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Ministries and institutes join hands to promote research

According to the MHRD, the initiative is part of the IMPacting Research INnovation and Technology initiative

In an initiative to promote research, 26 government ministries and departments have entered an agreement to collaborate for technology development covering various engineering disciplines along with institutes like the IITs and NITs.

According to the Ministry of Human Resource Development (MHRD), the initiative is part of the IMPacting Research INnovation and Technology (IMPRINT), initiative of the NDA government which is a multi-disciplinary, multi-partner and multi-goal oriented national programme aimed at technology development involving the Indian Institutes of Technology (IITs), Indian Institute of Science (IISc), national academies, ministries etc.

Ten technology domains have been identified under IMPRINT including healthcare, energy, sustainable habitat, Nano technology hardware, water resources and river systems, advanced materials, information and communication technology, manufacturing, security and defence.

“In the field of healthcare, Health Ministry, AYUSH and various bodies like ICMR would participate in research initiatives and IIT Kharagpur would be the coordinating institute,” officials at the HRD Ministry said.

For technological development in defence the MoU envisages involvement of DRDO, Department of Space, Department of Atomic Energy, while IIT Madras and IIT Delhi would be the coordinating bodies.

For Sustainable Habitat and Swachh Bharat, the MoU envisages a collaboration between Urban Development and Rural Development ministries and IIT Roorkee.

The initiative, IMPRINT aims to create synergy with all the major initiatives of the Government like Make in India, Digital India, Skill India, Namami Gange, Unnat Bharat Abhiyan, Swachh Bharat Mission and other Ministries engaged in research covering these domains, an official said. For every domain area, there shall be a Domain Expert Committee (DEC), chaired by a subject matter expert of eminence and with such members as decided by the National Coordinator.

The Director IIT Kanpur has been designated as the first National Coordinator for the programme for a period of one year, HRD officials said.

Among other collaborations envisaged under the IMPRINT initiative are collaborations in research on environment and climate, involving ministries of Environment and Forest and Earth Sciences and Indian Institute of Science, Bangalore.

Other bodies which are part of the large scale exercise include Ministries of Textiles, Surface Transport, Steel, Railways, New and Renewable Energy, Drinking Water and Sanitation, officials said.

Reliance Defence, Ukraine's Antonov plan JV for aircraft

New Delhi: Reliance Defence on Thursday said it will enter into a joint venture with Ukraine's Antonov, makers of AN 32 aircraft in service with the IAF, for military and civil transport uses.

"Reliance Defence along with Ukraine based State Corporation Antonov have agreed to cooperate on dual version transport aircraft for Military, Para military and Commercial use in India," the Anil Ambani-led group said in a statement.

The JV proposal comes at a time when India is in the midst of acquiring new transport aircraft and is in the process of upgrading the 105-strong fleet of AN 32.

Deccan Herald
01 Apr, 2016

Army's Western Command launches think tank 'Gyan Chakra'

Jammu: A think tank on Defence and Strategic Affairs has been formed by Army's Western Command, aimed at providing an outlet to veterans for pursuing research on strategic and national security issues.

"Western Command in a new path breaking initiative has launched a Defence and Strategic Affairs Think Tank aptly named Gyan Chakra. There are a large number of defence veterans who have settled in the Tri City," PRO Defence Lt Col Manish Mehta said on Thursday.

Lt Col Mehta said that many of these veterans are prolific writers and subject matter experts in their own domain.

Despite having a wealth of experience these veterans had no outlet for pursuing research and intellectual activity in an organised manner.

'Gyan Chakra' is being launched to fulfil a long-standing requirement of defence veterans though not articulated, he said.

"There are a number of Strategic Affairs Think Tanks like United Service Institution, Institute for Defence Studies and Analysis, Centre for Land Welfare Studies, Vivekananda International Foundation, Observer Research Foundation etc active in the National Capital Region but the remaining portion of Northern India is devoid of any such institution," he said.

The PRO said that the idea behind conceptualising this Think Tank is to attract leading strategic thinkers, defence analysts, scholars and academicians and provide them a platform to deliberate on strategic and national security issues.

More facilities

'Gyan Chakra' will be an extension of the Khetarpal Officers Institute (KOI), Chandimandir and will be co-located.

The think tank will offer facilities like, library, internet, research, round table discussions, lectures and seminars.

The membership will be open to the Veterans of the Tri-City and serving officers at nominal subscription, he said.

Lt Col Mehta said that the launch of the initiative was announced by Lieutenant General KJ Singh, Army Commander, Western Command on March 16, this year.

The Times of India
01 Apr, 2016

Army gears up to fight Siachen avalanches

Army chief General Dalbir Singh Suhag on Thursday visited the Siachen Glacier-Saltoro Ridge to take stock of the additional measures instituted to prevent avalanche-related casualties in the backdrop of a dozen soldiers and a civilian porter being killed there since February.

