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# Defence Strategic: National/International



**Press Information Bureau**  
Government of India

Ministry of Defence

*Mon, 15 May 2023*

## **Air Marshal Ashutosh Dixit Takes over as Deputy Chief of the Air Staff**

Air Marshal Ashutosh Dixit took over as the Deputy Chief of the Air Staff today. An alumnus of the National Defence Academy, he was Commissioned in the fighter stream on 06 December 1986. He is a graduate of the Staff Course, Bangladesh and National Defence College, New Delhi. The Air Marshal is a Qualified Flying Instructor as well as an Experimental Test pilot, with over 3300 hours of flying experience on fighter, trainer and transport aircraft. He participated in Operation Safed Sagar and Rakshak.

Air Marshal Dixit commanded a Mirage 2000 Squadron, a frontline fighter base in the Western sector, as well as a premier fighter training base. He has earlier served as Principle Director Air Staff Requirement, Assistant Chief of the Air Staff (Projects) & Assistant Chief of the Air Staff (Plans) at Air Headquarters. The Air Officer has also been the Air Defence Commander of Southern Air Command and was Senior Air Staff Officer, South Western Air Command prior to taking over as the Deputy Chief of the Air Staff.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1924156>



**Press Information Bureau**  
Government of India

Ministry of Defence

*Mon, 15 May 2023*

## **iDEX-DIO Signs 250th Contract, First Under Mission DefSpace & 100th SPRINT (Navy) Contract in New Delhi**

Innovations for Defence Excellence (iDEX), the flagship initiative of Ministry of Defence, has reached a milestone with the signing of its 250th contract - first under Mission DefSpace - and 100th SPRINT (Navy) contract in New Delhi on May 15, 2023. The contracts were signed in the presence of Defence Secretary Shri Giridhar Aramane and other senior civil & military officials.

**Mission DefSpace contract**

The first iDEX contract of Mission DefSpace was exchanged between Additional Secretary (Defence Production) & CEO Defence Innovation Organisation (DIO) Shri T Natarajan and CEO, InspeCity Shri Arindrajit Chowdhary, one of the winners of the challenge 'Micropropulsion system for cubesats'. This challenge is being led by the Defence Space Agency.

Cubesats are a class of smallsats, which are modular; low-cost; easy to manufacture, integrate, and launch; and form a critical component for launch-on-demand capabilities. For imagery/Intelligence Surveillance & Reconnaissance/communication purposes, cubesats need to be precisely aligned, hence there is a requirement of a compact micropropulsion system for precise manoeuvring and orbit correction. InspeCity is developing a gas-based system for this purpose. This technology, once developed, can be integrated with other satellites, including the cubesat swarm being developed under Mission DefSpace.

Recognising the strategic significance of the space domain, Prime Minister Shri Narendra Modi had launched Mission DefSpace with 75 Defence Space Challenges to be addressed by the private sector during DefExpo at Gandhinagar in October 2022. It aims to nurture the Indian Private Space industry through challenges addressing every stage of a space mission – from mission planning to satellite data analytics.

### **100th SPRINT (Navy) contract**

The 100th SPRINT (Navy) contract was exchanged between AS (DP) & CEO-DIO and CEO, Siliconia Technologies Pvt Ltd Shri Sushil Eknath Ghule. Siliconia Technologies Pvt Ltd is the winner of the Challenge which envisaged the development of a prototype that is a lightweight ASIC (Application-Specific Integrated Circuit) based communication system using software defined antenna for Low Earth Orbit, Medium Earth Orbit and Geostationary satellite communication. The solution by Siliconia can provide multiple independent receiver/transmitter sources that are essential in phased-array radars, typically used in satellite tracking.

It may be recalled that under the 'SPRINT' initiative, a total of 75 Challenge statements for the Indian industry were unveiled by Prime Minister Shri Narendra Modi during the Naval Innovation and Indigenisation Organisation (NIIO) seminar 'Swavlamban' on July 18, 2022. The initiative aims at inducting at least 75 technologies/products into the Indian Navy by August 2023 as part of 'Azadi ka Amrit Mahotsav'.

The iDEX achieved the milestone of signing its 1st and 50th iDEX SPRINT contracts under DISC-7 in October 2022 and January 2023 respectively and within a few months the 100th SPRINT (Navy) contract was exchanged.

### **About iDEX**

Till date, iDEX has received more than 7,500 applications from individual innovators, MSMEs and start-ups under various categories of challenges like DISC, Prime and Open Challenge. iDEX has also been able to generate thousands of jobs and attract India's talent back to the country.

The iDEX is working at a path-breaking pace to ensure that its agreements with the start-ups and innovators reach logical conclusions timely, eventually opening a myriad of options for the budding, soon to be unicorns and at the same time addressing the requirement of Services.

