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Press Information Bureau  
Government of India

Ministry of Defence

Wed, 17 Jan 2024

## Chief of the Naval Staff Inaugurates Revolutionary Clean and Green CO2-Based AC Plant at INS Shivaji-Leap towards Green Technology

Admiral R Hari Kumar, Chief of the Naval Staff, inaugurated the unique CO2 based Air Conditioning plant at INS Shivaji on 17 Jan 24. The AC Plant is first of its kind and is set to replace HFC (Hydro Fluoro Carbons) and HCFC( Hydro Chloro Fluoro Carbons) based air conditioning systems onboard ships. This step is in line with India's commitment towards Kigali Agreement of 2016 to phase down HFC and HCFC based synthetic refrigerants from 2028 onwards and Transcritical CO2 based air conditioning plant is the first step towards it. This technology aligns with the global efforts to combat climate change and supports Indian Navy's initiative towards sustainable green alternatives. This air conditioning plant is equipped with advanced digital control systems and smart technology integration economising manpower for running the plant. The system has been developed in collaboration with IISc, Bangalore, a testimony of channelising the Defence-Academia synergy towards induction of a futuristic technology in the Armed Forces. The success of this technology will not only offer state-of-the-art machinery to the Navy but has the potential for a wider application into the commercial air-conditioning & refrigeration market. The inauguration ceremony was also attended by Cmde Mohit Goel, Commanding Officer INS Shivaji, Prof B Gurumoorthy, CEO, FSID, Indian Institute of Science (IISc) Bangalore, Mr Amit Sharma MD, CEO, Tata Consulting Engineers Ltd and Mr. Arun Mote, Executive Director, Triveni Turbines Ltd, Bangalore.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1997031>



Wed, 17 Jan 2024

## Indian Navy is Aggressively Going after Piracy: Admiral Hari Kumar

Chief of Naval Staff Admiral R Hari Kumar on Wednesday said the Indian Navy is tackling piracy in the Indian Ocean Region (IOR) aggressively, and has increased the deployment of warships in the area.

Speaking to the media at INS Shivaji after the inauguration of a CO2 based air-conditioning plant built indigenously in collaboration with IISc Bangalore, he also said the anti-piracy act has been helpful for the Navy.

The Indian Navy has two operations going on in the IOR and one of them is an anti-piracy operation, Kumar said to a question. “The anti-piracy operation has been going on since 2008 with constant deployment of herd ships to combat piracy. The presence of warships deters the pirates.

Last year, we thought that piracy was almost over, but recently hijacking of an Indian vessel and Indian crew took place. We have increased the deployment and we are now aggressively going after them,” said the Navy chief.

The Maritime Anti-Piracy Act, 2022, has strengthened the Navy’s hands and India is among the few countries that have enacted such a legislation, he added. Multi-pronged efforts are underway on the indigenization front, Kumar said to a question about the push for ‘Atmanirbharta’ or self-reliance in defence procurement.

“I have given a commitment to the national leadership that by 2047, when we aspire to be a developed nation, the Indian Navy will be completely Atmanirbhar. That is the target we have set for ourselves. We have given this commitment and we are working towards it. This implies that all our platforms will largely be indigenous,” he said.

<https://www.financialexpress.com/business/defence-indian-navy-is-aggressively-going-after-piracy-admiral-hari-kumar-3367325/>

## ThePrint

Thu, 18 Jan 2024

### **Navy Agniveers Include over 1,000 Women, First Batch of Female Agnipath Sailors to Board Ships soon**

More than 1,000 women Agniveer sailors have been inducted by the Indian Navy, and several of them are set to be deployed on board ships beginning next month, ThePrint has learnt.

Sources in the defence and security establishment said more than 700 women were part of the first two Agniveer batches. Once the third batch passes out in March, the number will go past 1,000.

The first batch, comprising 273 women Agniveers, will head out to their respective postings based on their profession within the Navy once they complete their shore-based attachment, the sources said.

