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Defence News

Defence Strategic : National/International



Press Information Bureau
Government of India

Ministry of Defence

Tue, 20 Sept 2022 10:24AM

Raksha Mantri Shri Rajnath Singh & his Egyptian Counterpart General Mohamed Zaki Hold Bilateral Talks in Cairo

Agree to enhance conduct of joint exercises & exchange of personnel for training to strengthen defence ties

Sign MoU to bolster defence cooperation across all sectors of mutual interest

Raksha Mantri Shri Rajnath Singh held bilateral talks with Egyptian Defence Minister General Mohamed Zaki in Cairo on September 19, 2022. Shri Rajnath Singh, who is on an official visit to Egypt, was accorded a ceremonial Guard of Honour at the Ministry of Defence in Cairo, prior to the commencement of bilateral talks. During the meeting, both sides discussed steps to strengthen defence ties and reached a consensus to enhance conduct of joint exercises and exchange of personnel for training, especially in the field of counter-insurgency.

The two Ministers also agreed to identify proposals for expanding cooperation between the defence industries of India and Egypt in a time-bound manner. They also exchanged views on regional security and acknowledged the contribution of India and Egypt to peace & stability in the world. Both sides expressed happiness at the intensified defence engagement and exchanges over the last year, despite the COVID-19 pandemic.

Following the Raksha Mantri's call on with the President of Egypt Mr Abdel Fattah El-Sisi, both the Ministers agreed to consolidate and focus on enhancing security and defence aspects of bilateral cooperation. Signing of MoU by the two Defence Ministers on cooperation in the field of defence was a milestone event during the visit, which will pave the way for enhancing defence cooperation across all sectors of mutual interest.

Shri Rajnath Singh also invited his Egyptian counterpart to the India-Africa Defence Dialogue and IOR Defence Ministers' Conclave, scheduled to be held as part of 12th DefExpo in Gandhinagar, Gujarat between October 18-22, 2022.

As part of his day's engagements, the Raksha Mantri paid homage at the Unknown Soldier Memorial and Tombstone of the late Egyptian President Anwar El-Sadat in Cairo.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1860744>

THE TIMES OF INDIA

Tue, 20 Sept 2022

India-Egypt Pact to Boost Military Drills, Defence Co-production

India and Egypt have inked a MoU to bolster defence cooperation while also deciding to enhance joint military exercises, training, co-production and maintenance of equipment.

Defence minister Rajnath Singh and his Egyptian counterpart General Mohamed Zaki at a meeting in Cairo agreed to identify proposals for expanding cooperation between their defence industries in a time-bound manner.

“The MoU will pave the way for enhancing defence cooperation across all sectors of mutual interest. The two ministers also exchanged views on regional security and acknowledged the contribution of their countries to peace and stability in the world,” an official said on Tuesday.

Singh also invited his Egyptian counterpart to the India-Africa Defence Dialogue and Indian Ocean Region defence ministers' conclave to be held as part of 12th DefExpo in Gandhinagar between from October 18 to 22.

Defence minister Singh also called on President of Egypt Abdel Fattah El-Sisi, who expressed appreciation that the bilateral military-to-military cooperation had reached a new level.

“Singh acknowledged that Egypt is among the most important trading partners of India in Africa and that the bilateral trade has expanded significantly.

He noted with satisfaction the close cooperation in multilateral forums between India and Egypt,” the official said.

Egypt is among the several countries that has shown interest in acquiring arms produced by India, including the Akash missile systems capable of intercepting hostile aircraft, helicopters, drones and subsonic cruise missiles at a range of 25-km.

<https://timesofindia.indiatimes.com/india/india-egypt-pact-to-boost-military-drills-defence-co-production/articleshowprint/94337471.cms>

Tue, 20 Sept 2022

India Must be Ready for Hybrid War Says IAF Chief

The country must prepare for hybrid battles since they present a unique challenge as the security environment in our neighbourhood is still far from ideal, says the Chief of the Indian Air Force (IAF).

Speaking at an event in New Delhi, 'India Defence conclave' organised by a defence portal Bharat Shakti, Air Chief Marshal Vivek Ram Chaudhari stressed on the need to supplement India's economic success with a mirrored trajectory of homegrown military capabilities.

"The impact of the ongoing conflict in Ukraine is being felt the world over. The world is staring at an economic recession, with many smaller countries already facing the brunt of political and economic instability caused by hyperinflation. In this environment," he said at the India Defence Conclave here. He pointed out that numerous power centres have made an effort to expand their reach in open and exposed areas of the military, technological, and economic spheres.

"India, as a responsible power, is committed to enhancing cooperation and collaboration with the objectives of sustainability, inclusiveness, economic growth and security," he said.

Chaudhari emphasised the need for the Indian Air Force to improve its capabilities in the conventional, sub-conventional, and non-conventional domains given the current political climate. New platforms, weapons, systems, and ways of fighting are being conceptualised as we speak, and they could render the current arsenal obsolete or even less useful. In a no war, no peace scenario as well as in the event of any escalation, our adversaries have developed full spectrum capabilities across numerous domains that they may use against us.

"Today, we are faced with a wide variety of threats, but a distinct challenge lies in the convergence into hybrid wars. To counter such threats, we need to build and maintain a technological edge over our adversaries and prepare for hybrid warfare. This makes indigenous research and development and production wait of platforms, sensors, weapons or networking, very critical for future capability building," he said.

<https://www.financialexpress.com/defence/with-changing-security-environment-india-must-be-ready-for-hybrid-war/2678709>

THE ECONOMIC TIMES

Tue, 20 Sept 2022

No Chinese Raw Material for Bullet Proof Jackets

Cracking the whip on surreptitious use of raw materials from China for bullet proof jackets supplied to the armed forces, the defence ministry has mandated that Indian manufacturers need to certify that they were not dealing with Chinese entities. The move came after a row over bullet

proof jackets supplied in bulk to the Army that had a significant amount of Chinese content. A new tender issued by the Coast Guard has a specific clause that bans use of raw materials from China.

The contract for 746 jackets mandates that competing Indian vendors have to submit a certificate specifying that raw materials will not be imported from China. The Indian Army, which has already inducted BPJs with Chinese content, is likely to float tenders for procurement of protective gear in the future as emergency financial powers have been granted by the defence ministry.

