# समाचार पत्रों से चयित अंश
# Newspapers Clippings

## दैनिक सामयिक अभिज्ञता सेवा

## A Daily Current Awareness Service

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DefenceNews

*Sun, 22 March 2020*

# Tejas Mark II to replace Mirage 2000s with capability to deep-strike into enemy territory?

The HAL Tejas Mark II, fitted with heavier GE 414 engine will roll out in 2022 will take to the skies in 2023. The Tejas Mark II is expected to join the Indian Air Force by 2026 with the capability of striking deep into enemy territory just like Mirage 2000s.

The indigenous built Tejas Mark II fighter jet will have the capacity to conduct operations such as the one the Indian Air Force undertook in Balakot and will replace the ageing Mirage 2000 fighters according to Program Director (Combat Aircraft), Aeronautical Development Agency Girish Deodhare.

On February 26, 2019, IAF's Mirage 2000 entered a Jaish-e-Mohammed (JeM) terror camp in Balakot in Pakistani territory as retaliation for the terror group's suicide attack on a CRPF convoy in Pulwama, Jammu & Kashmir.

The Hindustan Aeronautics Limited (HAL) Tejas Mark 2 is a single-engine multirole fighter designed by Aeronautical Development Agency (ADA) and HAL. The plane has tailless compound delta-wing configuration with high manoeuvrability.

The Mark II, fitted with heavier GE 414 engine, will roll out in 2022, take to the skies in 2023 and join IAF by 2026. The Tejas MK II is a 4.5 generation aircraft.

Program Director Deodhare said that the MK II will have double the range of its predecessor MK I and will be fitted with Astra II BVR air-to-air missiles with a range of at least 150 km.

"While Tejas MK I is for combat air patrol within the Indian territory, MK II will have the capacity to conduct Balakot-like surgical strikes in enemy territory as it will carry heavy standoff weapons like Crystal Maze and Spice missiles," added Deodhare.

While work on MK II is proceeding as per schedule, ADA and Indian Air Force (IAF) sealed a deal for twin-engine advanced medium combat aircraft (AMCA) in the next three months. Earlier, IAF gave a written commitment to DRDO that it would buy the fifth-generation AMCA to strengthen its strike capabilities. AMCA is expected to roll out in 2024 and take to the skies the following year.

According to Deodhare, Hindustan Aeronautics Limited (HAL) will produce 16 FOC 9Final Operational Clearance) Tejas plus eight trainers before the reverse integration of IAF's Tejas in the initial configuration is taken up.

"HAL has done a commendable job to produce a FOC Tejas within a year of the design being frozen. This will help up in faster development of MK II as this only involves in upscaling of the existing platform with superior armaments, radar and avionics," he said.

For the MK II, ADA in collaboration with its parent DRDO is developing the indigenous active electronically scanned array (AESA) radar, which is not only difficult to detect but also has a high resistance to jamming by the enemy during an engagement.

The Tejas Mark II would incorporate the new features of the Mark 1A as well as a new glass cockpit with an eight-by-twelve-inch multifunction display and an onboard oxygen system that collects air from the outside, removing the need for oxygen bottles.

According to secondary research by EurAsian Times and quoting open sources – Tejas Mark II will be equipped with a multi-sensor data fusion system which will feature an active electronically scanned array radar, infrared search and track and a missile approach warning system.

The fighter jet will also comprise of an internalized electronic warfare suite. The aircraft will be designed to have network-centric warfare capacity and will be equipped with artificial intelligence-based "optimally manned" cockpit.

The cockpit will be designed such that the ground control would be able to take over the controls of the aircraft in case the pilot becomes unconscious, after being alerted by a sensor in the helmet of the pilot.

*https://www.defencenews.in/article/Tejas-Mark-II-To-Replace-Mirage-2000s-With-Capability-To-Deep-Strike-Into-Enemy-Territory-809840*

THE FINANCIAL EXPRESS

***Mon, 23 March 2020***

# DRDO joins fight against Coronavirus: To make hand sanitizer for citizens

***DRDO's are now being approached by the state governments to not only detect but to also, treat COVID-19 patients***

***By Huma Siddiqui***

Defence Research and Development Establishment, (DRDE) Gwalior, the laboratory has made its own sanitizing formulation. "So far we have made this formulation which has been prepared as per the WHO's state guidelines, available to the Delhi based DRDO Headquarter," a senior officer who wished to remain anonymous told Financial Express Online. DRDE, is one of the premier laboratory of Defence Research and Development Organisation (DRDO). It has so far has provided around 14, 398 bottles, each filled with 500 mL of sanitizer formulation to the DRDO Headquarter located in Delhi.

**Will Other Labs Produce this Formulation?**

The answer is yes. According to the senior officer, "Now many DRDO labs have been authorised to produce the DRDE formulation."

Efforts are being made to produce this formulation on a large scale so that the shortage in the country can be met with.

Lot of the security agencies in the country are getting hand sanitizer made with the DRDE formulation. These include: Prime Minister's Office, Ministry of Defence, Intelligence Bureau, Central Bureau of Investigation, Indian army, Indian Air Force, Indian Navy, Ministry of Housing and Urban Affairs, National Technical Research Organisation, Special Protection Group, and others.

**Another Feather in DRDE's Cap:**

It has been selected by the Madhya Pradesh state health authorities for undertaking the detection/ tests of COVID-19 cases.

According to the senior officer "These detection/ and tests of COVID-19 cases are being done in accordance with the National Center of Disease Control's (NCDC) standardized protocols."

In a recent interview to the Financial Express Online, Dr G Satheesh Reddy, Secretary, Department of Defence R&D and Chairman, DRDO, had mentioned that the Gwalior based lab has developed diagnostic kits against enlisted agents like Anthrax.

This has been now been used to have a diagnostic system for detecting infectious diseases.

DRDO's are now being approached by the state governments to not only detect but to also, treat COVID-19 patients.

**How is the Premier Organisation Protecting its Own?**

In view of the COVID-19 pandemic, the DRDO has been running awareness programmes regularly and advisory has been issued to all its personnel.

While the Gwalior based DRDE which is a BSL 3 lab has started screening, hand sanitizers have been made available to labs across the country. Also, masks and HOCL disinfectant have been made available to DRDO personnel.

Besides the regular screening, thermal screening of people at the entry has been started and also a 24/7 helpline has been set up and information is being updated every day.

The DRDO labs are being sanitised on a regular basis.

*https://www.financialexpress.com/defence/drdo-joins-fight-against-coronavirus-to-make-hand-sanitizer-for-citizens/1906320/*

THE TIMES OF INDIA

***Sun, 22 March 2020***

# Coronavirus: Defence, atomic energy labs too roped in for testing

Bengaluru: As concerns of a probable community spreading linger and governments — Centre and states — scramble to marshal all resources to mitigate the same, it has been decided to rope in even labs under the Defence Research and Development Organisation (DRDO) and Department of Atomic Energy for testing Covid-19. Other national labs under the department of biotechnology (DBT), department of science and technology (DST) and the Council of Scientific and Industrial Research (CSIR) will also be allowed to do the same.

The decision was made at the first meeting of the Empowered Committee for Covid-19 response, which was co-chaired by Niti Aayog member Vinod Paul and Professor K VijayRaghavan, principal scientific advisor to Government of India.

An office memorandum issued after the meeting late on Saturday reads: "National research labs (defined as labs of DBT/DST/CSIR/DRDO/DAE for this directive) are permitted to carry out clinical testing for COVID19 based on self-assessment and willingness to follow established protocols and all applicable reporting regulations as defined by the DHRICMR."

These labs are permitted to access samples for CoviD19 related research from any government approved clinical testing site or access clinical samples received by them for testing, subject to ethical approval.

"..Results from such research are required to be expeditiously shared in open formats to maximise impact of research. Clinical care agencies are directed to enrich the open dataset by providing de-identified clinical data," the memorandum adds.

Further, labs with biosafety level three (BSL-3) or BSL-3+ facilities with these agencies (DBT/DST CSIR/DRDO/DAE), are permitted to culture the virus and serve as additional testing and validation

sites for research, based on self-assessment of BSL-3 facilities and willingness to follow established protocols as defined by the Department of Health Research and ICMR.

"They may further share reagents and facilities with other national labs to ensure maximum effort for rapid solutions," the memorandum read, while adding that hospitals (Centre, State and private) must also cooperate with national labs for clinical sample collection where there is an ethical approval in place, subject to capacity for such work and ability to follow established protocols.