“Some of these women will then get deployed on board ships as junior-most sailors by the end of February or beginning of March this year,” a source said.

Women sailors will, however, not be deployed on submarines as of now.

On ships, the most junior sailor can be involved in different areas, including gunnery, anti-submarine warfare, communications, operations, electrical and engineering branches, systems controls, and logistics.

They are also required to carry out sentry duties such as basic handling of small arms and firefighting.

When Agniveers pass out of their ab initio training institute — INS Chilka — they undergo a two-week mandatory ship-orientation programme. After this, they are sent to professional training establishments. They are then required to complete the shore-based attachment.

Shore-based attachments are a type of hands-on training that the sailors undergo before being assigned postings. The ones who are not deployed on board ships carry out different shore-based duties.

The second batch of the Navy's women Agniveers is completing its professional training. The third will pass out in March.

### **Women in the Navy**

Agniveers are part of the Agnipath scheme launched by the central government in 2022, where men and women can join the armed forces for a period of four years.

The Indian Navy has inducted women in all branches. As of now, there are 680 women officers in the Navy. Navy chief Admiral R. Hari Kumar, during his annual press conference in December last year, said the force had appointed its first-ever woman officer to take over the command of the warship INS Trinkat, a fast-attack craft based in the western seaboard, as part of its “all roles-all ranks” effort to deploy women in the service.

<https://theprint.in/defence/navy-agniveers-include-over-1000-women-first-batch-of-female-agnipath-sailors-to-board-ships-soon/1928446/>



*Wed, 17 Jan 2024*

## **Republic Day Parade 2024: Navy to Showcase Nari-Shakti, Rising Combat Prowess at R-Day Parade**

The Indian Navy will project its military might and firm resolve to safeguard the nation's strategic interests in the maritime domain at the Republic Day parade, amid growing global concerns over the escalating tensions in the Red Sea. The naval tableau at the parade at Kartavya Path on January 26 will also showcase the Navy's “unwavering” commitment to ‘Nari Shakti’ with an overarching focus on women in all roles and across all ranks, officials said on Wednesday.

The contingent of the Indian Navy will have three women platoon commanders — Lt Mudita Goyal, Lt Sharvani Supreiya and Lt Devika H. For the first time, the Navy will have a mixed composition with 144 young men and women marching down the historic Kartavya path reflecting its commitment towards gender neutrality, the officials said.

The naval tableau will depict the first fully indigenous Carrier Battle Group, comprising aircraft carrier INS Vikrant, her highly capable escort ships Delhi, Kolkata, Shivalik, and Kalvari class submarine besides light combat aircraft as well as advanced light helicopter.

The tableau will also feature multi-band military communications satellite GSAT-7 and Rukmani satellite. Vice Admiral Gurcharan Singh, the Navy's controller of personnel services, said the naval contingent's participation at the parade would not just be a display of military might, but “would also reflect a resolve to safeguard the nation's strategic interests”.

The Vice Admiral told journalists that the tableau will also display the Navy's commitment to ‘Aatmanirbharta’ (self-reliance) in defence as well as its focus on gender neutrality.

At present, the Navy has 680 women officers and it has recruited 1,119 women Agniveers so far. “Our tableau this year encapsulates the narrative of a Navy that is not only safeguarding the maritime frontiers but also shaping a future where self-reliance and the empowerment of every individual irrespective of gender, are paramount,” Singh said.

“It stands as a resounding affirmation of India’s maritime prowess and the inclusive strides taken in the journey towards a self-reliant and equitable nation,” he said. The Navy has already deployed 10-12 warships in the strategic waters including the Arabian Sea following a spate of attacks on commercial vessels in the region as well as Houthi militants targeting various ships.