The forces have a large requirement for protective gear, with the Army the largest user given its diverse deployment from counter insurgency areas to border protection. As reported by ET in March 2019, a chunk of the '639 crore paid for the jackets by the Indian Army landed up with Chinese companies after the Indian company changed its supplier from a western source, after winning the procurement contest.

In the past, protection gear used by Indian armed forces used raw material imported from a handful of companies in Europe and the US. This changed when the vendor presented jackets that contained raw material from western sources in Europe and the US for selection trials but changed its suppliers after winning the contract. In June 2020, industry bodies urged the government to make a policy to reduce dependence on Chinese materials, saying that a sizeable amount of foreign exchange was diverted to Chinese companies for import of raw material for protective gear. Efforts are on by the industry for indigenous production of such materials.

<https://economictimes.indiatimes.com/news/defence/no-chinese-raw-material-for-bullet-proof-jackets/articleshow/94335942.cms?from=mdr>



Wed, 21 Sept 2022

IAF to Induct Made-in-India Light Combat Helicopter on October 3

The indigenously developed multi-role Light Combat Helicopter (LCH) capable of destroying enemy air defence and of being deployed in counter insurgency operations and combat search-and-rescue tasks is set to be formally inducted into the Indian Air Force (IAF) at the Jodhpur Air Force base in Rajasthan on October 3, officers said Tuesday.

The formal induction of the LCH comes months after the Cabinet Committee on Security, chaired by the Prime Minister, approved in March the procurement of 15 LCH Limited Series Production (LSP) at the cost of Rs 3,887 crore along with allied infrastructure sanctions worth Rs

377 crores. Of the 15 helicopters being procured from the LSP, 10 are for the IAF and five for the Indian Army.

The induction ceremony of LCH at Jodhpur Air Force base on October 3 will be attended by Defence Minister Rajnath Singh and Chief of Air Staff Air Chief Marshal V R Chaudhari, officers said.

In another step towards becoming #AtmanirbharBharat, #CCS has approved procurement of 10 Light Combat Helicopters (LCH) for #IAF and 05 for #IA.

A potent platform, #LCH has one of the highest operating altitudes among the combat heptrs in the world.<https://t.co/MF0dzIHaj7> pic.twitter.com/yxVmsBx4mi

— Indian Air Force (@IAF_MCC) March 30, 2022

LCH has a narrow fuselage because of the tandem cockpit configuration for the pilot and co-pilot gunner. It has a number of stealth features, armour protection, night attack capability and crash worthy landing gear for better survivability. LCH is a 5.5-tonne class combat helicopter designed and developed by the Defence public sector undertaking Hindustan Aeronautics Ltd (HAL).

The Ministry of Defence (MoD) has said that the LSP version of the LCH has around 45 per cent indigenous content by value which will progressively increase to more than 55 per cent for Series Production Version.

The MoD has said that the helicopter is equipped with requisite agility, maneuverability, extended range, high altitude performance and around-the-clock, all-weather combat capability to perform roles of Combat Search and Rescue (CSAR), Destruction of Enemy Air Defence (DEAD), Counter Insurgency (CI) operations.

As the IAF's offensive power adds more teeth to its bite, join us in welcoming the homegrown Light Combat Helicopter by changing your DP.

Put your DP where your heart is! #AtmanirbharBharat pic.twitter.com/800vUc5UF5

— Indian Air Force (@IAF_MCC) September 20, 2022

It is also an effective asset to counter slow-moving aircraft and Remotely-Piloted Aircraft (RPAs) and can be deployed in high altitude bunker busting operations, counter insurgency operations both in jungle and urban environments. It can effectively support ground forces in various combat scenarios.

<https://indianexpress.com/article/cities/pune/iaf-to-induct-made-in-india-light-combat-helicopter-on-october-3-8162413/>

Indian Navy will be Completely ‘Atmanirbhar’ by 2047: Admiral R Hari Kumar

From production of ships and submarines to spare parts and weapons, the Indian Navy will be “completely” self-reliant by 2047, Chief of Naval Staff Admiral R Hari Kumar asserted on Tuesday. At a defence conclave, he said there was much to learn from the Russia-Ukraine conflict which witnessed the use of new technologies, cyber space and all sorts of precision ammunition. The conflict between the two countries has underscored the necessity of ‘Atmanirbharta’ (being self-reliant) to defend one’s country, he said.

“By 2047, we will have a complete indigenous Navy, whether it be ships, or submarines, aircraft, unmanned systems, weapons, the entire complex.

“We will be completely ‘Atmanirbhar’ Navy. That is what we are targeting,” Admiral Kumar said replying to questions at the India Defence Conclave 2022. Asked if the supply chain of the Indian Navy was affected due to the Russia-Ukraine conflict, he said, “As of now, we are not hard pressed. We have adequate stock of spares. There has been no let up in our deployment of ships or aircraft today. We have taken steps to get help from our own industry.

Indian Navy had embarked on its “indianisation drive’ in 1961 when INS Ajay, the first small patrol boat, was indigenously made in india, he said. “Since then, we have progressed a lot,” he added. This report is auto-generated from PTI news service. ThePrint holds no responsibility for its content.

<https://theprint.in/india/indian-navy-will-be-completely-atmanirbhar-by-2047-admiral-r-hari-kumar/1136489/>

THE TIMES OF INDIA

China Remains Clear & Present Danger, Warn Military Chiefs

Despite the troop disengagement at another ‘friction point’ in eastern Ladakh earlier this month, the overall threat from China has not receded in any way and it is fast extending to other domains in addition to the land borders, the country’s military brass warned on Tuesday.

Army chief General Manoj Pande said the lessons learnt from the over 28-month military confrontation with China in eastern Ladakh included the need to maintain “high levels of operational preparedness at all times”, further enhance infrastructure development along the northern borders, especially in Arunachal Pradesh, and induct “niche or disruptive” technologies in a major way.

“We also need to develop our 'grey zone' capabilities,” Gen Pande said, speaking at the India Defence Conclave here. Grey zone warfare basically revolves around exploiting the operational space between peace and war to change the status quo or coerce an adversary, which China has mastered over the years with its salami-slicing and other tactics.