Gen Suhag, accompanied by Northern Command chief Lt-Gen D S Hooda and 14 Corps commander Lt-Gen S K Patyal, stressed the need for all soldiers and porters to strictly adhere to the laid-down drills and guidelines when traversing avalanche-prone slopes and negotiating crevasses on the glacial heights. “The Army chief also interacted with the soldiers and porters as well as the instructors of the Siachen Battle School,” said an official.

Ten ill-fated soldiers from the 19 Madras Regiment -including Lance Naik Hanumanthappa Koppad who survived for over eight days -had perished after being buried under a massive ice-wall avalanche in the Northern Glacier on February 3.

The Northern Glacier has some of the most treacherous terrain in the forbidding heights of the region, which go up to almost 22,000-feet at the famous Bana post held by Indian troops. Over 930 Indian soldiers have died in the region since April 1984 when India's Operation Meghdoot pre-empted Pakistan's Operation Ababeel to occupy the forbidding heights by a whisker.

The Tribune
01 Apr, 2016

US praises India’s role in N-security

Even as leaders from more than 50 nations gather in Washington to address the growing challenge of nuclear terrorism and safety, the US today praised India’s role saying the country “has a long record of being a leader, of being responsible”.

The world leaders will over the next two days discuss the challenges posed by non-state actors and terror outfits trying to acquire nuclear weapons, besides a host of other issues related to nuclear safety.

Russia has chosen to boycott the summit while Pakistan chose to pull out citing the Lahore blasts and has instead sent a low-level representation to the summit. Initially, Pakistan Prime Minister Nawaz Sharif was supposed to attend the event.

Prime Minister Narendra Modi, who arrived in Washington today to attend the fourth and last edition of the Nuclear Suppliers Summit (NSS), is likely to meet US President Barack Obama on the sidelines of the summit.

National Security Adviser Ajit Doval on Wednesday met US Secretary of State John Kerry. Both leaders discussed many global and regional issues.

Speaking before his meeting with Kerry, Doval said India “shared many concerns, particularly about terrorism, cyber space and we’ll be working together on that”.

“We hope that together we will be able to make it a better place to live and meet these challenges together, and in cooperation with other likeminded countries,” he said.

Kerry said, “India has a long record of being a leader, of being responsible and it is particularly important right now at a time when we see in the region some choices being made that may accelerate possible arms construction, which we have serious questions about.” The reference to Pakistan did not go unnoticed by anyone.

“We’ve raised them with various partners in the region. So, our hope is that this Nuclear Security Summit will contribute to everybody’s understanding about our global responsibilities and choices,” Kerry said.

US, India discuss Pak N-programme

By Chidanand Rajghatta

Pink Flamingo Scenario Causing Worry

The US and India have begun conversations about Pakistan's runaway nuclear weapons programme, including its development and deployment of battlefield tactical nuclear weapons, in the backdrop of the nuclear security summit that opens here on Thursday .

Ahead of Prime Minister Narendra Modi's arrival in the US capital on Thursday , National Security Adviser Ajit Doval and his US counterparts and other senior American interlocutors have been discussing the progress in India's ties with Pakistan, including complications arising from the patronage of terrorist groups by sections of the Pakistani establishment, and its nuclear posture. The Pakistani headache featuring in talks with Doval was revealed by secretary of state John Kerry , when he referred cryptically to Washington having “serious questions“ about “some choices“ being made in the region that “may accelerate possible arms construction“.

“We've raised them with various partners in the region. So our hope is that this Nuclear Security Summit will contribute to everybody's understanding about our global responsibilities and choices,“ Kerry said, without directly naming Pakistan. But there was little doubt Kerry's remarks were directed at Pakistan, whose PM has bailed out of the summit citing the terrorist attack in Lahore.

“India has a very important role to play with respect to responsible stewardship of nuclear weapons and nuclear materials. India has a long record of being a leader, of being responsible, and it is particularly important right now at a time when we see in the region some choices being made that may accelerate possible arms construction, which we have serious questions about,“ Kerry , with Doval beside him, said in a vote-of-confidence in New Delhi.

Earlier, President Obama telephoned Pakistan's PM Nawaz Sharif to condole the death of more than 70 persons in the Lahore bombing.“This attack against innocent civilians... underscores the critical danger that terrorism poses inside Pakistan, throughout the region, and around the globe,“ a White House readout of the call quoted Obama as saying.

Pakistan has sent a low level representation to the summit, evidently apprehensive about having to explain its decision to build tactical battlefield nuclear weapons. The possibility of a nuclear conflagration between India and Pakistan had been dubbed a “pink flamingo“ scenario, from a term coined by security analyst Frank Hoffman to describe events that are predictable and fully visible, but almost entirely ignored by policymakers (as opposed to Black Swans, which are unpredictable and unforeseen).

Evidently , this pink flamingo is not something that will remain unnoticed or unaddressed.

