PRAJYA

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PARALYMPICS 2024

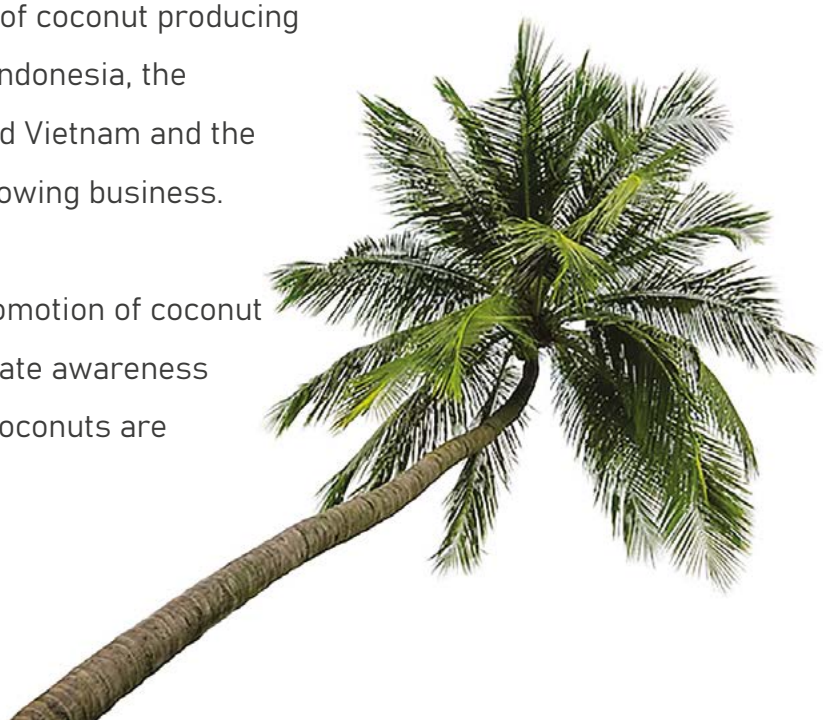
WORLD COCONUT DAY

World Coconut Day is an international day established by the Asian and Pacific Coconut Community (APCC), which is an intergovernmental organisation of coconut producing countries to recognise the importance of coconut.

2nd
September

It is celebrated by the farmers of coconut producing countries like India, Malaysia, Indonesia, the Philippines, Thailand, Kenya and Vietnam and the stakeholders in the coconut growing business.

Various activities related to promotion of coconut consumption and events to create awareness on the benefits of consuming coconuts are organised on the day.



THE PRAJYA TEAM

Published by:
Arya Samaj Charitable Foundation

Editorial Board:

Smt Mali Nandakumar
Educational Consultant

Shri Nandakumar V
Educational Consultant

Smt Nandhini S
Principal | D.A.V. Senior Secondary School, Mogappair

Teacher Contributors:
Smt Ghana Saraswathy M
Smt Manju Aildasani
Smt Meenakshi S
Smt Ramamani N
Smt Sarada Devi Ravutu
Kum Shrivaishnavi R
Smt Silpa Nandakumar
Smt Shubha T R

Independent Contributors:
Kum Anu Narayan
Smt Anuradha V R
Smt Archana Sundar
Shri Bharath
Kum Deepasri
Smt Gaayathiri G
Kum Kavya R
Smt A Laxmi
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Shri Nagarajan R
Kum Pavithra S
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Col Shashidhar M V (Retd)
Smt Shyamala Viswanathan
Shri Sridhar P
Smt Sumathi Ramakrishnan
Kum Sunita D Behera
Smt Uthra Dorairajan
Smt Vaishnavi V

Technical Editor :
Shri Guhaprasath Subramanian

Creative Design :
Shri Ram Manohar R
Sri Hari Digital Ventures P Ltd.
AVG Graphics

COMMENTS & SUGGESTIONS
prajya.magazine@davchennai.org

FROM THE EDITOR'S DESK

"Preparedness is like breathing; if we don't, you perish."

Climate change is a clear and present danger with immense potential to impact our collective future. The **IceNode** project is a major leap ahead in human capability to measure icemelt in some of the hardest-to-reach places on Earth. With further testing and development, the underwater robots will provide valuable data needed to predict how melting ice will affect sea levels in future.

Devastating floods have plagued several states across India with alarming frequency. The newly introduced **FloodWatch India 2.0** app launched by Union Health Ministry is designed to enhance public safety by providing real-time forecasts of flood from 592 monitoring stations across the nation.

Vishanu Yuddh Abhyas was a successful exercise providing important insights for future strategies to enhance India's preparedness and response to zoonotic disease outbreaks. It adopted a coordinated and efficient approach across all relevant sectors.

Living Naturally section provides valuable guidelines to prevent an outbreak of dengue. Ayurveda and Naturopathy offer amazing traditional wisdom to boost our natural immunity and guard ourselves against infectious diseases like dengue.

"We cannot stop natural disasters but we can arm ourselves with knowledge."

Read, reflect and revert with your thoughts and feelings.

We look forward to your support and suggestions.

- Editorial Team

Dear Readers,

There have been requests from quite a few readers for hard copies of Prajya. We understand that quite a high percentage of our young readers keep revisiting some articles, and a handy print version within reach induces one to read more often, highlight things and make notes. This also partly contributes to students spending less screen time. The Prajya team is happy to bring to you the issue in print.

However, there are few things that we want to be careful about:

A. We don't want to print more than what is required and

B. Keep the cost of the print version (plus postage) within reasonable limits.

Please note that the access to free online e-version will continue.

So, it will greatly help us if you could fill in the details in the link provided.

http://bit.ly/Prajya

Happy Reading !

Watch out for the Monthly Prajya Quiz online

Visit https://davchennai.org/publications/prajya-news-magazine/

Content

International Current Affairs

National Current Affairs

Defence updates

General Knowledge

Shri Ramaswamy R

New Leaders across nations

Country (s)	Area (km^2) and ranking	Population (millions)	Language	Capital	Currency (= USD)	Economy (Global Ranking)
Thailand	513120 (51st)	71.7	Thai	Bangkok	Thai Baht (0.03)	Upper middle income (26th)
France	551695 (49th)	68.4	French	Paris	Euro (1.12)	Developed economy (7th)
Algeria	2382000 (10th)	45.0	Arabic and Tamazight	Algiers	Algerian Dinar (0.0076)	Petroleum and natural gas export (50th)

Paetongtarn Shinawatra becomes Thailand's youngest Prime Minister

Thailand is a Southeast Asian country whose unique axial position controls the only land route from Asia to Malaysia and Singapore. Originally known as Siam, Thailand has Asian mainland and a southern peninsular land. During colonial era, Thailand served as a buffer between British Burma and French Indochina and was the only country in the region not colonized by an European power.

Triyampawai, one of the twelve month ceremonies in royal Thai Hinduism, descended from the tradition of *Tiruvempavai*. It forms part of the collection called the *Tiruvasagam*, and the 8th book of the *Tirumurai*, a canonical text of the Tamil Shaiva Siddhanta. The songs form part of the *pavai* ritual for unmarried young girls during the Tamil month of *Margazhi*. The girls would light lamps in the early mornings of *Margazhi* and sing songs in praise of Shiva. The 20 stanzas are sung, one on every day and then followed by the 10 songs of the T*irupalliyezhuchi*. It is believed that such rituals would bring prosperity and a suitable husband.

Paetongtarn (37) hailing from a billionaire family, assumed office on 16th August and became the youngest Thai Prime Minister. She is only the second woman to occupy the position, after her aunt Yingluck who acted as PM between 2011 and 2014. Her father, Thaksin Shinawatra too was PM between 2001 and 2006.

The family's Pheu Thai Party though coming second in the elections held in May 2023, formed ruling coalition after the lawmakers backed by the military blocked the vote winner Move Forward Party (MFP). MFP violated the Constitution when it tried to amend the *lese majeste* law which banned criticism of royal family.

Thailand is a constitutional monarchy where the PM is head of the government and hereditary monarch is the Head of State. The royal family has centuries-old connections with India's culture and heritage. Their Maha Rajguru lineage hails from Kanchi and South India.

Hymns from *Thiruvembavai* are recited during king's coronation ceremonies for many centuries now, the poem written by Tamil Saint Manikavasagar in 9th Century CE.

Michel Barnier to be France's New Prime Minister

France need not have gone to polls till 2027. But the French President Macron suddenly decided to hold elections for their 577 seats Assembly on 30th June and 2nd round on 7th July , even as the grand Paris Olympics awaited inauguration on 26th July . The first round eliminates all candidates who do not secure the support of 12.5% of registered voters and the 2nd round is usually a contest between 2 or 3 and rarely 4 candidates. The main contesting

groups were the rightwing National Rally (NR), centrist Macron's alliance and leftwing National Popular Front (NFP). The final results turned out to be different and has presented the government only with more challenges.

Alliance	2022	2024
National Raly (rightwing)	88	142
Macron's Ensemble (Centrist)	250	161
National Front (leftwing)	163	188

The 2024 elections results gave a hung verdict with no alliance gaining absolute majority. Following months of deadlock President Macron in his powers selected Michel Barnier, who since 5th September is PM of the new government.

The latter is considered rightwing and his appointment triggered nationwide protests by the opposition who want to see a leftwing takeover. Barnier, who had earlier served EU as Brexit negotiator, has challenges of controlling price rise and immigration policy.

France is a veto holding nuclear power of UNSC and an important member of EU. The world always look up with interest any government change in France.

Algerian President Tebboune wins second term with 95% vote

Algeria in Northern Africa lies between Morocco and Tunisia on the shores of the Mediterranean Sea. More than 99% of the population comprises Sunni Muslims. About 82% speak Arab and the rest, native Berber language. The country, which was under French colonial rule from 1830 till 1962 is constitutional semi-presidential republic where the President is Head of State, while the Prime Minister is the Head of Government.

Presidential elections were held in Algeria in September. Out of 24 million registered voters, 11.2 million voted and 9.4 million votes were declared as valid. The results issued by National Independent Authority for Elections (ANIE) gave 95% vote to the incumbent President Tebboune, but the final results tempered down to a more plausible 84%. Still the opposition were unhappy and called the results fraudulent; all parties including the winner alleged irregularities. Even from his earlier rule in 2019, President Tebboune is accused of repression and zero tolerance to dissent.

Smt Sumathi Ramakrishnan

Indo – UAE's landmark Civil Nuclear Energy Agreement

India and the UAE have signed a landmark Memorandum of Understanding (MoU) for civil nuclear cooperation, marking the first such agreement between the two nations. The deal was signed between the Nuclear Power Corporation of India Limited (NPCIL) and the Emirates Nuclear Energy Company (ENEC) during the visit of **Sheikh Khalid bin Mohamed bin Zayed Al Nahyan**, the Crown Prince of Abu Dhabi, to India. This agreement follows the 2015 commitment made during PM Modi's visit to the UAE, where both nations agreed to cooperate on the peaceful use of nuclear energy.

The MoU is the result of years of discussions, including trilateral talks between India, the UAE and France, focused on enhancing energy cooperation. This trilateral format was initiated on the sidelines of the UN General Assembly in 2022 and reinforced through high-level ministerial talks in 2023. The focus has been on promoting collaboration in nuclear and solar energy, with the UAE aiming to expand its investments in nuclear energy as part of its broader energy strategy.

In addition to the nuclear agreement, several other MoUs were signed. A long-term LNG (liquefied natural gas) supply deal was finalized between Abu Dhabi National Oil Company (ADNOC) and Indian Oil Corporation Limited, while another agreement between ADNOC and India Strategic Petroleum Reserve Limited (ISPRL) allows the UAE to increase its participation in India's crude oil storage facilities.

This strengthens India's energy security, building on ADNOC's existing storage agreement in Mangalore since 2018.

Other agreements included a partnership between the Government of Gujarat and Abu Dhabi Developmental Holding Company (branded as ADQ) for the development of food parks, expanding the I2U2 initiative that also involves Israel and the U.S. These deals highlight the growing strategic and economic ties between India and the UAE, particularly in energy, infrastructure and agriculture.

I2U2 is a grouping of India, Israel, the United Arab Emirates and the United States on joint investments and new initiatives in water, energy, transportation, space, health and food security.

Shri Sampath D

PM Modi's world tour

PM Modi also emphasized the goal of making "at least one Made in India food product on every dining table around the world," with India leading in millet production.

PM Modi addressed the ET **World Leaders Forum** in New Delhi and expressed confidence in India's future. He remarked, "India is writing a different success story today," and described the current decade as pivotal for the nation's growth. He highlighted the significant impact of recent reforms on Indian lives and emphasized the dramatic shift from a lack of basic services to widespread digital payments and improved connectivity.

He highlighted India's commitment to green energy, stating, **"Green energy is going to be a pillar in India's growth story and will produce 500 GW of green energy by 2030."**

PM Modi also emphasized the goal of making "at least one Made in India food product on every dining table around the world," with India leading in millet production.

True to his image of visiting various countries to spread goodwill and diplomacy and also ensuing that Indian commercial interests are well taken care of, the Prime Minister made landmark visits to Poland, Ukraine, Brunei and Singapore.

He arrived in the Polish capital in what is seen as the first visit by an Indian prime minister to Poland in nearly half a century. The last visit to Poland was by Prime Minister Morarji Desai in 1979.

Following the Modi-Tusk talks, the two sides unveiled a five-year "Action Plan" (2024-2028) for the India-Poland strategic partnership identifying a range of areas including defence, trade, agri-tech, energy, green technologies, infrastructure, pharmaceuticals and mining for cooperation. The Prime Minister also thanked Poland for facilitating the evacuation of Indian students from Ukraine after the conflict began in 2022.

Later PM Modi visited Ukraine and presented four **BHISHM (Bharat Health Initiative for Sahyog Hita & Maitri)** Cubes to the Government of Ukraine. President of Ukraine Volodymyr Zelenskyy thanked our Prime Minister for the humanitarian assistance. The Cubes will help in expeditious treatment of the injured and contribute to saving precious lives.

Each BHISHM Cube consists of medicines and equipment for the first line of care for all kinds of injuries and medical situations. It also includes surgical equipment for a basic Operation Room that can manage 10-15 basic surgeries per day. The Cube has the capacity to handle about 200 cases of diverse nature in emergency situations such as trauma, bleeding, burns, fractures etc. It can also generate its own power and oxygen in limited amounts. A team of experts from India has been deployed to provide initial training to the Ukrainian side to operate the Cube.

Then PM Modi visited Brunei and landed in Brunei Darussalam - the first ever bilateral trip by an Indian PM to the Southeast Asian nation - at the invitation of Sultan Haji Hassanal Bolkiah.

His visit to Brunei signified a deeper strategic alignment between the two countries. As China's influence grows in the region, countries like Brunei are seeking to diversify their international partnerships, and India is a natural partner given its democratic values, its policy of non-interference and its emphasis on a rules-based international order. Strengthening ties with Brunei thus allows India to engage more effectively with ASEAN as a whole and to advocate for a collective approach to dealing with China's maritime ambitions.

Later PM Modi visited Singapore during the second leg of a two-nation trip to South-East Asia.

The Singapore leg of the visit was marked by agreements on semiconductors, digital technologies, health and skill development. PM and his newly elected Singaporean counterpart Lawrence Wong witnessed the exchange of the Memorandum of Understanding on an **India-Singapore Semiconductor Ecosystem Partnership**. Given the critical importance of semiconductor chips in virtually everything from missiles to mobile phones and from cars to computers, the pact with Singapore has great geo-strategic and geo-economic importance.

First female government spokesperson for Iran

DO YOU KNOW ?

Three women have been appointed to key positions in the President Masoud Pezeshkian Cabinet:

- **Shina Ansari is the Deputy President and Head of the Department of Environment. She is an expert in environmental services with a PhD in Environmental Management from Science & Research University.**
- **Farzaneh Sadeq Malvajard has been confirmed as Iran's Roads and Urban Development Minister, making her the second woman to hold a ministerial position since the 1979 Islamic Revolution.**
- **Elias Hazrati, a former member of the Iranian Parliament, is the new Chairman of the Government's Information Council.**

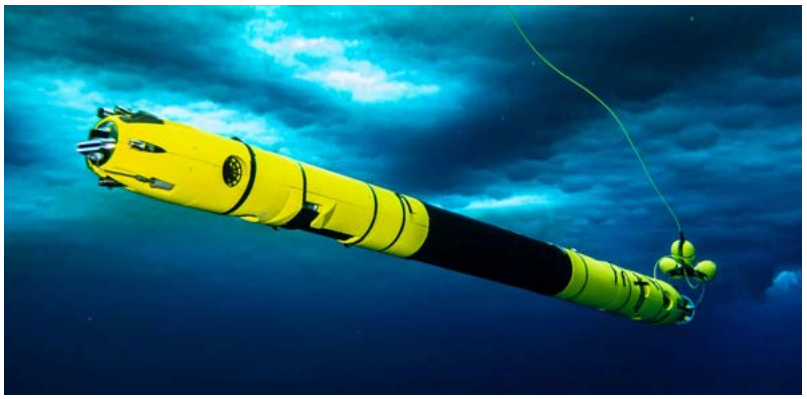
In a historic first, at the suggestion of Iranian President Masoud Pezeshkian and with the approval of the Cabinet of Ministers, **Fatemeh Mohajerani** was appointed as the first female government spokesperson in August 2024. As spokesperson, Mohajerani will be responsible for gathering and disseminating information regarding the Cabinet to the media.