*https://timesofindia.indiatimes.com/india/coronavirus-defence-atomic-energy-labs-too-roped-in-for-testing/articleshowprint/74758973.cms*

THE NEW INDIAN EXPRESS

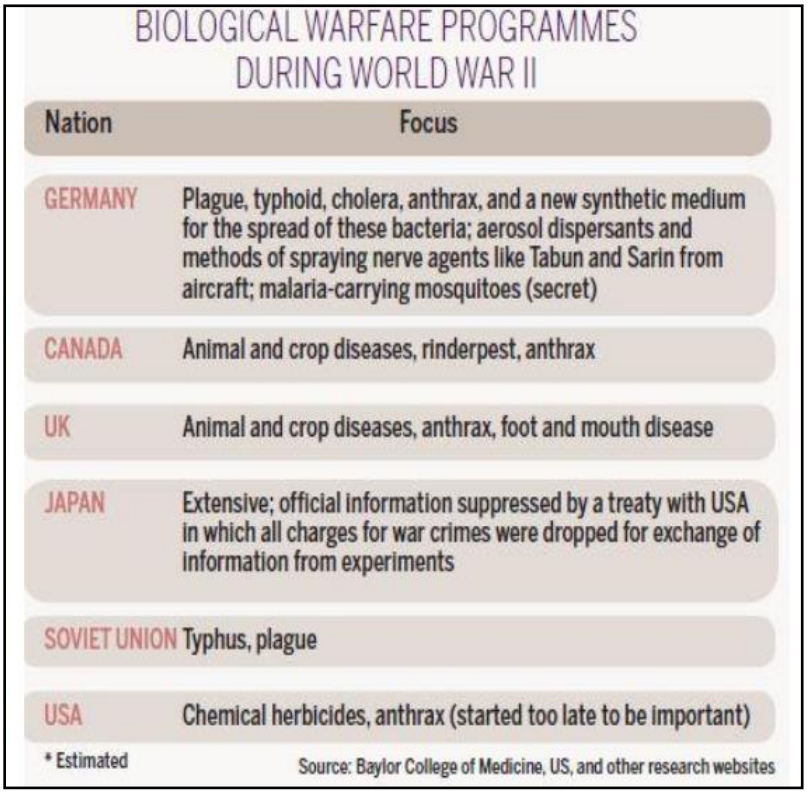
***Sun, 22 March 2020***

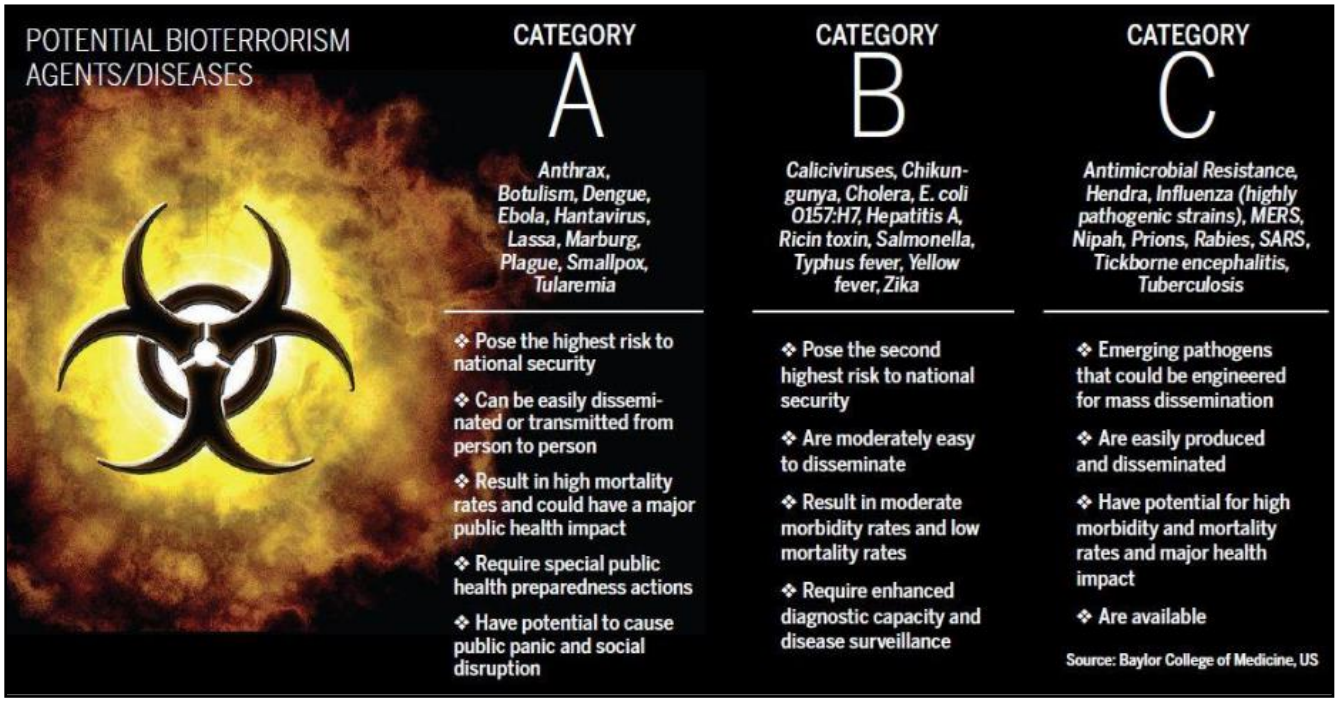
# The history of germ warfare and how prepared India is

***The raging advance of Covid-19, the desperate search for a vaccine, clueless politicians, economic crisis and widespread panic could also teach us how to respond to bioterror attacks. Is India ready?***

***By Ravi Shankar and NC Bipindra***

The dying months of 2001 were bad for America and the world. Less than a month after Islamic terrorists crashed airplanes into the World Trade Center, 62-year-old photojournalist Bob Stevens was admitted in a Florida hospital on October 2, 2001. The initial diagnosis was meningitis but it was soon found to be poisoning by anthrax, a weapon of bioterrorism. A few days later, in India, the Postal Department received 17 "suspicious" letters believed to be infected with anthrax spores. Though many individuals and institutions received the envelopes with white powder, none of them tested positive. It was dismissed as a copycat hoax.






"Biological attacks, both state-sponsored and otherwise, are a real threat despite the many treaties prohibiting them. Though the Indian Army is trained to prepare for chemical, biological, radiological and nuclear attacks, the programmes are on the back burner due to lack of resources," says Centre for Joint Warfare Studies Director Lieutenant General Vinod Bhatia (retired), who was previously Director General, Military Operations. India, with its vast disorganised population, dismal health facilities and poor connectivity, is sitting on a virus time bomb. Though the fatality, infection and recovery rate of Covid-19, as the novel coronavirus is called, is comparatively low, experts are not sure full data is available.

**Answering the Covid Question**

The pandemic has sent countries and economies into a tailspin. As soon as the outbreak began from Wuhan in central China, conspiracy theorists warned that the virus had escaped from the Wuhan Institute of Virology, a military lab in the province which is dedicated to the study of deadly pathogens. According to Dany Shoham, Israeli biological warfare specialist and expert on Chinese biological warfare capabilities, the institute is part of Beijing's secret bioweapons programme. In 2019, Canada expelled Chinese researcher Xiangguo Qiu who was working in a government-run lab, which studies numerous infectious diseases, including Ebola, to create vaccines and cures. She had previous experience working in Chinese labs dealing with lethally infectious diseases. China is currently building around five bio-facilities.

Beijing has blamed the US Army for bringing the virus to their country. Foreign ministry spokesman Zhao Lijian tweeted on March 12, "When did patient zero begin in US? ...It might be US army who brought the epidemic to Wuhan." Tweeting sympathy for China, former Iranian President Mahmoud Ahmadinejad suggested that the "#Corona lab-made virus" was deliberately created as a biological weapon by Beijing's enemies to halt the country's progress. The US, Europe, Russia and Australia have around 50 functioning or under-construction maximum-security labs, according to news reports. Western intelligence suspects that Iran and North Korea also possess chemical weapon labs. The study of dangerous pathogens such as Ebola or Marburg cannot be conducted without importing the viruses into a country. All nations doing virology research have lab biosafety levels of (BSL-4) with 24/7 security with their own air supply and filters.

But in the face of Covid-19 crisis, US President Donald Trump plunged America into panic by dithering, dismissing the impact with outright falsehoods. Many political leaders are in quarantine indicating that nobody is safe. Whole cities and countries are in lockdown. Says a former Indian Air Force Commander-in-Chief of a key Air Command, "The actions and capabilities required to tackle bioterrorism are identical to the ones required to contain coronavirus. Large medical facilities are needed to isolate, treat, and decontaminate patients before discharging them. You need special clothing for personnel operating in contaminated areas, not just masks." Two lethal non-conventional warfare threats haunt global security.

- Biological weapons manufactured by terrorists.
- Chemical agents used by totalitarian governments to kill dissidents at home and abroad.