The iDEX framework was launched by the Prime Minister in 2018 with the objective to provide the platform of co-creation & co-development in the defence sector. It aims to engage start-ups to contribute to the defence sector and develop defence and aerospace setup in the country. iDEX is being implemented by DIO, established under the Department of Defence Production, MoD. In his address, the Defence Secretary exuded confidence that the iDEX will help India become the biggest defence innovation ecosystem in the world in the times to come. He also appreciated the

continuous efforts and support from all the stakeholders, including the Services, start-ups, partner incubators and the iDEX team in reaching the milestone.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1924179>

## THE TIMES OF INDIA

*Tue, 16 May 2023*

### **Self-Reliance in Defence Sector Must for Strategic Autonomy, Says Rajnath**

Defence minister Rajnath Singh on Monday said self-reliance in the military sector was an urgent necessity as relying on imports could hinder India's strategic autonomy.

"Without self-reliance in the defence industry, we cannot make independent decisions on global issues that are consistent with our national interests. The more equipment we import, the more adverse impact it will have on our trade balance. We aim at becoming a net exporter to strengthen our economy and increase employment," he said, addressing the 12th convocation ceremony of the Defence Institute of Advanced Technology (DIAT), a deemed university of the Defence Research and Development Organisation (DRDO), in Girinagar. Singh said as modern warfare was evolving rapidly, there was a need to make quick progress in advanced technology to address emerging security concerns, such as contactless warfare.

"It can be a cause of concern for us if our adversary possesses more advanced technologies. This responsibility lies with our institutions," he said. Singh categorically said institutions like DIAT could play a crucial role in ideating new concepts for the armed forces and civil population.

He said, "Self-reliance does not mean isolation from the rest of the world. Self-reliance aims to address military needs by building necessary equipment/platforms with our resources."

Samir Kamat, the chairman of DRDO and governing council of DIAT, said DIAT graduates would play a significant role in 'Amritkaal' by developing cutting-edge technologies.

Singh awarded degrees to 283 students from diverse fields, including 261 MTech/MSc students and 22 PhD students. Twenty gold medals were awarded too. The event was attended by the vice-chancellor of DIAT, CP Ramanarayanan, and directors of DRDO laboratories.

<https://timesofindia.indiatimes.com/city/pune/self-reliance-in-defence-sector-must-for-strategic-autonomy-says-rajnath/articleshow/100262599.cms>

## Business Standard

*Mon, 15 May 2023*

### **Need to Promote Innovations Useful for Defence, Civil Sectors: Rajnath**

Defence Minister Rajnath Singh on Monday said that institutions need to promote innovation which is not only useful for the defence industry but also for civilian purposes. "We need to promote such innovations in the defence sector which are not only useful for defence but also equally effective for the civil sector," Rajnath Singh said at the 12th convocation ceremony of the Defence Institute of Advanced Technology (DIAT) in Pune. He cited examples of how the use of navigation systems was initially started for defence requirements but later on became an important

part of civilian life. "Plastic surgery is also deeply related to the defence sector. We see that many a time soldiers get injured during the war, and different parts of their bodies get damaged in an unfortunate way. For this plastic surgery is a boon which is also helping civilian life," the Defence minister said. Rajnath Singh said countries have to move fast towards technological advancement.

"We have to keep in mind that if our adversaries have more advanced technologies, then it can become a problem for us in the coming times. That's why we have to move fast towards technological advancement along with the changing environment," he said.

The minister said apart from land and air, threats can come from cyberspace and the space sector.

Concepts like non-kinetic or contactless warfare have made the need for advanced technology in the defence sector more important than ever, the minister said.

"In the last few decades, we have seen that the methods of warfare are changing at a faster rate.... The dangers of conventional war are in front of us, but going beyond them, now completely new types of threats are looming in front of us," added Rajnath Singh.

He also touched upon the government's Atmanirbhar push and highlighted that a huge country like India cannot depend on imports.

"If we only import defence equipment and platforms, it will make us dependent on other countries in the defence sector. This dependence can also be a hindrance to our strategic autonomy," he said.

Rajnath Singh also met former President Pratibha Patil and personally expressed condolences to her on the demise of her spouse Dr Devisingh Shekhawat.

[https://www.business-standard.com/india-news/need-to-promote-innovations-useful-for-defence-civil-sectors-rajnath-123051500553\\_1.html](https://www.business-standard.com/india-news/need-to-promote-innovations-useful-for-defence-civil-sectors-rajnath-123051500553_1.html)



*Mon, 15 May 2023*

## **Chief of the Army Staff General Manoj Pande Embarks on 2-Day Visit to Egypt**

Indian Army Chief General Manoj Pande has embarked on a two-day visit to Egypt. During the visit, General Manoj Pande will be meeting the Country's senior military leadership where he will discuss avenues for further enhancing Indo-Egypt defence relations.

Defence Ministry said, he will be visiting various Egyptian Armed Forces establishments and exchange ideas on issues of mutual interest.

The Army Chief will interact with the Commander-in-Chief of Egyptian Armed Forces, Minister of Defence and Military Production, and Chief of Staff, the Egyptian Armed Forces.

The Military relations of India with Egypt are on the rise which was evident during India's 74th Republic Day parade, wherein the Egyptian Armed Forces contingent made their first appearance.

The visit of General Manoj Pande will further deepen the bilateral relationships between the two Armies. This visit will also act as a catalyst for closer coordination and cooperation between the two countries on a host of strategic issues.