Singh said the central theme of the naval tableau revolves around ‘Aatmanirbharta’ showcasing indigenous milestones achieved by “Bharat”. As on date, out of 66 ships and submarines currently under construction, 64 are being built at Indian shipyards. “The main portion of the tableau features the first ever completely indigenous carrier battle group (CBG), with INS Vikrant being the strongest symbol of our nation’s vision, forming the core,” the Vice Admiral said.

“As you are aware, the CBG is meant to project maritime power in our area of interest. INS Vikrant would be supported by powerful combatants like Kolkata, Delhi and Shivalik class of ships which are capable of dealing with multi-dimensional threats,” he said.

“Kalvari class submarine would be operating in tandem. This CBG would be supported by ISRO’s Rukmani satellite. Kolkata class ships INS Kolkata, INS Kochi and INS Chennai are now deployed in the Arabian Sea for anti-piracy operations,” he said.

INS Chennai was recently involved in an operation that foiled the piracy attack on merchant vessel MV Lila Norfolk off the Somalian coast. “In the marching contingent, the Navy is parading a mixed composition platoon for the first time, wherein 144 young men and women will be marching down the historic Kartavya Path, shoulder to shoulder epitomising Navy’s commitment towards gender neutrality,” he said.

The naval contingent will be led by Lt Prajwal. “The front portion of the tableau depicts Nari Shakti, emphasising the role of women in the Indian Navy with progressive induction in all ranks and all roles which is unique among all the services,” Vice Admiral Singh said.

“It shall also portray the Indian Navy emerging as a strong and cohesive institution embracing gender neutrality,” he said.

<https://www.financialexpress.com/business/defence-republic-day-parade-2024-navy-to-showcase-nari-shakti-rising-combat-prowess-at-r-day-parade-3367368/>



Wed, 17 Jan 2024

## **The Evolution of Wargaming: Navigating Technological Battlefields**

*By Huma Siddiqui*

Wargaming, a strategic simulation of warfare, has experienced a profound transformation over the years, shaped by technological advancements and shifting geopolitical landscapes. The embrace of technology has been a pivotal force, guiding the migration of wargaming from traditional manual boards to the expansive realm of virtual simulations. This transition has not only enhanced the overall gaming experience but has also enabled a more nuanced understanding of the intangible factors that play a decisive role in the outcome of battles.



In the 20th century, wargaming concepts were predominantly geared towards resolving combat scenarios at the sub-tactical level, focusing on sub-sections, sections, and troop dynamics. However, the surge in computational capabilities has ushered in a new era, allowing for a graduated shift in playability from sub-tactical to strategic levels. “This evolution incorporates sophisticated attributes like the Combat Attrition module, Geographical Information System, and the Live-Virtual Constructive Integrating architecture, providing a more realistic and comprehensive assessment of military engagements,” explain sources in the defence and security establishment.

In the contemporary landscape, warfare is undeniably more technologically driven, and wargames have seamlessly adapted to reflect this reality. According to sources quoted above: “The integration of new-generation weapons such as drones and howitzers, alongside avant-garde technologies like artificial intelligence and augmented reality, underscores the continuous evolution of wargaming to mirror the complexities of modern warfare.”

### **Computer War Gaming & Indian Army**

“The process of developing computer wargames is a meticulous undertaking, with timelines stretching between 24 to 36 months,” said sources. The duration is contingent upon various factors, including the level of participation, the type of simulation employed (be it a detailed simulation or a more simplified look-up table), and the intricacies inherent in crafting a realistic and immersive gaming environment.

### **Who develops Computer War games for the Indian Army?**

Contrary to the notion of in-house development, wargames within the Indian Army involve collaborative efforts with external developing agencies. “While the Defence Research and Development Organization (DRDO) once held a monopoly in this domain, the landscape has diversified, with a growing pool of skilled developers in the open domain and quasi-government enterprises contributing to the development process,” explained sources.