**No Prevention for Lone Wolf Attacks**

Currently, Japan is on a war footing to prevent bioterror attacks during the July-August Tokyo Olympics, which is expected to attract 600,000 visitors from abroad. For the first time, it has imported five types of live viruses—Ebola, Marburg, Lassa, Crimean-Congo and South American viruses—to study detection and prevention measures. Bringing pathogens into a country is easy for terrorists, since virus sensors are largely ineffective. It is simple for a terrorist to unleash a contagion—germs can be mixed in powders and aerosol sprays. They can be sent by mail on infected envelopes or notepaper. They can be added to food or a city's water supply. They can be released into the wind from a truck, building, or plane. The modern terrorist is highly motivated and educated, and holds advanced science and IT degrees.

There is nothing to prevent a medical student in a private virology research lab from weaponising a tiny amount of smallpox pathogen from existing stocks. Or he can manufacture synthetic versions. Smallpox is difficult to detect and contain since it is extinct and doctors are unfamiliar with its symptoms, which show only two weeks after incubation. A drug named TPOXX has received FDA approval, but hasn't gone to the manufacturing stage since the disease is classified only a threat. "All of us wish we did not live in a world where terrorists and hostile nation states aspire to kill millions with biological organisms. Twenty years ago, we found ourselves woefully unprepared for the 9/11. Three thousand Americans died as a result. Next time it may be a pandemic and entire cities decimated by disease," writes retired undercover CIA officer Charles "Sam" Faddis, who headed the agency's counterterrorism unit tracking weapons of mass destruction.

An important American counterterrorism official testified before the US House Permanent Select Committee on Intelligence that al-Qaeda in the Arabian Peninsula has "high" intentions to procure chemical weapons and biological devices, particularly in Pakistan and Yemen. According to an Indian Army officer monitoring the quarantine at Manesar in Haryana, the facility has treated several hundreds of travellers from abroad and the military is experienced in handling health emergency cases.

However, the officer, who has over 20 years of service, confided that the Army has not procured new equipment in the last two decades to counter nuclear, biological and chemical attacks, except for developing a Defence Research and Development Organisation (DRDO)-manufactured reconnaissance vehicle for NBC countermeasures in 2003. The Indian military currently deploys nuclear, biological and chemical countermeasures that include DRDO's domestically developed quarantine vehicles for battlefield decontamination efforts. It has brought Joint Service Lightweight Integrated Suit Technology from the US to help troopers wade through contaminated areas safely and conduct decontamination exercises. Security agencies fear Islamic State (IS) operatives or terrorists could detonate a dirty nuke; after the Pulwama strike-back, Pakistan had threatened nuclear retaliation.

**Dirty Bomb is Real**

In 1995, Chechen militant leader Shamil Basayev buried a dirty bomb in a Moscow park, threatening to turn the city into "an eternal desert". Though it turned out to be just a warning, the fear that a small motivated group can make an active dirty bomb became real to world intelligence. A non-nuclear dirty bomb will disperse radioactive materials to contaminate areas and kill thousands. Such explosive devices are easier for a homegrown radical to make in his garage. According to the International Atomic Energy Agency (IAEA), "millions of radioactive sources have been distributed worldwide over the past 50 years" in myriad commercial, industrial, medical and research sites in over 100 countries. Most of these facilities are poorly guarded, making them vulnerable to theft.

In 1987, two Brazilian men stole a teletherapy unit from an abandoned cancer clinic to sell for scrap. Fascinated by the sci-fi deep blue light pulsing through a small opening, they dissembled it. The glow was caused by caesium gamma radiation beams used in the treatment of malignant tumours. Both thieves were infected and died. They had given pieces of the suit to friends and relatives with fatal consequences. The government spent millions of dollars to decontaminate topsoil where the suit was discarded. Buildings were demolished. Locally produced goods were boycotted and prices dropped by 40 percent. Tourism collapsed. Ironically, the same isotopes, which are used to save lives, make ideal materials to produce a dirty bomb.

A malware attack on a nuclear plant could cause another Chernobyl: India has 22 functioning nuclear reactors in seven nuclear power plants with seven more reactors under construction. The world has 450 nuclear reactors in around 30 countries. According to Nuclear Threat Initiative (NTI) Index, a unique public assessment of the status of nuclear materials security conditions in 176 countries, many developing nations are highly vulnerable to sabotage because of poor protective measures.

Fortunately, the Global Threat Reduction Initiative has secured about 1,700 radiological sites around the world containing enough material to make tens of thousands of large dirty bombs. Counter-terrorism experts believe that US President Donald Trump's peace deal with the Taliban which imposes no restrictions on them could lead to the next 9/11 or worse. The impact of the Covid-19 tsunami will prod a rethink on conventional responses to unconventional weapons. "Any anti-India group may be overtly or covertly contemplating a strike. By indoctrination and financial inducement, they could lure scientists and technicians working in biotech and cyber labs," says Major General Nilendra Kumar, who retired as the Judge Advocate General of the Indian Army a decade ago.

**Governments as Criminals**

Biological terrorism apart, countries at war have mercilessly unleashed chemical warfare on enemy combatants and their own citizens. The Russians and their Soviet forebears were masters at poisoning dissidents. On March 4, 2018, Russian spies smeared respiratory nerve agent Novichok on the doorknob of double agent Sergei Skripal's home, contaminating him and his 33-year-old daughter, Yulia. Once he recovered, MI6 paid for plastic surgery to alter his appearance and gave him a new identity. Previously in 2006, the assassination of former KGB and then FSB agent Alexander Litvinenko —who defected to the UK—by Russians, who covertly put polonium in his food, caused a major diplomatic row between London and Moscow.

In London in 1978, a Bulgarian communist agent using an umbrella gun fired a tiny bullet loaded with deadly ricin into defector Georgi Markov's leg. As is evident in the ongoing strife in Syria, the Assad regime has been using chemical weapons since 2012 on civilians. The devastating sarin gas attack in August 2013 killed over 1,400 non-combatants in Damascus. Ironically Syria is part of the Chemical Weapons Convention (CWC) of 1997, which prohibits chemical weapons development, production and deployment and ordered that existing weapons must be destroyed; Assad's violation of the agreement shows the weakness of enforcing policy.

A United Nations-sponsored organisation discovered that the IS used sulfur mustard gas in Syria against civilians for the first time. The Japanese Army killed tens of thousands of Chinese civilians in World War II using poison gas. The occupiers also poisoned over 1,000 water wells to study cholera

and typhus outbreaks using villagers as human guinea pigs. The use of chemical agents against the Native American tribes is one of the most shameful incidents in British history: soldiers distributed blankets used by smallpox patients to infect them.

**Is India Ready for Germ Warfare?**

As far back as in December 1998, India began to train its medical personnel to deal with the eventualities of bioterror attacks. Since it had ratified the 1972 United Nation's Biological and Toxin Weapons Convention, India has not executed a bioweapon programme. However, the Army does maintain defensive biological warfare equipment at protected sites. With extensive help from the advanced dual-use pharmaceutical industry and defence labs, the military is researching ways to counter germ warfare. India has the scientific capability to carry out a bio-offensive in case of a first strike, using delivery systems ranging from crop dusters to ballistic missiles.

"India does not hold or believe in nuclear, biological and chemical weapons. However, the National Disaster Management Authority has resources and laboratories to counter bio-aggression by a hostile country. Selective attacks would catch the enemy by surprise, inflict a psychological blow and impose a drain on medical resources necessary to attend the victims," says Major General Kumar. Sources say that India has a sophisticated globally acknowledged biotechnology infrastructure, and sufficient well-trained and knowledgeable scientists, most of who are adequately experienced in handling epidemics. It has numerous pharma production facilities and biocontainment laboratories with Biosafety Levels 3 and 4, according to NTI, a Washington DC-based think-tank.

DRDO is India's biodefence industry's core, whose top laboratory is the Defence Research and Development Establishment (DRDE) located at Gwalior in Madhya Pradesh. It is India's go-to institution for studies in toxicology, biochemical pharmacology and the development of antibodies against bacterial and viral agents. The DRDO works and focuses on countering biothreats such as anthrax, brucellosis, cholera, plague, smallpox, viral hemorrhage fever and botulism. Additionally, the government has established nuclear, biological, and chemical (NBC) warfare directorates in the armed forces, as well as an inter-services coordination committee to monitor their training and preparation. The military has set up an NBC cell at Army Headquarters as well.

However, DRDO's massive failures of its indigenous weapons programmes do not paint an inspiring picture. Says former Indian Air Force Group Captain Sandeep Mehta, "India's preparedness to tackle a bioterror attack ranges from poor to pathetic, and its capability is limited to helping relief providers who are then expected to deliver." The Biosafety Level 2 laboratory at the Institute of Preventive Medicine in Hyderabad provides guidance in preparing the government for a biological attack. However, Indian Army's Medical Corps specialists have publicly expressed reservations that Indian hospitals are inadequately prepared. CISF has been enabled to deploy specially trained first responders. In January 2003, the government announced changes in India's nuclear use doctrine, which now retains "the option of retaliating with nuclear weapons", after the discovery that al-Qaeda manuals taught the production and use of toxins.