<https://newsonair.gov.in/News?title=Chief-of-the-Army-Staff-General-Manoj-Pande-embarks-on-2-day-visit-to-Egypt&id=460940>

## HAL to Replace Key Component of Dhruv ALH Following Recent Crashes

Following three accidents in quick succession, Bengaluru-based Hindustan Aeronautics Limited has decided to replace a key component of the Dhruv Advanced Lightweight Helicopter to enhance the fatigue tolerance of the made-in-India chopper, that serves as the rotary-wing mainstay for the Indian armed forces.

The state-owned aviation major, sources said, would replace an aluminium-made control rod in the gear box with a steel made one. This will increase the fatigue tolerance of the copter and better control of the aircraft by the pilots.

The decision to make the change, suggested by a regulatory panel, comes close on the heels of three ALH crashes on March 8 (Navy), March 26 (Coast Guard) and May 4 (Army). More than 335 ALH have been produced so far, of which nearly 300 are in service with the three armed forces.

The last accident involving an Army Aviation chopper led to the death of one soldier and injury to two persons. The Navy and the Coast Guard had grounded their respective ALH Dhruv fleets in March following two similar incidents involving the platform.

The Indian Air Force that operates around 70 ALH is clearing its choppers for flying in batches. The aircraft that have undergone the tests are continuing with operations while the rest will be cleared for flying after completion of the same.

Officials at HAL asserted that the ALH had an outstanding safety record as it had flown more than 3,75,000 flying hours in the last two decades and the metallurgical changes in the control rod of the gearbox were being carried out to further improve the aircraft performance.

The multi-role, multi-mission 5.5 tonne helicopter has proven its mettle in various utility roles including lifesaving missions during natural calamities in India and abroad. New Delhi pitches it as one of the defence export items.

<https://www.deccanherald.com/national/hal-to-replace-key-component-of-dhruv-alh-following-recent-crashes-1218812.html>



## INS Mormugao: Know about Indian Navy's Destroyer Capable of Firing BarhMos

In a recent development, the Indian Navy successfully tested and fired a BrahMos supersonic cruise missile from its frontline guided missile destroyer INS Mormugao. A medium-range ramjet supersonic cruise missile hit the target with a hundred per cent accuracy during its maiden trail from the destroyer. With this successful trial, the destroyer and its potent weapon became the shining stars of the Indian Navy's firepower at sea and marked the country's ingenious

achievements under the Aatmanirbhar Bharat initiative. Amid this latest development, let's take a look at the other potential of the destroyer.

### **INS Mormugao and its firepower**

Named after the Goan port city of Mormugao, INS Mormugao was first launched on September 17, 2016, and was commissioned into the Navy on December 18, 2022. The ship is the second of the four Visakhapatnam-class destroyers developed under Indian Navy Project 15B, or P15B, a project launched in the 1990s to add guided missile destroyers to the Navy.

Built at Mazagon Dock Limited (MDL), the destroyer is 163 metre long, 17 metre wide and weighs 7,400 tonnes when fully loaded.

Propelled by four gas turbines in a combined gas and gas (COGAG) configuration, the ship is capable of ferrying at a speed of over 30 knots (50km/h), with a maximum range of 4,000 nautical miles.

It can accommodate about 300 personnel and is equipped with a 76mm super rapid gun mount, Barak-8 surface-to-air (SAM) missiles for a long range of shore and BrahMos surface-to-surface missiles (SSM).

Equipped with enhanced stealth features that ensure a reduced Radar Cross Section or radar signature, the ship can also transport and control multi-role helicopters.

Additionally, it is also equipped with 533-mm torpedo launchers and RBU-6000 anti-submarine rocket launchers.

It is automated with high-tech digital networks like the Ship Data Network (SDN), the Gigabyte Ethernet-based Ship Data Network (GESDN), the Combat Management System (CMS), the Integrated Platform Management System (IPMS) and the Automatic Power Management System (APMS).

The ship has multiple fire zones, including distributional power systems to enhance survivability in emergencies, battle damage control systems, and a total atmospheric control system to protect the crew against nuclear, chemical, and biological threats.

### **The BrahMos power**

BrahMos, the supersonic cruise missiles that can be launched from submarines, ships, aircraft, or land platforms, was produced by BrahMos Aerospace Pvt Ltd, an enterprises that was formed with the collaboration of the Indian Defence Research and Development Organisation (DRDO) and the Russian Federation's NPO Mashinostroyeniya. The missile has been designed to fly at a speed of 2.8 Mach, around three times the speed of sound.

<https://www.news9live.com/knowledge/ins-mormugao-know-about-indian-navys-destroyer-capable-of-firing-barhmos-2141132>



*Mon, 15 May 2023*

## **India, Indonesia Likely to Expand Ties in Air Force**

India and Indonesia are seeking to boost cooperation between their air forces, according to persons aware of the matter.

Air force-level ties between the two countries have remained underdeveloped, although naval ties are strong: both countries regularly conduct the Garuda Shakti special forces exercise and CORPAT



naval patrol exercises. Last Sunday, the two navies also kicked off a six-day Samudra Shakti exercise in Batam, Indonesia.