“China remains a formidable challenge and has increased its presence, not only along our land borders, but also in the maritime domain by leveraging anti-piracy operations to normalize its naval presence in the Indian Ocean Region,” Admiral R Hari Kumar said, addressing the AIMA convention.

Wars of tomorrow will straddle multiple domains. “The battlefield will transcend physical boundaries. It will be fought over the seas, on land, in the air, in the information domain, in the digital world, and even in our minds,” the Navy chief added.

Air Chief Marshal V R Chaudhari, in turn, said India is faced with a variety of threats, including hybrid warfare, with the security environment in the neighbourhood remaining far from ideal. He stressed the need to complement India's economic progress with a ‘mirroring’ trajectory of homegrown military capabilities.

“As we speak, new technologies, platforms, weapons, systems, and forms of warfare are being conceptualised, which have the potential of making the existing inventory less relevant or even redundant. Our adversaries have developed full spectrum capabilities across multiple domains, which can be brought to bear upon us in case of any escalation, or even in a ‘no war, no peace’ situation,” the IAF chief said.

Gen Manoj Pande said while progress has been made in troop disengagement in some areas of eastern Ladakh, including Patrolling Point-15 in the Gogra-Hot Springs area earlier this month, two more “friction points” remained to be defused through diplomatic-military dialogue for overall de-escalation to follow.

This was a reference to the much more crucial face-offs at the strategically-located Depsang Plains as well as the Charding Ninglung Nallah (CNN) track junction at Demchok. De-escalation, when and if it takes place, will involve the two countries to move back their over 50,000 troops each that have been forward deployed with heavy weapon systems along the eastern Ladakh frontier.

The Army chief said a “significant level” of border infrastructure has been developed in the forward areas in eastern Ladakh over the last two years, which included habitats for 35,000 troops as well as bases and garages for 450 tanks and other armoured vehicles, and 350 artillery systems and howitzers. But much more needs to be done, especially in the eastern sector. “We are focussing on road connectivity in forward areas, inter-valley connectivity (Arunachal Pradesh), aviation facilities for both strategic and tactical airlift and creation of more underground storage facilities (tunnels) for ammunition and weapons,” Gen Pande said.

Leveraging niche technologies, like using AI (artificial intelligence) for interpretation of satellite imagery and fusing all ISR (intelligence, surveillance, reconnaissance) inputs to generate a common operational picture, is one of the pillars of our ongoing capability development programme, he added.

<https://timesofindia.indiatimes.com/india/china-remains-clear-present-danger-warn-military-chiefs/articleshowprint/94336716.cms>

The Tribune

Tue, 20 Sept 2022

Army to Shed Colonial Baggage, to Review Unit Names, Uniform

The Army is looking to shed its colonial past vis-a-vis its uniform, ceremonies and names of regiments and buildings dating back to pre-Independence times.

What all is up for revision

- Uniforms & accoutrements like lanyard (shoulder cord)
- Names of infantry regiments like Sikh, Gorkha, Jat, Rajput
- Ceremonies like Beating the Retreat to mark end of R-Day
- Names of roads, institutes, parks after British commanders
- Battle honours awarded by British to rein in Indian states

In an internal discussion tomorrow, the Adjutant General of the Army will review the prevailing customs, old practices, regulations and policies. Several veterans, however, have reacted strongly over the agenda note that is doing the rounds on social media platforms. Army sources said the mere circulation of the agenda note did not mean that all suggestions would be carried out. The matter would be debated threadbare before any changes are executed.

The agenda note for the review meeting says “it’s time to move away from archaic and ineffective practices”. Army uniforms and accoutrements are being considered for the review, the sources said, adding that it wasn’t clear if the lanyard (the cord around the shoulder) would stay or not.

The note also lists “names of units” for a review. Infantry regiments like Sikh, Gorkha, Jat, Punjab, Dogra, Rajput and Assam were all named by the British.

Last year while addressing the Combined Commanders Conference, Prime Minister Narendra Modi had laid emphasis on the indigenisation of doctrines, procedures and customs in the armed forces. He had advised the three services to “rid themselves of legacy systems and practices that have outlived their utility and relevance”.

Units, establishments and institutes of colonial past are also on the review list, so are the names of buildings, roads and parks after the names of British commanders like Sir Claude Auchinleck and Herbert Kitchener. The affiliation of Army units with foreign armies, especially those which fought in the two World Wars will be reviewed, and there is a proposal that the regimental events and reunion should be restricted to the Army.

The meeting will also touch upon the pre-Independence theatre honours or battle honours awarded by the British to quell dissent by Indian states. Several Indian Army units have battle honours to mark the Anglo-Sikh wars, Anglo-Maratha wars and the Anglo-Gorkha wars.

The meeting will also review the ‘affiliation with Commonwealth War Graves Commission’, the grant of Honorary Commission, ceremonies like Beating the Retreat and having a “Colonel” as the head of regiment.

<https://www.tribuneindia.com/news/nation/army-to-shed-colonial-baggage-to-review-unit-names-uniform-433734>



Tue, 20 Sept 2022

India and Japan to Address Widening Gaps in Defence Industrial Co-operation

The sixth edition of the Japan India Maritime Exercise 2022, JIMEX 22 hosted by the Indian Navy concluded in the Bay of Bengal with the two sides bidding farewell to each other with a customary steam past on 17 Sep 22. The exercise, which marked the tenth anniversary of JIMEX

since its inception in 2012, consolidated the mutual understanding and interoperability between the two navies.

JIMEX 22 witnessed some of the most complex exercises undertaken jointly by the two navies. Both sides engaged in advanced level anti-submarine warfare, weapon firings and Air Defense exercises. Shipborne helicopters, fighter aircraft and submarines also participated in the exercise. IN and JMSDF ships replenished each other at sea under the agreement on Reciprocal Provision for Supply and Services (RPSS).

Indian Naval ships led by Rear Adm Sanjay Bhalla, Flag Officer Commanding Eastern Fleet and Japan Maritime Self Defence Force (JMSDF) Ships Izumo and Takanami led by Rear Adm Hirata Toshiyuki, Commander Escort Flotilla Four, participated in the week-long exercise.

The relevance of such bilateral naval exercise is seen in the background of larger debate which is about reinventing Japan's defence and security alignment. The focus remains on the maritime while Japan grapples with its larger roles and if the country wants to redefine its security perspectives.