After the December 2002 Parliament attack, an Indian parliamentary committee considered plans to make underground bunkers to protect MPs from nuclear and biological attacks. Then defence minister George Fernandes indicated that "the government has initiated necessary steps to ensure protection from a nuclear and bio-attack." In an apparent follow-up in August 2004, the then Home Minister Shivraj Patil indicated that Indian scientists were formulating a response to potential biological, chemical, and other non-conventional forms of terrorism. India has stringent export control regulations outlined in the Special Chemicals, Organisms, Materials, Equipment, and Technologies (SCOMET) guidelines. Its national export product control list, which identifies goods, technologies and services are subject to dual-use licensing requirements.

However in 2003, the US sanctioned two Indian companies charged with violating government regulations by supplying dual-use plant equipment to the Saddam Hussein regime for its chemical and biological weapons programmes, the NTI website says. In June 2015, India and the US signed a 10-

year defence framework agreement for cooperation in the development of defence capabilities, including "a lightweight protective suit effective in chemical and biological hazard environments." In September last year, Defence Minister Rajnath Singh warned that bioterrorism is among the new threats facing the country and asked the Armed Forces Medical Services to find effective ways to deal with new threats posed by advancing battlefield technologies. Whether Covid-19 is a bioterror weapon which went awry or a virus that got away, the real threat of a humanity ending, manufactured contagion unleashed by hostile countries for world domination haunts governments, military leaders, scientists and security experts worldwide. In spite of sophisticated electronic surveillance, countermeasures, scientific research and human intelligence, the coronavirus proves that the bugs are never too far to arrive at a location near you soon.

Conspiracy theorists have warned that the novel coronavirus had escaped from the Wuhan Institute of Virology, a military lab dedicated to the study of deadly pathogens. According to an Israeli biological warfare specialist, the institute is part of Beijing's secret bioweapons programme. China is currently building around five bio-facilities.

The US, Europe, Russia and Australia have around 50 functioning or under-construction maximum-security labs, according to news reports. Western intel suspects that Iran and North Korea also possess chemical weapon labs.

Al-Qaeda in the Arabian Peninsula has "high" intentions to procure chemical weapons and biological devices, particularly in Pakistan and Yemen, states a testimony by a top US counterterrorism official.

Syrian ruler Bashar al-Assad has used choking agents, such as chlorine gas and blister agents like sulphur mustard. The 2013 sarin gas attack killed over 1,400 non-combatants in Damascus. Ironically, Syria is part of the prohibitory Chemical Weapons Convention of 1997.

A UN-sponsored organisation has discovered that the IS used sulfur mustard gas in Syria against civilians—the first time an Islamist group used bioweapons. Security agencies fear rogue IS operatives or terrorists could detonate a nuke.

IAEA says "millions of radioactive sources have been distributed worldwide over the past 50 years" in several commercial, industrial, medical and research sites in over 100 countries. Most of these are poorly guarded.

**Allegations During the Post-world War II Period**

- The Eastern European press stated that Great Britain had used biological weapons in Oman in 1957.
- The Chinese alleged that the USA engineered a cholera epidemic in Hong Kong in 1961.
- In July 1964, the Soviet newspaper Pravda asserted that the US Military Commission in Columbia and Colombian troops had used biological agents against peasants in Colombia and Bolivia.
- In 1969, Egypt accused "imperialistic aggressors" of using biological weapons in the Middle East, specifically causing an epidemic of cholera in Iraq in 1966.

**How a Terrorist Can Unleash a Contagion**

Viruses can be mixed in powders and aerosol sprays.

They can be sent by mail on infected enveloped or notepaper.

They can be added to food or a city's water supply.

They can be released into the wind from a truck , building, or plane.

A student in a private virology research lab can weaponise a tiny amount of smallpox pathogen from the stocks.

*https://www.newindianexpress.com/magazine/2020/mar/22/the-history-of-germ-warfare-and-how-prepared-india-is-2118975.html*

The Indian EXPRESS

*Mon, 23 March 2020*

# Government puts in motion COVID-19 related research across country

***National research labs have now been directed to carry out clinical testing for COVID-19 based on self-assessment and "willingness to follow established protocols and all applicable reporting regulations'' as defined by DHRI/ICMR***

New Delhi: In response to tackling the spread and find a possible cure for the COVID-19, the Government of India has constituted an empowered committee co-chaired by Professor K Vijay Raghavan, Principal Scientific Advisor to the Indian Government and Dr. Vinod Paul, member of Niti Aayog.

The empowered committee, which held its first meeting today, has been set up to "coordinate among science agencies, scientists and regulatory bodies, and take speedy decisions on R&D related to SARS-CoV-2 virus and COVID-19."

National research labs have now been directed to carry out clinical testing for COVID-19 based on self-assessment and "willingness to follow established protocols and all applicable reporting regulations'' as defined by DHRI/ICMR.

These labs include those under Department of Biotechnology (DBT), Department of Science and Technology (DST), Council of Scientific & Industrial Research (CSIR), Defence Research and Development Organisation (DRDO) and Department of Atomic Energy (DAE). The labs have further been permitted access to samples of COVID-19 for research from any government-approved clinical testing site or access clinical samples received by them for testing, subject to ethical approval for such research.

"Clinical care agencies are directed to enrich the open dataset by providing de-identified clinical data," says a statement issued by the PSA's office today.

Labs with BSL-3 or BSL 3+ facilities, along with the DBT, DST, CSIR, DRDO and DAE are permitted to culture the virus and serve as additional testing and validation sites for research, based on self-assessment of BSL-3 facilities while following established protocol.

The labs have also been instructed to share their facilities, reagents and data and information regarding the virus to ensure "rapid solutions." Hospitals will also have to now share their information and database with the scientific agencies and research labs, which includes in clinic sample collection.

*https://indianexpress.com/article/coronavirus/covid-19-research-india-6325859/*

hindustantimes

*Mon, 23 March 2020*

# Indian Air Force may lease aerial refuelling tanker craft

***The doors to leasing military hardware were opened for the first time last week with the government unveiling a draft policy on arms acquisition that allows the armed forces to go in for leased capability to cut down on costs associated with purchasing weapons and systems***

***By Rahul Singh***

The Indian Air Force (IAF) is considering, for the first time, leasing aerial refuelling tanker aircraft to extend the reach of its fighter jets instead of a direct purchase against the backdrop of previous failed attempts to buy new tankers, two officers familiar with the move said on Sunday on condition of anonymity.

The doors to leasing military hardware were opened for the first time last week with the government unveiling a draft policy on arms acquisition that allows the armed forces to go in for leased capability to cut down on costs associated with purchasing weapons and systems.

"The IAF has made two attempts to buy tankers during the last decade-and-a-half. On both occasions, we were close to signing the deal but things fell through because of the high acquisition cost. Leasing is a good option to fill the capability gap," said one of the officers cited above.

The IAF operates a fleet of six Russian-origin Ilyushin-78 tankers that are plagued by maintenance problems and the force urgently needs at least six more.

"We are finalising the requirements for the proposed lease of tankers to boost our in-flight refuelling capabilities. We are looking at aspects such as whether we should opt for a wet [the lessor provides crew and maintenance] or dry lease. Leasing will be a better option as our budget is under pressure," said a second officer.

Leasing has been introduced in the draft Defence Procurement Procedure (DPP)-2020 as a new category for acquisition in addition to the existing 'Buy' and 'Make' categories in order to substitute huge initial capital outlays with periodical rental payments.

Leasing is permitted in two categories—where the lessor is an Indian entity and is the owner of the assets and where the lessor is a global entity. The provision of leasing in the draft DPP governs military equipment that is not deployed during the war—transport fleets, trainers and simulators.

"Tankers are a force multiplier and the IAF has been pressing for more inductions for the past 15 years. Finance has been and still is the issue. Leasing is a good option. It will save the flying hours of the IAF-owned aerial refuelling tanker aircraft for wars, with the leased ones doing the very substantial task of training and long ferries for exercises abroad," said Air Vice Marshal (retired) Manmohan Bahadur, additional director general, Centre for Air Power Studies.

According to an August 2017 Comptroller and Auditor General of India report, the desired serviceability of the Il-78 fleet should have been 70% by the IAF's own standards but it stood at 49% during 2010-16—barely half of the planes were available for missions at any given time during that period.

American (Boeing KC-46A), Russian (Il-78) and European (A330 MRTT) military contractors were expecting the IAF to float a global tender for more tankers. Israel Aerospace Industries' Bedek Aviation Group was also looking at participating in the contest with its Boeing 767-200 multi-mission tanker transport—a conversion of the Boeing aircraft by Bedek Aviation.