However, no regular bilateral air exercises are held between the two powers. A push to change that may be militarily significant, given India's increased defence outreach to Southeast Asia.

"Indonesia is an archipelago with thousands of scattered islands. Therefore, maritime connectivity and maritime cooperation has been the focus for the country. If you look at the country's defence modernization, the focus is firstly on the navy, then the army and finally the air force," says Premesha Saha of the Observer Research Foundation's Strategic Studies Programme. Because of Indonesia's maritime focus, developing air force and army cooperation has been less of a priority, Saha said.

Periodic attempts have been made to strengthen air force level ties. "In terms of military cooperation, we have coordinated patrols in the Andaman Sea, that have been going on for at least the past 17 years. We have army-to-army exercises, navy-to-navy, and soon we will start air force-to-air force," said Sidharto Reza Suryodipuro, former Indonesian Ambassador to India in 2021. However, no regular bilateral air force exercise was set up.

Saha said the focus of the defence partnership may be on shared challenges such as maritime piracy, grey-zone activities and Illegal fishing.

Greater interoperability, achieved through staff level talks and joint exercises, is a key component in India's quest to boost defence preparedness. India and Southeast Asian nations held their inaugural joint naval exercise this year.

However, no movement has taken place on this front just yet. As the military threat from China has grown in recent years, India and Southeast Asian countries have deepened their defence partnership. Sales of military equipment, including the sale of the BrahMos missile to the Philippines, have been a key part of India's defence outreach. India is also in talks to sell the BrahMos missile to Indonesia, according to the persons cited above.

India has also helped improve defence capabilities among key Southeast Asian countries like Vietnam. New Delhi has provided high-speed patrol boats to Vietnam, built on Indian Lines of Credit (LoC).

<https://www.livemint.com/news/world/india-and-indonesia-aim-to-strengthen-air-force-cooperation-to-tackle-shared-challenges-such-as-maritime-piracy-and-illegal-fishing-11684172704884.html>

# The Tribune

*Tue, 16 May 2023*

## **Is IAF's Entire MiG-21 Fleet Facing 'May Day' Call?**

*Abhijit Bhattacharyya*

Yelling 'May Day' thrice is the universally accepted and followed ultimate distress call of an airborne aircraft's pilot-in-command. The recent MiG-21 crash in Rajasthan — in which the pilot ejected but three civilians on the ground were killed — has renewed criticism that the aircraft is a relic of the past and a 'flying coffin', as if henceforth there will be 'May Day' calls for the Indian Air Force's (IAF) entire MiG-21 fleet which still consists of six squadrons of the Bison variant (Military Balance, 2022, published by the International Institute for Strategic Studies).

It is deplorable to use the expression 'flying coffin' as it will demoralise the fliers and associate staff of the operational MiG-21 Bisons. The importance of MiG-21 for the IAF must be understood in the wider perspective rather than jumping to conclusions.

At the beginning of the 21st century, the IAF had 41-plus operational squadrons which virtually constituted its sanctioned strength of 42. There were "31 fighter ground attack and nine multi-role fighter squadrons" and one-plus squadron of electronic-counter-measure jet aircraft (Military Balance, 2001-02). The point to note is that 33 out of 41 fighter units were variants of MiG-21, 23, 27 and 29 only.

Thus, when more than 80 per cent of the fighters of an air force are of the same origin, those must be flying the most for training and operations also. Moreover, the understanding and spirit of cooperation that Moscow and Delhi developed over the years was somehow completely missed by the West's monumental politico-diplomatic and geopolitical misjudgment in the 1960s and till the 1971 India-Pakistan war and beyond, up to the end of the 20th century.

Obviously, whereas the West missed the opportunity to woo the South Asian giant, Moscow succeeded in receiving Delhi's reciprocal support in ample quantity and quality despite the then Soviet Union's 1989 retreat from Afghanistan.

Regrettably, what the then Prime Minister Indira Gandhi had successfully done pertaining to India's defence, diplomacy and development, none of her successors could sustain it the way it should have been done. The need for fresh ideas to progress with the fast-changing and unfolding global power politics (with the rise and fall of several established nations) by changing one's approach to the IAF was missed by New Delhi.

Putting all eggs in one basket did no good to the IAF's capability. The dwindling fighters in operational squadrons inflicted colossal damage on the Indian airbases, where squadron after squadron ceased operations and professionally trained and competent flight commanders and squadron commanders from squadron leaders and wing commanders upwards were grounded and missed career progression. If there's no machine, there are no men too in the mess, the hangar and on the tarmac. They are redundant at fighter bases.

Indeed, the worst thing that happened to the IAF was that timely replacement of the ageing fleet didn't take place. Several factors played a negative role.

First, there grew a powerful 'import lobby' of various foreign fighter manufacturers of the West. The second was the phenomenal growth of middlemen. The third was a section of the bureaucracy being complacent, with little or no interest in technical matters pertaining to sophisticated aviation; and, finally, one could see an intermittent cold war between the uniformed brass and their civilian counterparts on 'delays' and 'crass procrastination' at the decision-making level.

