

# PRAJYA

MONTHLY NEWS MAGAZINE FOR CHILDREN

Volume: 03 Issue: 05 January 2024 Rs.85/-



**Angkor Wat Temple**



# INTERNATIONAL *Students* DAY

— NOVEMBER 17 —



Life is a book; being a student is the most excellent chapter.



**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. Sec School, Mogappair*

**Teacher Contributors:**

Smt Ghana Saraswathy M  
Smt Manju Aildasani  
Smt Meenakshi S  
Smt Ramamani N  
Smt Sandhya Nair  
Smt Sarada Devi Ravutu  
Kum Shrivaisnavi R  
Smt Shubha T R

**Independent Contributors:**

Kum Anu Narayan  
Smt Anuradha V R  
Smt Archana Sunda  
Shri Bharath  
Kum Deepasri  
Smt Gaayathiri G  
Kum Kavya R  
Shri Mrithyunjay GN  
Kum Pavithra S  
Dr Preethy S P  
Shri Ramaswamy R  
Shri Sampath D  
Col Shashidhar M V (Retd)  
Smt Shyamala Viswanathan  
Shri Sridhar P  
Smt Sumathi Ramakrishnan  
Kum Sunita D Behera  
Smt Uthra Dorairajan  
Smt Vaishnavi V  
Smt Vanaja Shankar

**Technical Editor :**

Shri Guhaprasath Subramanian

**Creative Design :**

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

**Printing :**

AVG Graphics, Chennai

**COMMENTS & SUGGESTIONS**

prajya.magazine@davchennai.org

FROM THE **EDITOR'S DESK**

*"We are very, very small, but we are profoundly capable of very, very big things."*

- Stephen Hawking

The record-breaking **Al Dhafra Solar Photovoltaic (PV) independent power project** is a monumental effort to harness the abundantly available solar energy to one lakh plus households and job opportunities to thousands.

Pakistani startup **She-Guard** has begun in a small way to convert banana crop waste into affordable and eco-friendly sanitary napkins. This little endeavour has the potential to tackle big and nagging issues like solid waste management, health and environmental problems.

The mammoth iceberg **A23a** is on the move. We as normal beings may just think of an iceberg as a mere mass of ice. But scientists believe that this oceanic behemoth "can provide nutrients to the waters it passes through and create thriving ecosystems in otherwise less productive areas."

**Angkor Wat**, the largest temple complex in the world, is a living symbol of magnificence. It chronicles the grandeur of a rich culture showcasing architecture, history, ancient technology and lot more.

**AMD's largest Global Design Center** in Bengaluru marks a milestone in the company's efforts to expand research, development and engineering operations in India.

The **Green Rising** initiative aims to mobilise 10 million youth to take concrete green actions at the grassroot level and become climate champions.

**"If you do enough small things right, big things can happen."**

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

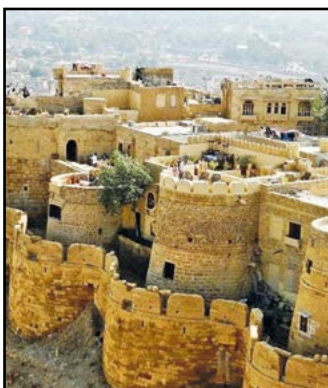


## International Current Affairs

- 6 Indian women in BBC's 100 Women 2023 list
- 7 Javier Milei - Argentina's new President
- 8 Meira Chand gets Singapore's highest Arts award
- 9 Largest single-site solar power plant
- 11 Pakistani startup wins top climate innovation competition
- 12 World's biggest iceberg on the move
- 13 COP 28 UAE
- 15 Angkor Wat - 8th wonder
- 16 India gives USD250 million to Kenya
- 17 Google's biggest AI Model 'Gemini'
- 19 'Green Rising' launched

## National Current Affairs

- 20 World's first ship-to-ship LNG transfer
- 22 India's GDP surpasses USD 4 trillion
- 24 Revolutionizing geospatial mapping in India
- 25 'AGNI' - promoting innovations by Ayurveda practitioners
- 26 NATPOLREX-pollution response exercise
- 27 AMD's largest global design centre launched
- 28 Blod+: India's first on-demand blood platform
- 29 Foxconn invests USD 1.5 billion in India
- 30 Top French honour for scientist VR Lalithambika



- 31 ISRO unveils X-Ray polarimeter satellite
- 32 Vaishali Rameshbabu becomes a Grandmaster
- 33 India's emission intensity goes down
- 34 Gol's new initiatives
- 36 'Hump WWII' museum opens in Arunachal Pradesh
- 37 Chandrayaan-3 propulsion module moved to Earth orbit
- 38 115 million year old shark fossil discovered
- 39 Garba dance on UNESCO's Intangible Cultural Heritage list
- 40 'Mera Gaon, Meri Dharohar' launched
- 41 Five State election results
- 43 India's first woman Aide-de-camp
- Defence Updates**
- 44 Indian Army's 'Nagastra-1' hits bullseye in live demo

- 45 Anti-Submarine Warfare ships launched
- 47 Women empowerment in Indian Armed Forces

### General Knowledge

- 49 Financial literacy - Financial health Part 1
- 52 Law in focus - Alternative Dispute Resolution
- 54 Women scientists of India - Darshan Ranganathan
- 57 Living Naturally - Understanding constipation
- 59 Curiosity Corner - Delhi
- 61 Param Veer Vandana - Naik Jadunath Singh
- 62 Padma Awardee - Dr Ratan Chandra Kar
- 63 Historical Wonder : Jaisalmer Fort
- 65 Spotlight of the month - Capt Fatima Wasim

# 100 WOMEN



## Indian Women in BBC's 100 women 2023 List

BBC's 100 Women 2023 is a little more special to us as it includes four Indian women: Actress Dia Mirza, Cricketer Harmanpreet Kaur, Photographer Arati Kumar-Rao and Tibetan Buddhist nun Jetsunma Tenzin Palmo.

Recognition in any form for one's work is definitely a motivation to enhance performance. The British Broadcasting Corporation recently unveiled its 11<sup>th</sup> edition of the BBC 100 Women list for 2023 that features inspiring and influential women from various fields around the world. This prestigious list is categorized into Culture and Education, Entertainment & Sport, Politics & Advocacy and Science, Health & Technology.

BBC's 100 Women 2023 is a little more special to us as it includes four Indian women: Actress Dia Mirza, Cricketer Harmanpreet Kaur, Photographer Arati Kumar-Rao, and Tibetan Buddhist nun Jetsunma Tenzin Palmo in the list.

**Harmanpreet Kaur** is the captain of the Indian Women's National Cricket Team and has achieved the distinction of being named as one of Wisden's five Cricketers of the Year in May 2023.

**Dia Mirza** is an award-winning actress who has been actively involved in social and environmental causes. Mirza's commitment extends to being an ambassador for Save the Children, the International Fund for Animal Welfare, and a board member of the Sanctuary Nature Foundation.

**Tenzin Palmo** is recognized as one of the first Westerners ordained as a Tibetan Buddhist nun and has authored books such as *Into the Heart of Life* and *Reflections on a mountain lake: Teachings on practical Buddhism*.

**Arati Kumar-Rao** is an independent photographer and National Geographic explorer dedicated to the cause of capturing the impact of environmental degradation on biodiversity. She is currently working on documenting forced human migration in India with a National Geographic grant.



# Javier Milei

## Argentina's new President

---

**Javier Gerardo Milei, the new President of Argentina, is a well-known politician, economist and author.**

**J**avier Gerardo Milei, the new President of Argentina, is a well-known politician, economist and author.

Milei is known for his flamboyant personality, distinctive personal style and strong media presence.

He has been a professor



of macroeconomics, taught university courses in macroeconomics, economic growth, microeconomics and mathematics. He has written numerous books and hosted radio programmes. His views are very different from other politicians of Argentina and have garnered significant public attention and polarizing reactions. He has written more than 50 academic papers.

He supports freedom of choice on drug policy, guns, prostitution, same-sex marriage, sexual preference and gender identity, while opposing abortion and euthanasia. In foreign policy, he advocates closer relations with the United States, supporting Ukraine in response to Russia's invasion, and distancing Argentina from geopolitical ties with China.

Smt Sandhya Nair



# Meira Chand

receives Singapore's highest Arts award



The Cultural Medallion was instituted in 1979.

Eighty-one-year-old writer Meira Chand was conferred the **Cultural Medallion**, Singapore's most prestigious arts accolade, in recognition of her artistic excellence and contribution to enriching the country's arts and cultural scene. The award comes with an SGD 80,000 grant to support her artistic pursuits.

A Singaporean of Swiss-Indian parentage, Meira Chand, is the first English language female writer to be conferred the award since 1997.

The London-born author has a master's degree in creative writing from Edith Cowan University, Perth, Australia, and a PhD in creative writing from the University of Western Australia.

The National Art Council recognized her for captivating readers worldwide with stories that reflect her multicultural heritage and explore themes surrounding the multiplicity of cultural identities.

## Her works

- *The Gossamer Fly*
- *The Last Quadrant*
- *The Bonsai Tree*
- *The Painted Cage*
- *A Choice of Evils*
- *A Different Sky*
- *House of the Sun*
- *A Far Horizon*







Smt Archana Sundar

# Largest single-site solar power plant

Al Dhafra is a pivotal step in the UAE's ambitious goal to triple its renewable energy capacity and double energy efficiency by 2030.

In a historic stride towards sustainable energy, the United Arab Emirates (UAE) has unveiled the **Al Dhafra Solar Photovoltaic (PV) Independent Power Project**, a monumental leap in the global clean energy initiative. Positioned just 35 kilometres from Abu Dhabi city, this 2-gigawatt (GW) solar power facility signifies a remarkable achievement showcasing the UAE's steadfast commitment to renewable energy.

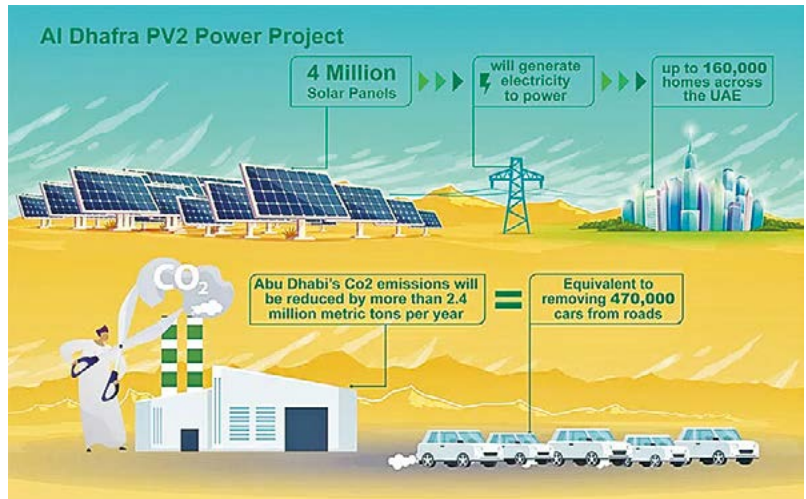
Presided over by Sheikh Hazza bin Zayed Al Nahyan, Deputy Ruler of Abu Dhabi, the inauguration ceremony highlighted the symbolic significance of the Al Dhafra project in advancing solar power efficiency, innovation and cost competitiveness. Developed by Abu Dhabi Future Energy Company (Masdar) in collaboration with key partners such as Abu

Dhabi National Energy Company (TAQA), EDF Renewables, and JinkoPower, the project not only attains unprecedented scale but also establishes a new benchmark in cost efficiency.

The project initially set competitive tariffs at AED 4.97 fils/kWh, a figure later improved to AED 4.85 fils/kWh upon financial close. This accomplishment underscores the UAE's dedication to providing sustainable energy solutions on a global scale. Al Dhafra is a pivotal step in the UAE's ambitious goal to triple its renewable energy capacity and double energy efficiency by 2030, aligning with the Net Zero 2050 goal and solidifying its leadership in solar energy production per capita.