*https://www.hindustantimes.com/india-news/indian-air-force-may-lease-aerial-refuelling-tanker-craft/story-8RzD9OwZs7M0Hc9wM5KzJP.html*

ThePrint

*Sat, 21 March 2020*

# Rafale production halts in France due to COVID-19, jets' delivery to India could be delayed

***If the production facility in France remains shut beyond 31 March, the delivery schedule of Rafale fighter jets to India could get impacted***

***By Snhesh Alex Philip***

New Delhi: The production of Rafale fighter jets has been temporarily suspended in France due to the coronavirus outbreak, which could impact the delivery schedule of the aircraft to India, ThePrint has learnt.

The training schedule of Indian Air Force (IAF) pilots has also been affected amid precautionary steps being taken in France to tackle the pandemic.

Defence sources told ThePrint that Dassault Aviation's Bordeaux-Mérignac production facility, which manufactures the Rafale, halted work this week. The facility will remain suspended until 31 March.

"Work has been stopped as a precautionary measure. The training and other related matters have also been put on hold. The steps are being taken as part of the overall protocols being put in place in wake of the coronavirus outbreak," a source said.

With the pandemic reaching over 150 countries — France and India are facing nearly 10,000 and 200 cases, respectively — governments across the world have pitched for work-from-home in a bid to contain the viral spread.

**Corona Virus Impact**

If the production facility remains shut beyond 31 March, the delivery schedule could get affected. Further, once the production facility resumes work, the machines will have to undergo mandatory servicing since it would have remained idle, the sources said.

The delivery of 11 Rafale jets for this year could get affected, said the sources. Four Rafale jets are currently under production at the facility while four others are under trials.

According to the contract, 11 of the total 36 Rafale jets under the deal are to be delivered on an annual basis. The first four jets were formally handed over to India in October 2019. These aircraft will arrive in India in May.

Every effort is being made to ensure that the production targets are met, but coronavirus is something that has hit every industry, the defence sources said.

Dassault Aviation had increased its production rate in 2015 following India's €7.878 billion order for 36 Rafale fighters.

**IAF's Rafale Integration**

With the first four Rafale fighters set to land in India in a couple of months, multiple IAF personnel are currently in France as part of the training and to monitor the project.

Sources said the IAF has already issued instructions to all its personnel, including those abroad, just like the Army and the Navy, to ensure precautions are taken at their end to prevent any spread of the coronavirus.

The first set of the Rafale aircraft will be commissioned into the 17 Squadron 'Golden Arrows' in Ambala and a second squadron will come up in Hasimara to secure the Eastern borders during peace times and war.

With this integration, the IAF will have the most potent 4.5 generation fighter aircraft. Equipped with a wide range of weapons, the Rafale is designed to carry out air dominance, aerial reconnaissance, ground support, in-depth strike, anti-ship strike and nuclear deterrence missions. The jets are referred to as an "omnirole" combat aircraft.

*https://theprint.in/defence/rafale-production-halts-in-france-due-to-covid-19-jets-delivery-to-india-could-be-delayed/384461/*

***Sun, 22 March 2020***

# IAF confident to get Rafale Jet by May 2020 despite production cut in France amidst coronavirus scare

***Indian Air Force is supposed to receive four additional Rafale fighter jets by May 2020***

As France goes under lockdown amidst Coronavirus scare, the production of Rafale fighter jet has been halted by Dassault Aviation at the company's production facility. While this will create a backlog for the jet manufacturer, IAF says they are confident to receive the batch of four fighter jets by May 2020. As per ANI, an Indian Air Force source has said that until the production lockdown is prolonged, Dassault will deliver its first batch by May this year.

"The work in Dassault Aviation facility producing Rafale fighter jets for India has been stopped till March 31 in view of the measures taken by the French government to tackle Covid-19. Indian Air Force personnel are training at six different places in France," said source.

"There will be no effect on the arrival of the first batch of these fighters in India in May this year. The future deliveries can get affected only if the COVID-19 issue gets prolonged for a longer period. India has already received India-specific Rafale combat jets on which our pilots are training," they added.

IAF ordered 36 units of the multi role fighter jets from Dassault after assessing multiple jets in a multi billion dollar deal. India has already received 3 fighter jets, with 1st jet being handed over at the companies plant in France and is awaiting for 11 other fighter jets in 2020. The first 4 of which were supposed to reach India in May.

The fifth gen fighter jet will enhance the air superiority of the IAF and will be sent to India in a batch of 11 for next 3 years,

*https://www.news18.com/news/auto/iaf-confident-to-get-rafale-jet-by-may-2020-despite-production-cut-in-france-amidst-coronavirus-scare-2544389.html*

The Dispatch

*Sun, 22 March 2020*

# Indian defence procurement and the questionable value of staggered purchases

***The author contextualises his view of continuing procurement through small orders on an 'as-and-when' basis in Gen Bipin Rawat's recent announcement***

***By Siddharth Anil Nair***

The Chief of Defence Staff (CDS) Gen. Bipin Rawat has announced that India will employ a 'staggered purchases' approach to its defence procurement for the foreseeable future. Staggered purchasing is the procurement of small orders of defence equipment on an 'as-and-when-required' basis.

India has employed staggered purchases in the past. This experience shows that instead of being a solution, this method is emblematic of Indian defence procurement/production process' larger systemic deficiencies. These deficiencies include a low operational account, large capital account deficit, inefficient domestic manufacturing, and diverse inventory of weapons and weapon-systems. Ultimately, India's employment of staggered purchases is problematic as it is based on the prioritisation of affordability over value-for-money.

**India's T-90 Experience**

Indian Defence Public Sector Units (DPSU) have wrangled with the issues of inefficient and expensive domestic manufacturing for decades. Take for example the Indian army's purchase of its T-90 Main Battle Tank (MBT) fleet; the first deal for which was for 124 fully-built units and 186 local assembly kits in 2001. The second, in 2004, was for the licensed production of 1,000 units. In 2007, a further 347 had to be contracted directly from Russia. In 2019, licensed production for 464 additional tanks was negotiated at a cost of US$ 3.12 billion.

Even with relatively large orders, the Indian army has had to negotiate multiple contracts specifically due to the poor production standards in the Heavy Vehicles Factory (HVF) in Tamil Nadu. Weak indigenous production has resulted in additional costs; with barrels, targeting, and night-vision systems having to be replaced by foreign imports. In fact, even as of 2019, 45 per cent of the T-90 MBT (its transmission and engine) is still Russian-manufactured, necessitating units be shipped to Russia for major repairs. The dearth in domestic logistics and parts production have raised the actual cost of the T-90 MBT to three-times the purchase price. The staggered purchase of parts, kits, and whole platforms have also encouraged Russian vendors to gouge prices on each transaction.

The use of staggered purchases in the case of the T-90 MBT is reflective of the inefficiencies of India's domestic manufacturing base. Its continued employment also denies any institutional attempt to improve Indian DPSUs, as staggered purchases preclude the economies of scale that make technology transfers and domestic production worthwhile.

**Indian Air Force: MiGs and Spare Parts**

A consequence of inefficient domestic production – as highlighted in the case of the T-90 – is the vulnerability of expensive spare parts and logistics. Another issue is the unreliable supply of these parts. Take the case of the Indian Air Force's (IAF) fleet of Su-30MKIs. Russia's erratic supply of parts causes delays in overhauls and maintenance as 49 per cent of a Su-30MKI consists of an imported kit (due to poor domestic production). The staggered purchasing of parts also burdens the operational budget as vendors are keen to push new parts, seeing as they cost about four times more than repairs. As such, the staggered purchases of parts, compared to placing a big-ticket order – where one can initiate domestic manufacturing and logistics – is not only detrimental to armed forces'

operational capabilities (due to increased downtime), but also to the already limited operational budget.

Another example of the myopic view of defence procurement is the IAF's recent decision to buy 21 additional MiG-29s from Russia. Though the fighters do come cheap at US$ 39 million per fighter, it is only because they have been lying mothballed since the 1980s. Fielding these 40-year old fighters will require considerable improvements to the airframes and engines; an additional US$ 13 million upgrade to meet IAF specifications; and costly imported maintenance. While the cost of any other aircraft would have been ruinous to the IAF, it will still bear all of these expenses, only to decommission the MiG-29 squadron by 2032.

**Interface and Interoperability Challenges**

The final issue of staggering purchases of defence equipment – when coupled with an ageing and diverse inventory – is that it leads to problems in subsystem interfacing and platform interoperability. Weapon systems require extensive modifications to be compatible with other extant systems. Even then, platforms that do operate with subsystems that are different in terms of age and country of origin remain susceptible to operational failures. For example, in the 2019 Balakot strike, a French Mirage 2000 deployed by the IAF was unable to fire its Israeli Crystal Maze missile. Similarly, platforms from different countries, such as the Indian Navy's Russian *Kilo*-class and French *Scorpène*-class submarines, have limited interoperability due to different communications systems, weapons, targeting equipment, etc.