### **However ...**

Although bespoke wargames cater specifically to militaries worldwide, a thriving market exists among hobbyist wargamers. These enthusiasts contribute significantly to the broader gaming landscape. However, according to sources “military-grade wargames, characterized by their intricate complexity, remain less accessible to the general public. Nevertheless, selected locations offer glimpses into this world through simulators, providing a unique opportunity to showcase the relevance of wargaming in understanding the intricacies of modern warfare.”

<https://www.financialexpress.com/business/defence-the-evolution-of-wargaming-navigating-technological-battlefields-3367274/>

# **The Tribune**

*Wed, 17 Jan 2024*

## **Pakistan Navy Operating Close to Iranian Coast, has 5 Warships in Arabian Sea**

Within 10 days of having decided to deploy more warships to patrol the Arabian Sea, the Pakistan navy now has five vessels out at sea, mostly centred around the Strait of Hormuz, the mouth of the Persian Gulf, which is a vital route used by crude and gas-carrying merchant ships.

Sources said the Pakistan navy was operating close to the Iranian coast and also had a ship in the Persian Gulf.

They said the Pakistan navy was far away from the locations of the Indian Navy's unprecedented peace-time deployment of 12 ships in the Arabian Sea.

Since the first week of December, the Indian Navy has ramped up its ship strength from two to 12.

Iran and Pakistan yesterday conducted a naval exercise off the coast of Bandar Abbas in Iran. In a sudden turn of events, Pakistan today recalled its ambassador from Tehran, blaming Iran for a missile strike on a terror camp in Balochistan.

On January 7, the Pakistan navy had said it was increasing its maritime assets at sea in the wake of recent security incidents in the Arabian Sea. It said, "Two or three ships always patrol the areas where Pakistan-bound and international merchant ships ply".

The sources said Pakistan's five warships out at sea were PNS Shamsheer, PNS Aslat, PNS Moawin, PNS Madadgar and PMSS Zhob.

In addition, extensive air surveillance was also being undertaken, the Pakistan navy had said, clarifying that it had not joined any US-led coalition or Operation Prosperity Guardian in the Red Sea. The Pakistan navy said it was protecting Pakistan-bound shipping and international shipping and had "nothing to do with the Hamas and Israel conflict".

"We fully support the Palestinian cause in accordance with the government policy... and are not party to any conflict between Houthis and Israel," the Pakistan navy had said.

Meanwhile, the day-long Pakistan-Iran exercise was a training drill, which included naval tactical manoeuvres, communication and telecommunication check operation, practice of sending and receiving messages in emergency situations at sea, tactical formations and flag and signal practice at sea.

<https://www.tribuneindia.com/news/india/pakistan-navy-operating-close-to-iranian-coast-has-5-warships-in-arabian-sea-582162>



Wed, 17 Jan 2024

## **ChatGPT Maker OpenAI Partners with US Military in Big AI Usage Policy Revamp**

ChatGPT creator OpenAI is working with the US military on a number of projects including cybersecurity capabilities, Bloomberg reported.

OpenAI is developing tools with the Pentagon on open-source cybersecurity software. It is also collaborating with the Defense Advanced Research Projects Agency or DARPA for its AI cyber challenge.

The ChatGPT maker has also held initial talks with the Biden administration on methods to assist with preventing veteran suicide, OpenAI's vice president of global affairs Anna Makanju said at the World Economic Forum in Davos.

Recently, Sam Altman-led OpenAI had removed language in its terms of service while banning artificial intelligence from military applications. Makanju has now described the latest decision as part of a 'broader update' of policies.



“Because we previously had what was essentially a blanket prohibition on military, many people thought that would prohibit many of these use cases, which people think are very much aligned with what we want to see in the world,” she said. But OpenAI maintained a ban on using its tech to develop weapons, destroy property or harm people, Makanju told Bloomberg.

Microsoft Corp., which happens to be OpenAI's largest investor, has been providing several software contracts to the US armed forces and other government branches.

OpenAI, Anthropic, Google and Microsoft are assisting the US Defense Advanced Research Agency with its AI Cyber Challenge to find software that will automatically fix vulnerabilities and defend infrastructure from cyberattacks.