With approximately 4 million solar panels utilizing innovative bi-facial technology, the plant is set to generate electricity for nearly





200,000 homes, simultaneously reducing Abu Dhabi's carbon emissions by an impressive 2.4 million tonnes annually—equivalent to removing about 470,000 cars from the road. As part of a comprehensive plan, UAE aims to invest up to Dh200 billion (USD 54 billion) by 2030, meeting energy demands sustainably and fostering economic growth.

This ground breaking solar initiative aligns seamlessly with

UAE's broader strategy, including the ambitious production of 1.4 million metric tonnes of hydrogen annually by 2031 and 15 million metric tonnes by 2050.

**Bifacial modules** produce solar power from both sides of the panel. Whereas traditional opaque-backsheeted panels are monofacial, bifacial modules expose both the front and backside of the solar cells.



# Pakistani startup wins top climate innovation competition



Pakistan-based cleantech startup **She-Guard** secured the top position at the ‘**Climate Launchpad Asia-Pacific**’ finals, presenting their innovative biodegradable and plastic-free sanitary product.

She-Guard faced stiff competition with 172 other teams from six countries in the finals. The event hosted by national partner

Centre4 Creativity & Sustainability, and funded by the Department of Foreign Affairs and Trade of Ireland (Irish Aid), served as a platform for climate innovators to present their solutions.

The startup’s mission revolves around converting banana crop waste into affordable and eco-friendly sanitary napkins. She-Guard is a biodegradable, eco-friendly and herbally treated sanitary napkin that has the potential to cater solid waste, serious health issues and environmental problems.

She-Guard’s success not only marks a significant milestone for the startup but also underscores the global significance of sustainable innovations addressing critical issues. **The event serves as a testament to the potency of entrepreneurship in propelling positive change for the environment and society.**

Sanitary napkins play a huge role in worsening the situation in all three problem areas mentioned, as they are generally plastic, chemical-based and used by 23 million of 67 million Pakistani



women. Besides this, there a social-economical problem: tens of millions other women do not have the luxury to hygienically manage their period as sanitary products are not available or not affordable for them. Mehreen Raza, the founder and CEO of She-Guard said, “She-Guard is a shield to ensure women and earth's health. She-Guard is the silver lining for the most ignored problems of women health and climate change. She-Guard ensures that women problems aren't taboo anymore.”

---

**"She-Guard is a shield to ensure women and earth's health. She-Guard is the silver lining for the most ignored problems of women health and climate change."**



# World's biggest iceberg on the move

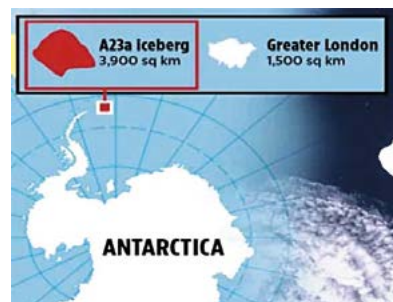
## DO YOU KNOW

- ◆ Iceberg is a large piece of ice that has broken off from a glacier or an ice shelf and floating in open water. The visible part is only a small portion, the majority is submerged underwater.
- ◆ Antarctic **A23a** is about 400m (1,312 ft) thick.
- ◆ Iceberg **B-15**, one of the largest icebergs ever recorded, was about 11,000 square kilometres in size. It broke off from Antarctica's Ross Ice Shelf in 2000.

In a thrilling event, the colossal Antarctic iceberg A23a has finally broken free after resting in the Weddell Sea for over 30 years. This monumental iceberg, covering an area twice the size of Greater London, is now on the move and scientists expect it to travel down what experts call "iceberg alley".

As A23a journeys through the Southern Ocean, it is likely to get caught in the **Antarctic Circumpolar Current** a powerful stream of water that will carry it towards the South Atlantic. This is an incredible natural process, much like a frozen adventure story!

Interestingly, South Georgia, often sees big icebergs like A23a hanging out just offshore. Due to their unique shape, these icebergs can get stuck on the island's shallow continental shelf.



But here's the catch - despite their massive size, all icebergs, including A23a, are destined to melt away over time. It is nature's way of recycling these frozen giants, returning them to the vast ocean.

As scientists keep an eye on A23a's exciting journey, this amazing spectacle serves as a reminder of the dynamic nature of our planet and the interconnected dance between ice, oceans and climate.





# COP28UAE

## UNITE. ACT. DELIVER.

COP28 was attended by dignitaries of 194 countries, environmental activists, NGOs, energy companies, environmental think tanks, representatives of environment protection agencies, world press and concerned citizens from the world over.

COP28 (Conference of parties) and 27 earlier such meetings are international meetings dedicated to assess and plan mitigation and adaptation strategies against climate change and extreme weather phenomenon.

COP28 was held in Dubai between 30<sup>th</sup> November and 12<sup>th</sup> December 2023.

### Why COP meetings are important

Hardly 4 to 5 decades back global warming and climate change was a hot scientific pursuit for scientists engaged in studying build-up of greenhouse gases (GHG), climate change and extreme weather.

COP meetings, starting with the first “Earth summit” held in Rio



COP28 was attended by dignitaries of 194 countries, environmental activists, NGOs, energy companies, environmental think tanks, representatives of environment protection agencies, world press and concerned citizens from world over.

de Janeiro, Brazil have evolved in character. With active involvement and guidance from **UNFCC (United Nations Framework on Climate Change)** COP meetings have become a carnival extravaganza that is broadcast far and wide by world media.





Undoubtedly, global issues like climate change have now reached every doorstep, demanding responsibility and action from member countries. GHG emission by different countries fall into the ambit of “Global commons” like atmosphere. Hence it is a global issue that demands global action. Decisions taken, road maps laid out, commitments and finally the drafts released in each of the COP meetings are crucial for taking corrective measures. Climate science has proved beyond doubt that anthropogenic climate change is real. COP meetings enable countries to convert these findings to meaningful political and economic course corrections.

### COP28

In keeping with the traditions of impressive terminologies and curious verbs COP28 didn't disappoint. Global Stockade, one of the key documents of COP28 assess over a 5 year period, the progress made, commitments fulfilled on emissions, flow of technology etc. The one released in COP28 has linked tripling of renewable energy capacity with a

phasing out of fossil fuels. India for its part has agreed with tripling of renewable energy capacity by 2030 with no “prescriptive” conditions. On fossil fuel usage the final draft at COP28 wants countries to reduce both production and consumption of fossil fuels in a “just and orderly” manner and achieve net zero emissions by 2050.

### Loss and Damage fund

**Loss and Damage fund (L&D)** was yet another key document of COP28. Developing countries have been impacted by global warming and climate change in many ways from droughts, extreme rainfall, floods and loss of agricultural productivity, lives, livelihood and property. It is a known fact that developed countries have been primarily responsible for this increased cumulative emissions of GHG during the industrial age for close to 200 years. Hence L&D has been created to compensate affected countries, with a commitment of USD 250 million. The irony is that the latest Global Stockade says that developing countries may need trillion dollars

and more in adaptation strategies. This kind of contingency fund has been in the asking for three decades. India correctly opined that the flow of this climate finance should come with access to technology.

### What can we expect?

Fossil fuels are responsible for 80% of global emissions of which coal is responsible for 40%. For the first time in as many meetings fossil fuel usage and their orderly phasing out found a place in the final draft with coal usage coming in for explicit mention. All this might sound very encouraging but compliance to control emissions after several commitments in the past is rather disappointing. Emissions have only increased every passing year. That is quite understandable. Emerging major economies like India and China depend on coal for close to 75% of their energy needs and developed west have shown little inclination to control emissions. **Technology can deliver but without a concerted effort on conservation front, commitments on emissions reduction will remain an aspirational goal for a long time to come.**



# Angkor Wat

## The 8<sup>th</sup> Wonder of the world

Located in Siem Reap, Cambodia, the incredible Angkor Wat complex comprising hundreds of buildings over 400 acres is the largest religious monument in the world.

Amidst lush greenery and surrounded by a picturesque moat lies this magnificent edifice that speaks volumes of the Khmer architecture. Located in Siem Reap, Cambodia, this incredible complex comprising hundreds of buildings over 400 acres is the largest religious monument in the world. The word Angkor Wat in Khmer language means 'city temple'.

### History

The construction dates back to 1116 C.E., three years after King Suryavarman II of the Khmer dynasty ascended the throne and went on for 28 years. It was stopped shortly after the king's death in 1150. Angkor Wat was dedicated to Lord Vishnu on the king's command and was the state's capital city. In 1177 the Cham people of Vietnam ravaged the city completely. The reign of King Jayavarman VII began after 4 years. He built a new city Angkor Thom dedicating it to Buddhism eventually converting Angkor Wat to a Buddhist shrine. The temple gradually became neglected in the 16<sup>th</sup> century and was rediscovered by the French only in the 19<sup>th</sup> century.

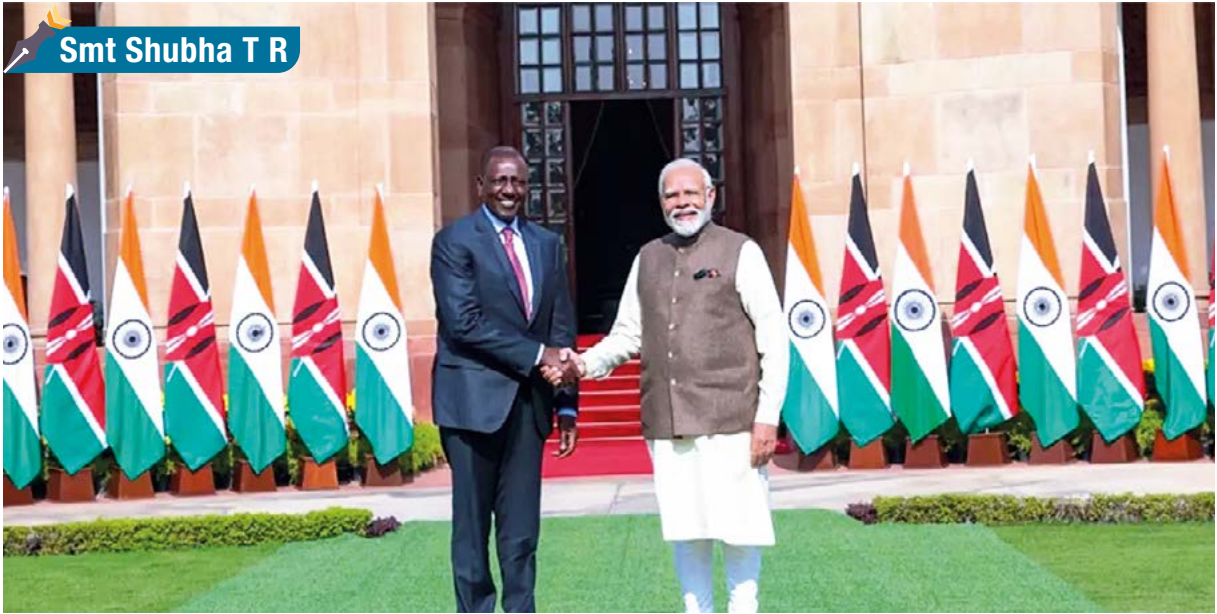
### The architecture

An aerial view of Angkor Wat shows the enclosure wall which separates the temple grounds from the moat. As per Khmer tradition, the temple is comprised of three concentric passageways with a central sanctuary, marked by five stone towers that mimic the five mountain ranges of Mt. Meru—the mythical home of the gods, for both Hindus and Buddhists. One of the key features of Angkor Wat's uniqueness is the use of the '*jagati*' (a raised terrace or platform), which raises the Angkor Wat leading up to the lotus shaped central tower which represents the *Axis mundi* (a cosmic axis believed to connect the earth and the heavens).