**Conclusion**

Admittedly, the policy of staggered purchases results in marginal improvements in critical areas. However, its use in India – without an expansion of the defence budget's capital and operational accounts, development of efficient indigenous manufacturing, and a compatible inventory – does nothing more than to preserve, and in some cases, aggravate the Indian armed forces' systemic issues.

*https://www.thedispatch.in/indian-defence-procurement-and-the-questionable-value-of-staggered-purchases/*

DECCAN Chronicle

***Sun, 22 March 2020***

# A force to reckon with

***As a debate on combat roles for women in the Army rages, those in the forces say it has more to do with practical approach than gender bias***

***By Priyanka Chandani***

When 26-year-old Captain Tania Shergill led an all-men marching contingent of the Corps of Signals at the Republic Day parade this year, the nation collectively hailed her as a symbol of 'Nari Shakti' (Women Power). But this euphoric bubble fizzled out rather soon when just a few days later, the government expressed its reservations on giving command positions and permanent commission to women in the Army.

Thankfully, the Supreme Court slammed the patriarchal mindset and granted permanent commission for women in the Indian Army's non-combat support units, on par with their male counterparts, should they wish to continue with it after completing their Short Service Commission (SSC).

Women will now get the same opportunities, benefits, ranks, promotions and pensions as their male counterparts. Till now, women officers were barred from roles that involved the active direction of military resources. They did not get leadership responsibilities that could have seen them ascend the hierarchy of power.

**Different Capabilities**

While the top court's decision has been welcomed by the defence forces, including Army Chief Gen M M Naravane, the debate on the practicality of inducting women in direct combat and command roles still rages on.

"Inducting women in branches other than medical, education and operations roles in the Armed Forces has been going on at a steady pace since the 1990s. There are roles in services and combat support arms like Signals, Army Air Defence, and Engineers where women officers are performing commendably," says Col Amardeep Singh, Sena Medal (retd).

The Army began inducting women for SSC in 1992. While male SSC officers could opt for permanent commission at the end of 10 years, women officers could not and weren't eligible for command appointments. As a result, they were not eligible for pension; only those with at least 20 years of service are eligible for pension.

In 2003, a petition was filed before the Delhi High Court seeking permanent commission for women SSC officers, which was finally granted in 2010. Subsequently, the government came out with an order in February 2019 for the grant of permanent commission to women officers in eight streams of the Army. But, the order did not offer any command appointments and made it clear that women officers would serve only in staff (administrative) posts and cannot go beyond the colonel rank.

**Combat vs Command Roles**

For much of human history, those serving in combat roles have been overwhelmingly male. So far, combat roles such as infantry, artillery, and armoury in the Indian Army, application of maritime power in both offensive operations against enemy forces territory and trade, and defensive operations to protect own forces, territory and trade in Indian Navy and airfield and ground defence guards in the IAF have been reserved for men. In a few cases, however, individual women have been recorded as serving in combat roles or in leadership roles.

And while there are doors open for women to take on combat roles in the IAF and Navy, the Indian Army remains conservative. Very few countries including the US, Britain, Denmark, Germany, Australia, Canada, Finland, France, Norway, Sweden and Israel have allowed women in combat roles.

"This has nothing to do with questioning women's capabilities or intelligence. Women have been in command roles in many sections of the Indian Army. We have women generals, so there is nothing like women are not given those roles," says Adarsh Shastri (name changed), a colonel of the Indian Army.

He explains that combat and commanding roles are two different things; and that it is not a straightjacket, as it is perceived by almost everyone. "It's a wrong impression that people have about the defence forces. It is not about being sexist. The Army is following the rules that were laid out initially. Women are there in combat and non-combat roles, and they are just as good and as bad as any other male officer," says Col. Shastri.

However, one must note the non-combat support that women officers provide to soldiers on the battlefield. So far, women can enter the defence forces through Combined Defence Services, Technical, Non-technical, Mechanical, Short Service Commission — SSC of National Cadet Corps, NCC, Judge Advocate General, Accounts, Logistics, Education, Architecture and as a martyr's wife. "So when we say 'give women combat roles', are we considering these points? You can't change the criteria. It is not one way that women join defence forces so everything needs to be considered before putting them into commanding or combat roles. We need to define conditions for every segment," explains Col. Shastri.

**Same, yet different**

Putting women in a frontline combat roles has been a contentious issue for a very long time. The process of inducting women into the defence forces itself has different selection and training criteria. While men are trained in the worst conditions, women are given a margin of leniency.

“Not every man gets a combat role, similarly not every woman will get that role. There is nothing like man and woman, when we wear the uniform, we all are officers. You have to prove yourself and nobody is questioning their capabilities, it is same for everyone,” states Padmavathy Bandopadhyay, the first Air Marshal of the IAF.

The Centre too opposed the idea, stating that male soldiers are not ready to accept orders from female officers due to physiological differences. This is in sync with the nation’s age-old resistance in terms of inducting women in combat roles, citing concerns over women’s physical abilities. While Indian women have been a part of the freedom struggle, the idea of deploying them in combat roles shocked men.

“There is no denying the fact that the physical capabilities of a man and woman are significantly different. In the IAF and Navy, you need brainpower, but in the Army, your physical strength is primary. Army personnel are deployed in difficult and adverse situations. The enemy on the other side is not so fair that he would see a woman and not shoot her. It is not discrimination between men and women officers, but a concern for women to be posted at more accessible places,” says Rashmi Sharma (name changed) a Regimental Medical Officer with the honour of having served in a Rashtriya Rifles Battalion in the Indian Army.

**Ready for Action**

Wing Commander C M Jaywant (retd) SC explains that women need equal physical parameters on the battlefield as far as the Army is concerned, but it is different from the IAF. “The person in the spot is in the cockpit. You need your decision-making power and technical intelligence, but when you go directly on the battlefields, then physical efficiency is a must,” he says.

Medical Officer Sharma opines that women should be given similar training and selection processes to get combat roles. “There should be no pressure on higher commanders to look after the security of those women, and they should just be treated like other male officers. We should let women go down to the depth and give them the same challenges. You can’t hold their hands and negotiate if women are in combat roles, which has been the technique till date,” asserts the lady officer.

According to Colonel Singh, the service conditions should spell out the job description clearly for women and men. “If women go through the same qualitative requirements and tests, then all those who meet it should be given a chance. Restrictions like marriage, pregnancy, etc. should be spelt out, and those who are still willing to go the mile should be allowed to,” he opines.

**Women on Top**

In December 2019, 24-year-old Sub-Lieutenant Shivangi became the first-ever woman pilot in the Indian Navy to steer a fixed-wing Dornier maritime reconnaissance aircraft. In 2017, six women officers from the Navy — comprising skipper Lieutenant Commander Vartika Joshi, Lt. Cdr. Pratibha Jamwal, Lt. Cdr. Swati P, Lt. Aishwarya Boddapati, Lt. S Vijaya Devi and Lt. Payal Gupta — charted their path into history by circumnavigating the globe in INSV Tarini.

In other similar instances, Flight Lieutenant Parul Bharadwaj, Flying Officer Aman Nidhi and Flight Lieutenant Hina Jaiswal became the first all-women crew to embark on a battle Inoculation Training Mission. Similarly, Flight Lieutenant Avani Chaturvedi along with fighter pilots Bhawana Kanth and Mohana Singh are among the nation's first women combat pilots, and they are inducted into the IAF’s fighter squadron.

Flying officer Aman Nidhi expressed that her being a woman cannot be a deciding factor whether she should be given the combat role or not. “My contribution will be equal to my male counterparts, nothing less. We have proved to the nation that there is nothing that women can’t do,” she avers.

Captain Tania Shergill of the Indian Army, who made the headlines for leading the all-men contingent on Army Day on January 15 this year, adds, “If women are given a combat role in the Indian Army, then we are up for it.”

Sub-Lieutenant Shivangi adds, “I know there is nothing that women can’t do. My challenges are the same, as any man would face.”

**Change in Mindsets**

While civilians might feel that the defence forces are discriminatory in their process, women in the service deny any bias. For them, it is about commanding a team that needs to have trust in the leader. However, some also believe that many officers are not conditioned to take orders from women in the force. “I was posted directly at the battlefield and the battalion was Rajput. They are culturally chauvinists. They prefer male doctors to females but that should not be a reason to not induct women in commanding or combat roles. The mindset needs to be changed,” says Regimental Medical Officer Sharma.