The security environment has drastically changed that is about responding to the imminent threats with the rise of China as being the single most factor in building security roadmap for the Japanese armed forces better known as the Japanese Self-Defence Forces (JSDF). The Constitution of Japan bans war as a means of settling international disputes and outlaws the maintenance of a military. Former Japanese Prime Minister Shinzo Abe wanted to amend Article 9 to explicitly allow the Japanese Self-Defense Forces (JSDF) to exist. In reality, the Japanese military abstain from using offensive weapons like long-range ballistic missiles, bombers and aircraft carriers. Manpower is pretty limited. Where is it leading to?

Japan's defence architecture

Japan lies at the forefront of a dynamic security landscape in the Indo-Pacific. Japan's home islands make up the strategic first island chain. The Japanese coast guards face regular stand-off with Chinese counterparts in the East China Sea. The stand-off is frequent that is often mentioned in the Japanese media. If you just take a look at the Senkaku Islands of Japan, and the violations by the China Coast Guard vessels near the Islands, it reflects the coordinated actions and plans, building upon such escalation. As reported, in the recent past, Chinese Coast Guard vessels– a total of 1,161 vessels– remained near the Senkaku Islands, holding illegal activities. As it continues, on July 4, two Chinese coast guard vessels entered Japanese territorial waters close to the Senkaku Islands, which led to the possible confrontation. Japan's Minister for Foreign Affairs, Yoshimasa Hayashi described the infiltration as a breach of international law.

The situation presents very clear picture surrounding the points of conflict with Japan.

Against the backdrop of China’s military capability, it is critical to enhance Japan’s deterrent—both independently and collectively—against China, in particular its use of force against disputed territories in the Indo-Pacific.

While China is at the centre of Japan’s security dimension, North Korea’s nuclear and missile program poses serious challenges. Japan finds itself in a security environment that is becoming less and less safe and the sense of vulnerabilities stem out on the perceived declining commitment of the U.S. in the region.

China’s rapid military modernization and capabilities are creating compelling situations for Japan to act upon its fallible security architecture.

As much evident is the fact that China’s defence budget grew from a mere \$11.4 billion in 1989 to \$250 billion in 2018, jumping from being only 40 percent of Japan’s defense budget to 536 percent. In 2017, President Xi Jinping projected that “by the mid-21st century,” the People’s Liberation Army (PLA) will “have been fully transformed into world-class forces” that “can fight and win”.

Japan’s response

“Japan is divided on the Article 9 of the Constitution,” says Jagannath Panda, Director, Yokosuka Council on Asia-Pacific Studies (YCAPS), Japan on the larger question which is about bringing reforms within the elements of the Constitution. The debate is still about ‘restricting its first strike capability’, points out Panda that hinders its roadmap for building capabilities. The critical components of Japan’s own effort to reinforce the alliance is to continue to modernize its defense capability to better meet the security challenges of today and the future.

The slow-paced reform began to flow when Japan released two key defense policy-planning documents in December 2018: the National Defence Program Guidelines (NDPG), a policy document that guides Japan’s defence policy for the next five years, and the Mid-Term Defense Program, an acquisition planning document that supports the NDPG.

In 2018 NDPG laid out “Multidomain Defense Force (tajigen tōgō bōei-ryoku)” as an organizing concept that Japan will strive towards. The concept took a major shift from the earlier plan based on Dynamic Joint Defence Force (dōteki bōei-ryoku) in 2013. While it took some time to formulate, it certainly addressed the threat in its bolder version outlined in its Multidomain Defense Force. So, what the concept- paper clearly talks about is building a credible long-range missile program, next generation aircraft carrier and submarines among others. Further, it also clearly puts forth the capability-roadmap, based on the multidomain perspective on space in defence. While what Japan lacks in its defence plan as it is restricted on the political front, country has already embarked on security partnership and conducts many high-caliber military exercises with its partners and friends in the region and beyond. It now holds regular security

consultations, 2+2 Ministerial Meetings, with the United States, Australia, Russia, France, Britain, Indonesia, and India.

On the security front, Japan is working closely with the militaries of the Association of Southeast Asian Nations (ASEAN) through the Japan-ASEAN defence cooperation framework, the Vientiane Vision. It led to the SDF's deployment of Izumo-class destroyers to various ASEAN countries under the Japan-ASEAN Ship Rider Cooperation Program.

Within the security dimension, Japan emphasized on the freedom of navigation operations (FONOPs). This is important for the "Free and Open Indo-Pacific" (FOIP) which is about the open rules-based order and maintaining the sanctity of United Nations Convention on the Law of the Sea (UNCLOS).

India- Japan military coordination

In the second India-Japan 2+2 Ministerial Dialogue held in Tokyo, Defence Minister Rajnath Singh and Japanese counterpart Yasukazu Hamada agreed to step up bilateral defense cooperation and engage in more military exercises, including holding the first joint fighter jet drills. The fighter exercise will lead to greater cooperation and interoperability between the Air Forces of the two countries.

Japan and India also initiated the operationalization of the Reciprocal Provision of Supply and Services Agreement during Exercise MILAN' in March this year. It finally upgrades the interoperability through such initiatives as the implementation of the Agreement Concerning Reciprocal Provision of Supplies and Services between the Self-Defense Forces of Japan and the Indian Armed Forces during bilateral training.

In addition to that multilateral exercise Malabar involving Japan, the US, India and Australia are being conducted for two years in a row. The Quad summit hosted by Japan in Tokyo last month launched a satellite-based maritime security initiative aimed to pursue a free and open Indo-Pacific."

The benefit of this maritime initiative will allow tracking of dark shipping and other tactical-level activities, such as rendezvous at sea, as well as improve partners' ability to respond to climate and humanitarian events and to protect their fisheries, which are vital to many Indo-Pacific economies.

Missing defense industrial co-operation

While the security cooperation is certainly growing in the right direction, the missing link is the lack of cooperation in the military industrial cooperation. Japan is still mulling if the government could allow the exports of military equipment to other countries, including India.

The story began in 2014, when the Abe government decided to lift the ban on exporting Japanese military equipment (non-lethal) to the world. Japan offered US 2 amphibious aircraft, manufactured by Japanese firm ShinMaywa, to India. While the discussion held between India and Japan for long, it did not go through as it was labelled too pricey at that time.