In the process, the indigenous plan too went wild, with low and slow speed, lacking in a sense of urgency. Chief after chief cried himself hoarse for wherewithal to take on the emerging two- or three-front threat; all in vain.

With little progress in the indigenised fighter programme, import too slowed, owing to conflicting and competing foreign bidders in India's military mart. Thus, by 2005-2006, the number of IAF squadrons had shrunk to 38 (29 of which were MiGs of various types, with the variant 21 leading with 15 squadrons).

Interestingly, the original Moscow-maker of MiG-21 had ceased production long back. The onus now is solely on the Bengaluru-based HAL to repair and refurbish the aircraft.

There, however, was no respite in sight for the IAF when it found in 2010 that its operational squadrons had further dwindled to 37 (with 15 being MiG-21 and nine other MiG variants). The

end result, understandably, was the endless woes of air warriors. It is blood, sweat, toils and tears all the way.

The number of IAF squadrons now stands at a perilous 31, well short of the sanctioned 42 squadrons — with six being MiG-21 Bisons (Military Balance, 2022).

Thus, the reality today is too harsh to be ignored and too demanding for a two- or three-front threat perception, notwithstanding the brave utterances of distraught senior air commanders. They do know in their hearts what they are dealing with. All the more so, when shrill voices of television commentators instantly come up with a readymade solution for the ‘obsolete flying coffin’ through off-the-shelf import of western fighters. India got caught in a web of imports, indigenisation and irreparable loss of flying machines and the consequential loss of lives of men behind the machines.

Yes, once again, a MiG-21 has crashed; but that doesn’t make it a ‘flying coffin’ — after having flown with the fleet for more than 60 years.

Which major country like India would dare to use a fighter for so long? Blame the systemic failure and inherent fault line of competing rivals’ eagerness to have a piece of India’s fighter pie.

<https://www.tribuneindia.com/news/comment/is-iafs-entire-mig-21-fleet-facing-may-day-call-508139>



*Mon, 15 May 2023*

## **HAL, Safran to Start Work on Engines to Power IMRH and DBMRH**

Ahead of Prime Minister Narendra Modi’s visit to Paris in July, design and development work on the helicopter engines under the joint venture between French company Safran Helicopter Engines and Hindustan Aeronautics (HAL) is set to start soon.

In 2022 the two sides had signed an MoU in the presence of Safran Global CEO Olivier Andriès and the top official of state-owned HAL, under which the joint venture is expected meet the requirements of the Indian armed forces as well the future 13-ton Indian Multi-Role Helicopter (IMRH) and its naval variant the Deck Based Multi Role Helicopter (DBMRH). Under this partnership the local defence manufacturing ecosystem in the country will play an important role.

It has been reported earlier both Safran Helicopter Engines and HAL have already inked a workshare agreement for the development of the engine for the 13 tonne IMRH and its naval version Deck-Based Multi-Role Helicopter (DBMRH). Both sides have already discussed and agreed on an equivalent repartition and HAL will participate in the design, development and production of the core engine components. The IMRH is expected to be launched four years from now.

These helicopters as reported by Financial Express Online earlier are for the Indian Army and the Air Force and will have the capability to take off and land 5 km altitude.

And these will replace the ageing Mi series Russian made military helicopters which the Indian Air Force (IAF) will start phasing out by 2028-29.

Also, Helicopter Engines MRO Pvt Limited (HE-MRO) facility has already been inaugurated in Goa which will help in providing maintenance services to more than 1000 Safran-designed helicopter engines.

## **Deck based Helicopter for the Indian Navy**

These helicopters are expected to go on the newly inducted indigenous aircraft carrier.

There are multiple partnerships between HAL and Safran Helicopter Engines already in existence and these include the Shakti engine. This engine powers the HAL built helicopters like the Rudra, Light Combat Helicopter and Dhruv.

Under a 50/50 joint venture between HAL and Safran Aircraft Engines set up last July near the Kempegowda International Airport makes complex piping, which is used mostly for the LEAP engine.

<https://www.financialexpress.com/business/defence-hal-safran-to-start-work-on-engines-to-power-imrh-and-dbmrh-3088881/>

# THE ECONOMIC TIMES

*Mon, 15 May 2023*

## **Ukraine Hails its First Offensive Success in Defence of Bakhmut**

Ukraine's military on Monday hailed recent advances around Bakhmut as its first successful counterattack in the battle against Russian forces fighting for control of the eastern city.

But Kyiv also said the situation in Bakhmut was difficult. It cautioned that Moscow had not changed its goal of capturing the city and was sending assault troops to Bakhmut's outskirts.

The Ukrainian military said last week it had started to push Russian forces back in and around Bakhmut after months of heavy fighting, and Moscow acknowledged that its forces had fallen back north of the city.

"The advance of our troops along the Bakhmut direction is the first success of offensive actions in the defence of Bakhmut," Colonel General Oleksandr Syrskyi, Commander of Ground Forces, said in a statement posted on the Telegram messaging app.