The choice of Doval to play Sherpa to the Prime Ministerial visit rather than external affairs minister suggests that New Delhi and Washington are developing a deep security relationship. Enigmatic comments and cryptic statements bear this out. For instance, following Doval's meeting with US National Security Advisor, NSC spokesman Ned Price said the two sides discussed US-India counter-terrorism cooperation, “including against Lashkare-Taiba and Jaish-e-Mohammed“, specifically highlighting the two terrorist groups that have long been fostered by the Pakistani military.

N-Proliferation Most Dangerous Threat: Obama *Comments on Eve of Nuclear Security Summit*

Proliferation and potential use of nuclear weapons pose the most dangerous threat to global security and peace, US President Barack Obama said today as leaders from over 50 countries started arriving here to attend the Nuclear Security Summit with the sole objective of preventing terrorists from obtaining and using atomic weapons.

“Of all the threats to global security and peace, the most dangerous is the proliferation and potential use of nuclear weapons,” Obama said in an op-ed in *The Washington Post* on the eve of the fourth Nuclear Security Summit, which among others is being attended by leaders from countries like India, Japan, China, South Korea and Brazil.

The Indian delegation is being led by Prime Minister Narendra Modi. “Thursday in Washington, I welcome more than 50 world leaders to our fourth Nuclear Security Summit to advance a central pillar of our Prague Agenda: preventing terrorists from obtaining and using a nuclear weapon,” Obama wrote. “We’ll review our progress, such as successfully ridding more than a dozen countries of highly enriched uranium and plutonium. Nations, including the US will make new commitments and we’ll continue strengthening international treaties and institutions that underpin nuclear security,” he said. Given the continued threat posed by organisations such as the terrorist group IS, Obama wrote, world leaders will also join allies and partners in reviewing their counterterrorism efforts, to prevent the world’s most dangerous networks from obtaining the world’s most dangerous weapons. Obama said the international community must remain united in the face of North Korea’s continued provocations, including its recent nuclear test and missile launches.

The additional sanctions recently imposed on Pyongyang by the UN Security Council show that violations have consequences, he said. The US will continue working with allies and partners for the complete and verifiable denuclearisation of the Korean Peninsula in a peaceful manner, he said. “More broadly, the security of the world demands that nations including the United States ratify the Comprehensive Test Ban Treaty and conclude a new treaty to end the production of fissile material for nuclear weapons once and for all,” Obama said. Obama said as the only nation ever to have used nuclear weapons, the US has a moral obligation to continue to lead the way in eliminating them.

“Still, no one nation can realise this vision alone. It must be the work of the world,” said the president.

Deccan Herald
01 Apr, 2016

Nuclear materials remain vulnerable to theft *By David E Sanger and William J Broad*

Pakistan's embrace of small, tactical nuclear weapons has altered the way the US talks of its nuclear security

As President Barack Obama gathers world leaders in Washington this week for his last Nuclear Security Summit, tonnes of materials that terrorists could use to make small nuclear devices or dirty bombs remain deeply vulnerable to theft. Still, Obama’s six-year effort to rid the world of loose nuclear material has pulled bomb-grade fuel out of countries from Ukraine to Chile.

Perhaps more important, several countries are balking at safeguards promoted by the United States or are building new stockpiles. President Vladimir Putin of Russia, where some of the largest

stockpiles of civilian nuclear material remain, has decided to boycott the summit. Putin has made it clear he will not engage in nuclear cleanup efforts dominated by the US.

In addition, Pakistan's embrace of a new generation of small, tactical nuclear weapons, which the Obama administration considers highly vulnerable to theft or misuse, has changed the way the administration talks about Pakistani nuclear security. While Obama declared early in his presidency that the United States believed Pakistan's nuclear assets were secure, administration officials will no longer repeat that line.

Instead, when the subject comes up, they note the modest progress Pakistan has made in training its guards and investing in sensors to detect break-ins. They refuse to discuss secret talks to persuade the Pakistanis not to deploy their new weapons. Pakistan, China, India and Japan are all planning new factories to obtain plutonium that will add to the world's stockpiles of bomb fuel.

And Belgium, where a nuclear facility was sabotaged in 2014 and where nuclear plant workers with inside access went off to fight for the Islamic State militant group, has emerged as a central worry. The country is so divided and disorganised that many fear it is vulnerable to an attack far more sophisticated than the bombings in the Brussels airport and subway system last week.

For the first time, the Nuclear Security Summit will include a special session on responding to urban terrorist attacks - and a simulation of how to handle the threat of imminent nuclear terrorism. "The key question for this summit," said Matthew Bunn, a nuclear expert at Harvard and a former White House science adviser, "is whether they'll agree on approaches to keep the improvements coming."