Japan had also entered into the Indian Navy's Project 75 India, for the Indian Navy to build six conventional submarines with next generational Air Independent Propulsion System (AIP). AIP system is the most critical technological breakthrough for submarine which allows submarines to remain underwater for a much longer time; a much-needed requirement for the Indian Navy to remain stealthy underwater for the operation in the Indian Ocean region and beyond. However, Japan government decided to withdraw from the project 75I, sighting the challenges in addressing such concerns.

But the change is in the offing. Recently, Japan and India held the first India-Japan Defence Industry Dialogue, to talk about the cooperation and collaborating for military equipment. Building upon the legacies, Japan has gained significant expertise in building naval warships, submarines and fighter jet. This could lead to the possible collaboration with India especially in aerospace. Japan has already launched its next-generation F-3 or F-X stealth fighter jet program. The concept is based on the next-generation air superiority fighter which will replace its 97 F2 fighters (F16-based), along its aging F-15s.

India has initiated multiple fighter jet program which will have next generation capabilities like Advanced Medium Combat Aircraft (AMCA) project, Tejas Mk II project and Deck based Fighter (TEBDF) aircraft. Besides, IAF also is working on its long-pending flagship Multi-Role Fighter Aircraft (MRFA) acquisition plan. In fact, Japan is scouting for the credible international partner for its ambitious fighter jet program. As reported, Japan is collaborating with UK which is about merging its F-X program with the UK's Tempest. It is important to note that it would be the first such international cooperation that Japan is heading towards apart from U.S. for a large military programme. India has also defined its air combat capability programme with similar scope and scale where both could be partners in design and development. This could also expand to the aeroengine technologies.

Another critical area is the naval cooperation with Japan on submarine which is also concurrent with the Japan's planned expansion of its submarine fleet to 22 boats which are all based on diesel-electric submarines. India's P 75I is progressing under the strategic partnership model which could be a potential area where combines skills and expertise could be a game-changer.

In the talk, the Indian Ambassador to Japan Sanjay Kumar Verma highlighted some of the key areas in the field of electromagnetic spectrum, space, cyberspace, underwater domain awareness, high energy lasers, cryptography, sensors, optic cables, robotics and artificial intelligence. How much of such talks translate into the reality is remained to be seen, knowing the tedious political

process underway? But certainly, it is just a matter of time that such “future oriented defense partnership” will unfold, as Panda puts it across.

<https://www.financialexpress.com/defence/india-and-japan-to-address-widening-gaps-in-defense-industrial-co-operation/2677376/>

THE ECONOMIC TIMES

Wed, 21 Sept 2022

India, UAE, France Keen on Rafale Forum; Key Role for New Delhi

The India-UAE-France ministerial trilateral held in New York on Monday focused on enhancing partnership in defence and security, with special focus on Rafale fighter jets, global commons, innovation and people-to-people ties.

Rafale fighter jets are the common element in trilateral strategic partnership. India and UAE have both purchased Rafale fighters from France. ET has learnt that the three countries are keen to form a trilateral Rafale forum and India will play a key role in the forum.

While India is a key strategic partner for France in South Asia, UAE is similarly a key partner for France in West Asia. India and UAE partnership have been transformed in the last few years and strategic heft have taken ties to a new level.

"A productive first trilateral ministerial meeting of India-UAE-France. Active exchange of ideas between strategic partners and UNSC members. Thank @ABZayed for hosting @MinColonna and me," foreign minister S Jaishankar tweeted following the meeting in New York on the sidelines of the UNGA.

The India-UAE-France trilateral is a new and more contemporary way of doing diplomacy with a focus on "active exchange" of ideas between strategic partners and UNSC members. The three countries, while different, are strategic partners to one another and discussions focused on areas of commonalities and on working out how to specify and concretise commonalities going forward, according to people familiar with the partnership. The three countries are very comfortable with each other and there are many areas where potentially they could be working in a more coordinated way.

In July, India-UAE-France held their maiden trilateral at official level to explore potential cooperation in the Indo-Pacific region including maritime security, blue economy and regional connectivity and food and energy security. The three sides in July exchanged perspectives on the Indo-Pacific region and explored the potential areas of trilateral cooperation including maritime

security, humanitarian assistance and disaster relief, blue economy, regional connectivity, cooperation in multilateral fora, energy and food security, innovation and startups, supply chain resilience and cultural and people-to-people cooperation. They had also discussed the next steps to be taken for furthering trilateral cooperation in the Indo-Pacific region.

Monday's trilateral comes close on the heels of the French foreign minister's India visit. Jaishankar was set to meet his Turkish counterpart late on Tuesday to take forward the dialogue between Prime Minister Narendra Modi and president Recep Tayyip Erdoğan in Samarkand last Friday.

<https://economictimes.indiatimes.com/news/india/india-uae-france-keen-on-rafale-forum-key-role-for-new-delhi/articleshow/94336385.cms>



Tue, 20 Sept 2022

Catch-22 for HAL Tejas in Argentina

By Girish Linganna

Even though, in the August of 2022, the Indian government admitted in its Parliament that over seven countries have been keen on procuring its indigenous Light Combat Aircraft (LCA) Tejas, its manufacturer, Hindustan Aeronautics Limited (HAL), struggles to finalise an export deal. Amidst the hype around the Malaysian interest in fighter aircraft, Argentina's South American nation has been engrossed in a peculiar situation. The Argentine-HAL predicament is fast becoming the classic TV trope, will they or won't they?

Falkland Fault Lines

Off the Argentine coast lie the Falkland Islands. The group of islands have been a contentious issue between Argentina and the United Kingdom (UK). Initially, the islands were French settlements. However, later on, the British settled a part of it. Their stint on the Falklands was cut short by the Spaniards from whom the Argentines claimed their independence.

Given that the Spanish controlled the Falkland Islands at the time of Argentine independence, Argentina claimed the islands. However, the British never relinquished their claim to the same when the Spaniards drove them out. This contention led to military action by Argentina in 1982. However, the Falkland Islands War culminated in the Argentine surrender.