### Angkor Wat today

The 20<sup>th</sup> century saw a considerable restoration of this complex and it became a UNESCO World heritage site. Many countries like France, Japan and China are involved in the conservation process to protect the sculptural reliefs. The temple is a symbol of Cambodia's pride, and a depiction of this is seen on the Cambodian flag.





# India gives USD 250 million to Kenya

## DO YOU KNOW ?

- ◆ **A Line of Credit (LOC)** is a pre-determined borrowing limit that is accessible whenever necessary. The borrower can withdraw funds as required until reaching the established limit, and once repaid, the funds can be borrowed again in the case of an open line of credit.
- ◆ **India and Kenya** have historical trade relations in spices along Swahili coast in Kenya.

The President of Republic of Kenya William Samoei Ruto made a three day state visit in December to India. It is notable that the Presidential visit from Kenya is taking place after six years.

President Ruto and PM Modi held bilateral talks and agreed to strengthen the relations in strategic areas of common interest. President Ruto thanked PM Modi for his leadership and support of the Indian Government for the inclusion of the African Union as a permanent member of the G-20.

PM Modi highlighted the shared agricultural heritage of both nations and announced the Line of Credit of USD 250 million to Kenya towards the modernization of its agricultural sector. The funds are aimed to support projects that



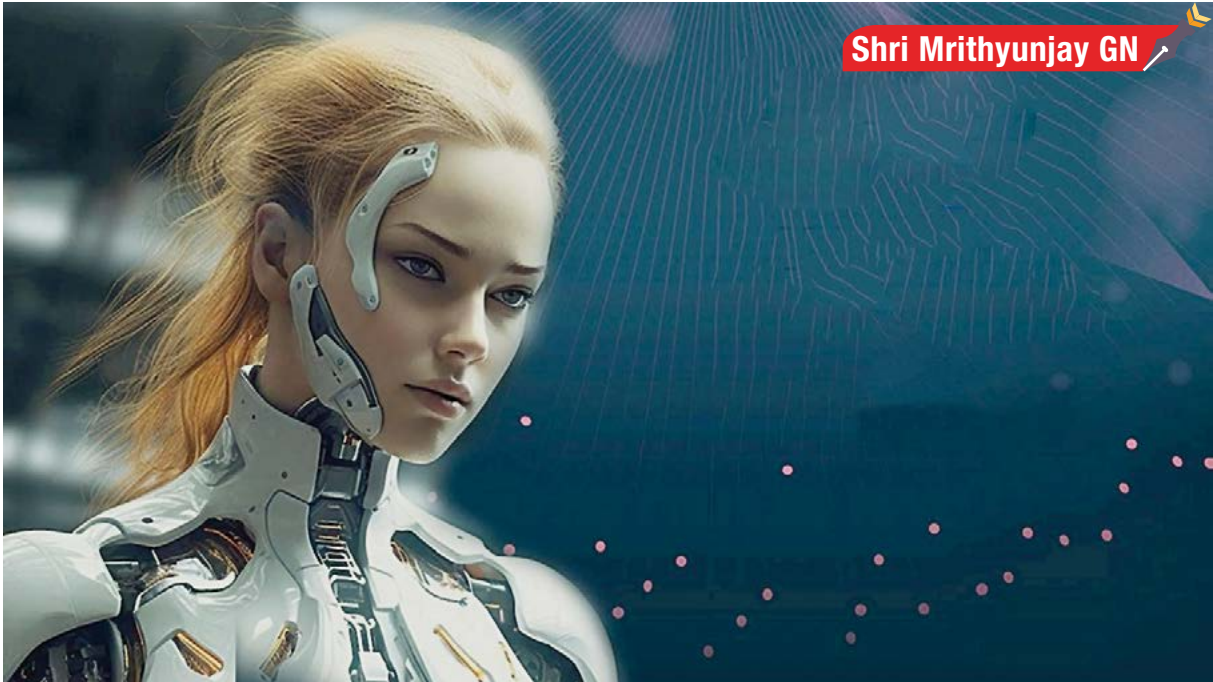
include advancement in agricultural practices and technologies.

The joint statement revealed that Kenya has offered land to the Indian companies and institutions for cultivation of crops including millets. The Indian companies would further invest in Kenya's agriculture sector, providing both equipment and technology.

Other aspects of bilateral talks included political relations, Trade and Investment, Capacity Building and Education, Digital public infrastructure, Counter Terrorism co-operation, Space, Maritime, Defence and Security cooperation etc.



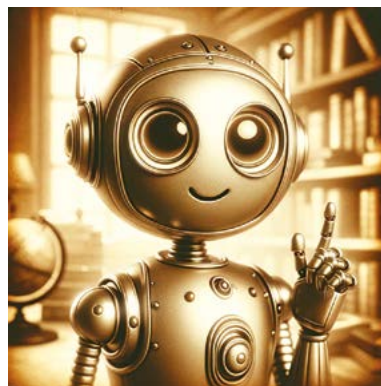




# Google's biggest AI model Gemini

Gemini can understand and interact with diverse data formats like images, code, audio and even video.

20<sup>th</sup> November 2022 will go down as the day a tectonic shift happened in human history. While the magnitude of the shift itself can be debated over, what is irrefutable is the fact that the moment OpenAI released ChatGPT launched to the public, we began looking at technology and the way we interact with it in a fundamentally different way.

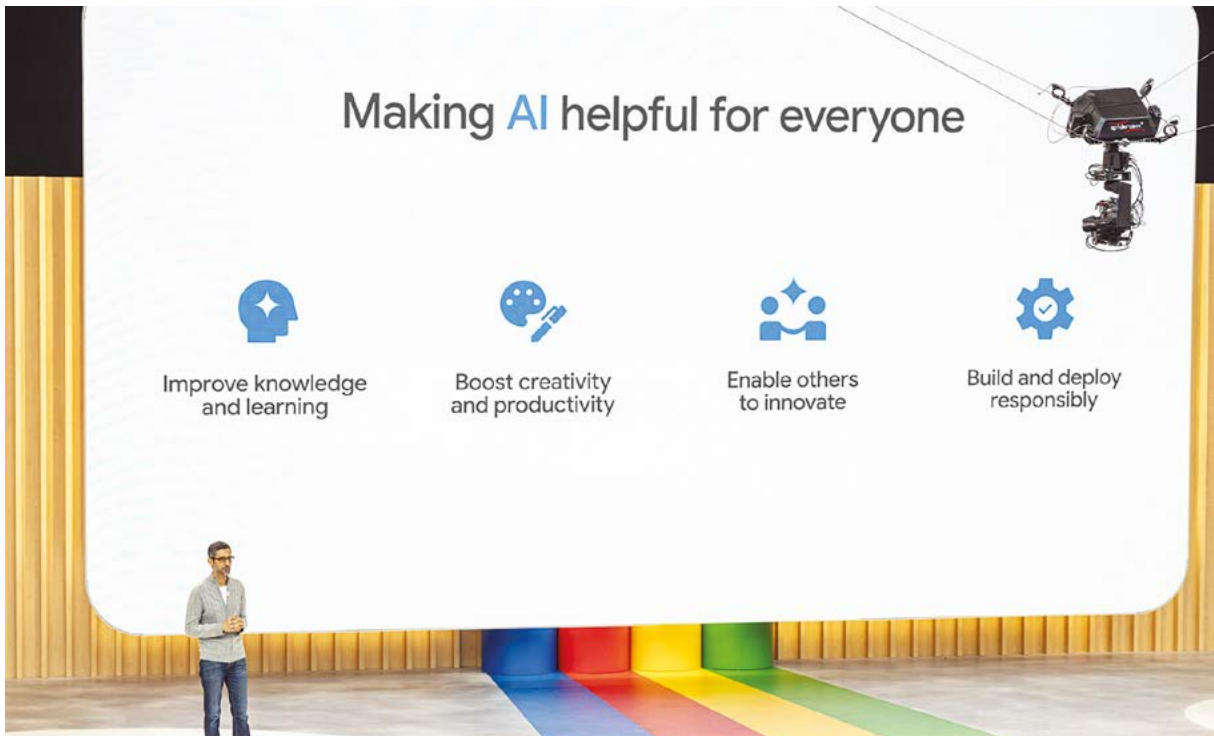


One year later, the biggest tech company in the world is stepping into the artificial intelligence domain. We are in a metaphorical arms race to see who can build the biggest and best artificial intelligence and, on 6<sup>th</sup> December 2023 Google brought out the big guns.

Developed by Google DeepMind, the artificial intelligence research division of Google, Gemini has quickly proven to be a worthy competitor to other AI models. **Unlike traditional AI models that only handle text-based interactions, Gemini can understand and interact with diverse data formats like images, code, audio and even video.** This makes it incredibly versatile and powerful.

This enhanced capacity is expected to help with deeper comprehension of complex situations.





With the use of Gemini, users can type up entire documents with a single prompt.



For instance, analyzing medical scans alongside research papers and patient data looking at multiple user needs and analyzing code, it can suggest modifications to address specific requirements.

With the use of Gemini, users can type up entire documents with a single prompt, transcribe a video by just uploading it to Google, edit images with a prompt and even generate recipes based on photographs of dishes. What makes this that much more game changing, is the fact that the technology will only get better as the time goes on.

The questions still persist,

however, about the ethical use of AI as the field advances with unprecedented speed. Fei-Fei Li, Chief Scientist of AI Ethics at Google emphasized its commitment to ethical development. "Gemini's development has been guided by rigorous ethical principles, and we are committed to ongoing collaboration with experts to ensure its responsible implementation."

**With AI taking over significant parts of our life, we are looking at a future where the question is no longer where we will adopt AI into our daily lives, but rather, where we will not.**





# 'GREEN RISING' launched

**"Youth should be included in decision and policymaking processes to enable them to co-create the solutions the world needs today."**

**H**eatwaves, deepening droughts, melting ice caps and rising floods - the calamities we face due to changing climatic conditions are on the rise. A recent study by UNICEF USA has revealed that one in three youth experience really high levels of anxiety about climate change. Yet, despite their worries, the youth are responding to the climate crisis with optimism and action. To mobilise world leaders to scale these children and youth-led grassroots climate action, UNICEF, Generation Unlimited (GenU) and partners launched the initiative on 8<sup>th</sup> Dec 2023.

Over the years 2023-2025, Green Rising is aiming to help 10 million young people become climate advocates through volunteering, green skills building, jobs, entrepreneurship and advocacy. The initiative will help them take concrete green actions to protect their communities and mitigate the devastating impacts of climate change.

"Youth should be included in decision and policymaking processes to enable them to co-create the solutions the world needs today. Our goals for the RewirEd Summit are



to align strategies, unite climate and education actors and position youth at the heart of the global climate agenda, with a sharp focus on green skills for green jobs and green economies," said Dr. Tariq Al Gurg, Chief Executive Officer and Vice-Chairman of Dubai Cares, and Board Member of GenU.

While the climate action looks different for various partner countries, for India, it is about paving the way for a climate resilient education system. UNICEF has engaged with members of national focus groups on environmental education to integrate climate change elements into India's new National Curriculum Framework (NCF).

These include school safety programmes, child cabinets and adolescent and youth platforms at the school level to converse openly on topics such as climate change and disaster risk reduction activities. This will enhance awareness and knowledge around climate change preparedness and resilience.





# World's first ship-to-ship LNG transfer

This groundbreaking achievement is part of GAIL's strategic efforts to optimize shipping costs and reduce emissions.

India's leading gas company, GAIL, has made history by successfully conducting the world's first ship-to-ship liquefied natural gas (LNG) transfer. This groundbreaking achievement is part of GAIL's strategic efforts to optimize shipping costs and reduce emissions.