In another development, OpenAI has also come out with a plan to prevent its tool from being misused to spread election-related misinformation as voters in more than 50 countries including India prepare to vote in general elections this year.

In a blog post, OpenAI stated preexisting policies and newer initiatives to prevent the misuse of its wildly popular generative AI tools, AP reported.

The ChatGPT maker said it plans to “continue our platform safety work by elevating accurate voting information, enforcing measured policies, and improving transparency.”

<https://www.hindustantimes.com/technology/chatgpt-maker-openai-partners-with-us-military-in-big-ai-usage-policy-revamp-101705499611945.html>



*Thu, 18 Jan 2024*

## **NATO Needs 'Warfighting Transformation', Top Military Official Says**

A top NATO military official called on public and private actors in the West on Wednesday to prepare for an era in which anything could happen at any time, including fighting a war.

"We need a warfighting transformation of NATO," the chief of the alliance's Military Committee, Dutch Admiral Rob Bauer, said as he opened a two-day meeting of national defence chiefs in Brussels.

He noted that in the past, NATO governments and companies lived in an era in which everything was plentiful, foreseeable, controllable, and focused on efficiency.

Since Russia's invasion of Ukraine in 2022, they should adjust their thinking to "an era in which anything can happen at any time, an era in which we need to expect the unexpected, an era in which we need to focus on effectiveness in order to be fully effective", he said.

His remarks come at a time when military aid is either held up or limited by political wrangling in the United States and the European Union.

Bauer pledged NATO's continued help for Ukraine.

"Ukraine will have our support for every day that is to come, because the outcome of this war will determine the fate of the world," he said.

On Tuesday, Ukrainian President Volodymyr Zelenskiy warned Western hesitation in the backing for Kyiv and fears of an escalation in the war with Russia could prolong the fighting by years.

Last week, German Chancellor Olaf Scholz berated European Union allies over what he called their insufficient support for Kyiv and urged them to ramp up their efforts.

At the same time, he said he was confident the bloc would agree its proposed 50 billion-euro aid package for Kyiv at an upcoming emergency summit on Feb. 1. The EU failed to agree on the deal at an EU summit in December due to opposition from Hungary.

<https://www.reuters.com/world/europe/nato-needs-warfighting-transformation-top-military-official-says-2024-01-17/>

## Science & Technology News



**Press Information Bureau**  
**Government of India**

Ministry of Science & Technology

Wed, 17 Jan 2024

### **Union S&T Minister Dr Jitendra Singh Calls for Finding Indian Solutions to Indian Problems as India Emerges as a Frontline Nation in the Comity of Developed and Scientifically and Advanced Countries**

**Describing India as a bright spot, Dr Jitendra Singh says India of 2024 is ready to take a giant leap and move forward on its ascent of its scientific acumen and its technological prowess**

**At least five major decisions taken in this direction in the recent times, says Dr Jitendra Singh, citing Space reforms, NQM, Geospatial Policy, Anusandhan NRF & NEP2020**

**“We have a political leadership today under PM Modi which has sent a message loud and clear that gone are the days when we waited for others to take the lead and then follow”: Dr Jitendra Singh**

**Dr Jitendra Singh inaugurates the 9th India International Science Festival in Faridabad, Haryana**

Union S&T Minister Dr Jitendra Singh today called for finding Indian solutions to Indian problems as India emerges as a frontline nation in the comity of developed and scientifically and advanced countries.

Addressing the Inaugural Session of the 9th India International Science Festival in Faridabad, Haryana, Dr Jitendra Singh cited three success stories in S&T that have defined India’s emergence in the last decade.

“India is the first country to land on the South Polar region of the Moon, India’s Vaccine success story is cited the world over and the Aroma Mission that has spurred the sprouting of a range of Startups,” he said.