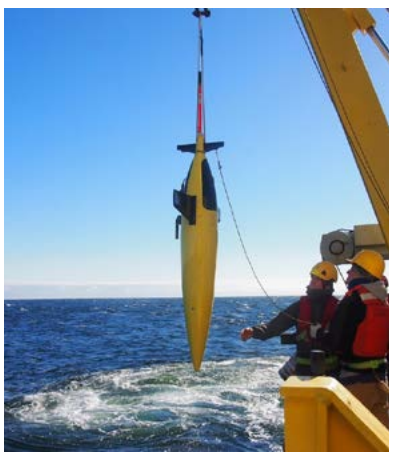
54-year-old Mohajerani was born in the city of Arak in 1970. She obtained her Doctorate of Business Administration from the Edinburgh Campus of Heriot-Watt University in Scotland. During the government of Hassan Rouhani, Mohajerani held the position of Head of the Technical and Vocational Training University of Shariati, which is an institution specifically for female students. She was named the Head of the Center for Brilliant Talents by then-Education Minister Seyyed Mohammad Bat'hai in 2017 and has held other positions in the Education Ministry too.

This is the latest appointment of a woman to a senior position. Pezeshkian administration has indicated appointing more women in the government.

Smt Archana Sundar

Under-water robots to combat climate change





NASA's Jet Propulsion Laboratory is developing a fleet of autonomous robots called **IceNode** to explore the hidden depths of Antarctica's ice shelves. These robots will venture beneath the miles-thick ice to measure the rate of melting, providing crucial data for understanding the impact of climate change on sea level rise.

The Antarctic ice sheet holds the potential to raise global sea levels by an estimated 200 feet if it were to melt completely. Scientists need accurate melt rates to improve computer models predicting sea level rise. However, the treacherous conditions and inaccessibility of the Antarctic ice shelves make it difficult for humans to conduct research in these areas.

IceNode is designed to overcome these challenges. The robots will be equipped with sensors to measure the temperature, salinity and flow of ocean water beneath the ice shelves. They will also be able to map the grounding zone, where ice meets the ocean and land.

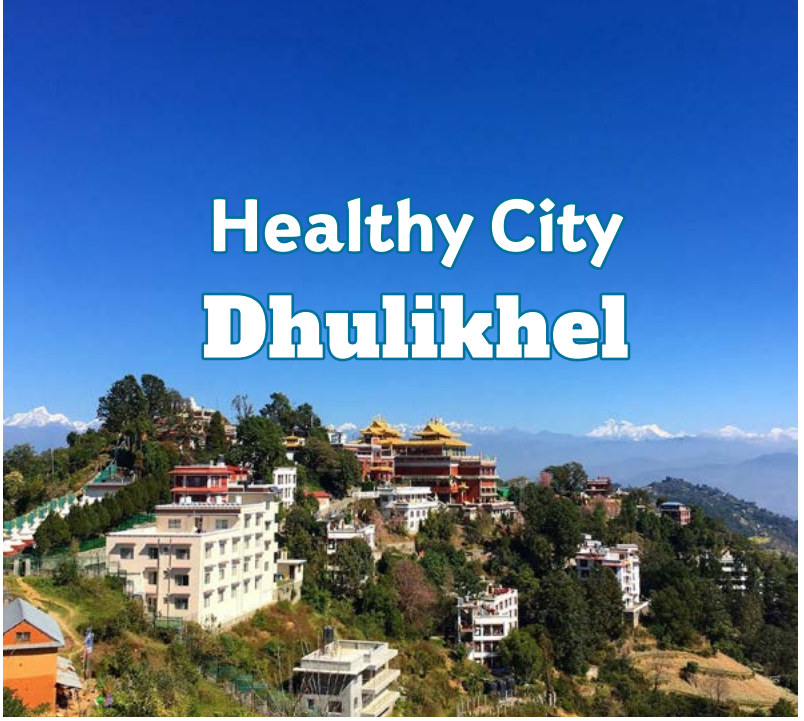
The IceNode fleet will operate for up to a year, collecting data and transmitting it via satellite. This data will help scientists understand how climate change is affecting the Antarctic ice sheet and how it may contribute to sea level rise in the future.

In addition to its scientific mission, IceNode also represents a significant technological advancement. The robots are being designed to operate autonomously in one of the harshest environments on Earth. They will need to withstand extreme temperatures, high pressures and corrosive salt water.

The development of IceNode is a collaboration between scientists, engineers and technicians from around the world. **It is a testament to the power of human ingenuity and our ability to explore the unknown.**

IceNode is a promising project with the potential to make a significant contribution to our understanding of climate change. **It is a reminder that even in the face of daunting challenges, human innovation can help us find solutions to the problems we face.**

Healthy City Dhulikhel



Smt Laxmi A

World Health Organisation (WHO) has declared Dhulikhel municipality of Kavrepalanchok district as Nepal's first 'healthy city' and second healthiest city in Asia. It is located at 1,550 metres altitude on the Eastern end of the Kathmandu Valley. The municipality is awarded USD 5,000 for implementing various programmes under the Healthy City initiative. This municipality has been monitored by WHO since 2021 and finally declared as Nepal's healthiest city.

Indicators for evaluation by WHO

- Citizens' access to health and their participation in health policy-making.
- Political commitment to health, nutrition and child health.
- Innovative health initiatives like tuberculosis-free and nutrition-friendly programmes.
- Dhulikhel Municipality initiated a campaign to become a healthy city since 2014.

DO YOU KNOW ?

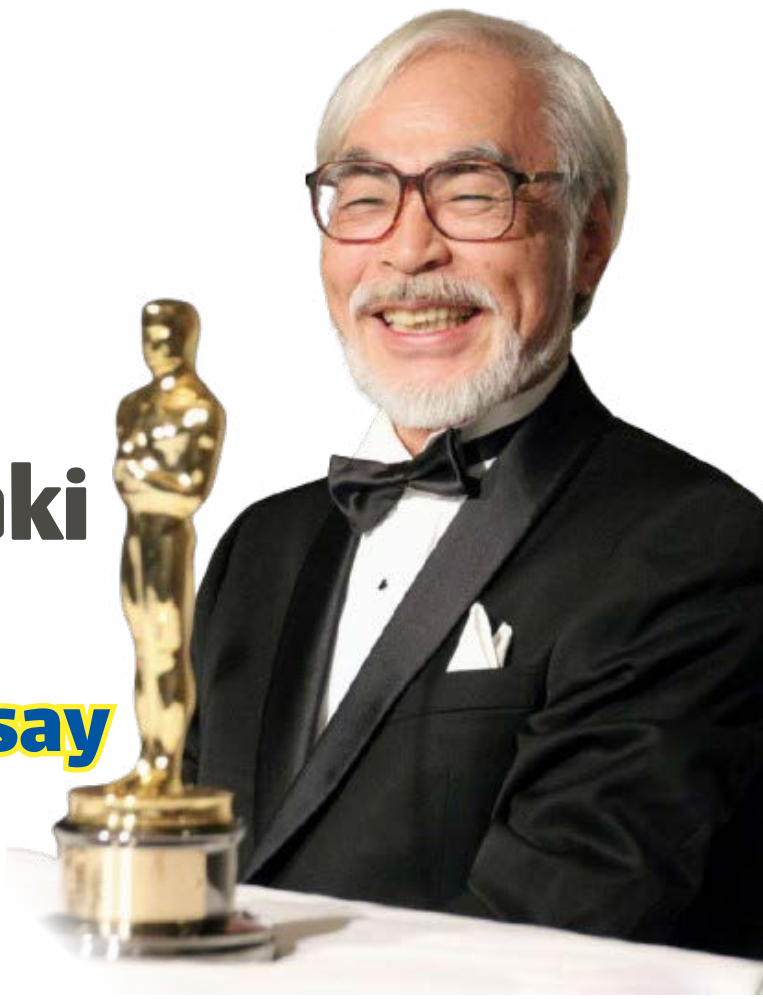
This news comes amidst reports of Nepal being the third most polluted country in the world, based on satellite-derived particulate matter 2.5 data. Dhulikhel scored 65.48 points on various indicators for healthy cities, joining the WHO Healthy City Network.

Key achievements

- Formed 69 Healthy City community level committees.
- Established psychosocial counselling centre in Ward 7.
- Expanded mental health services in all health posts.
- Initiated Hypertensive Care Cascade Initiative (BKHCCI) for prevention of non-communicable diseases including hypertension.
- Organized 34 different types of mobile health camps focusing on marginalized communities.
- Initiated TB free municipality and implemented various activities to screen, diagnose and treat the cases.
- Initiated Health Dashboard to inform about the important information to community people.
- Established breastfeeding corner inside the territory of the municipality office.
- Initiated nutrition programme for pregnant and postnatal mothers.
- Initiated school health programme in different schools.
- Conducted training programmes for health workers to develop their capacity to provide quality health services.
- Conducted road safety training to representatives, health workers and community people.
- Conducted mental health and counselling training to FCHVs (Female Community Health Volunteers).

Shri Mrithyunjay GN

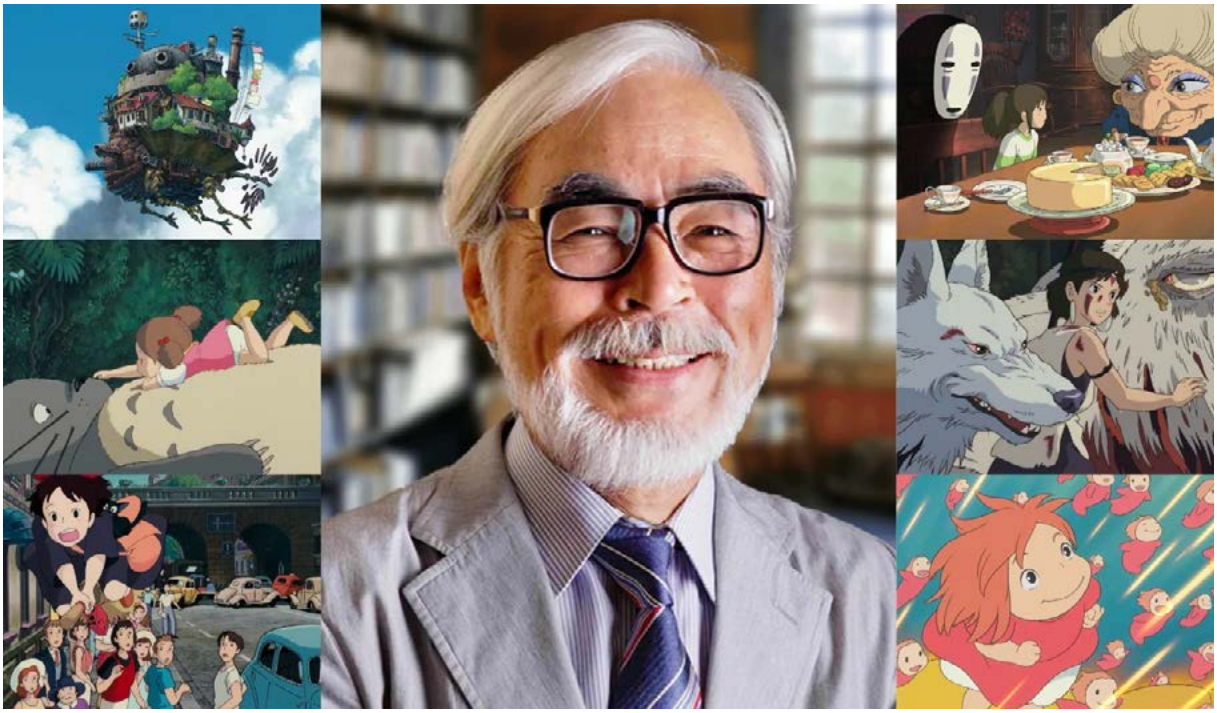
Hayao Miyazaki gets Ramon Magsaysay Award



A young boy meets an old powerful wizard who gives choice to remake the world he is from and build it into something perfect, without suffering or evil, or to be a part of the imperfect one he is from, flaws and all. The boy looks at the old man and says "I am a product of this imperfect world. If you were to ask me to make a perfect world, I would not know how, for I have no idea what perfection is." Saying this the boy walks away from the wizard, choosing to go back to his imperfect world.

Hayao Miyazaki was born to the director of Miyazaki Airplane, a manufacturing company that built parts for Zero fighter planes that were used in World War II.

Miyazaki grew up with an immense love for flying that is apparent in virtually all of his works.



From the clear blue skies of ***Porco Roscoe*** (1992), the dystopian skies that Nausicaä takes flight in the ***Valley of the Wind*** (1984) and the war torn skies that rain down death in ***Grave of the Fireflies,*** Miyazaki's love for the sky is second only to his anti-war sentiment.

It is these sentiments that he primarily chose to share with his audiences through his work, for you see the young boy from the story in the beginning is none other than Miyazaki himself and while he did not have the power to create a perfect world, what he did have was the ability to tell stories of people who constantly struggled to make the world around them a better place.

Miyazaki has had an indelible impact on the world of animation. Often considered the Godfather of Japanese animation, he has made movies that appeal to a wide variety of audiences both Eastern and Western, and more importantly, fundamentally dismissed the notion that animation is a form of entertainment for children. It is no surprise then that in September 2024, he was awarded the Ramon Magsaysay Award for excellence in animation.

The Ramon Magsaysay Award is a prestigious Asian award given to individuals who have made significant contributions to society in various fields. Established in 1957 in honour of the third Philippine president, Ramon Magsaysay, the award is administered by a non-profit foundation. The award is considered one of the highest honours in Asia and is given to individuals who have demonstrated outstanding leadership, compassion and commitment to their communities.

At 83, this titan of the animation industry now lives a quiet life in Japan, having entrusted his legacy to his animation house, ***Studio Ghibli,*** which he founded with his close friend Isao Takahata. What we can learn from such a visionary is that what matters is a good story and how it is told irrespective of the medium it is told through.

"I think it is vain to think that we can confront problems of the adult world through animated films," he once said. "That is not to say that films aimed at children are easier; they can be even more difficult because they deal with origins and fundamentals. But I think these are concepts that are especially suited to animation. I want to depict the reality of present-day children in Japan—including their desire—and make films that will inspire heartfelt enjoyment. This is something fundamental, something we should never forget."

Indian companies leapfrog into

TIME Magazine's World's Best Companies 2024

The TIME magazine has brought out its list of world's best companies recently. The list has 1000 companies and APPLE tops the list. The evaluation is based on multifaceted analysis that is done comprehensively and objectively. One notable feature this year is that there is significant recognition to Indian companies, which is an indicator to their growing influence globally.

Evaluation criteria

The analysis is done across three key parameters:

- **Employee satisfaction:** Factors like work conditions, salary, equality recommendations and overall company image are evaluated. The survey was conducted on 1, 70, 000 participants across 50 countries.
- **Revenue growth:** The focus was on companies with revenues in excess of USD 100 million in 2023 and the growth was measured from 2021 to 2023.
- **Sustainability:** The data was sourced from Statista's ESG (Enviroment, Social and Governance) database and targeted research. Evaluation was based on standardized ESG metrics.

Highlights of 2024 for India

This year 22 enterprises of Indian origin, have made it to the list of 1000 best companies of the world.

Compared to the fact that there were only 8 Indian companies in the list, last year, this is a significant jump.

HCL Tech has been ranked highest among the India headquartered companies. It is ranked 112 in the global list. From that perspective it is a small setback, as last year the highest ranked Indian company, Infosys, was ranked 64 in the Global list. This year there are no Indian companies in the Top 100. The rank of the Indian companies ranges from 112 to 993 this year.

However the companies that find a place on the list are from diverse sectors which indicates India's economic diversity:

Technology - HCL Tech, Infosys and Wipro.

Banking - Axis Bank, SBI, ICICI, Kotak Mahindra and Yes Bank.

Manufacturing - Larsen & Toubro, ITC and Hero Motorcorp

Energy - NTPC Limited

Automotive - Motherson, Bajaj and MRF

Conglomerates - Mahindra Group, Adani Group and Reliance Industries.

The list of Indian companies certainly demonstrates the strength of the IT and the Banking sector of India. The large conglomerates demonstrate the industrial power, strength and diversity.

Areas for improvement

While 22 companies finding their way into the list is significant, there is enough room for many Indian companies to get into the list. The focus should be on innovation, employee satisfaction and sustainability. On all the three fronts there is enough activity happening currently and they are bound to yield results in the near future.

Future outlook

The 2024 list of the TIME magazine throws the spotlight on the international recognition for Indian businesses and India's increasing relevance in the global economy. The Indian companies now have a benchmark to aspire for and to become well rounded enterprises and be among the best in the world. With the overall efforts on enhancing our capabilities in the areas of innovation and sustainability, Indian companies are certain to get ranked among the top 100 in the world.