The nuclear initiative has been a signature issue for Obama: It is among the goals he campaigned on in 2008 and one reason he was awarded the Nobel Peace Prize barely a year into his presidency. Benjamin Rhodes, a deputy national security adviser, told reporters on Tuesday that the administration's overall efforts had made it "harder than ever before for terrorists and bad actors to acquire nuclear material."

But the administration's budget for aiding global nuclear cleanups has been cut by half; some officials argue that less funding is needed with fewer nations willing to give up nuclear materials. A report Bunn helped write noted, "The administration is now projecting lower spending year after year for years to come, postponing or canceling a wide range of nuclear security activities that had been included in previous plans."

In a recent report, the Nuclear Threat Initiative, a private advocacy group in Washington that tracks nuclear weapons and materials, warned that many radioactive sources were "poorly secured and vulnerable to theft." The report called the probability of a terrorist's detonating a dirty bomb "much higher than that of an improvised nuclear device."

Ingredients for so-called dirty bombs, which use conventional explosives to spew radioactive material, are still scattered around the globe at thousands of hospitals and other sites that use the highly radioactive substances for industrial imaging and medical treatments. Fewer than half of the countries that attended the last nuclear summit in 2014 pledged to secure such materials, and they in turn represent less than 15% of the 168 nations belonging to the International Atomic Energy Agency.

And while the administration succeeded in getting more than a dozen countries to give up their civilian stockpiles of highly enriched uranium, a main fuel of atomic bombs, the Nuclear Threat Initiative said in another report that some 25 nations still had such materials - enough for thousands of nuclear weapons.

The report called highly enriched uranium "one of the most dangerous materials on the planet," warning that an amount small enough to fit in a 5-pound bag of sugar could be used to build a nuclear device "with the potential to kill hundreds of thousands of people."

Still, that does not mean Obama's efforts have failed altogether. He is expected to announce a major achievement soon: the removal of roughly 40 bombs' worth of highly enriched uranium and separated plutonium from Japan. Some of the uranium was fabricated in pieces the size of squares of chocolate that could be easily slipped into a pocket, a terrorist's dream. Yet there are signs that what began as a global effort to prevent terrorists from obtaining the world's deadliest weapons is fracturing.

In fact, there is a case to be made that even as vulnerable stockpiles have shrunk, the risk of nuclear terrorism has not. There is evidence that groups like the Islamic State are more interested than ever in nuclear plants, materials and personnel - especially in Belgium, where the attacks last week killed more than 30 people. The Belgian police discovered last year that Islamic State operatives had taken hours of surveillance video at the home of a senior official at a large nuclear site in Mol, Belgium. The plant in Mol, a northern resort area, holds large stocks of highly enriched uranium.

Atomic terrorism

Laura Holgate, Obama's top adviser on nuclear terrorism, noted on Tuesday that the US had worked with Belgium to "reduce the amount of nuclear material" at one key site. Asked about the Islamic State's interest in obtaining nuclear fuel from Belgium, she said, "We don't have any information that a broader plot exists."

The results of previous summit meetings have ranged from treaty ratifications to the establishment of more than a dozen training centres around the globe where guards, scientists, managers and regulators sharpen their skills at preventing atomic terrorism. Near Beijing, one of the largest training centres opened this month. "It's in our national interest" to help foreigners secure their atomic materials, said Nick Winowich, an engineer at Sandia National Laboratories, one of the American nuclear labs that helped in the centre's development.

The biggest wins have been the removal of all highly enriched uranium from 12 countries, including Austria, Chile, Hungary, Libya, Mexico, Turkey and Vietnam. The material was mostly reactor fuel. But officials said terrorists could have turned it into at least 130 nuclear weapons.

Critics of the summit process point to vague communiqués that seem to have done little to drive hard decisions. A sense of summit fatigue now seems to prevail, the critics add, noting that Russia's withdrawal evades some of the world's biggest security problems.

The Obama administration has also presided over a steady drop in US spending on international nuclear security. Budgets fell from more than \$800 million in 2012 to just over \$500 million in 2016. For 2017, the White House has proposed less than \$400 million - half the spending of the high point. The administration has defended the cuts, saying they reflect the completion of some programmes and upgrades and suspension of cooperative work with Russia after its invasion of the Crimean Peninsula.

The Hindustan Times

01 Apr, 2016

US, Asian leaders to discuss North Korea's nuke defiance

Washington: Working to display a united front, the United States and key Asian countries on Thursday will seek to put more pressure on North Korea as world leaders open a nuclear security summit in Washington. President Barack Obama, the summit's host, will also seek to smooth over tensions with China over cybersecurity and maritime disputes as he and President Xi Jinping meet

on the sidelines. The summit also offers Obama his last major chance to focus global attention on disparate nuclear security threats before his term ends early next year.

Though nuclear terrorism and the Islamic State group top this year's agenda, concerns about North Korea's nuclear weapons program are also commanding focus as the two-day summit gets under way. Those long-simmering concerns have escalated of late following the North's recent nuclear test and rocket launch.