She adds that men in the team judge you on your physical capabilities. “You are saying you want to be a combatant, but then you are expecting your team to give up their life on your orders. The team has to trust your judgment. They will only follow your orders when they know you are better than them because you are making them literally give up their lives. If tomorrow, they see a woman has come with lower abilities than them, then they will not accept it. It will create nuances on the combat places,” explains the officer.

While it sounds like more of an emotional demand to see women as equal, are we missing on to the bigger goal: The security of the Nation? Defence personnel believe that it has more to do with strategy and practical approach. “You cannot lose on any strategy just because you want a particular gender to be a combatant. What are we trying to prove? The compass needs to be reasoned,” Medical Officer Sharma opines.

A senior officer from the Navy says that the young male officers look for a leader who can outmatch them and they can connect with. “A soldier who is fighting expects the leader should know that he hasn’t received a letter from his home so he is agitated. Or the roof of his house in the hometown has fallen, or he wants to go on leave for some days, but there is a commitment at the border and for that, he is here. As a leader, he gives that trust, so as a soldier he would respect his leader. If any leader breaks down on the physical, emotional, integrity, loyalty and other aspects of his nature or flounders, he is not respected as a leader,” he elucidates before signing off.

*https://www.deccanchronicle.com/sunday-chronicle/cover-story/210320/women-in-combat-theyre-ready-is-the-army.html*

the pioneer

***Mon, 23 March 2020***

# Indian Air Force reduces staff at headquarters

New Delhi: Amid the coronavirus scare, Indian Air Force issued directions to reduce attendance in its headquarters with effect from March 23, excluding personnel engaged in essential and emergency services directly involved in taking measures to control spread of COVID-19. Indian Air Force officials said it was also decided that 30 per cent of officers and 50 per cent of junior officers will work from home adhering to home quarantine for a week starting March 23.

Further it was also directed that a second group to proceed on home quarantine on March 30, 2020 and intermixing of groups to be avoided.

Two days ago, Indian Army had issued fresh advisory wherein posting of all Indian Army personnel were deferred and soldiers on leave were given extended leave till April 15.

Indian Army Chief General M.M. Naravane had reviewed the force's preparation to contain COVID-19 with important functionaries at Army headquarters as fresh instructions were issued and strict adherence was demanded.

It was decided to run extensive awareness campaigns. "Awareness campaigns are being run on precautions to be taken within the Army and also for communities in near vicinity to Army establishments," said sources in the force.

All conferences and seminars were postponed till April 15 and temporary duty of all ranks are either rescheduled or cancelled till April 15.

All service personnel, except Army Medical Corps, attending courses terminating prior to April 15 will be retained at respective training institutions. For them additional training programmes can be added. Further annual and periodic medical examinations have been postponed April 15. It has been decided to regulate entry to canteens and crowding and bunching will be completely avoided.

*https://www.dailypioneer.com/2020/india/indian-air-force-reduces-staff-at-headquarters.html*

***Mon, 23 March 2020***

# Work from home, postings and leaves deferred: Indian Army fights coronavirus

***Army sources say it will be impossible to have units and formations go into work from home mode, so other unprecedented measures are being put in place at the orders of the Chief Of Army Staff***

***By Shreya Dhoundial***

New Delhi: Desperate times calls for desperate measures. The Indian Army, the largest ground force in the world, has launched an offensive to keep its 1.4 million troops safe from the coronavirus.

Starting Monday, all personnel at the Army headquarters and the Ministry of Defence will go into partial work from home mode. 35% of its officers and 50% JCOs and ORs will be in home quarantine for a week. The second group that works in the first week will proceed for home quarantine on March 30. Intermixing of both groups will be avoided at all costs.

Army sources say it will be impossible to have units and formations go into work from home mode, so other unprecedented measures are being put in place at the orders of the Chief Of Army Staff.

All postings have been deferred. Leaves have been cancelled till April 15. Those on leave have been asked to stay where they are till then.

All travel, domestic and international, has been put on hold. So have war games and conferences. All officers undergoing courses have been asked to stay at their respective institutions till April 15.

This does not apply to Army Medical Corps officers and personnel manning the 10 quarantine facilities the Army has set up.

The Army is also regulating footfall at CSD canteens where all serving and retired personnel buy their groceries and household needs. All veterans have been asked to adhere to social distancing and keep away from clubs and parties.

Socialising, an inherent part of Army life, is at a standstill.

Earlier this week, a 34-year-old at the Ladakh Scouts Regimental Centre in Leh became the first soldier to test positive for COVID-19. His father had a travel history to Iran, one of the worst affected countries, after China and Italy.

*https://www.news18.com/news/india/work-from-home-postings-and-leaves-deferred-indian-army-fights-coronavirus-2544859.html*

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

*Mon, 23 March 2020*

# India to go ahead with $2.3 billion Turkish shipyard deal

***The formal contract was signed days after India issued a strong statement rejecting all references made to Jammu and Kashmir in a joint declaration by Turkey and Pakistan during President Erdogan's visit to Islamabad last month. The contract was signed by HSL last month after clearances were given by the MoD, said people aware of the matter***

***By Manu Pubby***

New Delhi: India is going ahead with a $2.3 billion (about Rs 15,000 crore) deal to manufacture fleet support vessels (FSVs) in collaboration with a Turkish shipyard following a review after questions were raised on Turkey's links with Pakistan and the recent diplomatic tiff with the Recep Tayyip Erdogan government.

The formal contract was signed days after India issued a strong statement rejecting all references made to Jammu and Kashmir in a joint declaration by Turkey and Pakistan during President Erdogan's visit to Islamabad last month.


Turkey's TAIS had emerged as the lowest bidder for a contract to manufacture five of the 45,000-tonne FSVs at the Vizag-based Hindustan Shipyard Limited (HSL) last year, but the contract signing was put on hold in October following the repeated raising of Kashmir issue by Erdogan at international forums.

The contract was signed by HSL last month after clearances were given by the Ministry of Defence (MoD), said people aware of the matter. They said the Ministry of External Affairs was also consulted before the decision was taken.

HSL had been keen to resolve the matter at the earliest and had written several letters to the defence ministry over the past few months. "MoD has directed HSL to put the project on temporary hold in view of recent diplomatic developments with Turkey. HSL inputs regarding the legal and financial implications of cancelling the bid of M/s Anadolu shipyard have been submitted to the MoD," the ministry told the parliamentary standing committee on defence.

The defence ministry's vigilance department was asked to review the order and gave a go-ahead, said one of the persons, who did not wish to be identified. Similarly, inputs were received from MEA on diplomatic implications, after which it was decided to proceed with the Turkish collaborator. The contract was signed last month after the defence ministry removed its temporary hold order.

The Indian FSV project was initially given a go-ahead in 2016 after the Navy projected a requirement for ships that could carry fuel and other supplies for warships at sea.

As reported by ET, Turkish shipyards are a major supplier of warships to the Pakistani Navy and concerns had been raised on how access to the strategic HSL by its engineers and workers could result in serious security issues. HSL is located close to the Ship Building Centre, where India's nuclear armed submarines are built, as well as the Eastern Naval headquarters.

Besides four new corvettes, Turkey has designed a fleet support vessel for Pakistan, supports its submarine fleet and has signed a deal to sell 30 T-129 attack helicopters that have been developed in collaboration with Italian company Finmeccanica (since renamed as Leonardo). In September last year, Erdogan had used the ceremony to launch new corvettes for the Pakistani Navy. Last month, he raised the Kashmir issue again and attempted to draw similarities to the Palestine conflict.

Since then, the Turkish President has visited Pakistan, where he repeatedly raised the Kashmir issue and said that Turkey was on Pakistan's side over the conflict and that it would support it on the issue of being censored by the Financial Task Force as well. Following Erdogan's visit in February, India issued a strong statement and on March 3 made a strong demarche with the Turkish envoy as well.

*https://economictimes.indiatimes.com/news/defence/india-to-go-ahead-with-2-3-billion-turkish-shipyard-deal/articleshow/74766428.cms*

DefenceNews

***Mon, 23 March 2020***

# Indian Navy finally gets access to strategic French base near Mauritius

The Indian and French Navy for the first time conducted joint patrols from the Reunion Island which is an overseas region of France and an island east of Madagascar and 175 km southwest of Mauritius.

According to the report in The Hindu, India has carried out Coordinated Patrols (CORPAT) only with maritime neighbours and had rejected a similar offer by the US.

"The Indian Navy carried out a joint patrol with the French Navy last month from the Reunion Island. The patrol was conducted by a P-8I aircraft with French Navy personnel on board," The Hindu quoted some defence sources.

Earlier, as EurAsian Times reported, New Delhi will deploy a naval aircraft at France's reunion island as part of join surveillance mission with France in the southern Indian Ocean. This was announced by the French President Emmanuel Macron during his visit to La Réunion.

In his speech in French at the business forum, Macron laid out the strategic importance of Reunion in the Indian Ocean and the need to position it within the axis of the African and Indian subcontinent.