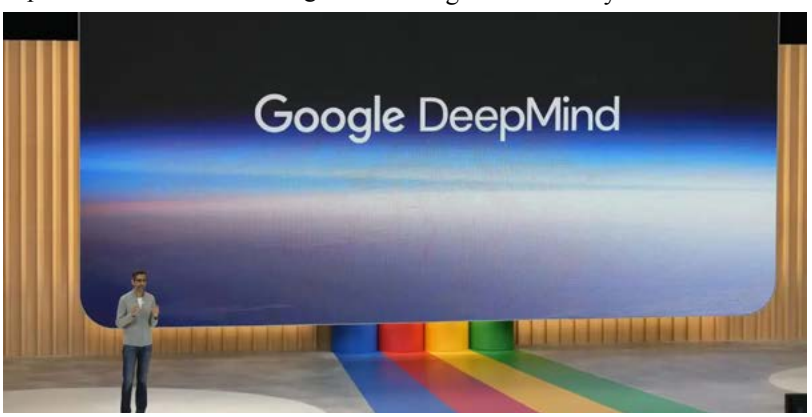
How many and how soon is the moot question. We need to wait for at least one more year to know that!

Shri Mrithyunjay GN

Morni Google DeepMind

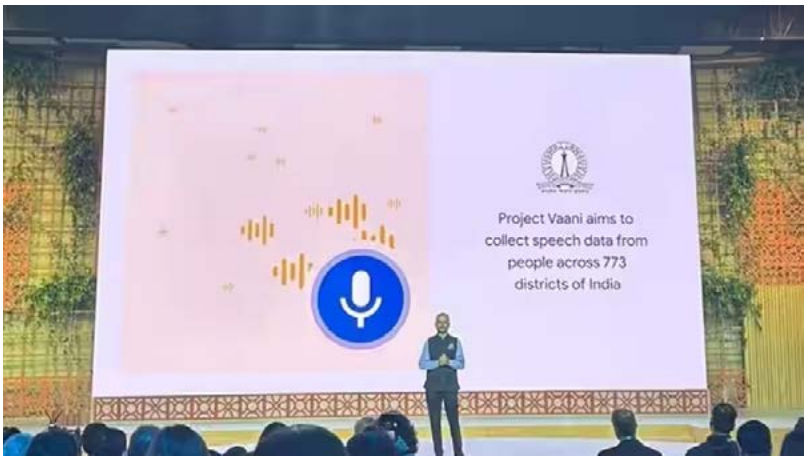
Google DeepMind artificial intelligence research lab has embarked on an ambitious project. One that aims to make communication across multiple Indian languages possible. Named **Morni** (Multimodal Representation for India)**,** this initiative aims to create AI models capable of understanding and preserving 125 Indian languages and dialects.

Demis Hassabis, CEO of DeepMind while discussing their mission statement said, "We are committed to using AI to solve some of the world's most pressing challenges, including preserving cultural heritage and promoting linguistic diversity."



Morni is designed to recognize many Indian languages, especially those spoken in rural areas that have limited online representation. This is truly a big step forward as it can help remove the digital disparity that is often seen between languages spoken by a large number of the population and other regional ones.

“India has 22 scheduled languages, which are viewed as official languages. But in our work, we are targeting over 100 Indian languages, because we find that there are 60 Indian languages which have over a billion speakers and over 125 languages that have over a lakh speakers each,” said Manish Gupta, Director at Google DeepMind, Google India.



Morni is focusing on two key areas: language modeling and speech recognition. By developing AI models that can understand and generate text in multiple languages, Google DeepMind aims to enhance machine translation - where text can be translated with accuracy without having to use language experts, thereby making it more accessible. Morni also aims to improve text summarization and content creation.

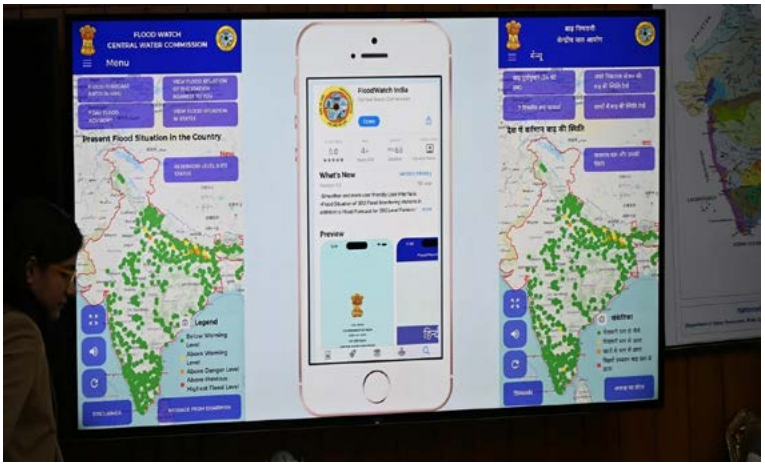
Similarly, speech recognition models will enable users to interact with computers and devices using their native languages. This will make accessing information much easier for people who do not know English or Hindi.

One of the most significant challenges in developing AI for Indian languages is the lack of high-quality training data. To overcome this hurdle, Google DeepMind has launched ***Project Vaani***, a collaborative effort with the Indian Institute of Science and ARTPARK. This project involves collecting and transcribing vast amounts of speech data from speakers across India.

Morni has the potential to revolutionize the way Indians interact with technology. By making AI accessible in their own languages, Google DeepMind is on a path to empower individuals and communities to participate more fully in the digital age. The cherry on the top, however, is the fact that the project could contribute to the preservation of endangered languages and dialects.

As Morni continues to evolve, it is expected to have a profound impact on various sectors, including education, healthcare and e-commerce. By breaking down language barriers, AI can enable more people to access information, services and opportunities.

Kum Sunita D Behera



FloodWatch India 2.0 App launched

On 17th August 2024, Union Jal Shakti Ministry launched FloodWatch India 2.0, a mobile app designed to provide real-time flood alerts and help improve public safety.

It builds on the previous version that provided information on flood forecasts on 200 level forecast stations. The current version provides information at additional 392 flood monitoring stations, taking up the total number of stations to 592. Further, this version also provides additional information regarding the storage positions of 150 major reservoirs in the country. This shall help in better understanding of the possible flood situation in their downstream areas.

HIGHLIGHTS

1. **Real-time alerts:** Users can get live updates on the likelihood of floods in their region. The app provides flood forecasts up to 7 days in advance.
2. **Interactive map:** A user-friendly map shows the status of rivers and possible flood-prone areas, allowing users to track conditions in real-time.
3. **Simple notifications:** The app sends out clear notifications about the water level in rivers and other important details that can help people take precautions in time.
4. **24/7 monitoring:** The app constantly monitors flood conditions across India, keeping users informed at all times.

The app is part of Indian government's broader efforts to use technology for disaster preparedness and reduce flood damage risk. It has been developed by the Central Water Commission (CWC), with data sourced from the National Water Informatics Centre (NWIC).

The user-friendly app presents all the information in 2 languages - English and Hindi – and is available in readable and audio broadcast format. The app also provides flood forecast at the nearest location where users can check the flood situation at the nearby station on the home page itself.

By making this tool available to the public, GoI aims to increase awareness of flood risks, especially in vulnerable areas. The app is available on Android and iOS platforms, ensuring more people can access vital flood information to stay safe during the monsoon season.

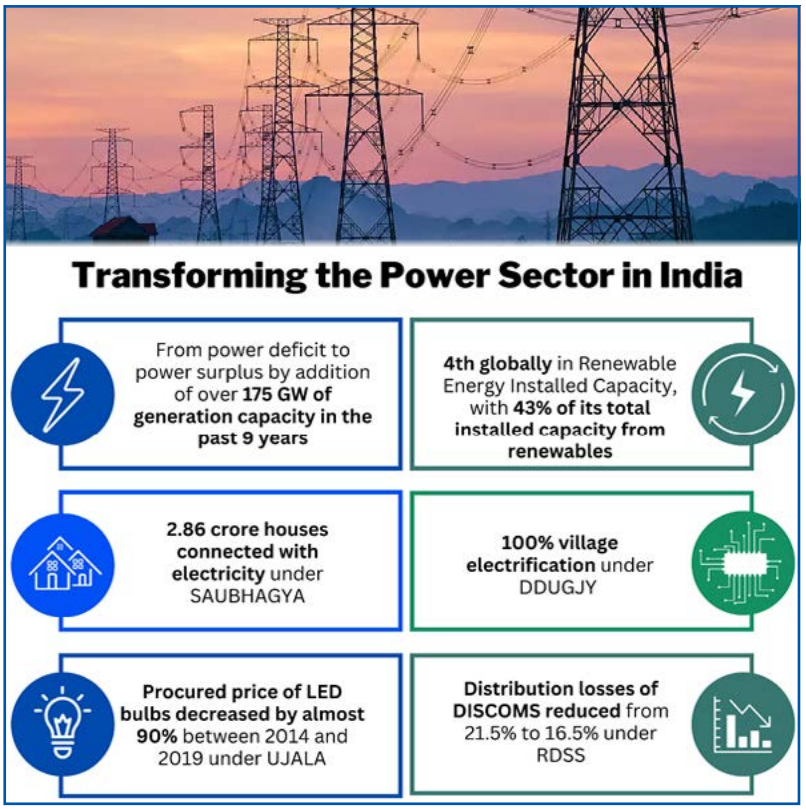
Smt Shyamala Viswanathan

Online platforms launched for power sector efficiency

Electricity is the key driver for the ongoing economic activities in the country. India is the third largest producer of electricity in the world. Coal is the country's top energy source (Coal and lignite account for the majority (about 60%), while hydroelectric accounts for slightly under a quarter (approximately 22%).

Furthermore, the demand for power is also increasing. Therefore completion of ongoing schemes and a thermal project in time-bound manner is extremely critical.

The Union Energy Minister Manohar Lal Khattar had recently launched three online platforms to increase the efficiency and



DO YOU KNOW ?

- Gujarat (52.9 GW) leads in power generation capacity, followed by Maharashtra (46.1 GW) and Rajasthan (40.1 GW).
- Korba is called power hub of India due to its Coal reserves and Industrial base for multiple thermal based power plants.
- India now has a total installed capacity of over 170,000 megawatts, up from just 1,362 megawatts when the country gained independence in 1947.
- The Calcutta Electric Supply Corporation (CESC), established in 1899, was India's first electricity-producing corporation.
- In 1905, Delhi became the world's first diesel power plant. In 1902, Mysore built the first hydroelectric power station.
- About 60% of India's electricity industry was privately held when the country gained independence. Currently, the government owns around 80% of the installed capacity. Private firms own only 12% of the capacity.

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF POWER

transparency of the power sector namely,

- Portal for online monitoring of projects - Thermal (PROMPT)
- Disaster Resilient Infrastructure for Power Sector (DRIPS)
- Hydro Power DPR

What are the portals expected to achieve?

PROMPT Portal - Allows real-time tracking and analysis of thermal power projects under construction in India. It aims to identify and resolve issues causing delays in these projects efficiently.

DRIPS Portal – Aimed at monitoring survey and investigation activities of hydroelectric projects and pumped storage projects, it provides real-time updates on hydroelectric and pumped storage projects under construction, improving coordination and management.

Hydro Power DPR is designed to quickly identify and address power disruptions caused by natural disasters like cyclones, earthquakes and floods. It connects nodal officers from various power sector departments and agencies to facilitate swift power restoration in affected areas.

Kum Pavithra S

On 22nd August 2024, Government of India launched the Create in India Challenge - Season One to boost innovation in the country's media and entertainment sector. This initiative, introduced by the Ministry of Information and broadcasting, features 25 unique challenges across various creative disciplines such as animation, gaming, filmmaking and music in partnership with leading industry associations and organisations. These challenges aim to showcase India's growing talent on a global stage and contribute to the expanding creator economy.

Information and Broadcasting Minister Ashwini Vaishnaw announced this challenge as part of preparations for the upcoming World Audio Visual and Entertainment Summit (WAVES). The event is expected to attract global attention and provide a platform for creators from diverse backgrounds. He emphasized the potential of the creative economy to generate significant employment and how it aligns with PM Modi's vision of "Design in India, Design for the World."

Finalists from each of the 25 challenges have the opportunity to present their best work at WAVES. Selected winners will gain access to renowned international platforms relevant to their field. The winner of the animation filmmaking competition will receive support to complete their project in collaboration with major production houses and showcase their work at prestigious festivals like the Annecy Animation Film Festival.

Prasar Bharati will host the competitions - Battle of the Bands and The Symphony of India, aiming to blend modern music with traditional folk. Dancing Atoms (a boutique animation development studio) is organising the Animation Filmmakers Competition to nurture emerging talent and elevate Indian animation.

The India Game Developer Conference (IGDC) will host a Game Jam to ignite creativity in game development, while the Internet and Mobile Association of India (IAMAI) will run an AI Art Installation Challenge, encouraging innovation in art through AI.

This initiative is a crucial step in supporting India's creative talent, providing them with the tools and opportunities to excel internationally.

Smt Anuradha V R

Deen Dayal SPARSH Yojana

The Department of Posts, Ministry of Communications has launched a Scholarship Scheme called Deen Dayal SPARSH Yojana to award children from Standard VI to IX. It is proposed to award annual scholarships to students who have good academic records and are also pursuing philately as a hobby.

The objective of the scholarship is "to promote philately among children at a young age in a sustainable manner that can reinforce and supplement the academic curriculum in addition to providing a hobby that can help them relax and de-stress".

- 920 scholarships will be awarded to students at the PAN India level.
- Every postal circle will give a maximum of 40 scholarships to 10 students each from Standard VI, VII, VIII and IX.

Benefits

- The amount is ₹ 6,000/- per annum @ ₹ 500/- per month.
- India Post Payments Bank (IPPB) / Post Office Savings Bank (POSB) will ensure that the scholarship is paid to awardees on a quarterly basis (Rs. 1500/- each quarter) after getting the list from each Circle.

Renewability

- Selections to the scholarship would be for one year.
- An already selected student can apply for the scholarship next year provided he/she fulfils other criteria.

Mentor

Every prospective school which participates in the competition would be assigned a philately mentor to be chosen from amongst the renowned philatelists.

The philately mentor would help in the formation of the School level Philately Club, providing guidance to young and aspiring philatelists on how to pursue the hobby and also helping the aspiring philatelists with their philately projects etc.

Eligibility

- The applicant should be a regular student of Class VII –IX, studying in a recognized school in India.
- The school should have a Philately Club and the candidate should be a member of that club. In case the School Philately Club hasn't been established, a student having his own Philately Deposit Account may also be considered.
- The applicant should have scored at least 60% marks or equivalent grade/ grade point in the recent final examination.

From where to get stamps

Mint stamps are available at Philatelic Bureaux and counters in the designated post offices, details of which are available at the nearest Head Post Office. Besides this, local philatelists and pen-friends across the country and abroad may be of great help.

DO YOU KNOW ?

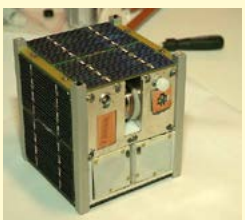
The Indian philatelic history began with the introduction of paper postage in India in 1852. Before that copper tokens were introduced for payment of postage in 1774. Their use was, however, not found to be very convenient and need was felt for some other token of pre-payment. With the success of Penny Postage in England, Sir Bartel Frere, the Commissioner of Sind introduced paper stamps for his province in 1852. These stamps, known as Scinde Dawk, were round in shape and were issued in three variations – embossed on white paper without colour, on white paper in blue and on vermilion wafers. They were withdrawn in October 1854 on the introduction of the regular India postage stamps though their use continued for quite some time.

Kum Anu Narayan

RHUMI-1

First ever Mobile Hybrid Rocket

A **CubeSat** is a square-shaped miniature satellite (10 cm × 10 cm × 10 cm — roughly the size of a Rubik's cube), weighing about 1kg.



Pico-satellites are at a mass below 1 kg, implemented by use of modern miniaturization techniques. They offer interesting potential to perform in-orbit tests of software and hardware components in a cost efficient way.

A Tamil Nadu-based start-up has made history by successfully launching India's first reusable hybrid rocket, named RHUMI 1. The rocket was launched from a mobile platform in Thiruvidandhai, near Chennai, on 24th August with the goal of advancing research on global warming and climate change. This launch marks a major step forward for India in the field of sustainable space exploration.

RHUMI 1 rocket is a unique hybrid rocket that uses a combination of generic fuel and a hybrid motor, which means it can use both liquid and solid fuels. One of the most exciting features of this rocket is that it is reusable, meaning it can be recovered and launched again, reducing the cost of future missions. RHUMI 1 also includes an electrically triggered parachute deployer, which helps it land safely back on Earth after its mission.

Although it was originally scheduled for launch at 7:00 a.m., the team launched the rocket at 7:25 a.m. due to strong winds and gusts. The rocket was launched at a 70-degree angle instead of the planned 89 degrees to ensure its safe journey into space.

The primary goal of the RHUMI 1 mission is to contribute to research on global warming and climate change. The rocket carried three CUBE satellites that were designed to monitor and gather important data on various atmospheric conditions. These include cosmic radiation intensity, UV radiation, and air quality. Such data is crucial for scientists to better understand the environment and how it is changing due to factors like pollution and global warming.