This has underscored the UK-Argentina relationship wherein the UK actively restricts any sale of defence equipment that carries any part made by a British firm. Mr Javier Garbarino, a journalist from the Argentine YouTube channel, Plusquambellum, highlighted that the Swedish Saab offered a tempting deal on the table. However, the UK again blocked the Gripen deal, given British origin components and its embargo.

The Great American Dream

In 2020, specific reports claimed that Argentina would award the contract to China for its JF-17 fighters. Reportedly, it has come out that the American government quickly influenced the Argentine deal and prevented Chinese defence dealings in its backyard. While the United States (US) has quickly checked Chinese headways in South America, it is also trying to contain the UK. To this effect, the US has provided no alternative yet. Instead, under its Foreign Military Sales (FMS) program, the US offered sans weapons and pods, F-16 fighters from Lockheed Martin that were initially provided to the Danish air force. Under this deal, Argentina can procure 12 aircraft. However, it has asked to receive a further offer for air-to-air and air-to-surface weapons, as well as at least one Boeing KC-135R Stratotanker, to ensure air-to-air refuelling of the fighters.

“The Danish F-16 complicates the future regarding wanting to get newer versions because the British blockade will prevent it. And the LCA Tejas would be a perfect option. Further, if there is a collaboration with Fadae, that would be very tempting”, shared Mr Garbarino.

Russian Roulette

In conversation with Mr Garbarino, he reported that the Argentine side has struggled to fly its Russian arsenal given the Russo-Ukrainian war and the sanctions on Russia. Due to a lack of spare parts, he shared that two Russian Mi-171 helicopters have been grounded for over a year due to a lack of spare parts.

Argentina has been pondering over increasing its purchase from Russia, but given the current global context, it opted for CH-47 Chinook helicopters from the American manufacturer Boeing. This deal replaces the South American country’s agreement with Russia to procure Mi-26 helicopters. In light of these developments, Mr Garbarino has underscored the Argentine hesitation in acquiring any aircraft that may contain Russian equipment that goes against any sanctions. He further highlighted that this rules the purchase of Mig-35 for Argentina. However, India’s relationship with the West and Russia and HAL’s recent offer to Malaysia, wherein it services their Russian fleet, gives confidence to Argentina. If a deal materialises, India will not only equip Argentina with credible fighters but also resuscitate its Russian helicopters.

Doldrums: HAL’s LCA Tejas Export to Argentina

Earlier, it was learnt that HAL would replace its various British-origin components to accommodate Argentina’s embargo concerns from the UK. From its tyre to its ejection seat, HAL has reportedly been working on manufacturing a win-win. However, the leader in ejection seats, Martin Baker, a British manufacturer, was said to be replaced by a Russian ejection seat.

In light of the Russian sanctions and their impact on defence exports, India would likely have to innovate or seek yet another manufacturer for the ejection seats of the LCA Tejas. According to Mr Garbarino, the deal may progress if India partners with the American ejection seat manufacturer, Collins Aerospace, a part of Raytheon Technologies. However, he has his reservations about such an arrangement.

Recently, Mr Sunil Raina, MD, Customer & Account Management, Collins Aerospace, India, shared the company’s eagerness to work with HAL on the LCA Tejas’ Mark 1A variant, which is HAL’s export variant for other countries, including Argentina. According to reports, Collins Aerospace’s legacy ejection seat, the ACES II, might be refitted into the Tejas for its Argentine variants. The ACES II has equipped the global fleet of F-16s. HAL will need to modify its Emergency Escape System Sequences and move for recertification trials.

Argentina can be an important market for the export of HAL products. However, Argentina is between a rock and a hard place. It must pacify the US, steer clear of the UK and watch its relationship with Russia while doing the best for its citizens and sovereignty. India's foreign solid policy must activate itself to work for a stronger bilateral relationship. HAL's helicopter line-up and other services can be helpful to the South American nation.

<https://www.financialexpress.com/defence/catch-22-for-hal-tejas-in-argentina/2678145>

Science & Technology News



Press Information Bureau
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Ministry of Science & Technology

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Union Minister Dr Jitendra Singh arrives at New York, Enroute Washington, on the First Leg of the 5-day US Visit, Which Includes Participation in Global Clean Energy Action Forum Scheduled from 21st to 23rd September at Pittsburgh, Pennsylvania

Dr Jitendra Singh was received by senior India Embassy officials and after facilitations at JFK airport, he will leave for Washington DC to hold an important Roundtable with senior executives of about 35 companies and federal representatives

Dr Jitendra Singh is leading the Joint Indian Ministerial official delegation of Ministry of Power, New & Renewable Energy and Ministry of Science & Technology on a 5-day visit to USA, to participate in Global Clean Energy Action Forum

Union Minister of State (Independent Charge) Ministry of Science and Technology; Minister of State (Independent Charge) Ministry of Earth Science; MoS PMO, Ministry of Personnel, Public Grievances, Pensions, Space and Atomic Energy, Dr Jitendra Singh, as the head of Joint Ministerial Indian delegation, arrived at New York this evening, enroute Washington, on the first leg of the 5-day US visit, which includes participation in Global Clean Energy Action Forum scheduled from 21st to 23rd September at Pittsburgh, Pennsylvania.

Dr Jitendra Singh was received by senior India Embassy officials and after facilitations at the JFK airport, he left for Washington DC to hold an important Roundtable with senior executives of about 35 companies and federal representatives associated with Geospatial, Space, Earth & Ocean Science, Pharma and Biotech Sectors to be organized by US-India Business Council at U.S. Chamber of Commerce headquarters in Washington, DC.

Dr Jitendra Singh is leading a high-level Joint Indian Ministerial official delegation of Ministry of Power, New & Renewable Energy and Ministry of Science & Technology to participate in Global Clean Energy Action Forum and also to interact with eminent academicians as well as Indian diaspora.