"The last few days have shown that we can move forward and destroy the enemy even in such extremely difficult conditions," he said. "We are fighting with fewer resources than the enemy. At the same time, we are able to ruin its plans."

Kyiv is expected to launch a major counteroffensive soon to try to retake Russian-occupied territory, but Ukrainian officials have indicated that the gains around Bakhmut do not signal that the broader counterattack has begun.

Deputy Defence Minister Hanna Maliar said heavy fighting continued in and around Bakhmut, and that "everything" was difficult there.

"The Russians have not changed their goals. They are sending assault troops to the outskirts of Bakhmut," she wrote on Telegram.

Reuters could not independently verify the battlefield reports.

Moscow, which launched its full-scale invasion of Ukraine nearly 15 months ago, sees Bakhmut as a stepping stone to attacking other Ukrainian cities. Kyiv has said before that keeping up the defence of Bakhmut allows for the military to prepare its expected counteroffensive.

<https://economictimes.indiatimes.com/news/defence/ukraine-hails-its-first-offensive-success-in-defence-of-bakhmut/articleshow/100252651.cms>

## **UK to Give Ukraine "Hundreds" of Air-Defence Missiles and Drones**

Ukraine's President Volodymyr Zelensky arrived in Britain on Monday to meet Prime Minister Rishi Sunak, who pledged "hundreds" of both air-defence missiles and long-range attack drones to fend off Russia's invasion. Zelensky's arrival, confirmed by the UK government, comes after he secured fresh promises of military aid during weekend visits to France and Germany ahead of a widely expected counter-offensive against Russia.

"The UK is a leader when it comes to expanding our capabilities on the ground and in the air," Zelensky tweeted before meeting Sunak at the prime minister's country retreat of Chequers. "This cooperation will continue today. I will meet my friend Rishi. We will conduct substantive negotiations face-to-face and in delegations," he said.

Sunak noted that the talks were taking place in the buildup to a Council of Europe leaders' meeting in Iceland -- which Zelensky will address by video -- and a G7 summit in Japan.

"This is a crucial moment in Ukraine's resistance to a terrible war of aggression they did not choose or provoke," the prime minister said in a statement. "We must not let them down," he said. "The frontlines of (President Vladimir) Putin's war of aggression may be in Ukraine but the fault lines stretch all over the world," he continued. "It is in all our interest to ensure Ukraine succeeds and Putin's barbarism is not rewarded."

At Chequers, Sunak will confirm "the further UK provision of hundreds of air-defence missiles and further unmanned aerial systems including hundreds of new long-range attack drones with a range of over 200 km" (125 miles), the UK statement said.

"These will all be delivered over the coming months as Ukraine prepares to intensify its resistance to the ongoing Russian invasion." The latest shipment comes after Britain last week became the first Western country to offer long-range cruise missiles to Ukraine, with its Storm Shadow rockets.

Britain is the second-largest provider of military assistance to Ukraine after the United States, and has added combat flight training to its programme of help, though not fighter jets.

<https://www.ndtv.com/world-news/uk-to-give-ukraine-hundreds-of-air-defence-missiles-and-drones-4035298>



## **US: Iran and Russia Expanding their 'Unprecedented Defence' Partnership**

The United States said on Monday (May 15) that Russia and Iran are "expanding their unprecedented defence partnership". The Ukraine war prompted the West to impose sanctions on Moscow, and after that, Russia ramped up ties with Iran. Ever since the war started, claims and counterclaims have been made over the use of Iranian drones in Ukraine, but both, Russia and Iran,

have denied the claims as the Kremlin once said that it had no knowledge of its army using such weapons. Meanwhile, Tehran had said that it was ready for talks with Kyiv to clarify the claims.

But US National Security Council spokesman John Kirby told reporters that "we are using the tools at our disposal to expose and disrupt these activities and we are prepared to do more."

US intelligence stated that Russia, one of the world's top military powers, has been obliged to rely on Iran for supplies as it suffers battlefield losses in its invasion of Ukraine.

Kirby highlighted that Moscow needs to acquire more sophisticated unmanned military drones as a key part of the growing cooperation.

He told reporters, "Interactions between Iran and Russia in matters regarding the selling of advanced weapons, especially more advanced UAVs, are now continuing." Kirby added that "this is a full-scale defence partnership that is harmful to Ukraine, to the region in the Middle East, and to the international community". He mentioned that further sanctions would soon be announced.

He said, "We are using the tools at our disposal to expose and disrupt these activities and we are prepared to do more. In the coming days, we will be announcing additional designations against those involved."

During the course of the Ukraine war, the US and Western countries have alleged that Iranian military staff had been deployed in Crimea to assist Russian forces using Iranian-made drones to attack Ukraine. The West slapped sanctions on Tehran in response. In fact, Ukrainian President Volodymyr Zelensky had even said that Moscow's use of drones built in Iran in operations against his nation was a sign of the Kremlin's "military and political bankruptcy".

Now, Kirby made the same allegations, as he said that Iran had delivered more than 400 drones to Russia since August, mainly of the Shahed type. He said that Iran is seeking to buy attack helicopters, radars and Yak-130 combat trainer aircraft from Russia, noting that "in total, Iran is seeking billions of dollars worth of military equipment." He added the United States had not detected "any movement" on ballistic missiles between the two countries.