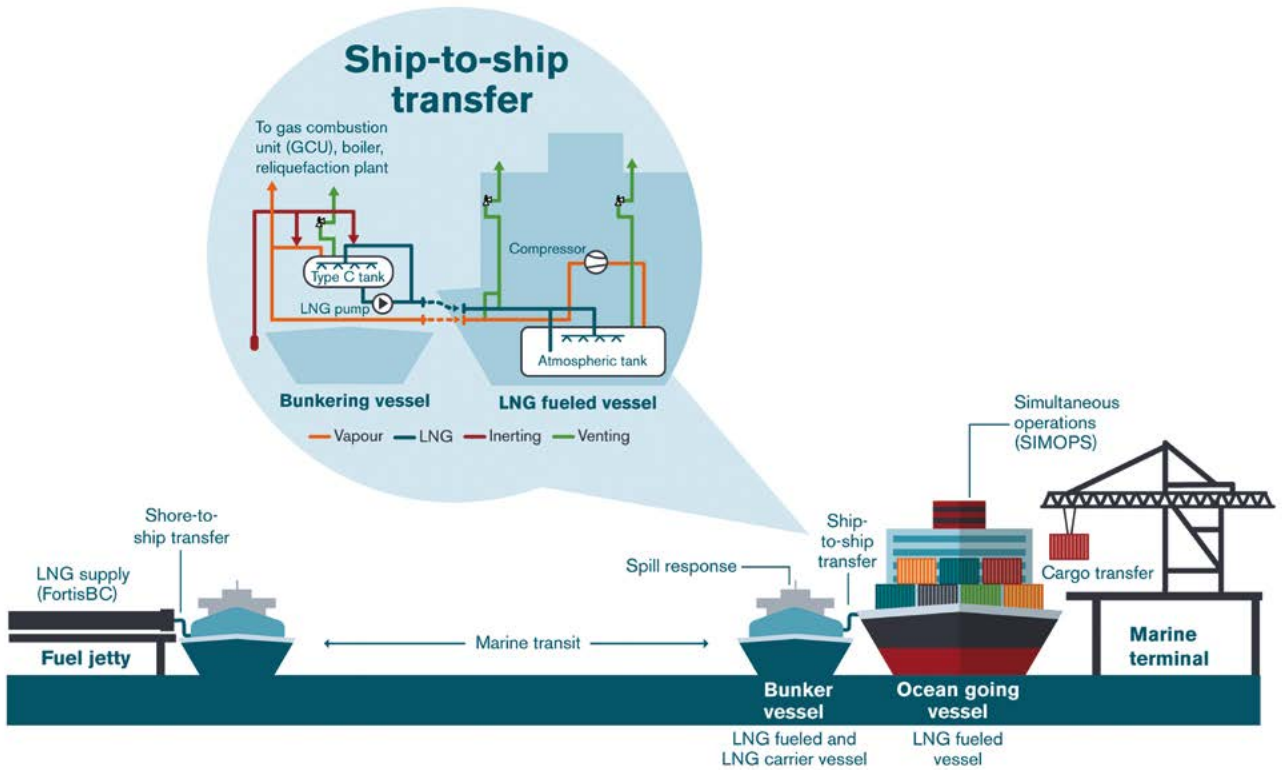
GAIL has secured a substantial contract for 5.8 million tonnes per annum of LNG from the United States. Traditionally, this LNG volume is transported to India through LNG ships, covering a distance of approximately 19,554 nautical miles and taking about 54 days for a round trip. This conventional approach results in the emission of around 15,600 tonnes of carbon dioxide (CO<sub>2</sub>). While emissions are typically controlled through advanced technology or alterations in cargo destinations,

GAIL's inventive ship-to-ship (STS) transfers have significantly decreased CO<sub>2</sub> emissions.

Recently, GAIL's vessel, **Castillo De Santisteban**, performed an LNG transfer mid-journey to another chartered vessel, **Al Gharrafa** of QatarGas. This STS transfer, a world first between a large conventional LNG vessel and a Q-Flex LNG Vessel, yielded substantial benefits. The QatarGas vessel continued to Dahej in Gujarat, completing the cargo delivery initially intended for GAIL's vessel.

Company officials confirmed that GAIL's optimized gain from this charter exceeded USD 1 million. Furthermore, the backhaul of the QatarGas vessel resulted in **savings in fuel costs and canal charges, creating a mutually beneficial**





With a potential minimum of two cargoes per month, distance savings could reach 209,664 nautical miles per year, translating to a significant reduction of 167,731 tonnes of CO<sub>2</sub> emissions.



situation for both GAIL and QatarGas.

If scaled up, this pioneering concept could revolutionize the LNG shipping industry. With a potential minimum of two cargoes per month, distance savings could reach 209,664 nautical miles per year, translating to a significant reduction of 167,731 tonnes of CO<sub>2</sub> emissions.

This innovative strategy aligns with GAIL's broader initiatives, including the introduction of the first floating CNG station and the

conversion of boats in Varanasi to run on environment-friendly CNG, as reported.

GAIL's forward-thinking approach and these notable achievements have earned the company the prestigious 'Innovation Award-India and Midstream Project of the Year' at the Asian Oil and Gas Awards. This recognition underscores GAIL's commitment to advancing sustainable and efficient practices in the energy sector.



# India's GDP crosses \$4 Trillion



**Consistent efforts across various sectors, coupled with strategic policies and a thriving entrepreneurial spirit have played a pivotal role in achieving this historic milestone.**

In a significant economic achievement, India's Gross Domestic Product (GDP) crossed the USD 4 trillion mark in nominal terms. This milestone underscores India's robust economic growth and solidifies its position as a major global economic force. India joined an exclusive group of countries that include the USA, China, Germany and Japan after its GDP hit the USD 4 trillion mark.

Consistent efforts across various sectors, coupled with strategic policies and a thriving entrepreneurial spirit, have played a pivotal role in achieving this historic milestone. The nation's ascent highlights its status as one of the world's fastest-growing major economies. This achievement demonstrates India's rapid expansion and emergence as a formidable economic powerhouse.





---

**Experts predict that India could reach the USD 5 trillion market cap mark by 2027 if its GDP grows at 8 % in US dollar terms.**

With a young expanding population, India has a sizable and growing middle class which drives domestic consumption. Additionally, a favourable business climate has enabled it to reach this milestone. The ease of doing business has increased considerably for enterprises to launch and operate successfully.

India has made significant investments with a focus on infrastructure development that has propelled the economy. The overall economic growth will definitely improve the lives of Indian people. It is expected to generate new jobs and opportunities. In addition, the country is projected to play a more significant role in the global economy. India has achieved significant success in various sectors which has accentuated the country's image in the global stage.

India's journey to this milestone has been bolstered by its embrace of digital transformation. The country has effectively utilized technology

for financial inclusion, transparency in governance, essential services delivery and women empowerment. These strides in digitalization have contributed significantly to India's resilient and promising economic narrative.

India's market cap has moved from USD 3 trillion to USD 4 trillion in about 31 months. Experts predict that India could reach the USD 5 trillion market cap mark by 2027 if its GDP grows at 8 % in US dollar terms. Some believe the feat could be achieved faster as there is scope for an expansion given India's growth prospects. India is now one of the few countries which have a market cap in excess of GDP at USD 4 trillion. In normal circumstances this could be a cause for concern. However, there is a confluence of three factors - growth, governance, and green transformation of the economy, backed by the investors looking to buy into every correction which augurs well for a remarkable growth in the years to come.





# Revolutionising Geospatial Mapping in India

The primary goal of the partnership is to develop 3D digital twins of major cities and towns across India.

**S**urvey of India (SoI), the nation's premier national survey and mapping organization, has joined forces with **Genesys International**, a leading Indian mapping company specialising in geospatial solutions. This strategic partnership marks a historic collaboration, as Genesys becomes the first company to establish a public-private agreement with SoI to create a three-dimensional (3D) digital twin-mapping programme in India.

The collaboration aligns with India's **National Geospatial Policy 2022**, focusing on in-house geospatial data production and usage. The partnership underscores a pivotal move towards delivering geospatial content aligned with the **National Geodetic Framework**, reflecting the country's commitment to technological advancements in mapping and urban planning.

The primary goal of the partnership is to develop **3D digital twins of major cities and towns across India**. This ambitious project will utilize Genesys' all-India highly-accurate navigable maps, supported by the Genesys constellation of sensors and SoI's **Continuously Operating Reference Stations (CORS)** network consisting of 902 stations.

Leveraging SoI's CORS network, the partnership aims to provide real-time high-precision positioning data, contributing to the creation of an accurate and dynamic 3D digital twin of urban landscapes.

Digital twins are virtual replicas of physical objects or systems, incorporating data, simulations and real-time information to mirror their real-world counterparts. The technology enables continuous monitoring of physical entities and seamless integration of data from various sources for comprehensive insights.

Genesys will integrate CORS data to ensure that its digital twins faithfully mirror the dynamic urban landscape with unparalleled precision. The integration empowers various applications, including urban planning, telecom signal assessment, disaster management and more, providing accurate and reliable geospatial insights.





# 'AGNI'

## Promoting innovations by Ayurveda practitioners

AGNI is viewed as an educational beacon, illuminating a path towards a harmonious integration of tradition and innovation in the field of Ayurveda.

The Central Council for Research in Ayurveda Sciences (CCRAS), operating under the Ministry of Ayush, has embarked on a transformative initiative known as the **Ayurveda Gyan Naipunya Initiative (AGNI)**.

AGNI's primary objectives are comprehensive, with a focus on advancing education, fostering a culture of evidence-based practice, and creating a collaborative network among Ayurveda practitioners. This encourages qualified practitioners to share their innovative practices and experiences in diverse disease conditions, emphasizing the need for scientific validation.

To facilitate matters, CCRAS has outlined a meticulous process for documenting and publishing reported medical practices and therapeutic regimens. In collaboration with the **National Commission for the Indian System of Medicine (NCISM)**, CCRAS aims to ensure the credibility and educational value of the documented information.

Qualified Ayurveda practitioners are invited to express their interest by submitting applications available on the CCRAS website ([ccras.nic.in](http://ccras.nic.in)). This collaborative effort involves building a database and enhancing practitioners' capabilities through training in research methods and good clinical practices. And also helps in bridging the gap between traditional knowledge and modern research methodologies.

**CCRAS, as an apex research organization, plays a pivotal role in coordinating, formulating, and promoting scientific research in Ayurveda.** The institution has previously initiated programmes such as SPARK, PG-STAR and SMART, aimed at boosting scientific research in Ayurveda colleges and hospitals, thereby nurturing the next generation of Ayurvedic scholars.

AGNI, backed by the credibility of CCRAS, marks a paradigm shift in the evolution of Ayurveda. It is viewed as an educational beacon, illuminating a path towards a harmonious integration of tradition and innovation in the field of Ayurveda.





# NATPOLREX

## pollution response exercise

### DO YOU KNOW ?

- ◆ ICG operates **three Pollution Response Vessels** (aka Pollution Control Vessels)
  - ICGS Samudra Prahari
  - ICGS Samudra Paheredar
  - ICGS Samudra Pavak
- ◆ These are fitted with specific equipment to deal with chemical and oil spills at sea.
- ◆ ICG has **four Pollution Response Centers** at Mumbai, Chennai, Port Blair and Vadinar in Gujarat.

**N**atpolrex is an annual naval exercise conducted by the Indian Coast Guard (ICG). The main objective is to protect the marine environment. It can be viewed as part of a contingency plan in the event of unfortunate oil spill or other forms of pollution that could harm marine ecosystems.