In addition to the CUBE satellites, the rocket also deployed 50 Pico satellites. These smaller satellites are tasked with

investigating different atmospheric factors, such as accelerometer readings, altitude and ozone levels. This data will provide scientists with a clearer picture of how the atmosphere behaves and changes, allowing for more informed decisions on how to protect the environment.

RHUMI 1 was developed by Space Zone India, a Chennai-based aerospace technology company. Space Zone India is focused on offering affordable, long-term solutions for space exploration; their reusable hybrid rocket is a major step towards making space missions more sustainable and cost-effective.

Founder and CEO of Space Zone India, Anand Megalingam, led the mission, with guidance from Mylswamy Annadurai, former Director of ISRO's Satellite Centre and the project director of India's Moon Mission "Chandrayaan."

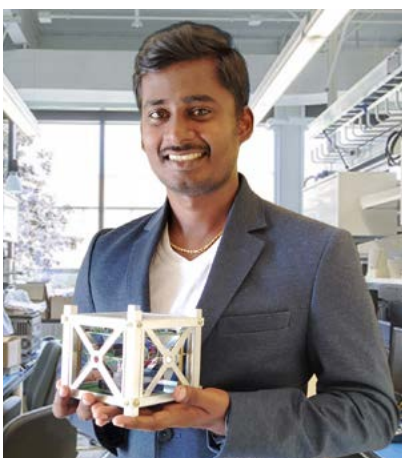
Space Zone India's efforts are also supported by the Martin Group of Companies, which has contributed to the mission through its Corporate Social Responsibility (CSR) initiatives. The Martin Group's involvement highlights the importance of private companies working with start-ups to drive innovation in space technology.

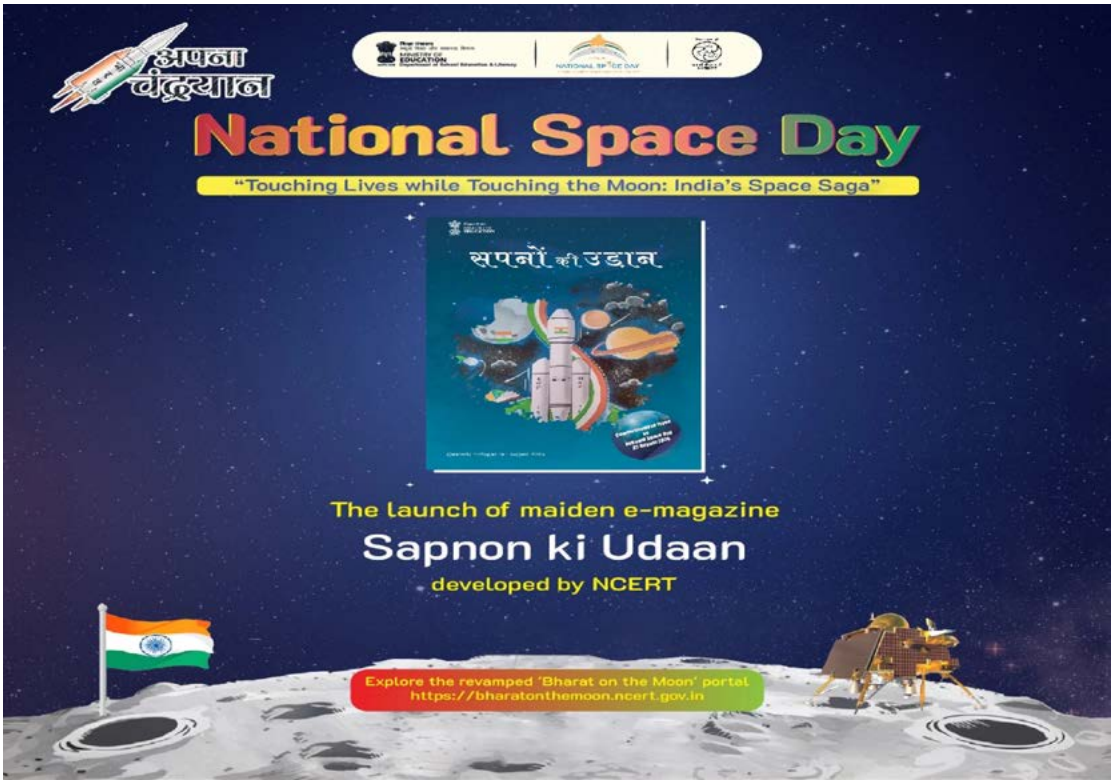
Anand Megalingam shared the importance of this mission, stating, "India is rapidly emerging as a global leader in space innovation, consistently launching groundbreaking missions that push the boundaries of what is possible. As our nation advances in this crucial sector, the need for sustainable and cost-effective solutions becomes more pressing. Mission RHUMI 2024 is a direct response to this need."

The success of the RHUMI 1 rocket launch paves the way for future missions aimed at studying environmental and atmospheric conditions. With its ability to carry satellites that monitor climate change, RHUMI 1 is a promising tool in the fight against global warming.

As Space Zone India continues to develop more innovative and sustainable space technologies, India is positioning itself as a leader in the global space industry, pushing the boundaries of what is possible while keeping environmental concerns at the forefront.

This mission shows that space exploration can be both groundbreaking and sustainable, helping to create a better future for everyone.





India celebrates National Space Day with launch of *'Sapnon ki Udaan'* E-Magazine

On India's first-ever National Space Day, an exciting new e-magazine called *Sapnon ki Udaan* was launched to inspire students across the country. Union Education Minister Dharmendra Pradhan led the virtual launch, making the event accessible to people all over India. The magazine is a blend of science, creativity and education, with the goal of encouraging young learners to dream big and explore the world of space and science. *Sapnon ki Udaan* includes a variety of content such as poetry, essays, stories, anecdotes and riddles.

What makes it special is that students, teachers and parents from all across India contribute to the magazine. This collaboration allows the magazine to represent a wide range of voices and perspectives, making it fun and engaging for everyone.

Space-themed content

The theme of the first issue of *Sapnon ki Udaan* is space. This theme was chosen to celebrate the one-year anniversary of Chandrayaan-3's historic landing on the moon's South Pole. This incredible space mission captured the imagination of people all over India and is now being used to inspire young students to think about science, space exploration and the universe.

How to access the magazine

Sapno ki Udaan is currently released quarterly (every three months), but the plan is to make it a monthly magazine in the future. You can read the magazine online through the NCERT website, making it easy for anyone with internet access to enjoy.

Supporting education and science

Minister Pradhan explained that *Sapno ki Udaan* is part of India's National Education Policy 2020, which aims to make education more accessible and prepare students for future challenges. The magazine encourages scientific thinking and creativity, helping students get ready for the global challenges of the 21st century.

A collaborative effort

The creation of *Sapno ki Udaan* was a team effort. It involved collaboration between the Department of School Education and Literacy, Ministry of Education and NCERT (National Council of Educational Research and Training). This teamwork is expected to bring lasting benefits to the educational community in India.

In summary, *Sapnon ki Udaan* is more than just a magazine—it is a tool to inspire students to explore, learn and dream about the future, especially in the field of space and science. By combining creativity and scientific inquiry, this magazine is set to make a big impact on education in India.

Kum Kavya R

Indian Health Ministry's initiatives

"With these new kits, it will just take us 40 minutes to get the results instead of having to wait one or two hours when using traditional methods."

RT-PCR -Real-time reverse transcriptase-Polymerase chain reaction is a laboratory technique that analyses genetic sequences by making multiple copies of them. It is one of the most used tests for COVID-19.

India develops indigenous M-Pox detection RT-PCR kit

On 27th August, the Central Drugs Standard Control Organisation (CDSCO) approved the manufacturing of the IMDX Monkey pox Detection RT-PCR Assay. **Siemens Helthineers** has developed India's home-grown monkey pox detection RT-PCR kit to battle the public health emergency of international concern. The new strain of monkey pox virus, Clade I, is considered to be highly transmissible and has higher mortality rates. This is a critical advancement in the fight against the monkey pox and a significant achievement for our "Make in India" initiative.

"The IMDX Monkey pox Detection RT-PCR assay is a molecular diagnostic test that targets two distinct regions in the viral genome, spanning both clade I and clade II variants of the virus. This ensures thorough detection across various viral strains, providing comprehensive results," said Hariharan Subramanian, Managing Director, Siemens Healthcare.

The RT-PCR kits will be manufactured by the company's molecular diagnostics manufacturing unit in Vadodara, which has a production capacity of one million tests per annum. With these new kits, it will just take us 40 minutes to get the results instead of having to wait one or two hours when using traditional methods. The tests also fit seamlessly into existing lab workflows with standard PCR setups, eliminating the need for new instruments.

Clinically validated by the Indian Council of Medical Research-National Institute of Virology, Pune, the assay boasts 100% sensitivity and specificity. These advanced testing kits tailored to combat monkey pox will help

India battling this disease and prioritising prompt and precise detection that can truly make a difference in saving lives.

Vishanu Yudh Abhyaas: A mock drill on pandemic preparedness

As part of the National One Health Mission (NOHM), a comprehensive national mock drill, "Vishanu Yuddh Abhyas" (Virus war exercise), was conducted in Ajmer district of Rajasthan from 27th to 31st August 2024, to assess pandemic preparedness and response to zoonotic disease outbreaks.

A mock zoonotic disease outbreak scenario was created to simulate a real-world outbreak. The drill was structured around two key components: investigation and identification of the virus responsible for the mock outbreak; and actions initiated to control the spread of illness across human and animal populations.

This exercise was aimed at evaluating the readiness and response of the National Joint Outbreak Response Team (NJORT), composed of experts from human health, animal husbandry and wildlife sectors. This exercise is first-of-its-kind and garnered appreciation from Union Health and Family Welfare Minister J P Nadda.

The response of the district and state teams, directed by NJORT, was found to be mostly prompt and appropriate, with some areas requiring further improvement. The exercise on the whole was a grand success and will shape our future healthcare strategy.

स्वास्थ्य एवं परिवार कल्याण मंत्रालय
MINISTRY OF HEALTH AND FAMILY WELFARE
सत्यमेव जयते

● **A clade is a group of organisms including a common ancestor and all of its descendants. Clades are also known as monophyletic groups and represent unbroken lines of evolutionary descent.**

Smt Gaayathiri G

Indigenous Oral Cholera Vaccine

Cholera is an infectious disease spread by ingesting contaminated food or water, and while it often causes mild symptoms or none at all, serious cases cause acute diarrhoea and can kill within hours, if untreated. It is still a major global health problem, affecting mainly people living in unsanitary conditions and who are at risk for outbreaks of cholera.

During the past decade, outbreaks are increasingly reported from more countries. From the early killed oral cholera vaccine, rapid improvements in vaccine development occurred as a result of a better understanding of the epidemiology of the disease, pathogenesis of cholera infection and immunity.

Recently, vaccine maker **Bharat Biotech International Ltd** launched **Hillchol** (BBV131), a novel single-strain oral cholera vaccine (OCV) it has developed under licence from **Hilleman Laboratories** (funded by Merck, USA and Wellcome Trust, UK).

The rollout assumes significance amid a shortage of OCVs that exists globally. At present, there is only one manufacturer supplying OCVs worldwide and a shortage of around 40 million doses annually. Global demand for the vaccine exceeds 100 million doses annually.

Bharat Biotech has established large-scale manufacturing facilities in Hyderabad and Bhubaneswar with a capacity to produce up to 200 million doses of Hillchol. Of this 45 million doses capacity has been established in Hyderabad, while the rest would be in Bhubaneswar, where the vaccine maker is setting up a 'big facility'.

The company has been licenced by the Drug Controller General of India to market the vaccine manufactured at the Hyderabad facility. This approval from the country's regulator is important as it gears up to seek pre-qualification for the vaccine from World Health Organization (WHO) as well as work with international organisations and vaccine alliances such as GAVI.

With the OCV yet to form part of the national vaccination campaign in India, the company initially would like to ship the products made at its Hyderabad facility to other countries. **Hillchol is a two-dose vaccine — administered orally on Day 0 and Day 14 — and suitable for children older than one year.** It will be available as a single-dose respule and should be stored between 2°C and 8°C. Hillchol is presented in a mono-multidose format.

- **A killed vaccine or an inactivated vaccine uses a killed version of a pathogen to protect against disease. The pathogen is grown in culture, then killed to destroy its ability to cause disease.**
- **Pathogenesis of a disease describes how it develops, progresses and either persists or is resolved.**
- **Respule is a small plastic container with a liquid which is put into a machine called a nebuliser. This machine turns the medicine into a fine mist which you breathe in through a face mask or mouthpiece.**

Smt T R Shubha

Samudra Pratap

Indigenous pollution control vessel

India is the 3rd largest importer of crude oil and chemicals, and receives large volumes of oil through ships. Oil, if spilled, poses inherent risks to the maritime zones of India and the connected coastlines housing large coastal populations, maritime ecosystems, tourism industries etc. So, it is crucial to address this issue.

Indian Coast Guard, cognizant and prepared to counter the threats already has three Pollution Control Vessels (PCV) **Samudra Prahari, Samudra Paheredar, Samudra Pavak** in its fleet stationed at Mumbai, Visakhapatnam and Porbander, Gujarat respectively.

Samudra Pratap is India's first indigenously designed and built pollution control vessel (PCV) for the Indian Coast Guard (ICG) fleet. The vessel is first of the two PCV's being built by **Goa Shipyard Limited** (GSL) for a cost of ₹583 crores. The PCV will help the Indian Coast Guard respond to oil spills in India's Exclusive Economic Zone (EEZ) and beyond.

Features

- **Length - 114.5 m**
- **Width -16.5 m**
- **Displacement - 4,170 tons**

It has side-sweeping arms to contain oil spills, an advanced radar system to detect oil spills and facilities to store and recover oil. It can recover oil at a rate of 300 tons per hour. It will be manned by 14 officers and 115 sailors.

Samudra Pratap is a testament to India's shipbuilding capabilities and demonstrates that Indian shipyards can produce advanced pollution control vessels.

It is also the first indigenously designed and built Hybrid Sea going ship (uses eco-friendly propulsion systems) in India.

The PCV project of GSL boasts of 60% and more indigenous content fuelling skill development and employment generation for local industry and MSME's.

Smt Ramamani N

India sets a new standard in Paralympic Games 2024

Indian athletes secured a record-breaking 29 medals—7 gold, 9 silver and 13 bronze—marking a new pinnacle in India's Paralympic history.

At the 2024 Paris Paralympics, Indian athletes secured a record-breaking 29 medals—7 gold, 9 silver and 13 bronze—marking a new pinnacle in India's Paralympic history and highlighting the nation's growing prominence on the world stage. The official games started in Rome in 1960 with 400 athletes from 23 countries.

India's debut and early years at the Paralympics

The nation first participated in the Paralympics in 1968 in Tel Aviv, Israel with a delegation of 10 athletes. They did not win any medals, but it marked the beginning of India's journey on the global Paralympic stage. In 1972 at the Heidelberg Games in Germany, para-swimmer Murlikant Petkar won India's first gold in the 50m freestyle swimming event, setting a world record time of 37.331 seconds.

After the victory in 1972, India faced interruptions in Paralympic participation, skipping the 1976 and 1980 Games. The country returned in 1984, winning four medals. The next success came in 2004 at the Athens Games, with Devendra Jhajharia winning gold and Rajinder Singh Rahelu earning a bronze.

Era of transformation (2012-2020)

From 2012 to 2020, India's Paralympic history experienced remarkable growth. It began with Girisha N Gowda's silver at the 2012 London Paralympics, followed by four medals at the 2016 Rio Paralympics and culminated in

Mariyappan Thangavelu	Gold	Men's High Jump F42
Varun Singh Bhati	Bronze	Men's High Jump F42
Devendra Jhajharia	Gold	Men's Javelin Throw F46
Deepa Malik	Silver	Women's Shot Put F53

an impressive 19-medal success at the 2020 Tokyo Paralympics.

2012 London Paralympics

Girisha N Gowda won India's only medal at the 2012 London Paralympics, securing a silver in the Men's High Jump F42 category. His accomplishment brought pride to the nation amidst tough competition.

2016 Rio Paralympics

The 2016 Rio Paralympics were a significant event for the Paralympic Movement, with record-breaking TV audiences and over 2.1 million spectators. India won a total of four medals, including gold in the Men's High Jump F42 and Men's Javelin Throw F46, and a silver in the Women's Shot Put F53.

2020 Tokyo Paralympics

India had its hitherto best performance, winning a total of 19 medals, including 5 gold, 8 silver and 6 bronze. Standout performances included Avani Lekhara winning gold and bronze in shooting, Sumit Antil winning gold in javelin throw, and Pramod Bhagat and Krishna Nagar winning gold in badminton. India finished 24th in the overall medal standings.

The 2024 Paris Paralympics: A memorable milestone

India's participation in the Games was its most successful to date, with 84 athletes competing in 12 sports. The athletes' outstanding performances resulted in winning 29 medals, securing the 18th place in the overall medal tally. This achievement represents a significant milestone for Indian para-sports and demonstrates the country's growing impact on the global stage.

From humble beginnings in 1968 to record-breaking achievements in Paris, this journey reflects remarkable growth, determination and triumph. Government initiatives like **Khelo India** and **TOPS (Target Olympic Podium Scheme)** have empowered these athletes, enabling them to redefine their place on the global stage.