“We have a political leadership today under Prime Minister Modi which has sent a message loud and clear that gone are the days when we waited for others to take the lead and then follow. India of 2024 is ready to take a giant leap and move forward on its ascent of its scientific acumen and its technological prowess,” he said.

Dr Jitendra Singh said, at least five major decisions have been taken in this direction in the recent times.

“Space reforms bringing in PPP model; Anusandhan NRF that will be better than the best; National Quantum Mission that places India in a league of select 6 or 7 countries pursuing Quantum Technology; National Geospatial Policy that is already being used extensively in SVAMTIVA scheme for geomapping properties and agricultural farms; and the National Education Policy, NEP-2020, that has set the young generation free from being prisoners of the aspirations will help fulfill the Viksit Bharat@2047 as envisioned by PM Modi,” he said.

Dr Jitendra Singh said, Prime Minister Shri Narendra Modi has broken taboos of the past by opening the Space sector to public-private-participation. From just 1 Startup in the Space sector in 2014, we now have 199 Space Startups. Over Rs.1,000 crore investment has come in from Space Startups in last nine months of the current financial year from April to December 2023, he said.

“India’s Space economy today stands at a modest \$8 billion, but our own projection is that by 2040 it will scale \$40 billion. But more interesting is that according to some international observers, for example the recent ADL (Arthur D Little) Report mentions that we could have the potential of \$100 Billion by 2040,” he said.

Stating that the "Anusandhan National Research Foundation" will pave the way for a greater PPP model in scientific research, Dr Jitendra Singh said the NRF will catapult us to the league of a handful of Developed nations pioneering new research in new frontiers.

“NRF budget envisions a spending of Rs. 50,000 crore over five years, out of which over 70%, will come from non-government sources, including domestic as well as outside sources,” he said.

The Minister said that the National Education Policy 2020 is something that India was waiting for several decades. The biggest change was renaming the Ministry of Human Resource and Development to Ministry of Education.

“NEP-2020 liberates students from being ‘prisoners of their aspiration’, by allowing switch over or combinations from different streams of studies such as Humanities and Commerce to Sciences and Engineering,” said Dr Jitendra Singh, to the thunderous applause of hundreds of school children.

Stating that most journals describe India as the bright spot, Dr Jitendra Singh said, the children of today are blessed to be the architects of the technology driven Amritkaal.

“If you go by the international yardstick, we are rated No.3 in the world in the Startup ecosystem, we were just 350 (ten years back), and it’s all happened in the last ten years; in the Global Innovation Index we were 81, we’ve jumped 41 places, today we are No. 40 in the world, in the resident patent filling, we were 7thrank in the world, in the network readiness we were 79, today we are 60, these are all world acclaimed yardsticks, in biotechnology, we were 50 Startups, today we are 6,000, we were simply \$10 billion bioeconomy, within eight years we went 8 times more \$80, today we are \$140 billion and in biomanufacturing we are among the first five in the world,” he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1996980>



# Press Information Bureau Government of India

Ministry of Science & Technology

Wed, 17 Jan 2024

## IISF 2023 Inauguration Ceremony

**India has become a Country to attain Global Repute with the Strength of Science, Technology, and Innovation: Dr. Jitendra Singh, Union Minister of State for S&T**

Faridabad, 17 January 2024. “The India International Science Festival 2023 is being celebrated for three key reasons among many others and these three reasons are the successful landing of India’s Chanrayaan-3 on the South Pole region of the Moon; Second COVID Vaccine development by India and Third Aroma Mission.” Dr. Jitendra Singh, Union Minister of State (Independent Charge) for Science & Technology said this during the inaugural ceremony of the IISF 2023 at the Translational Health Science and Technology Institute (THSTI)-Regional Centre for Biotechnology (RCB) Joint Campus, Faridabad today. He further added that India is the first country to make a successful DNA vaccine in a short period of time. We have now reached to the fifth position in the fastest growing economies of the world. India has become a country to attain global repute with the strength of science, technology, and innovation. Hon’ble Minister Dr. Jitendra Singh addressed the huge gathering and focused on the five revolutionary decisions made by the Government of India within a couple of years, namely the Space reforms through the Public-Private Partnerships, National Quantum Mission, Anusandhan-National Research Foundation (NRF), National Geospatial Policy, and National Education Policy (NEP). Dr. Singh also added in his address during the inaugural ceremony of IISF 2023 that for the national development by science and technology, we are now focusing on the Indian Solutions to Indian Problems, Indian Data for Indian Research, Indian Doctors for Indian People, and Public-Private Participation.