Much of the world's trade, ranging from raw materials, manufactured goods to crude

**South Asia Cooperative Environment Programme (SACEP)** is an intergovernmental organisation, established in 1982. South Asian nations like India, Bangladesh, Maldives, Nepal, Pakistan and Sri Lanka are members of SACEP. This organisation was established to protect marine ecosystems from accidental oil spills and other forms of marine pollution. This exercise Natpolrex is run in all



oil takes place via the sea route. Sometimes while transporting crude, accidents result in major spills that harm marine environment. Oil spills threaten local fisheries, livelihoods and marine ecosystems.

these countries. Natpolrex however needs to follow guidelines laid out by the SACEP. To fulfil these guidelines the ICG runs the National oil spill contingency plan to predict and prevent damages.



# AMD's largest global design center in India

The AMD Technostar campus is part of the company's USD 400 million investment in India over the next five years.

Advanced Micro Devices Inc., more commonly known as AMD, has been manufacturing computer processors for more than 50 years. AMD developed the x86-64 architecture design and instruction set in 1999. This revolutionised computing by allowing processors to handle multiple complex instructions simultaneously. They have also made great advancements in computing performance in the last decade.

The AMD Technostar campus is part of the company's USD 400 million investment in India over the next five years.

This partnership between the tech giant and the Indian government was announced in SemiconIndia 2023, a conference organised by India Semiconductor Mission in partnership with various semiconductor manufacturers under the leadership of PM Modi. The partnership itself is a significant step towards fulfilling the mission of making India a global hub for Semiconductor Design, Manufacturing and Technology Development.



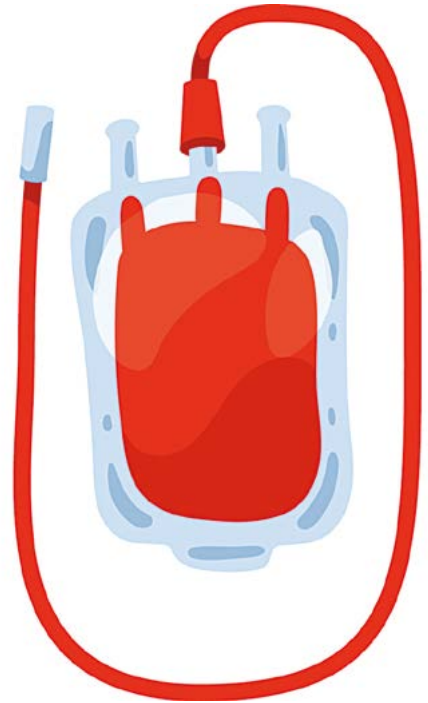
With over 6,500 employees across India, AMD's partnership plans to host approximately 3,000 AMD engineers in the state-of-the-art campus. The objective is to focus on ways in which the design and development of semiconductor technology including 3D stacking, artificial intelligence, machine learning and more can be improved.

This inauguration marks a milestone in the company's commitment to expand research, development, and engineering operations in India.

With growing demands for more powerful and efficient processors as we foray into a future of tech, India's growth in this sector will be greatly enhanced by this partnership.



# **Blod+** India's first on-demand blood platform



**C**hennai-based company Blod.in has unveiled Blod+, a revolutionary healthcare software and logistics platform designed to transform blood management and delivery in India. This innovation aims to address the

significant issue of blood wastage in healthcare facilities across the country. Varun Nai, CEO of Blod.in, highlighted the impact of blood wastage, stating, “About 6.5 lakh units of blood are wasted annually in India, leading to around 12,000 daily deaths. Blod+ ensures hospitals have steady blood access, reducing wastage significantly.”

quicker access to blood for patients in need, addressing a critical aspect of healthcare delivery.

One of the standout features of Blod+ is its empowerment of blood banks to distribute blood and its components more efficiently to hospitals within its network. This not only reduces wastage but also streamlines the supply chain, making it easier for blood banks to manage their inventory and promptly fulfill demands.

Adithya Vikram, CTO of Blod.in, shared the vision behind Blod+, stating, “We envision a reality where hospitals and family members are no longer burdened with the task of finding blood for their loved ones.” The platform has already gained traction among healthcare giants such as CloudNine, Bewell, Sooriya Hospital and IMAX Hospital, along with 35+ more hospitals, showcasing its integration ease and user-friendliness.

The launch follows a successful funding round with investments from industry leaders such as Prabhu Rangarajan (co-founder of M2P Fintech), Mohan K (co-founder of Ippo Pay), Samit Shetty (founder of Chaitanya Microfinance), and several others, reflecting the promising potential of this transformative healthcare platform. The support from these investors underlines the belief in Blod+ as a significant player in revolutionizing blood management practices in the healthcare sector.



# Foxconn invests USD 1.5 billion in India



**Foxconn is best known for the manufacture of contract products for Apple iPhone, among other products.**

**F**oxconn, formerly known as Hon Hai Precision Industry, is world's largest contract manufacturer of electronics, established in 1974 with headquarters in Tucheng, New Taipei City, Taiwan. In 2021, the company's annual revenue reached 6.83 trillion New Taiwan Dollars (USD 214 billion). Ranked 20<sup>th</sup> in the 2023 Fortune Global 500, it is one of the largest employers worldwide.

Foxconn is best known for the manufacture of contract products for Apple iPhone, among other products. They have approximately 1.3 million employees in mainland China and 7.68 lakh employees worldwide. The MNC has plans to invest USD 1.5 billion in India for an unspecified building project to fulfill their operational needs.

It already has several projects in the works in India, including factories in Karnataka and Telangana States. There are nine campuses and

30 factories in various parts of India with an estimated 70,000 employees.

Foxconn helped Apple triple production in India and assembled more than USD 7 billion of iPhones in last fiscal year, making almost 7% of its handsets in the country. This contributed to their operating revenues of over ₹500 crores for FY 22-23.

Customers have high expectations on the quality and new features of every new Apple product. Though there are about 200 suppliers who make up 98% of Apple's procurement spend, Foxconn maintaining high quality at the right price, makes them the No.1 vendor for Apple. Apart from iPhone, they are also suppliers for Microsoft, Meta, Google and Amazon.

Foxconn plans to replicate with electric vehicles, the success they have had with iPhone. The company is approaching and are being approached by auto makers.



## Top French honour for scientist

# VR Lalithambika

Lalithambika played a pivotal role in fostering collaboration between the French National Space Agency CNES and ISRO.

In a momentous recognition of her significant contributions to space cooperation between France and India, Lalithambika VR, a distinguished scientist and former Director of the Human Spaceflight Programme at the Indian Space Research Organisation (ISRO), was honored with the prestigious *'Légion d'Honneur.'* The award was conferred upon her by Thierry Mathou, the Ambassador of France to India, in a ceremony held in Bengaluru.

Lalithambika (60) played a pivotal role in fostering collaboration between the French National Space Agency CNES and ISRO. She received acclaim for her instrumental role in the signing of the first joint agreement in 2018,

focusing on human spaceflight and, specifically, the field of space medicine. The Indo-French partnership took a significant stride forward under her leadership.

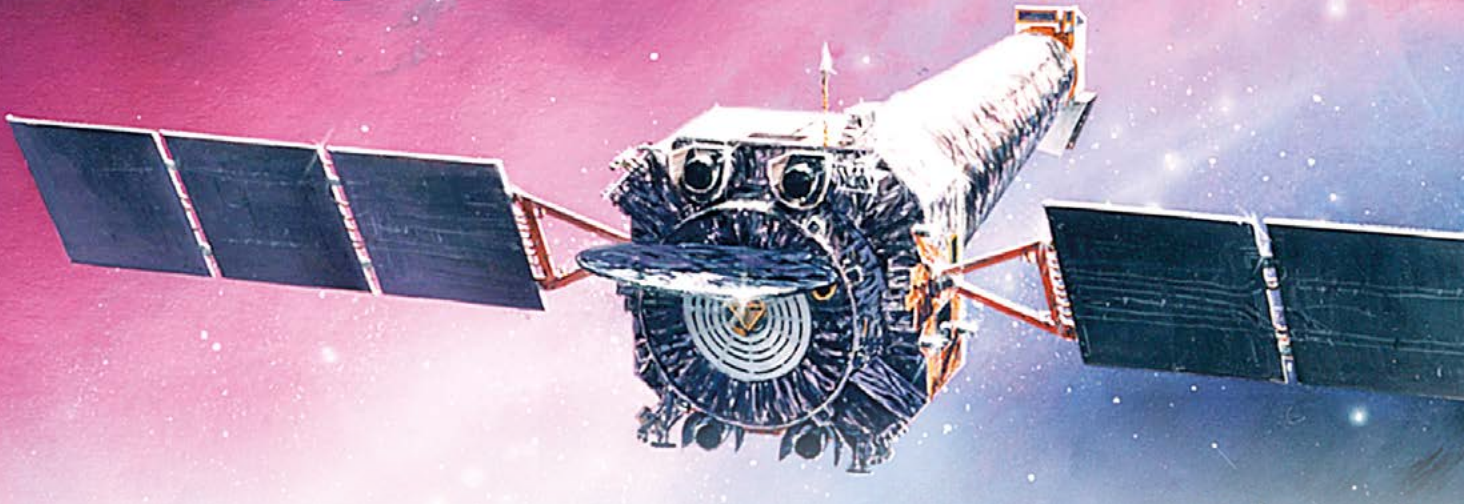
Lalithambika coordinated another critical Indo-French agreement in 2021, centred around India's astronaut programme. This agreement entails the training of India's flight physicians and mission control teams at prominent French facilities, including the CADMOS Center in Toulouse and the European Astronaut Centre (EAC) in Cologne, Germany.

Lalithambika commenced her journey with ISRO in 1988 as a launch vehicle autopilot design engineer at the Vikram Sarabhai Space Centre. Over the years, she expanded her responsibilities, engaging in diverse activities encompassing design, validation and flight telemetry data management for ISRO's launch vehicle missions.

Lalithambika follows the footsteps of former ISRO Chairman A S Kiran Kumar as the second ISRO scientist to receive the Legion of Honour from France.



# ISRO unveils X-Ray polarimeter satellite



India Space Research Organisation (ISRO) is set to launch the nation's first-ever **X-ray Polarimeter Satellite (XPoSat)**, revolutionizing space-based X-ray astronomy. While space-based X-ray astronomy was already established in India, it primarily focused on imaging, time-domain studies and spectroscopy. The XPoSat is a dedicated polarimetry mission to study various dynamics of bright astronomical X-ray sources in extreme conditions.

## History of astronomical instrumentation

The evolution of astronomical instrumentation begins with the invention of the first optical telescope, almost 400 years ago. The next step was attaching cameras to photograph celestial objects, resulting in astronomical imaging. Later, we delved into analysing the frequency components in the light

emitted by the astral bodies, thus making spectroscopy a vital tool in astronomy.

We combined imaging and spectroscopy to capture the celestial bodies with different wavelengths such as visible, ultraviolet and X-ray. Polarimetry emerged after this to study the polarization of light. In astronomy, polarization is the orientation of the electric field in an electromagnetic wave. When light from celestial objects interacts with matter, such as dust or gas, it can become polarized. Studying polarization provides insights into the properties of the intervening medium and the nature of the light source.

## The XPoSat mission

Polar Satellite Launch Vehicle (PSLV) will launch the XPoSat, carrying two payloads, into the Low Earth Orbit for observation. The primary payload **POLIX**

**(Polarimeter Instrument in X-rays)** will measure the polarimetry parameters (degree and angle of polarization) in medium X-ray energy range of 8-30 keV photons of astronomical origin. The **XSPECT (X-ray Spectroscopy and Timing)** payload will give spectroscopic information in the energy range of 0.8-15 keV.

While we have a wealth of information available about astronomical sources such as blackhole, neutron stars and active galactic nuclei, their emission mechanisms are complex to understand. The polarimetry measurements help us understand the degree of polarization and the angle of polarization and thus is an excellent diagnostic tool to understand the emission processes from astronomical sources. This can be a great foundation for future advancements in the astronomy community.