Obama planned to have a joint meeting on Thursday morning with Japanese Prime Minister Shinzo Abe and South Korean President Park Geun-hye, two US treaty allies deeply concerned about North. It's a reprise of a similar meeting the three countries held in 2014 during the last summit in The Hague.

China's influence over the North will be front and center later in the day when Obama sits down with Xi. The White House said that meeting was also an opportunity for Obama to press US concerns about human rights and China's assertive territorial claims in waters far off its coast.

Though frictions with China remain high, the US was encouraged by China's role in passing stringent new UN sanctions on North, its traditional ally. Now the US is pressing Beijing to implement those sanctions dutifully.

"The international community must remain united in the face of North Korea's continued provocations, including its recent nuclear test and missile launches," Obama wrote in an op-ed appearing Thursday in The Washington Post. He added that the recent UN sanctions "show that violations have consequences."

In North, the government has been churning out regular propaganda pieces condemning the US and South Korea, while warning it could launch a pre-emptive strike against South Korea or even the US mainland at any time.

For years, pressing security crises in the Middle East have overshadowed Obama's goal of expanding US influence and engagement in Asia, with the North threat another unwanted distraction. Though the US and China have struck sweeping agreements on climate change, they've remained at odds on many economic issues. Obama has also been unable to get Congress to ratify the Asia-Pacific free trade deal his administration painstakingly negotiated.

The Hindustan Times
01 Apr, 2016

The lone tiger on the Asian mountain

India must join the US, Australia, Japan to establish a cooperative security framework to contain China's adventurism

Speaking at the Raisina Dialogue earlier this month, Admiral Harry Harris, Commander-in-Chief, US Pacific Command, called for quadrilateral Australia-India-Japan-US consultations for peace and stability in the Indo-Pacific region. He said, "Together, we can develop a roadmap that leverages our respective efforts to improve the security architecture and strengthen regional dialogues. Together, we can ensure free and open sea lanes of communication..."

Harris also announced that the next set of naval exercises in the trilateral annual Malabar series, comprising India, Japan and the US, will be held in the northern Philippine Sea, close to the South China Sea. The Chinese perceive such efforts as attempts to gang up on them and, therefore, their reaction was fast and furious. A spokesperson of China's foreign ministry said, "We urge the US government to put some restraint on them (US commanders) and stop them from irresponsible sensationalisation and hyping up so as to avoid undermining regional peace and stability."

China senses the emergence of a security vacuum in the Indo-Pacific and is rushing to fill it. Beijing has discarded Deng Xiaoping's 24-character strategy to 'hide our capacity and bide our time'. It has dropped the phrase "peaceful rise" while referring to its economic growth and military assertiveness.

China has deep internal fault lines. Its rapid economic growth, now slowing, has been uneven and non-inclusive. There is a deep sense of resentment of the Communist Party for the denial of basic freedoms. The discontent could boil over and lead to an uncontrollable spontaneous implosion. David Shambaugh, a well-known China scholar, is among those in the China-may-implode school. The recent crash of Chinese stock markets and their continuing volatility point to the possibility of a meltdown.

Most Asian leaders are apprehensive of China's intentions and worry that it may behave irresponsibly somewhere in the Indo-Pacific. It could decide to intervene militarily in the South China Sea, or to occupy one or more of the disputed Senkaku/Diaoyu islands or decide to resolve the remaining territorial disputes, like that with India, by using military force. Though President Xi Jinping has denied plans to 'militarise' the South China Sea, surely China is not building air strips there to fly in Japanese tourists.

Both the contingencies — implosion and military adventurism — have a low probability of occurrence, but will be high-impact events with widespread ramifications should either of them come to pass. In such an eventuality, both India and the US will need strong partners to deal with the fallout and to manage the consequences. Hence, the India-US strategic partnership makes eminent sense as a hedging strategy.

India must join the US and other strategic partners, such as Australia, Japan, Singapore, South Korea and Vietnam, to establish a cooperative security framework for peace and stability in the Indo-Pacific and for the security of the global commons — air space, space, cyber space and the sea-lanes of communication — to enable freedom of navigation and free flow of trade. If China is willing to join this security architecture it should be welcomed. However, it is unlikely to do so as it believes that 'one mountain cannot contain two tigers' and sees itself as the lone tiger on the Asian mountain.

US leaders have expressed their support for India's emergence as a major power several times. They have said the US is committed "to help India become a major world power in the 21st century". President Barack Obama declared in 2010 that "India is not just a rising power, it has already risen".

The US hopes India will soon become a "net provider of security" in the region. The expectations include India joining international counter-terrorism and counterproliferation efforts; sharing intelligence; upholding the rules and norms governing maritime trade; providing help to the littoral states to meet their security needs; helping to counter piracy and narcotics trafficking; and, continuing to taking the lead in humanitarian and disaster relief (HADR) operations in the region. All of these expectations are unexceptionable and India has been contributing extensively to achieving these common goals.