At the Business Roundtable with CEOs of 35 prominent companies, Dr Jitendra Singh is to highlight the bilateral Science & Technology (S&T) collaboration range from Mega Science such as LIGO [Laser Interferometer Gravitational Observatory], TMT [Thirty Meter telescope] and Neutrino Physics to Clean Energy Technologies, Health Science, Earth and Ocean Science, Agricultural Science and recent interest in expanding our collaboration in Emerging Technologies. Dr Jitendra Singh may also refer to joint Department of Science & Technology, Government of India and National Science Foundation (NSF), United States launched projects in wide range of areas of common interests such as - Cobotics, Computer vision, Robotics and Automation Technologies, Artificial Intelligence and Machine Learning, Data Analytics, Sensors, and Networking and Technologies for Internet of Things & Internet of Everything. Dr Jitendra Singh will also present before the US MNCs the tremendous opportunities that the Indian Space sector offer and will underline the fact that ISRO and NASA are working together to launch a joint radar satellite for Earth observation named NISAR [NASA-ISRO Synthetic Aperture Radar]. The NISAR mission will collect data vital to tackling the climate crisis. ISRO has been getting Deep Space Network Antenna support from NASA in its Missions such as Chandrayaan-1, Mars Orbiter Mission (MOM) and Chandrayaan-2 mission and will continue availing support for our Chandrayaan-3 mission.

Dr Jitendra Singh will offer that both India and America may further expand the partnership in the areas of common priority such as Quantum Technology, Artificial Intelligence, Deep Ocean Exploration, Electric Vehicles, Emerging Technologies for Telecommunications and Semiconductor Research and Innovation, geospatial technology areas related to acquisition, processing, and dissemination of high-resolution geospatial data.

The Minister is likely to interact with key US Federal officials over dinner at India House to be hosted by the Indian Ambassador. After the dinner at India House, Dr Jitendra Singh will depart for Pittsburgh on 21st September to take part in the coveted joint convening of the Clean Energy Ministerial (CEM13) and Mission Innovation (MI-7). The event is expected to bring together thousands of clean energy leaders from across the world, including CEOs, innovators, young professionals, civil society and ministers from over 30 countries to accelerate clean energy innovation and deployment.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1860910>

Microbiologists Conference from September 21 in Mysuru

The 62 nd annual three-day International Conference of Association of Microbiologists of India on “Microbes and Society: Current trends and Future Prospects (MSCTPF-2022)” will be held at Senate Bhavan in Manasagangotri on Wednesday at 9:30 am.

University of Mysore in association with the CSIR-CFTRI, DRDO-DFRL, and the JSS AHER have jointly organised the conference which will be inaugurated by Dr. C.N. Manjunath, Director, Sri Jayadeva Institute of Cardiovascular Sciences and Research, Bengaluru.

Vice-chancellor G. Hemantha Kumar will preside. Prof. S. Ayyappan, Chairman, KSTA, Government of Karnataka, Bengaluru, former vice-chancellor Prof. K.S. Rangappa and DRDO-DFRL Director Anil Dutt Semwal will be the guests of honour.

The valedictory of the conference will be held on September 23 at Vijnana Bhavan in Manasagangotri at 1 p.m. and Dr. Sridevi Annapurna Singh, Director, CSIR-CFTRI will be the chief guest.

<https://www.thehindu.com/news/national/karnataka/microbiologists-conference-from-september-20-in-mysuru/article65914150.ece>



NASA on Track for Artemis-I Cryogenic Demonstration Test on Wednesday

NASA remains on schedule for an Artemis I cryogenic demonstration test on Wednesday, September 21. In the days since the previous launch attempt, engineering teams have analyzed the seals that were replaced on an interface for the liquid hydrogen fuel line between the Space Launch System (SLS) rocket and the mobile launcher. They also adjusted procedures for loading cryogenic, or supercold, propellants into the rocket. A small indentation was discovered by engineers on the eight-inch-diameter liquid hydrogen seal. It may have been a contributing factor to the leak on the previous launch attempt.

With new seals, updated cryogenic procedures, and additional ground software automation, Artemis teams are now preparing to demonstrate the updates under the same cryogenic conditions the rocket will experience on launch day. The four main objectives during the demonstration include assessing the repair to address the hydrogen leak, loading propellants into the rocket’s tanks using the new procedures, conducting the kick-start bleed, and performing a pre-pressurization test.

Based on recent engineering assessments, the new cryogenic loading procedures and ground automation will transition temperatures and pressures more slowly during tanking. This is expected to reduce the likelihood of leaks that could be caused by rapid changes in temperature or pressure. After the liquid hydrogen tank transitions from the slow fill phase to fast fill, NASA teams will initiate, or “kick-start,” the flow of liquid hydrogen through the engines to begin conditioning, or chilling them down, for launch.

After both tanks have reached the replenish phase, the pre-pressurization test will bring the liquid hydrogen tank up to the pressure level it will experience just before launch while engineers calibrate the settings for conditioning the engines at a higher flow rate, as will be done during the terminal count. Performing the pressurization test during the demonstration will enable teams to dial in the necessary settings and validate timelines before launch day, reducing schedule risk during the launch countdown.

Call to stations for the demonstration occurred at 5 p.m. EDT (2 p.m. PDT) Monday, September 19. The launch director is expected to give a “go” to begin loading cryogenic propellants into the rocket at approximately 7 a.m. on Wednesday. The test is planned to conclude around 3 p.m. after the teams have met the objectives and will not go into the terminal count phase of the launch countdown. Teams may extend the duration of the test should circumstances warrant it.

During the test, teams will load propellants into both the core stage and upper stage tanks, and Orion and the SLS boosters will remain unpowered. Meteorologists currently predict favorable weather for the test with a 15% chance of lightning within 5 nautical miles of the area, which meets the criteria required for the test. Meteorologists will continue to monitor expected conditions.

NASA Television will provide live coverage with commentary of the demonstration beginning at 7:15 a.m. EDT (4:15 a.m. PDT) on Wednesday, September 21. Continuous live video of the Artemis I rocket and spacecraft at Launch Pad 39B remains available on the Kennedy Newsroom YouTube Channel.

<https://scitechdaily.com/nasa-on-track-for-artemis-i-cryogenic-demonstration-test-on-wednesday/>



Tue, 20 Sept 2022

36 OneWeb Satellites Arrive in India to be Launched by ISRO on GSLV Mk-III

36 satellites part of a constellation by OneWeb arrived in India on Tuesday to be launched by the Indian Space Research Organisation (Isro) into Low Earth Orbit (LEO). The satellites arrived at the Satish Dhawan Space Centre (SDSC- SHAR) and will be launched from Sriharikota.