# Vaishali Rameshbabu becomes a **Grandmaster**

## DO YOU KNOW

- ◆ The game of chess originated in India, where it was called **Chaturanga** prior to the 6<sup>th</sup> century AD.
- ◆ It became popular in India and then spread to Persia and Arabia. In fact, the word "Checkmate" in Chess comes from the Persian phrase "Shah Mat," which means "the King is dead."
- ◆ **Viswanathan Anand** is the first Indian to win the Grandmaster title.
- ◆ The **longest chess game** ever was between I. Nikolic - Arsovic, Belgrade 1989, which ended in 269 moves. The game was a draw.
- ◆ In 1985, the Soviet player Garry Kasparov became the **youngest World Chess Champion** ever at the age of 22 years.
- ◆ In 1997, IBM's **Deep Blue supercomputer** famously defeated Garry Kasparov, the then reigning world chess champion - a ground-breaking moment in the history of AI and chess.
- ◆ Vaishali and her younger brother, Rameshbabu Pragganandhaa mark the **first brother-sister pair** in history to both hold Grandmaster titles.

Vaishali Rameshbabu, the 22-year-old chess player from India, has recently earned the title of Grandmaster at the **IV El Llobregat Open** in Spain.

This achievement makes her only the third woman from India to become a Grandmaster, following in the footsteps of Koneru Humpy and Harika Dronavalli.

Vaishali's journey in chess began with early successes, including winning the Asian Youth Chess Championships in the under-14 girls' category in 2015. This win was instrumental in her being awarded the title of International Master (IM). This was followed by a steady progress from an IM to a GM, a journey marked by determination and skill.

The story of Vaishali and Pragganandhaa is an inspiring one, not only for their individual achievements but also for their collective success as siblings in the world of chess.





# India's emission intensity down by 33 percent

In a significant stride towards environmental sustainability, India has surpassed expectations by achieving its **greenhouse gas (GHG) emission targets** well ahead of schedule. Between 2005 and 2019, the country reduced its **Green gross domestic product or Green GDP in short (GDP) emission intensity** by an impressive 33%, exceeding its goal 11 years in advance. This success was coupled with the creation of an additional carbon sink, absorbing 1.97 billion tonnes of CO<sub>2</sub> equivalent.

Despite these accomplishments, India's total emissions, including the **Land Use, Land-Use Change, and Forestry (LULUCF) sector**, witnessed a 4.56% increase compared to 2016. However, the nation remains committed to its long-term objectives. The emission intensity of the economy, a measure of GHG emissions per unit of GDP, has set the stage for India to achieve a 45% reduction by 2030, compared

to 2005 levels. Simultaneously, plans are underway to establish a carbon sink of 2.5 to 3.0 billion tonnes through tree and forest cover by 2030.

India's **National Determined Contributions (NDCs)** underscore its commitment to limiting the rise in Earth's average temperature, aiming for a target well below two degrees Celsius, preferably 1.5 degrees Celsius. **Scientists warn that breaching this limit could lead to exacerbated climate impacts such as heat waves, floods, cyclones and sea-level rise.**

The energy sector, accounting for 75.81% of anthropogenic emissions, remains a focal point for mitigation efforts. Agriculture follows at 13.44%, with Industrial Process and Product Use at 8.41%, and waste at 2.34%.

The LULUCF sector, crucial in offsetting emissions, removed a

significant 4,85,472 gigatonnes of carbon dioxide equivalent.

In 2019, India's net national emissions, considering both emissions and removals, totalled 26,46,556 GgCO<sub>2</sub>e, or 2.6 billion tonnes of CO<sub>2</sub>e.

The country stands among 26 developing nations that have submitted their national communications based on GHG inventory for 2019 or later years, showcasing a commitment to transparency and accountability.

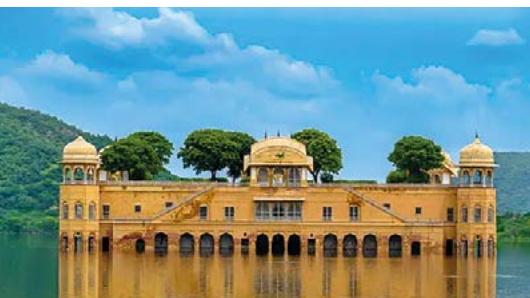
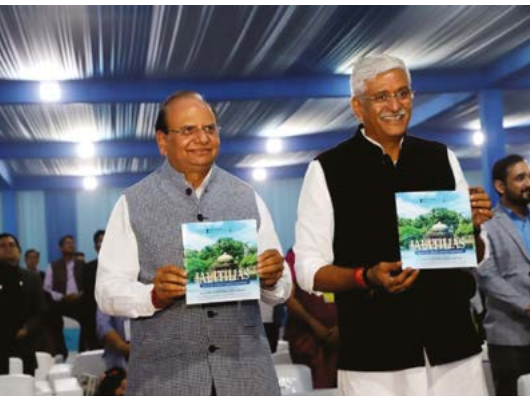
PM Modi, positioning India as a global climate leader, has proposed hosting the annual UN climate talks in 2028.

**With only 4% of global carbon emissions despite a population share of 17%, India's achievements underscore its dedication to a sustainable future and set the stage for a potential milestone climate conference in 2028.**





# GoI's NEW INITIATIVES



**Jal Itihas Utsav** was hosted at Shamsi Talab, Jahaz Mahal in Mehrauli, Delhi, on 1<sup>st</sup> December 2023 by the National Water Mission. Its aim is to raise public awareness for safeguarding water heritage sites, instilling a sense of ownership among the masses, promoting tourism and contributing to the restoration of historical structures.

The campaign themed **“Source Sustainability for Drinking Water”** aimed to prepare communities for the rainy season, encourage rainwater harvesting and ensure the sustainability of drinking water sources. The focus was particularly on 150 water stressed districts identified by the Jal Jeevan Mission.

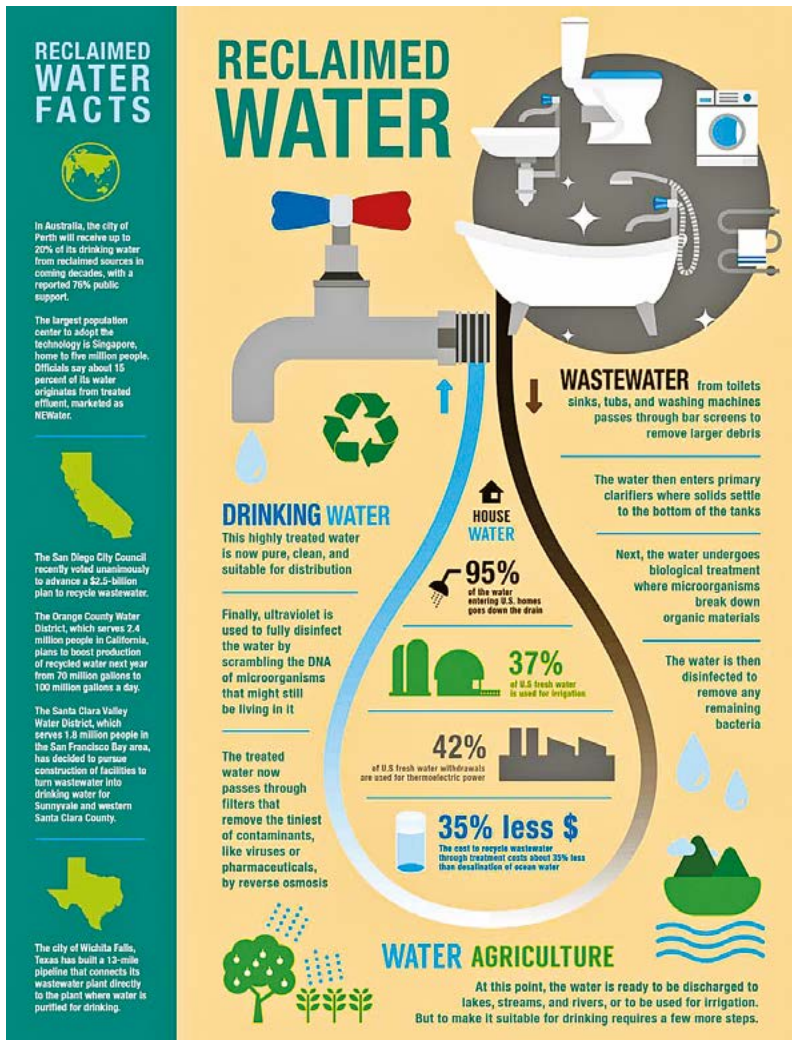
The cleaning and levelling of the Talab and its surrounding park were undertaken in partnership with the Archaeological Survey of India (ASI) and the Municipal Corporation of Delhi (MCD).

## Surya Nutan

Surya Nutan, has been developed by Indian Oil Corporation’s Research and Development division at Faridabad. It is a stationary, rechargeable and indoor cooking stove kept in the kitchen and a cable carries solar energy captured through a photovoltaic (PV) panel kept outdoor or on the roof.

It uses the sun's energy to cook food. The stove entails a one-time procurement cost and has zero maintenance. It collects energy from the sun, converts it into heat through a specially designed heating element, stores thermal energy and reconverts the energy for use in indoor cooking. The energy captured will not only help in daytime cooking needs of a family of four but also the dinner.

The prototype is currently tested at 60 locations. The stove is likely to cost between ₹ 10,000 and ₹ 12,000 a unit.



has launched tools like GIS Gram Manchitra and mobile solution mActionSoft to empower Gram Panchayats and improve grassroots spatial planning. By using geo-spatial technology, these tools offer a unified platform for visualizing and planning developmental works, which in turn would help the formulation of the **Gram Panchayat Development Plan (GPD)**.

The Gram Manchitra application serves as a single and unified Geo-Spatial platform. Further it empowers Gram Panchayats to visualize developmental works across diverse sectors in a comprehensive manner. It will give an insight into various works planned and assist in a more transparent and informed working.

The various tools aid, in identifying potential project sites, tracking of assets, project cost estimation, and impact assessment.

### Amplify 2.0

The Union Ministry of Housing and Urban Affairs is making raw data from Indian cities available on a single platform for academics, researchers, and stakeholders to help data-driven policy making. The Amplify 2.0 (Assessment and Monitoring Platform for Liveable, Inclusive and Future-ready urban India) portal was launched recently by the Ministry.

Currently, 225 urban local bodies (ULB) have been on-boarded and data for 150 cities is available on the portal. Previously, the Ministry used data provided by civic bodies to rank cities based on four indices. These encompassed ease-of-living, municipal performance, climate smart cities assessment and data maturity assessment.

The government plans to release various reports based on subsets of these four indices, moving towards a more data-centric approach.



The stove has a 10-year life and does not have a traditional battery that needs replacement. Also, the solar panel has a 25-year life expectancy.

### 'Gram Manchitra' GIS App

The Ministry of Panchyati Raj



# Hump WWII Museum

## opens in Arunachal Pradesh

29<sup>th</sup> November marked the opening of The Hump WWII Museum at Pasighat, Arunachal Pradesh.



food and ammunition for Chinese forces battling the Japanese. However, this vital support came at a tragic cost: around 650 aircraft were lost along the way.

The museum immortalizes the bravery of the pilots who risked their lives for democracy and freedom. Chief Minister Pema Khandu described the museum as a heartfelt tribute from the people of Arunachal Pradesh and emphasized its role in educating future generations about the courage and sacrifice displayed on The Hump.

In 2016, the **US Defense Prisoners of War / Missing In Action Accounting Agency (DPAA)** conducted searches for the remains of missing American airmen in the region. With an estimated 400 still unaccounted for, particularly in Arunachal Pradesh, preserving and remembering this crucial chapter of history remains paramount. The chief minister urged for further exploration of some 30 locations in Arunachal Pradesh where remnants of WWII aircraft are believed to lie.