17th January 2024 is the first day of the most-awaited mega science festival-that is IISF 2023. Since 2015, after the eight editions of the festival, the ninth edition is more interesting, with everyone excited about the events to be held after the inauguration is done. The big area was filled with people of every age group and different sections of society satisfying the ultimate goal of the IISF. This reflects the “Celebration of Science by All.” This year’s theme is- “Science and Technology Public Outreach in Amrit Kaal.”

Other dignitaries of the inaugural ceremony were Shri Moolchand Sharma, Cabinet Minister of Higher Education, Transport, Mines and Geology, and Elections, Government of Haryana; Prof. Ajay Kumar Sood, PSA to the Gov. of India; Prof. Abhay Karandikar, Secretary, DST; Dr. M. Ravichandran, Secretary, MoES; Dr. N. Kalaiselvi, Secretary, DSIR & DG, CSIR, Dr. Rajesh S. Gokhale, Secretary, DBT; Ms. A. Dhanalakshami, Joint Secretary, DST; Shri Shivkumar Sharma, National Organising Secretary, Vijnana Bharati (VIBHA).

While addressing the event, DST Secretary, Prof. Abhay Karandikar welcomed all the National and International guests coming from 23 countries to the India International Science Festival (IISF) 2023. He said that the festival has become the beacon for the scientific achievements from all over the country. He also explained the importance of IISF 2023 along with the brief introduction of the events scheduled on the four days from 17-20 January 2024 to the audience. He also added that our young students and researchers gets inspired and motivated by the scientific progress our country has made and contribute to make India the global leader.

During the inaugural session, the IISF Programme Guide and IISF News Bulletin's Regional Languages Special Editions were released by the dignitaries. These language editions were brought out in seven Indian languages (Malayalam, Bangla, Haryanvi, Bhojpuri, Hindi, Marathi and Urdu). The Science Media Communication Cell (SMCC) of CSIR-National Institute of Science Communication & Policy Research (NIScPR) has prepared, designed and published these language editions of the IISF News Bulletin.

Shri Moolchand Sharma, Cabinet Minister, Government of Haryana said that country gets progress through the exchange of knowledge and innovative ideas. The India International Science Festival is the right platform for S&T based knowledge sharing.

Prof. Ajay Sood, Principal Scientific Advisor (PSA) to the Govt. of India said that the vision of IISF 2023 is to ensure science not only in the books but accessible to the public in many interesting and intellectual ways. He added that IISF provides extensive opportunities to get a deeper understanding of scientific disciplines through its events and programmes with many verticals of science and technology.

Dr. Shivkumar ji, National Organising Secretary, Vijnana Bharati (VIBHA) India greeted the audience and the other dignitaries present. He emphasised on our Indian tradition and values that has science embedded in them and said that science is a festival. He further stated that the science festival is organised with an aim to think and implement on how science in the labs should reach or become available to the society and be useful to the general public.

All the dignitaries on the dias were presented by the Dr. P.S. Goel, Chairman, Programme Committee, IISF 2023, the cow dung pot and mitti cool water bottle invented by a grassroot innovator justifying one of the mega science event's objective of taking science grassroots innovations to society.