India must not hesitate to intervene militarily in conjunction with its strategic partners if its vital national interests are threatened in its area of strategic interest. This extends from the South China

Sea in the east to the Horn of Africa in the west. India would prefer to intervene under the UN flag but may join a coalition of the willing in case consensus is difficult to achieve in the UN Security Council. India must develop robust tri-Service capabilities for military intervention.

India-US defence cooperation, a key component of the strategic partnership, must be enhanced to take it to the next higher trajectory to enable the two countries to undertake joint threat assessment; contingency planning for joint operations; sharing of intelligence; simulations and table-top exercises — besides training exercises with troops; coordination of command, control and communications; and, planning for operational deployment and logistics support. All of these activities must be undertaken in concert with India's other strategic partners in Asia.

Only when a cooperative security framework is in place will the India-US strategic partnership realise its true potential as a force for peace and stability in the Indo-Pacific.

The Asian Age
01 Apr, 2016

China: Don't 'gesticulate' on SCS plans

China's defence ministry denounced as gesticulation on Thursday speculation it would declare an air defence zone over the disputed South China Sea, after the United States said it had told China it would not recognise one.

US officials have expressed concern that an international court ruling expected in coming weeks on a case brought by the Philip-pines against China over its South China Sea claims could prompt China to declare an air defence identification zone as it did over the East China Sea in 2013.

US deputy secretary of defence Robert Work said on Wednesday the US would view such a move as "destabilising" and would not recognise such an exclusion zone in the South China Sea.

Ministry spokesman Yang Yujun, asked about Mr Work's remarks, said any sovereign state had the right to set up an ADIZ.

"On this, there is no need for other countries to gesticulate," Mr Yang told a monthly news briefing.

"Whether or not to or when to set up an ADIZ depends on whether there is an aerial threat or the level of aerial threat. It needs many considerations," he added.

The Times of India
01 Apr, 2016

India, US sign MoU for setting up LIGO observatory in India

Washington:- India and the US on Thursday signed an MoU for setting up a new Laser Interferometer Gravitational- Wave Observatory (LIGO) in India that will play significant role in carrying forward frontline research on various aspects of gravitational wave astronomy.

The MoU comes about a month after the Union Cabinet approved the construction of the long-awaited third LIGO interferometer.

Department of atomic energy secretary Sekhar Basu and the US' National Science Foundation (NSF) France Cordova signed the MoU in this regard in the presence of Prime Minister Narendra Modi.

Modi, who is currently in the US to attend the two-day Nuclear Security Summit (NSS), met scientists of LIGO who recently proved gravitational waves theory. He also interacted with the Indian scientists who are part of the LIGO project.

Prime Minister described the LIGO project as a great example of India-US scientific collaboration and said the success of this project could well inspire an entire young generation of Indian scientists.

The Cabinet, he said, has already approved \$1200 crores for the project.

"Now that India has decided to be part of the project, the possibility is that India would be central to the LIGO project, partly on account of the fact that geography favors us," external ministry spokesman Vikas Swarup told reporters.

"It would come up hopefully in the next five to seven years," Swarup said. Cordova explained how India was extremely important for the future of the LIGO project.

"Today is an exciting day because it offers the promise of deepening our understanding and opening an even wider window to our universe. This MOU is the first step toward an additional gravitational wave detector, located in India," Cordova said.

Deccan Herald
01 Apr, 2016

Search for signals from alien worlds

Miami, AFP: The search for radio signals from alien worlds is expanding to 20,000 star systems that were previously considered poor targets for intelligent extraterrestrial life, US researchers said Wednesday.

New scientific data has led the SETI Institute to believe systems orbiting red dwarfs -- dim, long-lived stars that are on average billions of years older than our sun -- are worth investigating.

"This may be one instance in which older is better," said astronomer Seth Shostak of California-based SETI, a private, non-profit organisation which stands for Search for Extraterrestrial Intelligence.

"Older solar systems have had more time to produce intelligent species."

The two-year project involves picking from a list of about 70,000 red dwarfs and scanning 20,000 of the nearest ones, along with the cosmic bodies that circle them.

To do this, scientists will use the SETI Institute's Allen Telescope Array in northern California, a group of 42 antennas that can observe three stars simultaneously.

"We'll scrutinize targeted systems over several frequency bands between 1 and 10 GHz," said SETI scientist Gerry Harp.

"Roughly half of those bands will be at so-called 'magic frequencies' -- places on the radio dial that are directly related to basic mathematical constants," he added.

"It's reasonable to speculate that extraterrestrials trying to attract attention might generate signals at such special frequencies."

For a long time, scientists ruled out searching around red dwarfs because habitable zones around the stars are small.