The Hump WWII Museum stands as a powerful testament to the courage and sacrifice of Allied pilots who defied the unforgiving skies for the greater good. It serves not only as a memorial but also as a vital reminder of the human cost of war and the unwavering spirit of those who fought for freedom.

The Hump air route, stretching across Assam, Arunachal Pradesh, Tibet, Myanmar and Yunnan, became the stage for one of the most significant airlifts in history. Established after the Japanese blockade of the Burma Road in 1942, it relied on the tireless efforts of US-led Allied aircrews.

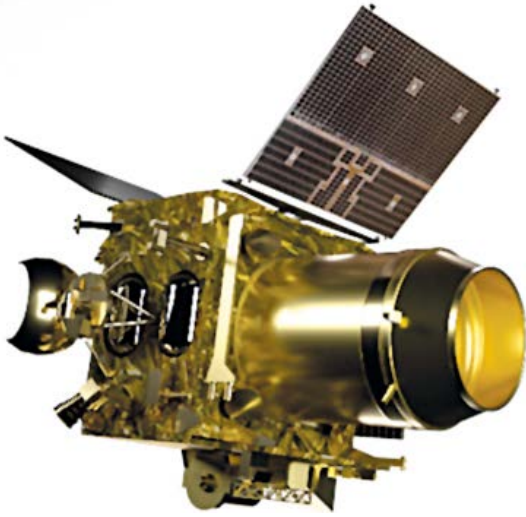
‘The Hump’, named as such for its treacherous terrain of deep gorges and mountains exceeding 10,000 feet, served as a critical lifeline between airfields in Assam to Yunnan, China from 1942 and 1945, during WWII.

In what was called the "greatest sustained aerial transport achievement of the war" by The National Museum of the US Air Force, Allied pilots braved unimaginable conditions to transport over 650,000 tons of fuel,

### DO YOU KNOW ?

- ◆ **Allied powers** was a coalition of countries that opposed the **Axis powers** (led by Germany, Italy and Japan) during World War II.
- ◆ The principal members were the UK, US, USSR and China (the **"Big Four"**) as well as France while it was unoccupied.
- ◆ The Allies also included every other signatory to the Declaration by United Nations (1<sup>st</sup> January 1942).





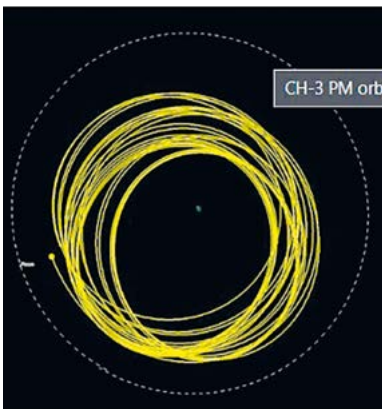
# Chandrayaan-3 Propulsion Module moved to Earth orbit

Propulsion Module (PM) of Chandrayaan-3 was moved from an orbit around the moon to an orbit around the earth.

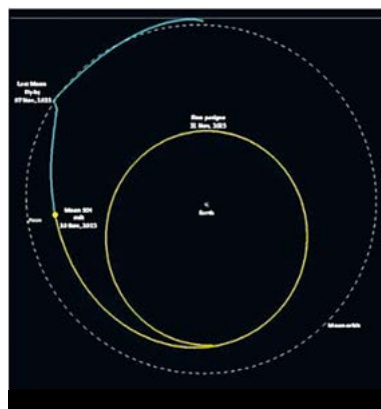
On 23<sup>rd</sup> August, India scripted history by successfully landing on the lunar surface and becoming the first to land near the south pole of the Moon. The mission's three objectives were to demonstrate a safe and soft landing on the lunar surface, to demonstrate a Rover roving on the moon and to conduct *in situ* scientific experiments.

In another unique experiment, the **Propulsion Module (PM)** of Chandrayaan-3 was moved from an orbit around the moon to an orbit around the earth. Taking into consideration the available fuel and the safety of other spacecraft in **Geosynchronous Earth Orbit (GEO)**, ISRO planned for the PM's return to Earth in October 2023. As of now, PM is orbiting Earth and crossed its first perigee on 22<sup>nd</sup> November with an altitude of 1.54 lakh km.

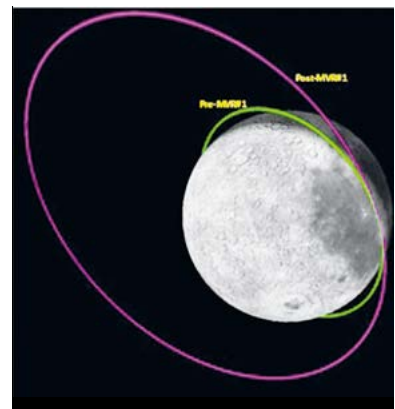
Additionally, it will remain in orbit around the earth for a year. The move is described as a 'unique experiment' and is considered significant in space exploration, as it showcases ISRO's capability of planning and executing manoeuvres to bring a spacecraft back from moon to the earth.



CH-3 PM orbit around Earth for next 1 year



CH-3 PM Earth arrival trajectory



CH-3 PM orbit after the first manoeuvre





# 115 million year old shark fossil discovered

A team of researchers, led by **Triparna Ghosh** and **Sunil Bajpai**, from the Geological Survey of India (GSI) and IIT-Roorkee respectively, have discovered fossils of sharks in Jaisalmer, Rajasthan. The team estimates the fossils to be around 115 million years old, making these some of the oldest fossils of sharks belonging to the

early Cretaceous period, which is roughly between 145 million years and 66 million years ago.

The team explored the **Habur Formation** in Jaisalmer Basin – an area known to contain a type of limestone, which, incidentally, is also home to many fossils.

This is a landmark discovery because the fossils belong to the

era right after dinosaur extinction – a period when old species slowly disappeared and new species were emerging globally; and biodiversity took a giant leap towards the species we all are familiar with today. The fossils have been matched with five genera (groups of closely related organisms) of lamniform sharks: large sharks like the Great White Shark. The fossils obtained were those of teeth and were found to be characteristic of these types of sharks.

If the identification is accurate, these would be the oldest fossils of lamniform sharks. Further study of these would provide eye-opening details of the life in the beginning of the Cretaceous period and the path of evolution that these species took post their emergence.





# Garba dance on UNESCO's 'Intangible Cultural Heritage' list

## DO YOU KNOW ?

- ◆ Garba is celebrated for nine days during the festival of Navaratri.
- ◆ The festival is dedicated to the worship of the feminine energy or Shakti.
- ◆ The dancers, wearing colourful dresses move around the centre in a counter-clockwise circle.
- ◆ They move using simple movements while singing and clapping their hands in unison.

UNESCO has approved the inclusion of Gujarat's traditional Garba dance in its 'Representative List of the Intangible Cultural Heritage of Humanity'.

This decision was taken at the 18<sup>th</sup> session of the UNESCO's Intergovernmental Committee for Safeguarding of Intangible Cultural Heritage held in Republic of Botswana.

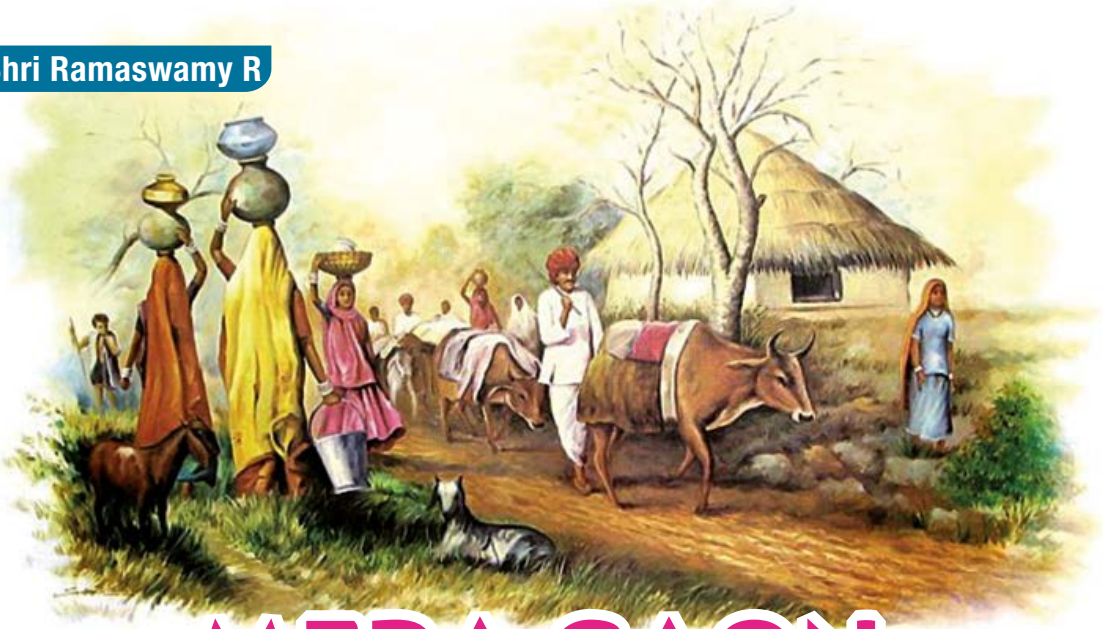
Explaining the dance form, the official website of UNESCO stated, "The practitioners and bearers (of garba) are broad and inclusive, from the dancers to the musicians, social groups,

craftspeople and religious figures involved in the festivities and preparations.

Transmitted through practice and observation, Garba fosters equality by transcending socio-economic, gender and religious structures. It is inclusive of diverse and marginalized communities, thus strengthening social bonds."

PM Modi in his congratulatory message said, "This honour inspires us to preserve and promote our heritage for future generations. Congrats for this global acknowledgement."





# MERA GAON MERI DHAROHAR

**M**era Gaon Meri Dharohar (MGMD) is one of the 3 interlinked programmes of **National Mission for Cultural Mapping** (NMCM) of the Ministry of Culture, Govt. of India. The website lets viewers see photographs across 32.87 lakh sq.km. of our country virtually. MGMD literally is all about “My Village My Heritage” and operates under ₹469 crores budget for 3 years.

NMCM was set up in 2017 with an aim to identify and document India’s cultural heritage and its creative potential to regenerate and revitalize rural economies, thereby making village India self-reliant.

Under NCNM, cultural mapping of 2 lakhs of the planned 6.5 lakh villages has already been completed and uploaded on the Mission portal that serves as the National Cultural Workplace.

- ▶ The mapping covers several domains like geographic, developmental and cultural profile including village stories, traditional knowledge and wisdom, customs, ornaments, food fairs and festivals, rituals, village gods and goddesses, physical and historical landmarks, architecture, places of worship, art forms – oral, visual, performed and crafted (songs, dances, tales, legends, epics, theatre, handlooms and handicrafts unique to the villages).
- ▶ Drone video of 750 villages was completed under the project.
- ▶ A web portal developed under MGMD will serve as the **National Cultural Work Place (NCWP)** and provide a single window online platform for culture service providers.

## 2. Cultural Work Place

NCWP portal provides open access to the following facilities:

- ▶ Registration of art forms and artistes
- ▶ Unique Identification Code (UIC) for the artistes
- ▶ Link to welfare schemes of the government
- ▶ Uploading facility for cultural events/and art and craft products/artistes workshops
- ▶ Editing and updating of village data by the users
- ▶ Virtual living museum
- ▶ Village travel passport
- ▶ Digital Indi-badges for online village travel

## 3. Sanskritik Pratibha Khoj (Cultural Talent Search)

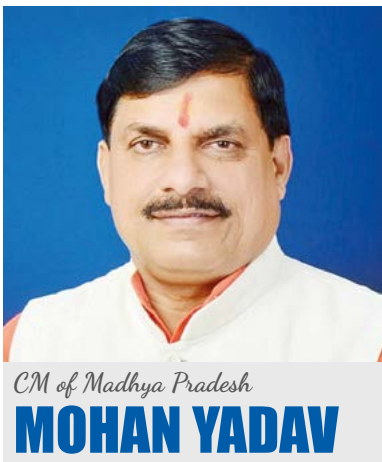
Aims to launch National Talent Hunt Scheme with a view to generate cultural vibrancy in the country.





