will continue to have the freedom to innovate without worrying about litigation in this area and infringement notices. Ambiguous guidelines, like those published in August last year, would have resulted in a patent minefield like in the U.S."

New herbal drug to cure fractures much faster

The sheesham tree that finds its way into almost every home as furniture will now help you heal your bones. The Central Drug Research Institute on Wednesday launched its newly-developed herbal medicine for bone health. The medicine, based on Indian rosewood or "sheesham", will be available in the market in March. Talking about the new drug, CDRI director Dr Madhu Dixit said, "This herbal preparation is made from leaves of "dalbergia sissoo, a large deciduous perennial tree, growing in lowland region throughout India, popularly known as sheesham. This medicine helps us in improving bone health and will also encourage farmers to cultivate this tree for their economic benefits." Dr Dixit, the first woman director of CDRI, said that the results of the clinical trials had established the safety and effectiveness of the new drug in healing fractures. Patients who were given this drug reported a much faster healing of fractures than those who opted for the traditional procedures. In fact, the healing time was reduced to almost half in many cases. The drug is made from the leaves of the sheesham tree which has a high amount of flavonoids that help in healing. Besides, since the leaves are used for making drugs, it will not have an adverse impact on the ecology. "Very soon, we will begin clinical trials for treating osteoporosis also and if this succeeds, it will be a major breakthrough," the director said. The clinical trials were also carried out on women who suffered fractures due to osteoporosis and the success rate was amazingly high. CDRI scientist Naibedya Chattopadhyaya, who is closely associated with the drug, said, "This is a standardised extract, hence we know the exact amount of active ingredients in it which are required for bone health and which cannot be obtained in optimum dose by consuming fresh leaves." A drug company from Gujarat will soon start manufacturing this wonder drug that is expected to enter the market by March.