Any planets orbiting them would be so close that one side would be constantly facing the star, making one side of the planet very hot and the other quite cold and dark.

But more recently, scientists have learned that heat could be transported from the light side of the planet to the darker side, and that much of the surface could be amenable to life.

"In addition, exoplanet data have suggested that somewhere between one sixth and one half of red dwarf stars have planets in their habitable zones, a percentage comparable to, and possibly greater

than, for Sun-like stars," said the statement. Experts have been hunting for alien intelligence for six decades, but have not found any evidence yet.

The Statesman
01 Apr, 2016

Drug resistant TB a major challenge: Experts

With multi-drug resistant tuberculosis emerging as a major obstacle in the fight against tuberculosis, healthcare experts have advocated the need for a collective move towards improved diagnostic mechanisms that help in accurate diagnosis of drug resistant strains of TB.

A symposium at AIIMS conducted in collaboration with BD, leading medical technology company, was inaugurated by Dr V M Katoch, Former Director General - ICMR and presided over by Prof. SK Acharya - Dean of Research, AIIMS.

The experts who attended the event included Dr Rajesh Kapur, Advisor, Department of Biotechnology, Govt of India; Dr Sunil Khaparde, DDG-TB, Govt of India; Prof D Behera from PGIMER, Chandigarh; Dr. R Ichhpujani from Clinton Foundation; Dr. Sanjay Sarin from FIND; Dr. Puneet Deewan from Bill & Melinda Gates Foundation; Dr Upasna Agarwal from NIRTD, Delhi; Prof. SK Kabra from AIIMS. The experts highlighted that inaccurate and delayed diagnosis continues to be a major challenge, which also perpetuates spread of drug resistant TB. They emphasized that adoption of liquidbased TB drug susceptibility testing on a larger scale is key to improve timely diagnosis of drug resistant TB.

"Inaccurate and delayed diagnosis of TB continues to be a challenge in both public and private sectors. In early stages when the drug resistance starts developing, a new crop of MDR bacteria erupts which cannot be detected by molecular methods but only by liquid culture methods and therefore, whenever there is a suspicion of MDR-TB the samples must be subjected to phenotypic second line drug susceptibility testing, using liquid culture systems," emphasized Prof. Sarman Singh, Head, Division of Clinical Microbiology & Molecular Medicine, AIIMS, who led the symposium.

The Hindustan Times
01 Apr, 2016

Age of robots: Meet Mako, the hip/knee surgeon

Imagine a world where robots replace surgeons in an operation theatre. American medical device giant, Stryker Corporation, is set to woo the Indian market with its robot, Mako, which is equipped to do just that.

Mako, which costs \$1.5 million to \$2 million (₹ 10-13 crore) in India, is the only robot in the world that can perform joint replacement procedures, according to the company.

"We have sold over 300 such robots across the globe. In India, we aim to sell about 40 robots in the next five to six years," Kevin Lobo, one of the lesser known India-born CEOs of a global corporation, told HT.

"Mako will be a game-changer for us. It is a disruptive technology. The precision produced with Mako is beyond human capacity as it enables movement of implant (knee or hip) within millimetres," Lobo added.



The Mako hip replacement robot that will cost ₹10-13 crore

At present, machines such as the four-armed Da Vinci allow surgeons to operate with greater precision.

Known for its premium offerings in medical devices, Stryker, a \$10-billion company, has a oneeyed focus to push growth in the Indian market.

“Slowing growth in Brazil, China and Russia has pushed more of our investments into India. At present, it is the most exciting market across the globe. We plan to launch about 20 new products here this year,” Lobo said.

The affordable range will include pelvic reconstruction plates, value-series hospital beds and power tools, among other devices.

Emerging markets currently represent close to 8% of company’s sales. “We would expect emerging markets to contribute at least 12-14% over the next five to six years” Lobo added.

According to a report by the US-India Business Council, the Indian medical device industry was valued at \$4.4 billion in 2015, the fourth largest in Asia, with a potential to grow at 10-15% annually to \$7 billion by 2016.

SAY HI TO INDIA'S BIGGEST EYE ON THE SKY



PM Modi and his Belgian counterpart Charles Michel switched on the Uttarakhand-based ARIES telescope, Asia's largest, on March 30

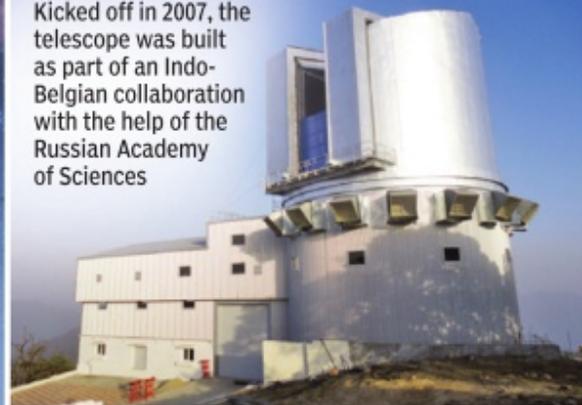
The telescope is located at the peak of 2.5 km high hill in the Western Himalaya, 50km from Nainital



SPECIAL FEATURES...