The 2024 Games will be remembered as a defining chapter that inspired millions and set a new standard of excellence for India's future Paralympic endeavours.

DO YOU KNOW ?

In 1948, Dr. Ludwig Guttmann organised the Stoke Mandeville Games, featuring 16 injured servicemen and women in archery. This event laid the groundwork for the Paralympic Games, providing a platform for athletes with disabilities to showcase their abilities globally.

Kum Kavya R

Indian Air Force launches Comic Book series

On 28th August, the Indian Air Force launched a 32-page comic book titled **"Heroes of the Indian Air Force—Vol. I."** It was released by the Air Chief Marshal, VR Chaudhari, Chief of the Air Staff, Indian Air Force (IAF). He envisioned depicting the heroic narratives of the Air Force's role in various wars and the nation's history through the comics, which has come true today.

Anubhav Khanduri, General Manager of the National Film Development Corporation of India, and his team played a key role in the design and development of the book.

The first volume features two stories: '**Find your calling**', which tells the inspiring tale of Arjan Singh, who became the first Marshal of the Indian Air Force; and '**Battle of Boyra**', a gripping narrative of a significant battle fought during the 1971 Indo-Pak war.

Commando comics were very popular in the 1960's and 70's. Be it Commando Comics or Indian War Comics, both revisit war heroes and stories of their valour. To make the experience more engaging for the readers, the comics are illustrated from the soldier's or pilot's point of view. Similarly, the comics released by IAF illustrate the events through the pilot's eyes.

"By telling these stories in a format that is accessible and entertaining, we hope to connect with the younger generation. The medium of comics can foster a sense of duty and aspiration. It is a call of action for the youth to join the forces," said Group Captain Rajat R Tamhane.

The book also gives out information about career choices in the Indian Air Force and the associated eligibility criteria. It is a free resource for circulation among the target audience of young children. A PDF version of the book will also be available for free sharing on digital media.

75 years of Supreme Court of India

Shri Bharath

The Constitution of India came into force on 26th January 1950 and the Supreme Court of India was officially established on 28th January 1950. It was housed in the Parliament building at the same place from where the Federal court functioned from 1937 to 1950.

A two day national conference on District Judiciary was conducted by the Supreme Court of India (SCI) on 31st August and 1st September 2024 at the Bharat Mandapam, New Delhi.

To commemorate 75 years of the establishment of SCI a postage stamp and a coin was released by PM Modi at the inaugural function, and the President of India Draupadi Murmu unveiled the flag and insignia of SCI at the valedictory function. Union Law Minister, the Chief Justice of India and over 800 participants from the District Judiciary across India attended function and the conference.

The flag coloured in navy blue and the insignia were designed by the National Institute of Fashion Technology, Delhi. The insignia features the following :

Dharma Chakra

The "wheel of Dharma" is based on the Saranath Lion Capital which was created by Emperor Ashoka in the 3rd Century BCE. This is also featured in the Indian National flag.

Supreme Court building

At the centre, insignia has the Supreme Court building.

The constitution of India

The book of the constitution of India which is the guiding spirit of the Republic of India.

Mahabharata Vakyam

The motto of the SCI ***"Yatho Dharmasthatho jayah"*** which translates to **"where there is Dharma, there is victory"** written in the Devanagari script is inscribed in the flag.

This encapsulates justice and righteousness that the Supreme Court strives to uphold.

Flags and insignias have utility in symbolizing values and principles. The flag and insignia of SCI symbolize justice and democracy. While the Supreme Court of India has stood the test of time and acquitted itself extremely well, over the past couple of decades there have been some signs of our justice system moving slightly away from our cultural and civilisational moorings and values. Indian democracy and justice system will get rejuvenated if this 75th year marks the beginning of a course correction towards aligning with the spirit of Dharma.

"Dharmo vishvasya jagatah pratishthaa"

(Translation: Dharma is the foundation of the universe.)

– Mahanarayana Upanishad

Smt Sandhya Nair

IIT Delhi's Abu Dhabi Campus

Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, the Crown Prince of Abu Dhabi, opened the Indian Institute of Technology (IIT) Delhi Abu Dhabi campus. It is the first-ever full IIT campus outside India.

Significance

This is part of a larger vision, known as the **Vision Document**, which was launched in February 2022 by PM Modi and UAE President Sheikh Mohamed bin Zayed Al Nahyan. This document highlights education as a key area for stronger cooperation between India and the UAE. IIT Delhi Abu Dhabi is a platform for innovation, cultural exchange and economic growth, improving deeper ties between India and the UAE.

There are 52 students, a mix of Indian,Emirati and international students who have enrolled in two important undergraduate programmes which have been designed to align with global technological trends and meet the needs of the region:

- Computer Science & Engineering
- Energy Engineering.

Through a multidisciplinary approach that integrates engineering, environmental science and policy, students will explore renewable energy sources, energy storage technologies and sustainable energy systems, contributing to a greener and more sustainable future.

Admissions process

Students were selected for these courses through two different methods:

- **JEE Advanced Exam** which is the regular method used in India to get into IITs.
- **Combined Admission Entrance Test (CAET)**: This is a new exam specifically for international students.

This dual method ensures that the campus attracts a diverse range of students while maintaining the high standards that IIT is known for.

Postgraduate Programmes

The first Master of Technology (M.Tech) programme, focusing on Energy Transition and Sustainability has been introduced.

Globalisation of Indian education

The establishment of IIT Delhi Abu Dhabi is a significant step in spreading Indian higher education across the world. It shows India's ability to share its academic expertise internationally. This partnership between India and the UAE strengthens educational and knowledge exchanges, helping to develop skilled human resources.

Future prospects

The campus is expected to expand and offer more specialised programmes that meet both regional and global demands. IIT's presence in the UAE is expected to boost the country's knowledge economy and help with its goals of economic diversification.

Shri Mrithyunjay GN

Vishvasya

Blockchain Technology Stack launched

On 4th September 2024, Ministry of Electronics and Information Technology (MeitY) launched a service that will offer Indian business something completely unique bringing about additional safety and security in an increasingly online world.

S. Krishnan, Secretary of MeitY launched the Vishvasya-Blockchain Technology Stack to offer Blockchain-as-a-service with a geographically distributed infrastructure designed to support various Indian made block chain based applications.

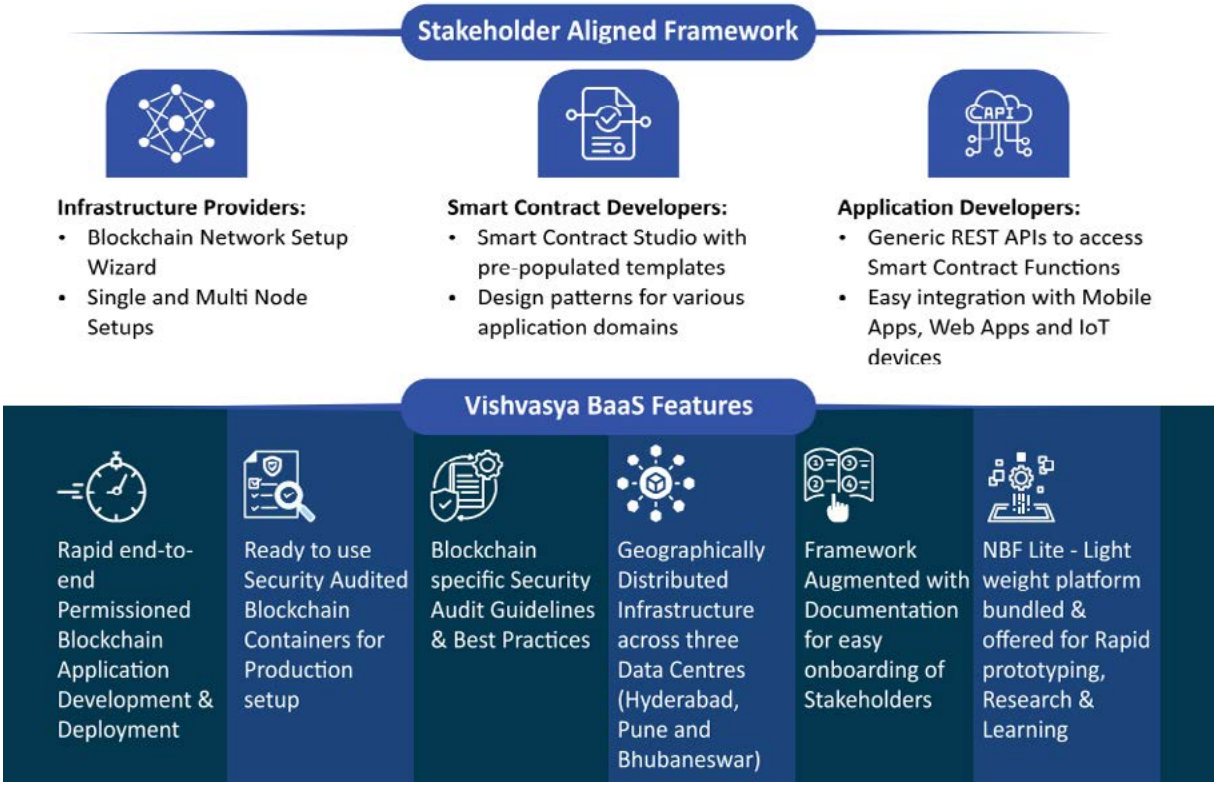
Let us first understand what a Blockchain is. Imagine a ledger that keeps a record of everything that happens in a particular system.

Now imagine this ledger isn't just a simple document with a list of events, but each record has its own unique block containing a timestamp and a link to the previous block, which cannot be altered in any way. This is blockchain. Every transaction is recorded on this chain, making it nearly impossible to tamper with as each part of the chain has a unique link to the previous part.

The uses of a block chain are potentially endless. They can be used to keep track of multiple transactions in a business. They can be used to ensure each and every part of a product's manufacturing

Vishvasya Blockchain as a Service (BaaS)

Vishvasya BaaS addresses the challenges of Blockchain adoption across various stakeholders including Infrastructure Providers, Smart Contract Developers and Application Developers.



MeitY
Government of India

cycle is done in a systematic manner.

The nature of a blockchain also ensures that no single entity controls the blockchain network. Instead, it is controlled by a network of computers, making it highly resistant to tampering, editing and hacking.

This is where **Vishvasya,** the National Blockchain Framework (NBF), **NBFLite**- Lightweight Blockchain Platform, **Praamaanik** - an blockchain-enabled solution for verifying mobile app origin and National Blockchain portal come in!

NBF is designed to provide secure and reliable digital services to citizens. It uses blockchain technology to ensure transparency and efficiency. NBF supports different types of blockchain networks and is located in data centres across India.

NBFLite is a platform that helps startups and students create and test new blockchain apps quickly. It was created by a group of experts from different organizations, including C-DAC, NIC, IDRBT, IIT Hyderabad, IIIT Hyderabad, and SETS Chennai, with support from the MeitY.

During the launch, S Krishnan expressed that as part of the efforts of Government of India for providing trusted digital service delivery, the National Blockchain Framework would play an important role in enabling security, trust and transparency for various citizen centric applications.

Bhuvnesh Kumar, Additional Secretary, MeitY, highlighted that blockchain technology holds immense potential for transforming governance in India by making public services more transparent, efficient and accountable.

Vishvasyaisagroundbreaking technology that has the power to transform the way we live and work. By simplifying blockchain technology, it is making it accessible to a wider audience and unlocking its full potential.

Smt Silpa Nandakumar

Asian king vulture gets a home in Uttar Pradesh

The red-headed vulture, also known as the **Asian king vulture, Indian black vulture or Pondicherry vulture,** finds a new abode in Uttar Pradesh. It is the world's first conservation and breeding centre for the Asian king vulture.

The Asian king vultures have a distinct appearance with deep-red to orange neck in the adults and a paler red in the younger ones. They have a black body with pale grey shade at the base of the flight feathers. Males have a paler, whitish iris, whereas females have dark brown iris.

The Asian king vulture used to be found all over India till diclofenac poisoning affected the whole breed of species. A non-steroidal anti-inflammatory drug was used on pets, but the vultures that fed upon the dead animals saw a huge drop in number. Due to this, the species, which was hundreds of thousands in number once, has now come dangerously close to extinction.

Significance and the facilities

The facility named **Jatayu Conservation and Breeding Centre** is located in Maharajgunj. It aims to improve the population of the vultures and has 24x7 monitoring of the species. The Asian king vulture has been listed as **critically endangered** in the International Union for Conservation of Nature's (IUCN) red list since 2007. The centre opens with a pair of male and female vultures and three more female vultures.

Monitoring is extremely crucial as the vultures make one partner in their entire life and lay only one egg in a year. The feeding of the birds at the centre is done twice a week and each one has a diet of nearly three kilos of meat at a time. The focus is on ensuring good health and providing them with a mate. Once a female lays egg, the pair is left free in their habitat. In order to help the birds adapt themselves in the forest, the conservation centre is carefully curated to replicate its natural habitat.

Kum Shrivaishnavi R

New species of GENUS CURCUMA discovered

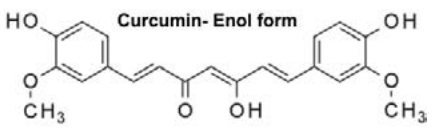
The genus which turmeric and ginger belong to, Curcuma, has now officially welcomed another member to the chartered list – ***Curcuma ungmensis.*** This new species was discovered in the village of Ungma in Nagaland, India. The discovery of this species was published in ***Phytotaxa,*** a journal in Botanical taxonomy.

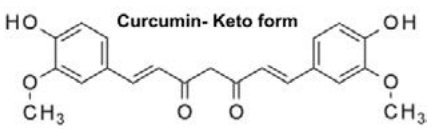
The research group consisted of Mamiyil Sabu and V. S. Hareesh from the **Malabar Botanical Garden and Institute for Plant Sciences in Kozhikode**, Kerala, and Punatemjin Tiatemsu of the **Department of Botany from the Fazl Ali College in Nagaland**. What was supposed to be a field trip in the Naga Hills in the Mokokchung district, turned out to be fortuitous discovery.

The genus Curcuma hails from the **Zingiberaceae** family of modified stems – these are rhizomes, with attractive flowers. Many species give rise to leaves, flowers and rhizomes that have strong scents and ornamental flowers that can be used as decorations. They are commonly used for culinary purposes as well.

In this new species, the flowers are whitish-yellow making them promising candidates for ornamental arrangements. Initially, similarities were drawn between C. *ungmensis* and C. *inodora,* its most closely related species. This was later resolved due to differences between the size of the rhizome and the floral arrangement, sometimes referred to as inflorescence.

It grows up to 65-90 cm and the large flowers adopt a pronounced yellow colour during full bloom. The flowers bloom for a day, making them exotic. Their population must be protected and conserved.





Rhizome is a horizontal underground plant stem capable of producing the shoot and root systems of a new plant. It stores starches and proteins and enables plants to survive an annual unfavourable season underground.

Rangeen Machhli App launched

DO YOU KNOW ?

- Indian Council of Agricultural Research (ICAR) is the apex body for coordinating, guiding and managing research and education in agriculture.
- Pradhan Mantri Matsya Sampada Yojana was launched as part of the Blue Revolution to double the income of fish farmers and fishers in the country as part of the Atmanirbhar Bharat scheme.

Ornamental fishkeeping is a popular hobby that can bring joy and relaxation to people of all ages. Ornamental fish production is a significant source of employment as well as foreign exchange for both developed and developing countries.

Union Minister for Fisheries, Animal Husbandry and Dairying Rajiv Ranjan Singh launched the "Rangeen Machhli" mobile app at the ICAR-Central Institute of Freshwater Aquaculture, Bhubaneshwar recently. ICAR-CIFA developed it with support from **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.

Features

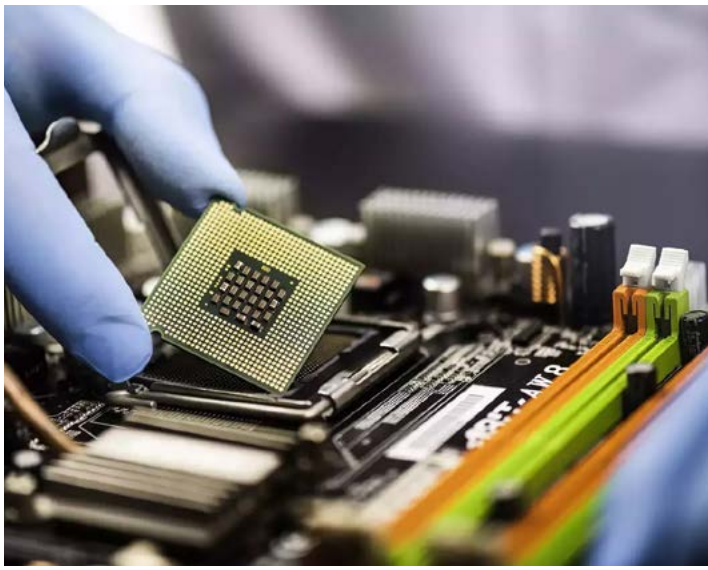
It is designed to meet the growing needs of the ornamental fisheries sector. It provides

- crucial knowledge resources for hobbyists, aquarium shop owners and fish farmers.
- information on popular ornamental fish species in eight Indian languages.
- "Find Aquarium Shops" tool, which allows users to locate nearby aquarium shops through a directory updated by shop owners, promoting local businesses and connecting users with reliable sources for ornamental fish and aquarium-related products.
- educational modules for both newcomers and professionals in the ornamental fish industry.