Meanwhile, Zelensky on a visit to Britain Monday won a promise of "hundreds" more missiles and drones - and said his coveted goal of enlisting Western fighter jets was drawing nearer.

<https://www.wionews.com/world/us-says-iran-and-russia-expanding-their-unprecedented-defence-partnership-592729>

## THE ECONOMIC TIMES

*Mon, 15 May 2023*

### **Poland gets First HIMARS Rocket Systems to Deploy Near Russian Border**

Poland has received the first batch of the US-made HIMARS rocket launchers it has said it plans to deploy in the region bordering Russia, the Polish defence minister said Monday.

"This weapon will be deployed in the northeastern part of our country... its task will be to deter the aggressor," Mariusz Blaszczak told reporters. In March, the ministry said the long-range precision rocket systems would be stationed in the military unit based in Olsztyn, about 80 kilometres (50 miles) from the border with Russia's Kaliningrad enclave. Blaszczak said the HIMARS launchers would "strengthen the Polish army on the eastern flank of Poland and the eastern flank of the North Atlantic Alliance."

Poland, a country bordering Ukraine which it staunchly supports, bought 20 HIMARS from the United States in 2019 and has now received first delivery of the systems.

But Warsaw has said it has negotiated with the United States to acquire more launchers of that type.

"The US Congress has approved the sale of almost 500 launchers to Poland. These launchers will be brought to Poland as soon as possible," Blaszczak said.

"We want to ensure that under this new, negotiated contract, co-production of HIMARS, both launchers and rockets, takes place in Poland. This is the goal we set for ourselves," he added. Poland announced a sharp increase in defence spending in late January to four percent of gross domestic product, with the prime minister saying the country needed to arm itself "faster" in light of Russia's war in Ukraine.

<https://economictimes.indiatimes.com/news/defence/poland-gets-first-himars-rocket-systems-to-deploy-near-russian-border/articleshow/100253030.cms>

## Science & Technology News

# ThePrint

Mon, 15 May 2023

### **We Need to Prepare for the Public Safety Hazards Posed by Artificial Intelligence**

For the most part, the focus of contemporary emergency management has been on natural, technological and human-made hazards such as flooding, earthquakes, tornadoes, industrial accidents, extreme weather events and cyber attacks. However, with the increase in the availability and capabilities of artificial intelligence, we may soon see emerging public safety hazards related to these technologies that we will need to mitigate and prepare for.

Over the past 20 years, my colleagues and I — along with many other researchers — have been leveraging AI to develop models and applications that can identify, assess, predict, monitor and detect hazards to inform emergency response operations and decision-making.

We are now reaching a turning point where AI is becoming a potential source of risk at a scale that should be incorporated into risk and emergency management phases — mitigation or prevention, preparedness, response and recovery.

AI and hazard classification AI hazards can be classified into two types: intentional and unintentional. Unintentional hazards are those caused by human errors or technological failures.

As the use of AI increases, there will be more adverse events caused by human error in AI models or technological failures in AI based technologies. These events can occur in all kinds of industries including transportation (like drones, trains or self-driving cars), electricity, oil and gas, finance and banking, agriculture, health and mining. Intentional AI hazards are potential threats that are caused by using AI to harm people and properties. AI can also be used to gain unlawful benefits by compromising security and safety systems. In my view, this simple intentional and unintentional classification may not be sufficient in case of AI. Here, we need to add a new class of emerging threats — the possibility of AI overtaking human control and decision-making. This may be triggered intentionally or unintentionally.

Many AI experts have already warned against such potential threats. A recent open letter by researchers, scientists and others involved in the development of AI called for a moratorium on its further development.

**Public safety risks** Public safety and emergency management experts use risk matrices to assess and compare risks. Using this method, hazards are qualitatively or quantitatively assessed based on their frequency and consequence, and their impacts are classified as low, medium or high. Hazards that have low frequency and low consequence or impact are considered low risk and no additional actions are required to manage them. Hazards that have medium consequence and medium frequency are considered medium risk. These risks need to be closely monitored.

Hazards with high frequency or high consequence or high in both consequence and frequency are classified as high risks. These risks need to be reduced by taking additional risk reduction and mitigation measures. Failure to take immediate and proper action may result in severe human and property losses.

Up until now, AI hazards and risks have not been added into the risk assessment matrices much beyond organizational use of AI applications. The time has come when we should quickly start bringing the potential AI risks into local, national and global risk and emergency management.

AI risk assessment AI technologies are becoming more widely used by institutions, organizations and companies in different sectors, and hazards associated with the AI are starting to emerge.

In 2018, the accounting firm KPMG developed an “AI Risk and Controls Matrix.” It highlights the risks of using AI by businesses and urges them to recognize these new emerging risks. The report warned that AI technology is advancing very quickly and that risk control measures must be in place before they overwhelm the systems.