- > The telescope has a 3.6-metre-wide primary mirror which collects light from its field of view and focuses it onto a 0.9-m secondary mirror, which in turn will divert it into various detectors for analysis
- > While the Hubble space telescope captures cosmic panoramas with a primary mirror that's 2.4 m wide but its clarity is better because it is situated in space
- > While the combined weight of ASTROSAT's mirror and six instruments is 1,500 kg, the Devasthal telescope's primary mirror alone weighs 4,000 kg

Kicked off in 2007, the telescope was built as part of an Indo-Belgian collaboration with the help of the Russian Academy of Sciences



It is operated by the Aryabhata Research Institute of Observational Sciences (ARIES)

WHAT WILL IT STUDY?

Magnetic field structure of stars

Chemical evolution of Milky Way

Extra-solar planets

Formation of stars and their evolution in different environments

Movement of stars in the outer region and the halo of the Milky Way

Planet formation



Graphic: Sunil Singh

“ Prime Minister Charles Michel and I have just activated, remotely, India's largest optical telescope. Even sky is not the limit. This product of Indo-Belgian collaboration is an inspiring example of what our partnership can achieve

— PM NARENDRA MODI

आईआरएनएसएस-1एफ भू-स्थैतिक कक्षा में स्थापित

चेन्नई, (वार्ता): भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) द्वारा प्रक्षेपित देश के छोटे दिशासूचक उपग्रह आईआरएनएसएस 1 एफ को आज सफलतापूर्वक भू-स्थैतिक कक्षा में स्थापित कर दिया गया। इसरो ने प्रक्षेपण यान पीएसएलवी सी-32 के जरिये 1425 किलोग्राम वजन के आईआरएनएसएस 1 एफ उपग्रह का श्रीहरिकोटा के सतीश धवन अंतरिक्ष केन्द्र से 10 मार्च को प्रक्षेपण किया था। इस वर्ष इसरो का यह दूसरा प्रक्षेपण था। यह उपग्रह भारतीय क्षेत्रीय दिशासूचक उपग्रह प्रणाली (आईआरएनएसएस) का छठा उपग्रह है।

इसरो द्वारा आज यहां जारी विज्ञप्ति के अनुसार उपग्रह को भू-स्थैतिक कक्षा में भेजने के लिए कक्षा परिवर्तन का काम सफलतापूर्वक किया गया। उपग्रह के प्रक्षेपण के मात्र 20 मिनट बाद कक्षा में उपग्रह के स्थापित होते ही उपग्रह के दो स्वचालित सोलर पैनलों ने काम करना शुरू कर दिया था और कर्नाटक में हासन स्थित मास्टर कंट्रोल फैसिलिटी ने उपग्रह को अपने नियंत्रण में ले लिया था। मास्टर कंट्रोल फैसिलिटी ने तरल एपोगी मोटर (एलएएम) के जरिए एक कक्षा परिवर्तन पेरिगी (पृथ्वी से निकटतम दूरी) और तीन एपोगी (पृथ्वी से अधिकतम दूरी) में किया। इस तरह से कुल चार कक्षा परिवर्तन के बाद उपग्रह भू-स्थैतिक कक्षा में स्थापित किया गया। पीएसएलवी-सी32 का यह 34वां सफल अभियान साबित हुआ है। आईआरएनएसएस-1 ए, 1 बी, 1 सी, 1 डी और 1 ई, इस शृंखला के पहले पांच उपग्रह थे, जिनका क्रमशः दो जुलाई, 2013, चार अप्रैल 2014, 16 अक्टूबर, 2014, 28 मार्च, 2015 और 20 जनवरी 2016 को सफलतापूर्वक प्रक्षेपण किया गया है।

The Hindu
30 Mar, 2016

Honorary doctorate for Bhyrappa, Manjunath

Mangalore University on Wednesday presented honorary doctorate to novelist S.L. Bhyrappa, cardiologist C.N. Manjunath and Chairman of AJ Group of Institutions A.J. Shetty at its 34th annual convocation at Mangalagangothri.

Minister for Higher Education and Pro-Chancellor of the University T.B. Jayachandra presented them.

In his convocation address V. K. Saraswat, member, NITI Aayog, and former Director General, Defence Research & Development Organisation (DRDO), stressed on the digital India programme of the Union government. He said that a stable “regulatory environment and presence of favourable conditions” were needed to attract private investors to build internet infrastructure in remote places in the country. The regulatory policy should be “an enabler” and not an obstacle for investments.

One way to minimise the cost of network development is to give access to land and buildings for mobile networks in an “expeditious and transparent and coordinated manner,” he said.