The "Basics of Aquarium Care" module covers essential topics such as types of aquariums, fishes, water filtration, lighting, feeding and day-to-day maintenance, while the "Ornamental Aquaculture" module focuses on breeding and rearing of different ornamental fish. Link for downloading - **https://play.google.com/store/apps/details?id=com.ornamentalfish**

Shri Nagarajan R

SEMICON INDIA 2024



SEMICON India 2024, the region's premier semiconductor event, was held on 11th September 2024 with a grand inauguration presided over by Prime Minister Modi in Greater Noida. The event underscores India's emergence as a global semiconductor powerhouse. It brought leading global semiconductor industry companies to exhibit and present on addressing key challenges such as talent shortages, supply chain redesign and sustainability concerns.

SEMI officially launched its **India Semiconductor Workforce Development Program (ISWDP)** with a recent workshop on semiconductor manufacturing, held in partnership with **ESSCI** at IIT Delhi. The programme emphasizes collaboration with educational institutions to create specialized curricula for semiconductor design roles and co-develop skill development initiatives. Addressing the global talent gap in the semiconductor industry, the launch aims to equip India's robust engineering pipeline with the necessary skills to be job-ready for the fast-growing sector.

SEMICON India features additional SEMI programmes to advance industry growth such as Sustainability and Smart Manufacturing, supporting the favourable regulatory policies by the ISM and the Government of India and facilitating global investments to strengthen India's position in the industry. Representatives from Uttar Pradesh, Gujarat, Assam, Karnataka, Odisha and Tamil Nadu showcased their vision and policies designed to attract significant investments and drive growth, further highlighting India's collective ambition to become a key player in the global semiconductor landscape.

In his address, PM Modi emphasized the semiconductor industry's critical role in India's technological advancement and reaffirmed the government's commitment to strengthening the sector. Echoing this sentiment, Ajit Manocha, SEMI President said, "With AI fuelling global semiconductor demand, around 150 new fabs will be required to meet the industry's ambitious USD 1 trillion target by 2030."

SEMICON India 2024, featured global leaders such as SEMI, NXP, Foxconn, PSMC, Renesas, Tata Electronics, CG Power, Applied Materials and Cadence.

ESSCI - Electronics Sector Skills Council of India is a non-profit organization that focuses on developing and imparting skills for the Electronics Systems, Design and Manufacturing Industry (ESDM).

Smt Meenakshi S

Port Blair renamed Sri Vijaya Puram

In a move to remove colonial imprints, the central government has announced that Port Blair, the capital of the Andaman and Nicobar Islands, will now be known as Sri Vijaya Puram.

The decision to rename Port Blair follows Prime Minister's 2018 initiative to rename three islands of the Andaman and Nicobar archipelago. Ross Island was renamed Netaji Subhas Chandra Bose Dweep, Neil Island became Shaheed Dweep and Havelock Island was changed to Swaraj Dweep. These changes were made as a tribute to Bose's contribution to India's freedom struggle.

Port Blair, the gateway to the Andaman and Nicobar Islands, was named after Archibald Blair, a naval surveyor and lieutenant in the Bombay Marine Corps. Blair was the first to conduct a detailed survey of the Andaman Islands, a crucial factor in the city's establishment.

Port Blair, now officially known as Sri Vijaya Puram, serves as the capital of the Andaman and Nicobar Islands, a Union Territory of India situated in the Bay of Bengal. It functions as the South Andaman district and is home to the headquarters of several strategic military installations. Indian Navy's major naval base, INS Jarawa, is located here, along with air and sea bases operated by Indian Coast Guard.

The renaming of Port Blair is a fitting tribute to the city's contribution in the making of the new Independent India. It marks a significant step in shedding the colonial legacy and embracing the nation's rich history and strategic importance in the region.

The new name relates to the victory that was attained in India's freedom struggle and the role played by the Islands in the struggle. The island ter**ritory which was the naval base during the time of the Chola Empire can now emerge as one of the key areas in India's strategic and developmental dreams.**

DO YOU KNOW ?

Bose escaped British surveillance in Calcutta and returned to Indian soil nearly three years later at Port Blair Aerodrome. Netaji hoisted the national flag for the first time on Indian soil, at Port Blair, symbolizing the fulfilment of his promise that the Indian National Army (INA) would stand on Indian land by the end of 1943.

Shri Sampath D

Global CyberSecurity Index 2024

India in Tier 1

With a rank of 98.49, India is one of the 47 countries that have demonstrated commitment to robust cyber security practices.

India has jumped to Tier 1 in the **Global Cybersecurity Index (GCI)** 2024, released by the International Telecommunication Union (ITU), when it comes to role-modelling as part of the country's cybersecurity commitments and resulting impacts.

This is a remarkable accomplishment that shows the country's dedication to building a strong cybersecurity foundation.

GCI is a trusted reference that measures the commitment of countries to cybersecurity at a global level to raise awareness on the importance and different dimensions pertaining to this issue.

The various pillars of assessment include

- Legal measures
- Technical measures
- Organizational measures
- Capacity development
- Co-operation

With a rank of 98.49, India is one of the 47 countries that have demonstrated commitment to robust cyber security practices. GCI found India taking strong actionable cyber security measures in all crucial areas.

According to the GCI 2024 report, India excelled in the legal pillar, establishing a

robust framework of laws and regulations to govern cybersecurity. Additionally, the passage of the Digital Personal Data Protection Bill (2022) further strengthens India's legal framework, providing enhanced safeguards for citizen data.

Advanced technical and organizational measures: India's high scores in these areas show that the country has invested in modern technologies and organized systems to prevent and manage cyber threats.

Being ranked Tier 1 is a huge win for India and shows that the country is doing exceptionally well in keeping up with the ever-changing world of cybersecurity. It means:

Staying alert: India will continue to improve and update its defences against new cyber threats.

Digital inclusion: Efforts will focus on making sure everyone has access to cybersecurity resources.

Raising public awareness: People will be encouraged to adopt better online safety habits.

Improving laws and technology: India will keep updating its laws and investing in new technologies to stay ahead.

Tier 1 countries include

Australia, Bangladesh, Belgium, Brazil, Egypt, United States, Iceland, Greece, Sweden, Portugal, Qatar, Norway, Turkiye and United Kingdom to name a few among 47 countries.

Challenges for India include

- Continuous vigilance and adaptation
- Bridging the digital divide and ensuring equitable access to cyber security resources
- Fostering a culture of cyber hygiene and raising public awareness
- Continuous improvement in legal frameworks
- Investment in cutting-edge technology

With this achievement, India stands alongside leading nations like the US, Australia and UK, showing its strong commitment to international cybersecurity co-operation. **This is a powerful step forward in making the digital world safer for everyone.**

Col Shashidhar M V (Retd)

INS Arighat commissioned

Deep Dive

On 29th August 2024, 'INS Arighat' was commissioned at Visakhapatnam in the presence of Raksha Mantri Rajnath Singh. 'INS Arighat' is the second in the Arihant class of nuclear-powered submarines, designed and built in India.

Construction involved use of advanced design and manufacturing technology, detailed research & development, utilisation of special materials, complex engineering and highly skilled workmanship which were conceptualised, designed, manufactured and integrated by the Indian scientists, industry and Naval personnel.

Features	Specifications
Project	Built under the Advanced Technology Vessel (ATV) project at the Visakhapatnam Shipbuilding Centre.
Nuclear-Powered Speed	Runs on a nuclear reactor, allowing it to move faster than conventional submarines, matching the speed of surface ships.
Endurance	Unlike regular submarines that can stay underwater for only a few hours, INS Arighat can remain submerged for months.
Surface Speed	Can travel at a speed of 12-15 knots (22 to 28 km/h) on the surface.
Underwater Speed	Capable of reaching speeds of 24 nautical miles (44 km/h) underwater.
Launch Tubes	Equipped with eight launch tubes.
Dimensions	Length: 111.6 meters, Width: 11 meters, Height: 9.5 meters.
Weight	The submarine weighs 6,000 tonnes.
Combat Capabilities	Equipped for underwater missile attacks, featuring sonar communication systems, sea-based missiles and anti-radiation protection systems.

Indian nuclear-powered ballistic submarines have been named the Arihant meaning the 'Destroyer of the Enemy' in Sanskrit.

Specifications and capabilities

Like its predecessor, INS Arihant, commissioned in 2016, INS Arighat is powered by an 83 MW pressurized water reactor allowing it to remain submerged for extended periods making it a highly survivable asset in naval stealth warfare.

The submarine is equipped to carry twelve K-15 Sagarika missiles which have a range of 750 km or four K-4 missiles with a range of 3500 km. This capability significantly enhances India's second-strike capability, aligning with its no-first-use nuclear policy.

Only six countries in the world now operate nuclear submarines—the US, UK, Russia, France, China and India. A few other nations, such as Brazil, are also in the process of developing nuclear submarines.

Nuclear submarine & reactor

A nuclear submarine is powered by a nuclear reactor, which generates energy to run its steam-driven propulsion systems.

It alows the submarine to operate for extended periods without needing to surface or refuel giving it almost unlimited range.

The nuclear reactor is typically located in a separate compartment, generally in the middle, or towards the rear, of the submarine. The reactor generates heat, which is used to produce steam. This steam can either directly drive turbines or generate electricity to power the electric motors.

Nuclear submarines equipped with nuclear warheads are known as Ship Submersible Ballistic Nuclear (SSBN).

Used for attack purposes only without nuclear warheads, they are referred to as Ship Submersible Nuclear (SSN).

Conclusion

The commissioning of INS Arighat is a pivotal moment for India's indigenous nuclear submarine programme.

India has been working for a long time to build a strong second-strike capability as part of its nuclear defence strategy. This is aimed at completing its nuclear triad—the ability to launch nuclear weapons from land, sea and air as a deterrent force against China. It will further enhance nuclear deterrence, help in establishing strategic balance and peace in the region besides playing a decisive role in the security of the country.

- **Indian Navy's ATV Programme focuses on developing indigenous nuclear-powered submarines, such as the INS ARIHANT and INS ARIGHAT.**
- **Launched in 1984 - These advanced submarines play a crucial role in enhancing India's maritime security and strengthening its nuclear defence capabilities as they are equipped with nuclear propulsion and ballistic missile systems.**

Col Shashidhar M V (Retd)

Air Marshal Ashutosh Dixit is AOC-in-C

Air Marshal Ashutosh Dixit is the new head of Indian Air Force's Prayagraj-based Central Air Command from 1st September 2024.

Before this coveted appointment he was the Deputy Chief of Air Staff from May 2023 and was at the forefront of various projects for the adoption of future technologies, force modernisation and increased focus on **'Make in India'** for defence forces.

He is a recipient of the **Ati Vishisht Seva Medal (AVSM), Vayu Sena Medal** and **Vishisht Seva Medal (VSM)** for various meritorious services.

Air Marshal Ashutosh Dixit is an alumnus of the National Defence Academy and was commissioned in the fighter stream of IAF on 6th 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 has successfully participated in **Operation Safed Sagar** and **Rakshak** (Counter Insurgency & Counter Terrorism).

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 had earlier served as Principal 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.

Immediately on assuming the appointment, the Air Marshal has emphasised that operational readiness of the Central Air Command in all scenarios will be his top agenda.

- **Air Officer Commanding (AOC)** is a title given in the air forces of Commonwealth (and some other) nations to an air officer who holds a command appointment.
- **AOC- in – C** Air Officer Commanding-in-Chief.
- **Vayu Sena Medal** a military decoration given to Indian Air Force (IAF) personnel for acts of bravery or exceptional devotion to duty is usually awarded during peacetime, but can also be given during conflict.

Col Shashidhar M V (Retd)

Vertical launch of Short Range Missile

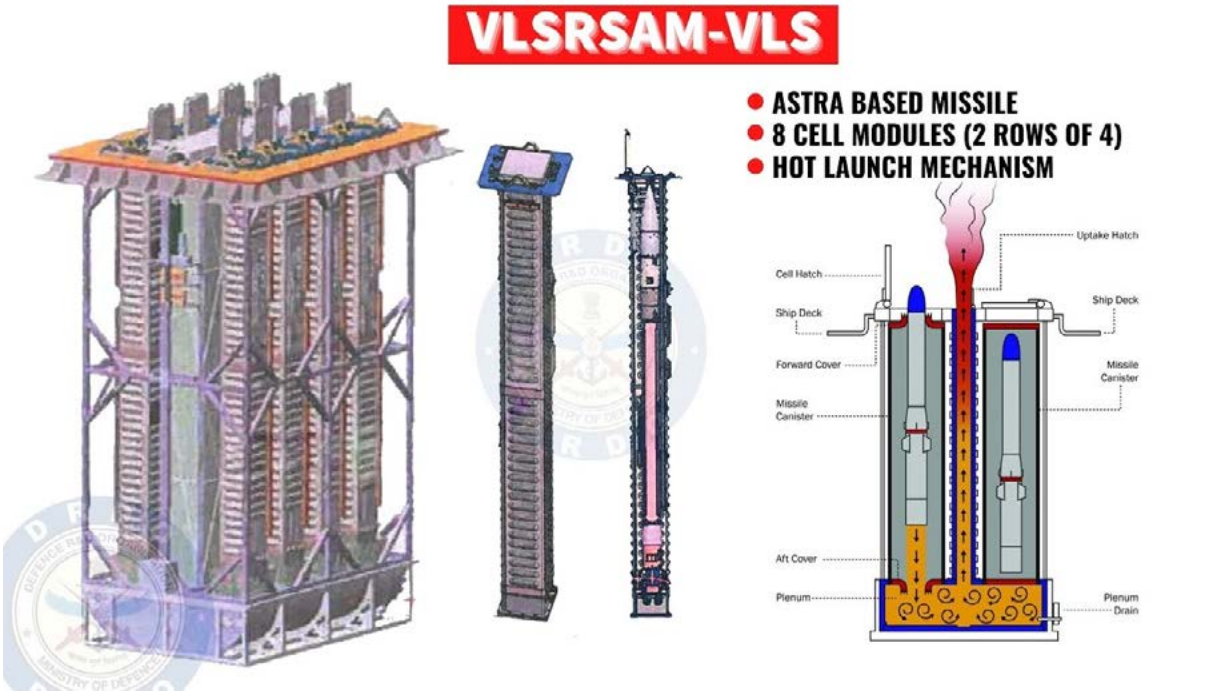
Introduction

In September 2024, the Defence Research and Development Organisation (DRDO) and the Indian Navy successfully conducted the flight test of the **Vertical Launch Short Range Surface-to-Air Missile (VL-SRSAM)** from the Integrated Test Range (ITR) at Chandipur (Odisha).

- Tested from a land-based vertical launcher against a low-flying, high-speed aerial target. Flying at a very low altitude and simulating a sea-skimming threat it showcased its precision and capability to neutralise targets.
- Flight test was carried out to validate multiple updated elements of the weapon system, including the proximity fuse and seeker.
- Performance of the system was meticulously tracked and confirmed by various instruments such as the Radar Electro-Optical Tracking System and telemetry deployed.
- Back-to-back successful flight tests of the Vertical Launch Short Range Surface to Air Missile (VLSRSAM) was conducted on the very next day.

About VL-SRSAM

- The VL-SRSAM, a ship-borne weapon system, is meant for neutralising various aerial threats at close ranges, including sea-skimming targets.
- Its design is based on the Astra missile, an air-to-air missile successfully beyond visual range operationalized in 2022.
- A quick reaction surface-to-air missile for neutralising various aerial threats at close ranges including sea-skimming targets.
- The missile has an operational range of 50 to 100 km distance and features mid-course inertial guidance through fibre- optic gyroscope and active radar homing in terminal phase.
- The launch of the system was conducted to validate



integrated operation of all weapon system components, including the vertical launcher unit with controller, canisterized flight vehicle and weapon control system.

- DRDO facilities that contributed to the development of this system are the Defence Research and Development Laboratory (DRDL) and Research Centre Imarat (RCI) both from Hyderabad and Research & Development Establishment (Engineers), based at Pune.

Features

It is designed for neutralising various airborne threats at close ranges, including aircraft, helicopters, drones and incoming missiles.

It is equipped with advanced guidance systems and cutting-edge technologies that provide enhanced agility and precision in targeting.

It weighs around 170 kg and uses solid propellant. With a maximum speed of Mach 4.5, the weapon system can reach an altitude of 16 km.

The successful demonstration of this system further strengthens India's air defence capabilities in maritime operations.

Conclusion

The VL-SAM will significantly enhance the operational capabilities of our Navy by paving the way for integration of weapon systems on board its ship besides serving as its force multiplier. It likely to further boost the defence capability of own naval vessels against aerial threats.

Employment and Labour Law

Background

Human resource is a critical resource in any economy, and no less in India. Considering the population of our country, proper training, education and honing of the workforce can contribute immensely to the society and the economy.