The satellites will be launched onboard Isro's Geosynchronous Satellite Launch Vehicle Mark III (GSLV MK-III) from the Satish Dhawan Space Centre as part of an agreement signed between the United Kingdom-based firm and the NewSpace India Limited (NSIL).

While Isro is yet to say anything about the launch date, it is expected to happen in October.

The company in a release said that with this launch, OneWeb will have more than 70 per cent of its planned Gen 1 Low Earth orbit (LEO) constellation in orbit as it progresses to deliver high-speed, low-latency connectivity services around the world. The launch will be the company's 14th mission to deploy these satellites into orbit.

"Undertaking the launch of 36 OneWeb satellites onboard GSLV-MkIII from India is a historic moment for NSIL and Isro. We are excited to see the arrival of the satellites and the ground support equipment in India in preparation for the launch," Radhakrishnan D, Chairman-cum-Managing Director, NewSpace India Limited, said in a statement.

OneWeb had to look for new launch partners after relations between the West and Russia soured. It is worth mentioning that OneWeb was using the Russian Space Agency launch services to deploy its satellites into orbit. Russia had denied launching the satellites even after integrating three dozen of them with the launch vehicle and moving it on the pad.

The Soyuz rocket was rolled out on the launch at the Russia-operated Baikonur Cosmodrome in Kazakhstan when the Russian space agency laid out demands in front of the UK government in order to launch the satellites. The demands included a guarantee that OneWeb satellites will not be used for military purposes, and that the UK government withdraw as a shareholder from OneWeb.

OneWeb has since then partnered with not only the Indian space agency but also its rival SpaceX for launch services. SpaceX is also deploying satellite constellations to provide internet connectivity across the world, and its chief, Elon Musk had recently said that the service is now accessible on all continents, including Antarctica.

<https://www.indiatoday.in/science/story/36-oneweb-satellites-arrive-in-india-to-be-launched-by-isro-on-gslv-mk-iii-2002464-2022-09-20>



Tue, 20 Sept 2022

India is Fully Geared for Sustainable Aviation Fuel: Dr. G. Sathesh Reddy, Scientific Adviser to Raksha Mantri

Consuming about 10% of the total energy of the transportation sector each year, the Aviation industry exhales its own share of greenhouse gas into the atmosphere which is about 2.5% of global emissions. This leads to concerns for the environment, and has also led the aircraft sector to increasingly adopt non-fossil fuel.

Today, India requires about 25 Metric Ton of Aviation Turbine Fuel (ATF) to ensure all its civil and military aircraft remain airborne, which also has economic and strategic considerations. Further, the de facto supply line (and stock) of imported crude and refined products with oil companies (and refineries) is highly limited.

Focused on carbon-neutral or zero-carbon emission aviation transport technology, the Aeronautical Society of India (AeSI) organised a seminar titled “Sustainable Aviation Biofuel for Civil & Military Transport Aircraft – The Way Forward”, which brought stakeholders from different sectors (Oil & Gas, Civil Aviation, and Defence) to discuss sustainable production, testing and efficient utilization of jet biofuels to reduce aviation carbon footprints.

“The Council of Scientific and Industrial Research’s (CSIR) laboratory in Dehradun has taken the lead, along with the support of Department Of Science & Technology (DST), DRDO and Indian Air Force, to develop a home-grown technology to produce bio-jet fuel. It has been formally approved for use on military aircraft and has flight-tested as well with the particular mix of fuel, “Dr. G. Satheesh Reddy, Scientific Adviser to Raksha Mantri & President-Elect, Aeronautical Society of India (AeSI) said while interacting exclusively with Prasar Bharati News Services (PBNS).

Notably in January 2019, after months of exhaustive ground and flight trials, the indigenous produced bio-fuel was finally cleared for use by the premier airworthiness certification agency of the country. The technology was developed by the Indian Institute of Petroleum (CSIR-IIP), a constituent laboratory of the Council of Scientific and Industrial Research, after undergoing evaluation tests and trials over a period of three years.

SAF: The Future of Aviation

Sustainable Aviation Fuel or SAF is made from renewable biomass and waste resources. It has the potential to deliver the performance of petroleum-based jet fuel but with a fraction of its carbon footprint, giving the aviation sector a solid footing for decoupling greenhouse gas (GHG) emissions from flight.

“Even the private airlines have also shown a lot of interest in adopting sustainable aviation fuel. A lot of work has gone into various aspects, which has been supported by the Civil Aviation Ministry, the Ministry of Petroleum and Natural Gas, Indian Oil Corporation Limited (IOCL) among others. In fact, a plant being established at Mangalore Refinery and Petrochemicals Limited (MRPL) with a technology from CSIR, which will ready by 2024 to produce about 20,000 litres of biofuel per day,” Dr Reddy said while adding that how India is moving towards adopting sustainability in aviation sector.

Further, there is a long way to go. We have to see that there is a higher mix of fuels. I am sure the whole ecosystem, the plants, the production capabilities, standardisation, the engine among others will happen in coming years and ensure the sustainable aviation fuel comes up in a big way making cleaner environment around the globe, Dr. G. Satheesh Reddy added.

A lot of efforts have been underway in research, and production of biofuels by different industries along with the support of Government organizations. Further, standardization efforts are going on and at the same time others airlines have also picked in under the suitability of the biofuel. So, I think India is fully geared up for SAF, he asserted.

India in Mission Mode

With a population of 1.3 billion, India has a massive demand for energy to fuel its rapidly growing economy. Further, India has progressively decoupled economic growth from greenhouse gas emissions. For example, the Net Zero Emissions target by 2030 by Indian Railways alone will reduce emissions by 60 million tonnes annually.

Similarly, India's massive UJALA LED bulb campaign is reducing emissions by 40 million tonnes annually. To complement these landmark efforts, the National Hydrogen Mission was launched in 2013 to make India the world's largest hydrogen hub. Even though it supports the second largest population in the world, India's sustained efforts have ensured that its per capita CO2 emissions are much lower than the global average. The US emits 14.7 tonnes per capita, China emits 7.6 tonnes per capita, while India's CO2 emissions amount to 1.8 tonnes per capita.

<https://newsonair.com/2022/09/20/exclusive-india-is-fully-g geared-for-sustainable-aviation-fuel-dr-g-satheesh-reddy-scientific-adviser-to-raksha-mantri/>