Governments have also started developing some risk assessment guidelines for the use of AI-based technologies and solutions. However, these guidelines are limited to risks such as algorithmic bias and violation of individual rights. At the government level, the Canadian government issued the “Directive on Automated Decision-Making” to ensure that federal institutions minimize the risks associated with the AI systems and create appropriate governance mechanisms.

The main objective of the directive is to ensure that when AI systems are deployed, risks to clients, federal institutions and Canadian society are reduced. According to this directive, risk assessments must be conducted by each department to make sure that appropriate safeguards are in place in accordance with the Policy on Government Security.

In 2021, the U.S. Congress tasked the National Institute of Standards and Technology with developing an AI risk management framework for the Department of Defense. The proposed voluntary AI risk assessment framework recommends banning the use of AI systems that present unacceptable risks. Threats and competition Much of the national level policy focus on AI has been from national security and global competition perspectives — the national security and economic risks of falling behind in the AI technology. The US National Security Commission on Artificial Intelligence highlighted national security risks associated with AI. These were not from the public threats of the technology itself, but from losing out in the global competition for AI development in other countries, including China. In its 2017 Global Risk Report, the World Economic Forum highlighted that AI is only one of emerging technologies that can exacerbate global risk. While assessing the risks posed by the AI, the report concluded that, at that time, super-intelligent AI systems remain a theoretical threat. However, the latest Global Risk Report 2023 does not even mention the AI and AI associated risks which means that the leaders of the global companies that provide inputs to the global risk report had not viewed the AI as an immediate risk. Faster than policy AI development is progressing much faster than government and corporate policies in understanding, foreseeing and managing the risks. The current global conditions, combined with



market competition for AI technologies, make it difficult to think of an opportunity for governments to pause and develop risk governance mechanisms.

While we should collectively and proactively try for such governance mechanisms, we all need to brace for major catastrophic AI's impacts on our systems and societies.

<https://theprint.in/world/we-need-to-prepare-for-the-public-safety-hazards-posed-by-artificial-intelligence/1574638/>

## दैनिक जागरण

Tue, 16 May 2023

# स्वदेशी तकनीक से सौर सेल परीक्षण होगा सस्ता व सुगम

जागरण विशेष

अजय चौहान, नोएडा

सौर सेल परीक्षण के लिए आयातित उपकरण पर निर्भर नहीं रहना होगा। केंद्र के विज्ञान एवं तकनीकी विभाग (डीएसटी) के सौर मिशन प्रोजेक्ट के अंतर्गत स्वदेशी उपकरण एमिसोलर तैयार किया गया है। जो सौर सेल परीक्षण को सस्ता और सुगम बनाएगा। इसे डीआरडीओ के पूर्व विज्ञानी डा. वीके जैन के निर्देशन में एमिटी विश्वविद्यालय के विज्ञानियों ने लंबे शोध के बाद तैयार किया है। उपकरण को पेटेंट मिल चुका है और औपचारिकताएं पूरी कर इसे बाजार में उतारने की तैयारी है।

**केंद्र से मिला अनुदान:** डा. वीके जैन बताते हैं कि एमिसोलर से पीवी और इलेक्ट्रॉनिक्स उपकरण निर्माण उद्योगों के साथ अनुसंधानकर्ताओं और विज्ञानियों को भी सहायता मिलेगी। भारत सरकार ने इस प्रोजेक्ट के लिए अनुदान दिया है।

**स्वदेशी तकनीक की जरूरत:** डा. जैन बताते हैं कि सौर सेल की दक्षता माइक्रो रिटि सिलिकान चार्ज वाहक और उनके प्रसार क्षेत्र पर निर्भर करती है। अभी उद्योगों और प्रयोगशालाओं में इसके

उत्पादन लागत कम करने पर ध्यान



डा. वीके जैन

एमिसोलर उपकरण के विकास से जुड़े डा. वीके जैन के अनुसार यदि 100 मेगावाट सूर्य का प्रकाश मिलता है तो 20 मेगावाट स्वच्छ बिजली पैदा होती है। सौर ऊर्जा उत्पादन की लागत कम करने को सौर सेल की दक्षता में वृद्धि करनी होगी या निर्माण तकनीक को सस्ता बनाना होगा। एमिसोलर इस लिहाज से महत्वपूर्ण है। इसकी कीमत छह लाख रुपये तक रहेगी, जबकि विदेशी उपकरण 80 लाख रुपये का आता है।

परीक्षण के लिए हम विदेश की महंगी तकनीक पर निर्भर हैं। वैश्विक स्तर पर सौर ऊर्जा उत्पादन के क्षेत्र में भारत की भूमिका सबसे अहम है। ऐसे में सौर ऊर्जा उत्पादन को ज्यादा से ज्यादा स्वदेशी तकनीक आधारित, सस्ता और सुलभ बनाने की आवश्यकता है। गौरतलब है कि भारत सरकार नवीकरणीय ऊर्जा के प्रयोग पर विशेष जोर दे रही है ताकि वर्ष 2070 तक नेट जीरो उत्सर्जन के लक्ष्य को पूरा किया जा सके।



अतिरिक्त समग्री  
पढ़ने के लिए  
स्कैन करें।