One important facet of ensuring a healthy and happier workforce is labour law or employment law. This is the framework which lays down and addresses the legal rights and obligations of working persons and their employers. It governs several aspects of the relationship between employees/ workmen and employers. Labour law broadly covers

(a) industrial relations

(b) unfair labour practices

(c) workplace health and safety

(d) terms of employment

(e) compensation and perks

Purpose of Labour Law

A well-structured and established labour law framework has the potential to achieve the following:

- establishing a system that facilitates productive employment relationships;
- providing a framework within which stakeholders can interact with regard to work-related issues and disputes;
- guaranteeing several principles and rights at the workplace;
- establishing processes for implementation and enforcement of rights available at the workplace.

Labour Law in India

The labour laws of independent India derive inspiration from welfare-oriented ideologies and constitutional principles. The relevance of the dignity of human labour has been identified in the Constitution of India. Labour laws have also been influenced by international trends in human rights as well as international conventions and recommendations of various national committees.

As a result, labour law in India caters to different aspects and categories of labour, including health, safety, training, wages, contract labour, child labour, gender-based issues, industrial disputes and social security.

Overview of labour legislations in India

There are many labour legislations in India, which may be classified under several groupings including but not limited to the following:

a. Laws related to industrial relations and disputes, such as the Trade Unions Act and Industrial Disputes Act;

b. Laws regulating wages and compensation, including the Payment of Wages Act and the Minimum Wages Act;

c. Laws pertaining to terms and conditions of employment, such as the Factories Act, the Mines Act and the Contract Labour (Regulation & Abolition) Act;

d. Laws aimed at promoting gender equality and empowerment, such as the Maternity Benefit Act and the Equal Remuneration Act;

e. Laws in relation to empowerment of disadvantaged sections, including the Bonded Labour (Abolition) Act and the Child Labour (Prohibition & Regulation) Act; and

f. Laws related to social security, such as the Workmen's Compensation Act, the Payment of Gratuity Act and the Employees' Provident Fund & Miscellaneous Provisions Act.

Dr. Bimla Buti

(19.9.1933 – 24.2.2024)

The first woman fellow of INSA in physical sciences

Bimla had the privilege of working with Nobel Laureate Prof S.Chandrasekhar, whom she revered as her Guru.

A highly acclaimed plasma physicist of international repute, who was invited by Dr. Vikram Sarabhai himself to join as faculty at PRL went on to establish strong theoretical and experimental research group in plasma physics. Later, this great scientist established the Institute for Plasma Research under the Department of Atomic Energy. She is none other than Bimla Buti!

During partition in 1947, little Bimla's family had to move to India. She was 13 or 14. "The first thing my father wanted to do was get me and my two nieces admission to some school. The one that we could get into was the government-run school for children who had migrated from Pakistan. Unfortunately, that school had no science, though mathematics was my favourite subject." recalled Prof. Bimla about her schooling.

Her father was a gold medallist in mathematics from Punjab University. He mentored and nurtured the interests of his daughter who had lost her mother earlier. After schooling, she was eager to take up science and mathematics when she entered college.

"At this stage I opted for the physics, chemistry, mathematics combination rather than biology for the simple reason that I was scared of cutting open frogs, maybe because I am a vegetarian. My sister's husband, a medical doctor, tried hard to persuade me to study medicine, but my father encouraged me to pursue the career of my choice. I did not enjoy chemistry but did like physics, probably because of my interest in applied mathematics. I considered going into engineering but for that I would have had to go out of Delhi. Neither my family nor I liked this idea. This, probably, was the reason I chose Physics (Hons.) at Delhi University."

After finishing her M.Sc., she received a fellowship from the government of India to go abroad for PhD at University of Chicago. Bimla had the privilege of working with Nobel Laureate Prof S.Chandrasekhar, whom she revered

as her guru! "Besides my father who moulded me during my early years, it was my Guru Chandra whose training had an indelible effect on my professional life later on. The virtues instilled in me in childhood, like self-reliance, the confidence to face all kinds of situations and the courage not to bow to unjust pressure, were strengthened by my association with Chandra. I always spoke my mind fearlessly, and most of my seniors did not like this."

Prof. Chandrasekhar had worked in many diverse fields. He would work in one field and after doing a thorough job in it, he would write a book and then move on to a different field. At the time when Bimla joined his research team, his field of interest was magneto-hydrodynamics and plasma physics. So she chose to specialise in plasma physics and worked on relativistic plasmas for her thesis.

She developed many models and then applied them to problems in the astrophysical realm as well as laboratory plasmas. Using the techniques of nonlinear dynamics, she interpreted many observed phenomena in terms of nonlinear, turbulent and chaotic plasma processes. After obtaining Ph.D. in 1962, she returned to India and started teaching at Delhi University for two years. At this stage, Buti's academic career took her back and forth between India and the US. Again, she decided to work as a resident research associate of the National Academy of Sciences, at the Goddard Space Flight Centre, NASA. There she was associated with the theoretical division headed by plasma physicist T. G. Northrop. For the sake of doing full justice to work and to focus on her professional commitments, she decided not to marry.

She returned to India and joined as a senior scientific officer at the Department of Physics, Indian Institute of Technology Delhi (IITD). It is during this period that Prof. Chandra was invited by the then Prime Minister Indira Gandhi to deliver the Nehru Memorial Lecture. As his student, Bimla Buti was also invited to the banquet dinner that followed, where she got a chance to meet many dignitaries.

"I met Prof. Sarabhai for the first time. Right then and there, he invited me to work at the Physical Research Laboratory (PRL) of which he was the Director. This is how I joined PRL, and spent twenty-three years of my professional life. The research atmosphere at PRL was quite different from that at IIT and Delhi University. Sarabhai did not believe in vertical hierarchy, and he gave full freedom and responsibilities to the scientists. We managed to establish a very strong group in plasma physics at PRL".

She initiated and founded the Plasma Science Society of India. While at PRL, she had opportunities to visit and work at other NASA centres, like the Ames Research Centre and the Jet Propulsion Laboratory (JPL), California, for longer durations. Besides visiting NASA Centres, she also worked at the University of California, Los Angeles, from 1986 to 1987.

She was the Director of the plasma physics division at the International Centre for Theoretical Physics (ICTP), Italy, for nearly two decades from 1985. She provided platforms for a large number of scientists from many developing and developed countries to interact and exchange ideas.

Prof.Bimla Buti was the first Indian woman Physicist Fellow of INSA in 1981 and The Academy of

Sciences of the Developing World (TWAS) in 1990, when it had only a handful of Indian Fellows. She was also elected as fellow of the National Academy of Sciences (NAS), the American Physical Society (APS).

At the same time, it was not an easy path that Dr.Bimala traversed as a woman scientist in a man-dominated field. Even to get nominated for fellowships and awards was very challenging. "Differential gender treatment was apparent when the Director of PRL was to be chosen in the mid-1980s. Invariably, I had to face the jealousy of my male colleagues.

Awards

- 1977 Vikram Sarabhai Award for Planetary Sciences
- 1993 Jawaharlal Nehru Birth Centenary Lectureship award
- 1994 Vainu Bappu International Award in Astrophysics
- 1996 Lifetime Achievement award of the University of Chicago

Career highlights

- **1992-93** - Founder President the Plasma Science Society of India
- **1977-83** - Associate Editor of IEEE Transactions on Plasma Science, USA
- **1988-91** as its Vice President
- **1991-94** President, Commission 49, International Astronomical Union.

"We have to work hard to bring about some changes in society, namely to convince people that family responsibilities should be shared by men and women. And in my opinion, women themselves have to take strong initiative to convince their families and themselves that they can and should be able to pursue careers in science" said Buti about her thoughts on shrinking the gender gap.

After retirement, she started the **Buti Foundation** **to reduce the gender bias in STEM, to promote education, advancement of knowledge and computer literacy and strives to help the public connect with science**. The purpose is to increase interactions between natural and social scientists, and between scientists and non-scientists.

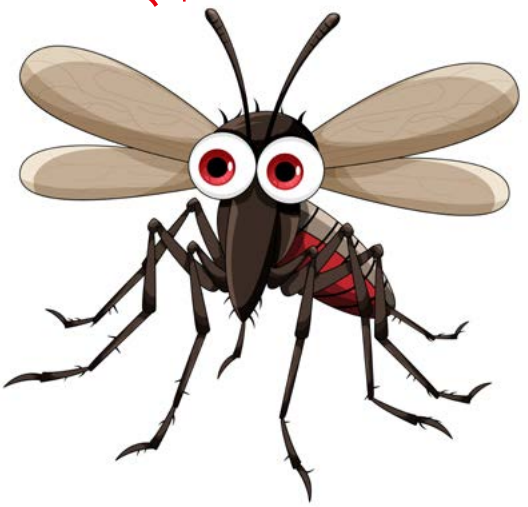
"Am trying to use the foundation and its four centres to talk to the administrators and policymakers and tell them we have got to do things to encourage women scientists," she said.

Her father's life was her motivation. "Professionally he was a lawyer, but he was also a social worker and a freedom fighter—he worked tirelessly for India to be liberated from British rule. So I must have got the feeling from him that I should give back to society. So far, the funds for the foundation have been my personal funds," she stated.

She will be a guiding beacon of many scientists across the globe.

Dr Preethy S P

Remedies for DENGUE



Insights from Ayurveda and Naturopathy

Dengue fever, caused by the dengue virus (DENV) and transmitted through the bites of infected Aedes mosquitoes, is one of the most significant mosquito-borne viral infections worldwide. The World Health Organization (WHO) identifies dengue as a major public health threat, especially in tropical and subtropical regions. Dengue is characterized by flu-like symptoms that may progress to severe conditions like dengue haemorrhagic fever (DHF) or dengue shock syndrome (DSS), which can be fatal if not managed properly.

The infection manifests as high fever, severe headaches, joint and muscle pain (hence the term "breakbone fever"), nausea, vomiting, skin rashes and mild bleeding (such as from the gums or nose).

India has been experiencing annual outbreaks of dengue, especially during the monsoon season when stagnant water from rain creates ideal breeding grounds for mosquitoes. In recent years, India has witnessed a surge in dengue cases. What's concerning is the recent evolution in dengue symptomatology. Previously, dengue presented as high fever with joint pain and rashes. However, recent outbreaks have shown variations like persistent vomiting, severe abdominal pain and even neurological symptoms in some patients. This change in the clinical presentation has made it imperative to adopt more vigilant monitoring and to explore both modern and traditional methods for managing the disease.

Ayurvedic and Naturopathic perspectives

Ayurveda and naturopathy offer time-tested approaches to disease management, focusing on strengthening the body's natural defences and restoring balance. For dengue, these systems emphasize both prevention (by repelling mosquitoes and boosting immunity) and treatment (by alleviating

symptoms and promoting faster recovery).

1. Ayurvedic approach

In Ayurveda, dengue is seen as a condition resulting from the imbalance of the body's *doshas* (*vata, pitta,* and *kapha*). Preventing mosquito bites, enhancing immunity and detoxifying the body are key strategies.

- **Herbal mosquito repellents:** Traditional Ayurvedic plants and herbs have been used for centuries to ward off mosquitoes. Citronella, neem, tulsi (holy basil), and eucalyptus are known mosquito-repellents. These can be used in oils, sprays or as fumigants.
- **Neem (*Azadirachta indica*):** Neem oil has been found effective as a natural insecticide and mosquito repellent. Applying diluted neem oil to the skin can help prevent mosquito bites.
- **Tulsi (*Ocimum sanctum*):** Tulsi is known to prevent mosquito larvae from thriving, so growing this plant around the house can reduce mosquito populations.
- **Camphor:** Burning camphor in rooms acts as a mosquito repellent, helping to keep these pests at bay.
- **Dietary considerations:** Ayurveda emphasizes building a strong immune system to prevent infections. Consuming immunity-boosting foods such as ginger, turmeric and *amla* (Indian gooseberry) is recommended. These foods enhance the body's defence mechanism, making it more resistant to infections like dengue.

Giloy (*Tinospora cordifolia*)

2. Naturopathic remedies for treatment

Naturopathy focuses on the body's innate ability to heal itself. In the context of dengue, naturopathy suggests remedies to alleviate symptoms, reduce fever and speed up recovery.

- **Papaya leaf extract:** One of the most popular natural remedies for dengue is papaya leaf extract. Studies have shown that papaya leaf juice helps increase platelet count, which tends to drop dangerously during dengue. Consuming fresh papaya leaf juice twice a day is often recommended for dengue patients.
- **Giloy (*Tinospora cordifolia*):** This herb, also known as *"Amrita"* in Ayurveda, is known to boost immunity and fight infections. Giloy juice or supplements can be consumed to reduce fever and support the immune system during dengue.
- **Coriander (*Coriandrum sativum*) leaves:** Known for its cooling properties, coriander leaf juice is used to bring down fever and soothe the digestive system, which often becomes compromised during dengue.
- **Fenugreek (*Trigonella foenum-graecum*) seeds:** Soaking fenugreek seeds in water and drinking the extract helps in detoxifying the body and reducing high fever. It is also beneficial in improving digestion and appetite, which can be affected during the illness.

Natural mosquito repellents for prevention

Preventing mosquito bites is crucial to reducing the risk of dengue. While chemical repellents are effective, they come with potential side effects, especially for long-term use. Natural mosquito repellents provide a safer alternative. Here are some commonly used natural repellents:

- **Lemon eucalyptus oil:** A widely researched natural repellent, lemon eucalyptus oil is as effective as DEET-based repellents. It contains citronellal and p-menthane-3,8-diol, which are potent against mosquitoes. Applying a mixture of lemon eucalyptus oil with a carrier oil to exposed skin can reduce the chances of mosquito bites.

- **Lavender oil:** Lavender oil, known for its soothing aroma, also acts as a natural mosquito repellent. Its application on the skin not only keeps mosquitoes away but also provides relief from the itching of existing bites.

- **Garlic:** Eating garlic may help prevent mosquito bites due to the sulphur compounds released through the skin after consumption. Additionally, garlic oil can be mixed with other oils and applied to the skin as a topical mosquito repellent.

- **Marigold plants:** Planting marigolds around your home can act as a natural barrier against mosquitoes. The scent of marigolds contains pyrethrum, an ingredient found in many commercial insect repellents.

Dengue is a persistent public health challenge, especially in countries like India. While modern medicine focuses on supportive care and vaccine development, natural remedies rooted in Ayurveda and naturopathy offer complementary ways to both prevent and manage dengue. From using mosquito-repelling herbs to enhancing immunity with natural supplements like papaya leaf extract and giloy, these approaches blend traditional wisdom with practical solutions. Adopting a holistic lifestyle that includes environmental management and personal hygiene can also significantly reduce the risk of dengue, helping individuals and communities stay safe during outbreaks.

Smt Ramamani N

Lt. Col. Ardeshir Burzorji Tarapore

Lieutenant Colonel Ardeshir Burzorji Tarapore fondly remembered as Adi, was born on 18th August 1923 in Bombay to Burzorji Tarapore and Nergish. His ancestor Ratanjiba worked as a military leader under Shivaji. Ardeshir Tarapore studied at Sardar Dastur Boys School, Poona. He distinguished himself in athletics, gymnastics, boxing, swimming, tennis and cricket. After leaving school, Ardeshir Tarapore was commissioned on 1st January 1942 in the 7 Hyderabad Infantry.

He set his heart on joining the armoured regiment of the Hyderabad State Forces. His dream came true when Major General El-Edroos, the Chief-in-Command of the State Forces witnessed Tarapore's brave act of jumping into a bay, picking up the grenade and throwing it away to safety.

He was transferred to the Hyderabad Imperial Service Lancers. Later, after the merger of Hyderabad with the Union of India, his date of commission was revised to 1st January 1945 and was posted in Poona Horse, an armoured regiment of the Indian Army. It was raised in July 1817 as a result of the Treaty of Poona, between Lord Hastings and Baji Rao II, the Peshwa.

At the Battle of Chawinda on 11th September 1965, Poona Horse attacked Phillora in the Sialkot area. Lieutenant Colonel Tarapore led the southern thrust of the offensive, which was met with a massive armour charge from the Pakistani Army. Despite constant enemy tank and artillery fire, Lieutenant Colonel Tarapore held his ground and gallantly attacked Phillora. He refused to be removed after being injured. On 14th September 1965, he led his unit to capture Wazirwali, followed by Jassoran and Butur-Dograndi on 16th September 1965. He was hit multiple times, however he kept his positions in both locations, supporting the infantry attacking Chawinda. The unit destroyed around sixty Pakistani Army tanks while sustaining only nine tank fatalities. His tank was hit and he died a hero's death.

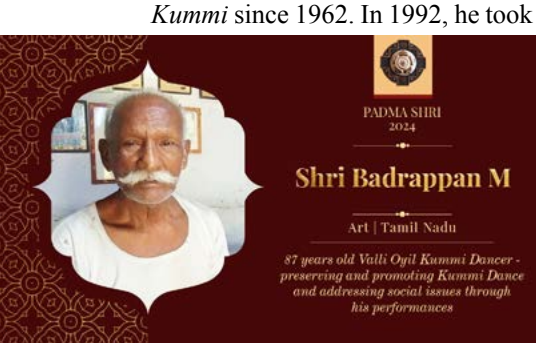
Lieutenant Colonel A.B. Tarapore's heroism during the six-day epic action was emblematic of the highest traditions of the Indian Army. He was cremated on 17th September 1965 in Jassoran.