"We are working very closely with India. In the first quarter of 2020, a patrol aircraft from the Indian Navy will be deployed at La Reunion to participate in surveillance missions," said Macron.

In March 2018, French President visited India and along with counterpart Minister Narendra Modi unveiled a "Joint Strategic Vision of India-France Cooperation in the Indian Ocean region". It was also during that visit that the two sides signed an agreement for "Provision of Reciprocal Logistics Support" that would allow each other to access the other's military facilities.

President Macron had also acknowledged that France's closer ties with India came from a "profound change" as a result of a common strategic agenda. "This common security agenda in the region is an agenda of maritime surveillance, protection of our marine areas, construction of a joint agenda to avoid any form of hegemony or intrusion," Macron had stated.

*https://www.defencenews.in/article/Indian-Navy-Finally-Gets-Access-To-Strategic-French-Base-Near-Mauritius-809836*

THE HINDU

*Sun, 22 March 2020*

# In a first, India, France conduct joint patrols from Reunion Island

***Defence sources confirmed that the exercise was conducted by a P-8I aircraft with French Navy personnel onboard***

***By Dinakar Peri***

India and France, For the first time, have conducted joint patrols from the Reunion Island, signalling New Delhi's intent to engage with friendly foreign partners in expanding its footprint in the Indian Ocean, focusing on the stretch between the East African coastline and the Malacca straits.

India has so far carried out Coordinated Patrols (CORPAT) only with maritime neighbours and had rejected a similar offer by the US.

"The Indian Navy conducted a joint patrol with with the French Navy last month from the Reunion Island. The patrol was conducted by a P-8I aircraft with French Navy personnel onboard," two defence sources independently confirmed to *The Hindu*.

"We have robust engagement with the French", one of them said. The surveillance was done in Southern Indian Ocean off Mauritius. "The P-8I was there for a week," he stated.

There was greater understanding between India and France on each others concerns, especially in the maritime domain, the source said. "They also have capacity constraints there and we can share responsibilities. The patrols will be periodical. There is no set pattern," the source added

As reported by *The Hindu* last November, visiting French Navy Chief Admiral Christophe Prazuck had stated that they were "looking forward to organising joint patrols with the Indian Navy" in 2020 and working on the precise objectives. Speaking at an event, he said the region of the patrols could be North Western Indian Ocean or Southern Indian Ocean "around the islands that are part of France."

"France is a safe country for us, there will be no concerns in conducting joint patrols with them," a third official stated on why France was the first country selected to conduct joint patrols. France is also the first country to deploy a Liaison Officer at the Indian Navy's Information Fusion Centre (IFC-IOR) as part of efforts to improve Maritime Domain Awareness (MDA).

**Major Strategic Partner**

France has steadily emerged as a major strategic partner for India with big ticket defence deals and increased military to military engagement. The Indian navy is currently inducting French Scorpene conventional submarines, being built in India under technology transfer, and the Indian Air Force will soon get the first batch of its 36 Rafale fighter jets.

Currently, under the 'Neighbourhood First' policy and broader maritime cooperation, the Indian Navy undertakes joint EEZ surveillance with Maldives, Seychelles and Mauritius and CORPATs with Bangladesh, Myanmar, Thailand and Indonesia.

In early 2016, then U.S. Pacific Commander (now Indo-Pacific Command) Adm Harry Harris proposed the prospect of Indian and US navies conducting joint patrols, which was also advocated by other visiting senior U.S. military officers. However, this was rejected by India, and in 2018, then Navy Chief Adm Sunil Lanba stated that while India was looking at cooperative frameworks in the region to deal with common threats, efforts such as coordinated patrols and joint patrols would be done only with maritime neighbours.

The joint patrols, along with other activities, are part of the Navy's increasing engagement in the Indian Ocean Region through capacity-building and joint activities for improving MDA and interoperability.

*https://www.thehindu.com/news/international/in-a-first-india-france-conduct-joint-patrols-from-reunion-island/article31129323.ece*

Forbes

***Mon, 23 March 2020***

# China deployed 12 underwater drones in Indian Ocean

***By H I Sutton***

China has deployed a fleet of underwater drones in the Indian Ocean. According to Chinese government sources, the drones were launched in mid-December 2019 and recovered in February after making more than 3,400 observations. These *Sea Wing* gliders are a type of Uncrewed Underwater Vehicle (UUV) which can operate for months on end.

The gliders are similar to ones deployed by the U.S. Navy. When China seized a U.S. Navy ocean glider in 2016 the stated reason was to ensure "safe navigation of passing ships." Taken at face value, it may be surprising that China is now deploying these types of UUV en masse in the Indian Ocean. China has also deployed the Sea Wing from an ice breaker in the Arctic.

Reports from December 2019 suggested that 14 would be employed in the Indian Ocean mission. But newer reports suggest that only 12 were used. Possibly there were technical issues with the other two. They were launched by the specialist survey ship *Xiangyanghong 06* which has since returned to Rizhou in China. The mission was the winter survey for the Joint Ocean and Ecology Research Project run by the Ministry of Natural Resources.

The Sea Wing (Haiyi) bear a striking resemblance to the Littoral Battlespace Sensing-Glider (LBS-G) used by the U.S. Navy. On December 15, 2016, China obtained a U.S. Navy LBS-G in international waters in the South China Sea. The glider was in the process of being recovered by USNS *Bowditch* when a small boat from a Chinese vessel which had been shadowing the Navy vessel plucked it from the water. After a diplomatic spat the glider was returned to a U.S. Navy warship.

The Sea Wing isn't a case of reverse engineering however. It was reported in Chinese sources in September 2016, months before the U.S. Navy incident. But the American type is a clear influence and they are generally equivalent.

These gliders are unpowered. Instead they employ variable-buoyancy propulsion which makes them sink and then rise to the surface again. This is done by inflating and deflating a balloon-like device filled with pressurized oil. At the same time they have large wings so they can glide forward as they go. This allows them to run for extremely long periods of time, travelling vast distances. They are not fast or agile however, so a generally employed for long range missions where they can be left alone until they need to be picked up.

The Chinese gliders were reportedly gathering oceanography data. Sensors measured seawater temperature, salinity, turbidity, chlorophyll and oxygen levels. This information was transmitted back to the mother ship via the aerial in the tail. Although the aerial points directly backwards, it swings up above the surface as the glider noses down for another dive.

This is the sort of information which sounds innocuous but is commonly gathered for naval intelligence purposes. In particular it is relevant to submarine warfare. For example salinity levels can

affect the distance that a submarine can be heard from. And it may be possible to detect submarines if they disturb chlorophyll.

For its part, China continues to report finding foreign UUVs off its coast. If Chinese fishing vessel catches a glider they are to hand it over to the government. Presumably the same fate did not befall any of the Chinese gliders.

*https://www.forbes.com/sites/hisutton/2020/03/22/china-deployed-underwater-drones-in-indian-ocean/#631f614c6693*

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# Pakistan's effort to launch 750km range missile crashes

***According to national security planners and Pakistan watchers, this was the second consecutive test failure of the Babur II sub-sonic missile after the previous test failed on April 10, 2018***

***By Shishir Gupta***

New Delhi: Pakistan's efforts to build a 750 km range ground-launched cruise missile Babur II have suffered a set-back with the delivery platform crashing to the ground after two minutes or 14 kilometres in flight from the launch point at Sonmiani test range in Balochistan on March 19.

According to national security planners and Pakistan watchers, this was the second consecutive test failure of the Babur II sub-sonic missile after the previous test failed on April 10, 2018. The second test launch failed while being witnessed by Lt Gen Sahir Shamshad Mirza, Chief of General Staff, Pakistan General Headquarters, Rawalpindi, and top officials of Army Strategic Forces Command (ASFC) and Strategic Plans Division.

Senior officials told Hindustan Times that Pakistan with the help of China is trying to build missile named after first Mughal Emperor Babur to match the 1,000 kilometre range Nirbhay cruise missile being developed by the DRDO.

Both the missiles are said to have terrain hugging and sea skimming capabilities with nuclear as well as conventional warhead.

The Nirbhay missile has already undergone six test trials with the last one achieving full mission objectives.

It is understood that before testing Babur II missile, a team of Pakistan missile scientists had visited China. Islamabad has already developed a 700 kilometre range Babur I cruise missile that can be fired both from land as well as sea with terrain contour matching and GPS satellite guidance.

It is also trying to develop air launched cruise missile by the name RAAD.

The Pakistani cruise missiles are derivatives of Chinese C-602 and C-802 missiles with both the countries not members of missile technology control regime.

*https://www.hindustantimes.com/india-news/pakistan-s-effort-to-launch-750km-range-missile-crashes/story-UT5CbOR3K0uVojmiOYoKjO.html*