The inauguration ceremony concluded with a vote of thanks by Dr. Arvind C. Ranade, Director, National Innovation Foundation (NIF) India and Chief Coordinator, IISF 2023. The NIF-India, an autonomous organisation of the Department of Science and Technology (DST), Govt. of India is the coordinating and implementing organisation of IISF 2023.

The events scheduled for the first day of IISF 2023 include Student Science Village, Face to Face with New Frontiers of Science & Technology, Science through Games & Toys, Students Innovation Festival – Space Hackathon 2023, State S&T Ministers and Centre and State S&T Secretaries and Officials Conclave, Education for Aspiring India – National Science Teachers Workshop, Young Scientists' Conference, New Age Technology Show, National Social Organisations and Institutions Meet (NSOIM), Science, Technology and Innovation Exhibition, and India International Collaboration followed by a Cultural programme.

The mega science festival will be celebrated from 17-20 January 2024 at the joint campus of the Department of Biotechnology (DBT)-Regional Centre for Biotechnology (RCB) & Translational Health Science and Technology Institute (THSTI), Faridabad (Haryana).

The grand festival of science aims to honour and highlight the scientific achievements in Science, Technology, and Innovation by the country with the primary objective of connecting science with society. The Science Media Communication Cell (SMCC) at CSIR-National Institute of Science Communication & Policy Research (NIScPR) is coordinating and facilitating the media publicity of the India International Science Festival (IISF) 2023. The key objective of the SMCC is to disseminate and showcase R&D breakthroughs and scientific achievements of India on various platforms of media. For more information, please visit <https://niscpr.res.in/> or follow us at @CSIR-NIScPR.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1996983>

Wed, 17 Jan 2024

## **ISRO Develops Second-generation Distress Alert Transmitter for Fishermen**

ISRO has developed a second-generation 'Distress Alert Transmitter' (DAT), incorporating advanced satellite communication and navigation capabilities that allow fishermen at sea to send emergency messages from fishing boats and get acknowledgement in real time.

The DAT has been operational since 2010 and more than 20,000 of them are currently in use, the space agency said. The messages are sent through a communication satellite and received at a central control station (INMCC: Indian Mission Control Centre) where the alert signals are decoded for the identity and location of the fishing boat, according to an ISRO statement.

The extracted information is forwarded to Maritime Rescue Coordination Centres (MRCCs) under the Indian Coast Guard (ICG).

"Using this information the MRCC undertakes Search and Rescue operations to save the fishermen in distress," it said.

Taking advantage of technological developments in satellite communication and satellite navigation, ISRO has improvised DAT with advanced capabilities and features, evolving to Second Generation DAT (DAT-SG).

The DAT-SG has the facility to send back acknowledgement to the fishermen who activate the distress alert from the sea. "This gives him an assurance that rescue (team) is coming to him.

Apart from transmitting distress signals from the sea, DAT-SG has the capability to receive messages from the control centre," ISRO said.

Using this, advance alert messages can be sent to the fishermen at sea whenever there are events of bad weather, cyclone, tsunami or any other emergencies.

Thus, the fishermen will be able to sail back home or go to safe places. Further, the information about Potential Fishing Zones (PFZs) are also transmitted to fishermen using DAT-SG on regular intervals. This helps fishermen get good catch and savings in terms of time and fuel.

DAT-SG can be connected to mobile phones using Bluetooth interface and the messages can be read in native language using an app on the mobile.

"The INMCC has a web-based network management system called 'SAGARMITRA' which maintains a database of registered DAT-SGs and helps MRCCs access the information about boat, and the coordinates of the boat in distress in real time. This helps the Indian Coast Guard undertake Search & Rescue operations at the time of distress, without any time delay," it said.

Secretary in the Department of Space and ISRO Chairman S Somanath inaugurated the DAT-SG in the presence of ICG Director General Rakesh Pal on January 15 at INMCC, ISRO Telemetry, Tracking and Command Network, Bengaluru. The services of DAT-SG have been declared operational on a 24x7 basis, it was stated.

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