His ashes were taken to Poona and later immersed in the Sangram on 29th November 1965. **He displayed exemplary leadership and remarkable skill, ultimately sacrificing his life in the noblest tradition of the Indian Army and was posthumously awarded the Param Vir Chakra.**

M. BADRAPPAN

M. Badrappan is the master of the ***Valli Oyil Kummi*** folk dance. ***Valli Oyil Kummi*** is a traditional folk dance and song from Tamil Nadu that depicts the story of Lord Murugan and Valli, a tribal girl who is worshipped as a goddess.

Born on 16th April 1936, Badrappan's journey is nothing short of inspiring. Despite studying only up to the 10th standard and leading the life of a small farmer, he immersed himself in the world of folk arts. His dedication and passion led him to learn ***Arichandra Kummi*** from Master Thottanagowder in 1959 and work with Tirumappa Gowder, the Master of *Valli Oyil Kummi* since 1962. In 1992, he took the bold step of forming a team under his leadership, marking the beginning of an incredible 52-year journey in folk arts.



What's truly remarkable is Badrappan's commitment to passing on his knowledge. For the last 20 years, he has been tirelessly training around 100 boys and girls in *Valli Oyil Kummi* at the Government Middle School in his village, Dasanur.

His efforts have not only revived this traditional art form but have also broken gender barriers, with women now actively participating. Badrappan's impact goes beyond just preserving folk art. He has skillfully woven elements of history, social concepts, environmental awareness and even health education into *Valli Oyil Kummi*. **His dedication to promoting natural agriculture and raising awareness about infectious diseases is truly commendable.**

Badrappan has conducted around 300 *Valli Oyil Kummi* events in various locations including villages, cities, schools, colleges and universities. He promotes folk arts through social media, radio, television, YouTube and short films. His performances include Coimbatore Radio for 24 years, three programmes on Coimbatore Pothigai TV and participation in events at Bharatiar University, Avinasilingam University and Kongunadu College of Arts and Science, Coimbatore. He also received awards such as the ***Kalai Muthumani*** Award in 2002 from the South Zone Cultural Centre Tanjore and the ***Kalaimamani*** Award in 2019 from the Tamil Nadu Government for his continuous service in folk art.

DO YOU KNOW ?

Arichandra Kummi **is a folk dance depicting the story of King Harishchandra who ruled Varanasi.**

Smt Vaishnavi V

Jaipur

CURIOSITY CORNER

I Quick five on Jaipur!

1. Capital city of the state - _____
2. Founder of Jaipur - _____
3. Mountain range that surrounds the city -_____
4. River that flows through the city - _____
5. Regional languages spoken here - _____

II Crossword

Across

5. _____ Mahal is a five-storeyed structure with latticed windows for air conditioning. (4)

6. Mesmerized by the city's beauty, Sir C.V Raman called it the "Island of _____".

7. Known as the '_____ of India' for its architecture, beautiful landscapes and exemplary culture. (5)

8. This city is a part of this famous tourist circuit. (6, 8)

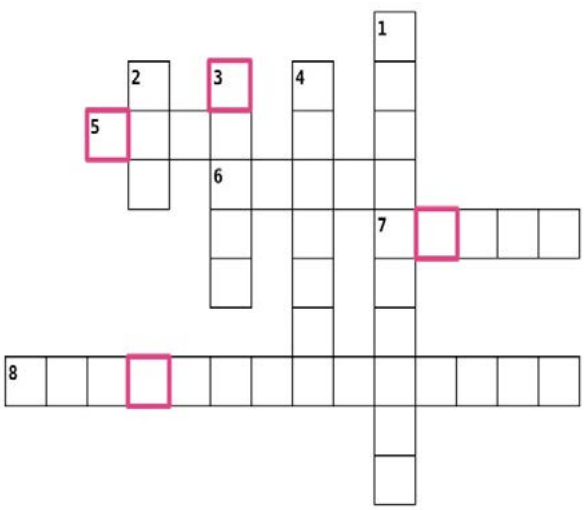
Down

1. This palace is still home to the last ruling royal family. (4, 6)

2. _____ Mahal with magnificent exteriors appears to float on the Man Sagar Lake. (3)

3. The traditional headgear worn by men in Rajasthan. (5)

4. A traditional folk dance performed by women who gracefully swirl and move in circles. (7)



III Facts Fantastic!

Do you know these interesting facts about Jaipur? Go ahead! Give a try with the clues given below.

1. On 6th July 2019, UNESCO inscribed the entire city of Jaipur among its World Heritage Sites. Do you know the two other heritage sites that are located in the city?

(A) An astronomical observatory built by Raja Sawai Jai Singh II housing 16 huge architectural geometric devices used in astronomy.

(B) Palace complex built with white marble, pale yellow and pink sandstone. Prime tourist attraction also known for its underground tunnels.

2. Founded in the year 1727, planned by this architect based on vastu-shastra and shilpa-shastra, Jaipur holds the distinction of being the first planned city of India.

3. In 1876, Raja Sawai Ram Singh I painted the entire city pink as a symbol of hospitality to receive this British Royal and was titled the 'Pink City' by the Royal himself. To retain this epithet, the city continued to paint its avenues and buildings pink.

4. Pride of the Aravalli range, this massive fort was used as a retreat by the Rajput Royals and also added a strong defence ring to the city.

5. One of the largest free literary events in the world conducted annually, attracts renowned authors, poets and thinkers from across the globe.

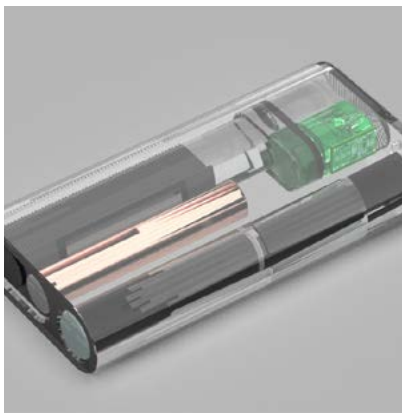
IV What am I?

Unscramble the highlighted boxes in the crossword to find me.

Hint: A type of religious scroll painting or folk painting traditionally done on a long piece of cloth or canvas.

Answers on page 66

Indian designer wins James Dyson Award



Odisha-based industrial designer **Komal Panda** has been honoured with the prestigious James Dyson Award 2024 for her ground breaking invention, **Novocarry. This portable cooling carrier is designed to maintain insulin and other liquid medications at optimal temperatures, particularly during long-distance travel and in areas with limited electricity.**

Inspired by her father's struggles with diabetes, Komal developed Novocarry after witnessing the challenges he faced in storing insulin while working in a steel factory with no refrigeration facilities. To take his insulin shot, he had to rush home during lunch breaks because ice packs melted too quickly. Realizing that this issue was not unique to her father, Komal set out to design a portable, reliable solution for those who need to keep medications cool throughout the day.

Drawing inspiration from both beer coolers and vaccine coolers, Komal incorporated conduction technology and a Peltier chip into Novocarry, **which directly cools insulin vials, eliminating the need for bulky fans.** This made the device compact, lightweight, and portable. Additionally, Novocarry **includes a large battery that not only powers the cooling system but also doubles as a charging station for other electronic devices.**

For her innovative work, Komal was awarded a cash prize of ₹5 lakhs. Reflecting on her win, she expressed that this recognition validates her design process and gives Novocarry the opportunity to gain international exposure.

"My goal was to create a solution that would promote independence and peace of mind for individuals who rely on medications that require refrigeration," she shared.

In addition to Komal, Krea Limb and HydroChurn were named the first and second runners-up, respectively. These top three inventions will represent India in the international round, where the final winners will be selected by Sir James Dyson himself.

Komal's success with Novocarry is a testament to the power of creative solutions and highlights the bright future of design engineering in India. **Her invention has the potential to significantly improve the lives of millions of people around the world who rely on medications that require refrigeration.**

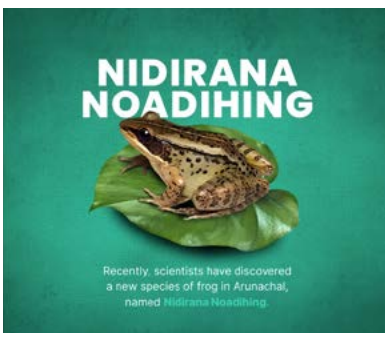
Smt Archana Sundar

Amphibians of Arunachal

A team of biologists from the **Wildlife Institute of India** and the **University of Wolverhampton** has made a significant contribution to herpetological research in India. They have successfully identified two new species of frogs in the biodiversity-rich Namdapha-Kamlang landscape of Arunachal Pradesh.

The Noa-Dihing Music Frog

The first species, the Noa-Dihing music frog (***Nidirana noadihing***), is characterized by its distinctive call pattern and pale cream-colored line on its mid-body. It was initially discovered near Gandhigram and later found in the marshy habitat of Glaw Lake.



- **Unique call pattern:** The frog's call is similar to that of wild ducks, with a series of "quack... quack... quack" sounds.
- **Habitat:** The Noa-Dihing music frog prefers marshy areas dominated by the Rotala grass species.
- **Breeding behaviour:** Males create circular pits in the marsh where they call to attract females. However, the exact breeding and egg-laying behaviours remain unknown.

The Patkai Green Tree Frog

The second species, the Patkai green tree frog (***Gracixalus patkaiensis***), is a smaller frog with a body size of 23-26 mm. It was discovered in the marshy areas of the Namdapha Tiger Reserve and has a call that resembles that of insects.

- **Habitat:** The Patkai green tree frog is found in evergreen forests with marshy areas covered in cane, bamboo, rattan palm, fern and wild zingiber.
- **Breeding:** This frog breeds in swampy areas during the monsoon season.
- **Close relative:** The Patkai green tree frog is closely related to the ***Gracixalus gracilipes***, found in China, Thailand and Vietnam.

Significance of the discoveries

These discoveries highlight the exceptional biodiversity of the Namdapha-Kamlang landscape and underscore the importance of continued research and conservation efforts in the region. The Patkai green tree frog is the sixth new frog species to be discovered in the Namdapha Tiger Reserve, further emphasizing its significance as a biodiversity hotspot.

Conserving the swampy habitats in and around the protected areas is crucial for the survival of these newly identified species. The addition of these two amphibians to the region's biodiversity underscores the need for ongoing research and exploration in the Namdapha-Kamlang landscape.

Smt Ghanasaraswathy M

Tso Moriri Lake

Ladakh's gem of natural beauty

Tso Moriri Lake is one of the most beautiful lakes in India, located high in the Changthang plateau of northern Ladakh. At an altitude of 4,522 meters, it is one of the highest saltwater lakes in the country. The area around the lake is protected as part of the Tso Moriri Wetland Conservation Reserve, which means no one is allowed to pitch tents or build anything on its shores. This helps keep the lake clean and peaceful.

The lake is surrounded by tall, snow-covered mountains and their reflections on the calm water create an amazing view. What makes Tso Moriri special is the way its colours change throughout the day. As the sun moves across the sky, the lake's waters shift from deep blue to bright turquoise, creating a magical effect. The beauty of the lake, combined with the cool, fresh air of the mountains, makes it a perfect place to relax and take in nature.

Tso Moriri is also a great place for wildlife lovers. As part of the conservation area, it is home to many migratory birds, such as the bar-headed goose and the black-necked crane. Watching these birds fly over the peaceful waters adds to the feeling that this place is truly special.

For anyone planning a trip to Ladakh, Tso Moriri is a must-see. Its remote location and unspoiled beauty offer both adventure and a chance to experience true calm. Visiting this lake is not only a visual delight but also a refreshing break from busy life, making it one of the best places to enjoy Ladakh's natural charm.

DO YOU KNOW ?

- **Inner Line Permit:** Since Tso Moriri is located close to the Indo-China border, Indian tourists need to obtain an Inner Line Permit (ILP) from Leh.
- **The nearby attractions:** Tso Moriri Lake is surrounded by several other stunning natural and cultural attractions in Ladakh. Here are some nearby places you can visit:
  - Korzok Monastery
  - Tso Kar Lake
  - Puga Valley
  - Changthang Plateau
  - Hanle monastery and observatory
  - Pangong Lake
  - Nyoma village

I Quick five!

1. Rajasthan
2. Maharaja Sawai Jai Singh II
3. Aravalli Range (Nahargarh and Jhalana hills)
4. Dravyavati
5. Rajasthani, Hindi

III Facts Fantastic!

1. (A) Jantar Mantar, (B) Amber (Amer) Palace Fort
2. Vidyadhar Bhattacharya
3. Albert Edward, the Prince of Wales.
4. Nahargarh Fort
5. Jaipur Literature Festival (JLF)

II Picture quiz

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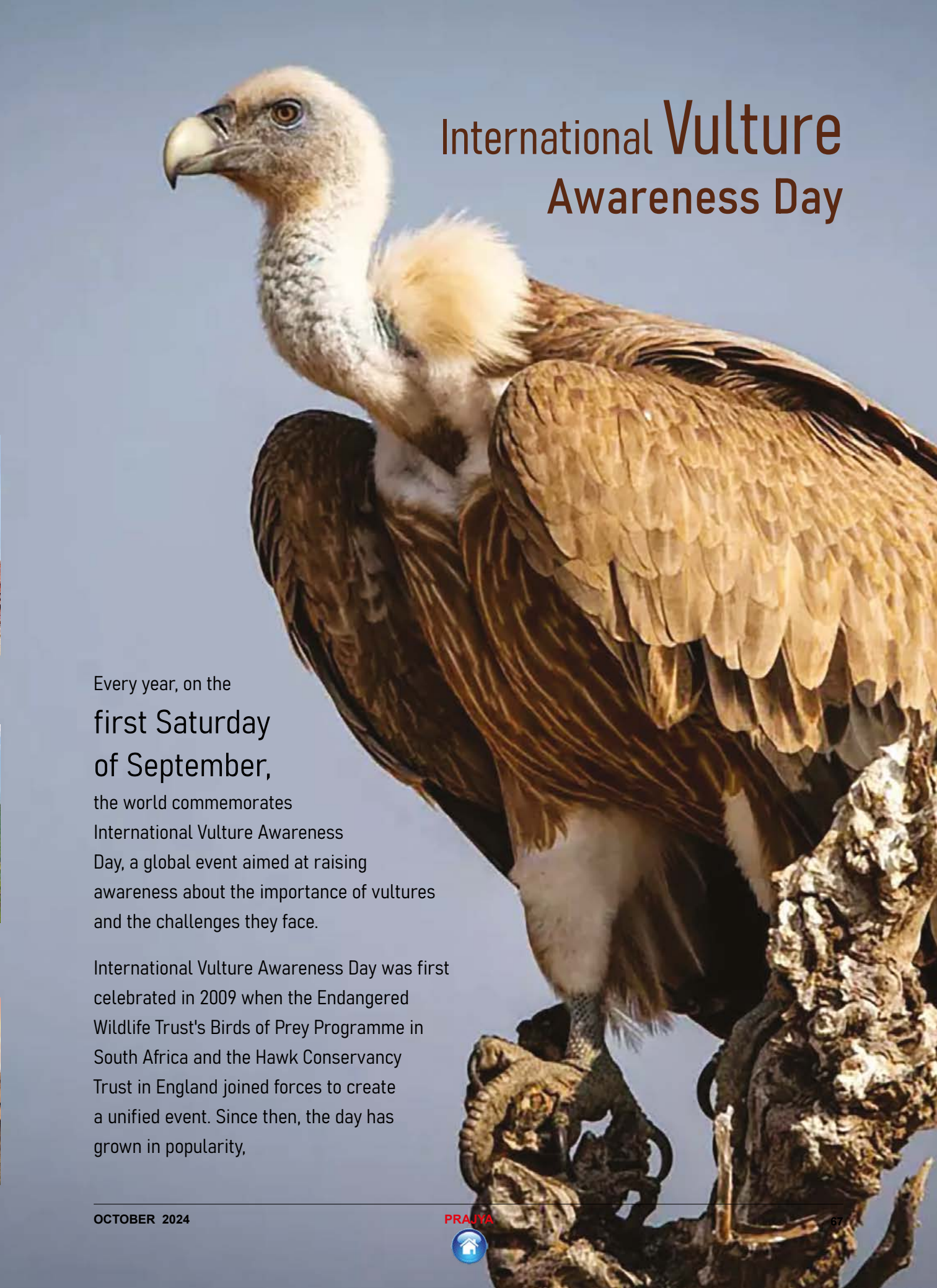
IV

What am I ? Hidden word :

PHAD

International Vulture Awareness Day



Every year, on the

first Saturday of September,

the world commemorates International Vulture Awareness Day, a global event aimed at raising awareness about the importance of vultures and the challenges they face.

International Vulture Awareness Day was first celebrated in 2009 when the Endangered Wildlife Trust's Birds of Prey Programme in South Africa and the Hawk Conservancy Trust in England joined forces to create a unified event. Since then, the day has grown in popularity,

World Photography Day

19th AUGUST

Every year on 19th August we celebrate World Photography Day to celebrate the art, craft, science and history of photography. The day also encourages photographers from around the globe to share a single photo that encapsulates their world.