# Five State election results

## Are the 2024 elections a done deal?



The results of the five assembly elections held in November 2023 sprang a surprise on the common people and the political pundits alike. Majority of the “experts” got their assessments wrong. It would be interesting to look at the states individually.

**Madhya Pradesh:** In MP the wide perception was that BJP will lose out to Congress. While there was no discernible anti-incumbency factor against the Shivraj Singh Chouhan government despite a 18-year tenure, there was a perceived fatigue factor that was expected to spoil the chances of BJP. Many opinion polls suggested that it was advantage Congress, so much so that Congress’s CM face Kamalnath started believing that he is the CM. The results proved otherwise. BJP’s ground work, Modi’s popularity and Shivraj Singh Chouhan’s good work gave BJP a thumping victory.

The BJP’s tally which was 109 in the 2018 elections rose to 163 and the tally of Congress plummeted to 66 from 114.

**Rajasthan:** In Rajasthan the record of Chief Minister Ashok Gehlot was decent. Despite the fact that the State has a track record of not electing the same party consecutively for two terms, the Congress was giving the BJP a run for their money. It was a neck and neck race in which, finally BJP romped home comfortably with 115 seats to its credit. Its tally went up from 73 seats it won in 2018. Congress’ tally fell from 100 to 69.

**Chhattisgarh:** This was a state where Congress had high hopes of winning. The opinion polls suggested a Congress victory and there was really no reason for the Bhupesh Baghel government to be shown the door. Nevertheless, even in Chhattisgarh BJP had a handsome victory.

Its tally moved up to 54 from the 15 it had in the outgoing assembly while that of Congress tanked from 68 to 35.

**Telangana:** This is a state where there was palpable anti-incumbency against the K.Chandrashekar Rao government which had become synonymous with corruption and dynastic politics. While both Congress and BJP were the opposition parties in Telangana, the party that was well poised to reap the benefits of the anti - incumbency against the Bharat Rashtra Samithi (BRS) Government was Congress and it secured a comfortable majority with 64 seats moving up from the 19 it had earlier. BRS dropped from 88 seats to 39. BJP which had just one seat in the outgoing assembly won 8. Its vote share also improved from 7% in the last elections to 14%. Congress as expected has made Revanth Reddy the Chief Minister.

**Mizoram:** The Zoram People's Movement (ZPM) swept the polls garnering 26 seats in the 40-member assembly unseating the Mizo National Front (MNF) government. In Mizoram too the majority of the pollsters got the predictions wrong and only a few had predicted a ZPM victory. The ZPM was a political formation formed six years ago as an alternative to Congress and MNF. It has six small regional parties and some Civil society groups and its promise was a corruption-free government. **This is the first time that a party other**

**than Congress and MNF has been voted to power.** BJP does not have a significant presence in the State. Lalduhoma has taken over as the Chief Minister.

**BJP Chief Ministers:** BJP has selected three new faces as chief ministers in the three states that it has won – **Vishnu Deo Sai** for Chhattisgarh, **Mohan Yadav** for MP and **Bhajan Lal Sharma** for Rajasthan. This is in line with the choices BJP has made, since its ascension to power in 2014, starting from Manohar Lal Khattar in Haryana. While analysts keep discussing on the caste and other calculations behind such selections, the choices defy all caste calculations. **In most of the cases, BJP has not selected a person representing a major caste of the state to lead it.** This in itself is an exercise that would foster unity amongst various castes. Whether one likes or hates BJP, this approach of not pandering to the castes is commendable. It is rather unfortunate that the “mainstream analysts” and media have not given BJP the credit that is due. **The bottom line for such selections seems to be loyalty, silent work for the party and ideology, and perceived efficiency and effectiveness in delivering governance and welfare measures to the people.**

**Lok Sabha Elections 2024:** The results of these state elections are a morale booster for BJP which it badly needed after its defeat in the Karnataka state elections. The setback to Congress and the I.N.D.I.A alliance on account of this is huge as BJP's political landscape has expanded. Its penetration among



various groups has also improved. It is now clear that PM Modi's popularity rating is intact and “Modi ki Guarantee” works on the ground. Armed with this huge success BJP will now approach the 2024 Lok Sabha polls with a lot of confidence. If Modi's popularity works for the states, it should certainly work for the Centre.

Does that mean that the 2024 Lok Sabha elections are a done deal? The wisdom and aspirations of the Indian electorate can never be underestimated and the last word cannot be said yet.





# India's first woman Aide-de-camp



**DO YOU  
KNOW** 

The **Territorial Army** of India is an auxiliary military organisation of part-time volunteers that provides support service to the Indian Army.

**W**omen are excelling in all the fields and the appointment of a woman to a higher designation is a testament to the power of women breaking gender norms.

**Squadron Leader Manisha Padhi**, a 2015 batch Indian Air Force officer has been appointed as the first woman *Aide-De-Camp* (ADC) to the Governor of Mizoram, Hari Babu Kambhampati.

Earlier, Squadron Leader Manisha Padhi served at various Air Force stations, including Bidar, Pune, and Bhatinda.

'*Aide-de-Camp*' is a French term referring to an officer in the armed forces who assists a higher-ranking officer. The Service chiefs, including those of the Army, Navy, and Air Force typically have three aides-de-camp. The President has five, including three from the Army and one each from the Navy, Air Force and Territorial Army. There is also an honorary ADC from the Territorial Army.

For state governors, two ADCs are appointed, with one each from the Indian Armed Forces and the Indian and state police services. However, in Jammu and Kashmir, both ADCs to the governor are selected from the Indian Army.



# NAGASTRA-1

## hits bullseye in live demo

### Rewind

1. The Indian Armed Forces have been procuring state-of-the-art weapons and equipment, technologies with focus on "Make in India" initiatives.
2. Our Army recently inked a deal to purchase 450 completely indigenous unmanned aerial vehicles (UAV) - Nagastra-1 loitering munitions to strengthen its defence system.
3. Solar Industries, Nagpur in April 2023 bagged the order to supply the UAV 'Nagastra' by beating competitors from Israel and Poland.
4. Designed and developed by Economics Explosives Ltd

(EEL) in association with Z-Motion (Bengaluru) it is the first "Loiter Munition" that has more than 75 % indigenous content.

### Why is Nagastra-1 special?

Nagastra-1 is a fixed-wing electric unmanned aerial vehicle with an endurance of 60 minutes.

### Salient features

1. **Range:** 15 km in man-in-the-loop mode and 30 km in autonomous mode.
2. **Payload:** 1.5 kg explosive warhead.
3. **Accuracy:** Can neutralize any hostile threat with GPS-enabled precision strikes with

an accuracy of 2 m.

4. In addition to day-night surveillance cameras, it is equipped with fragmenting warhead to defeat soft-skin targets.
5. If target is not detected or if the mission is aborted it can be re-called and a soft landing made with a parachute recovery mechanism for reuse multiple times.
6. Can loiter around in the air and strike as and when the target reaches the spot.
7. It hits in a *kamikaze* mode (suicidal attack), destroying the target and itself.
8. Recover, abort and rescue features make it far superior to any similar class of system developed by other nations.
9. Easily assembled and launched from the ground.

**Nagastra-1**  
Nagastra-1 is a fixed-wing electric unmanned aerial vehicle which is a loitering munition

**450** completely indigenous UAVs to be purchased by the Indian Army

**More than 75%** indigenous parts

**RANGE**  
30KM AUTONOMOUS MODE  
15KM MAN-IN-LOOP

**ENDURANCE**  
60 MINS

Day-night surveillance cameras  
Fragmenting warhead

**KAMIKAZE MODE**  
Neutralise any hostile threat with an accuracy of **2 meters** USING GPS

If the mission is cancelled, the UAV can be called back and make a soft landing through a parachute recovery mechanism

### Live demonstration

A weapons and ammunition live demonstration was organised at the Infantry School, Mhow on 16<sup>th</sup> November 2023 witnessed by the Chief of Army Staff along with other senior officers from the Armed Forces.

During the display this newly developed Loiter Munition was launched from a pneumatic launcher. After following a predefined trajectory it went into a *kamikaze* mode to destroy the target with an accuracy of 2m.





# Anti Submarine Warfare (ASW) Ships launched

16<sup>th</sup> November 2023

Anti- Submarine warfare (ASW) a shallow watercraft (SWC) Amini (P75), an Arnala-class anti-submarine corvette was launched in a ceremony at Kattupalli Port in Chennai. Arnala-class ships will replace the navy's ASW-SWC Abhay (P33) in service since 1989.

The Amini is the fourth of eight scheduled (ASW-SWC) vessels built and delivered by GRSE, Kolkata.

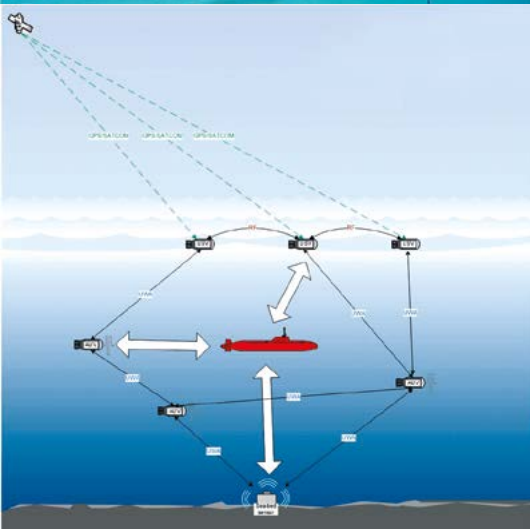
As per the build strategy four ships are being built at GRSE and the remaining four ships sub-contracted to M/s L&T Shipbuilding, Kattupalli for hull and part outfitting.

## Powerhouse

A "Make in India" initiative project, the Arnala-class ships will ensure large-scale defence production by own manufacturing units giving impetus to local employment and capability enhancement. Nearly 80% of the material used to build the corvettes are locally sourced.

## HIGHLIGHTS

- ▶ Length: 77meters
- ▶ Displacement : 900 tonnes
- ▶ Maximum speed: 25 knots (29 miles per hour).
- ▶ Endurance capability: 1,800 nautical miles (2,100 miles)
- ▶ Primary anti-submarine



## DO YOU KNOW ?

- ◆ **Arnala class ships** are specifically designed for anti-submarine operations in coastal waters, Low Intensity Maritime Operations (LIMO) and Mine Laying operations, including subsurface surveillance in the sea shore.
- ◆ **Brown-water area** encompasses areas close to the coast, invariably within the territorial waters of the country.
- ◆ **Indian Navy has been involved in brown-water operations** such as coastal surveillance and anti-piracy operations. Brown-water tasks can be divided into two broad categories:
  - **low intensity maritime operations (LIMO).**
  - **maintenance of good order at sea.**



weapons include lightweight torpedoes and rockets along with a combat management system.

- ▶ Houses two 12.7-mm stabilized remote control guns with optronic control systems.

### 30<sup>th</sup> November

Three of the eight ASW (SWC) built by Cochin Shipyard Limited (CSL) to serve the Navy were concurrently launched in Kochi. These Mahe class vessels will replace the Navy's current Abhay class ASW corvettes and to be commissioned as INS Malvan, INS Mahe and INS Mangrol will be ready for delivery by the end of 2024.

These vessels are named after the ports along the coast and intended to follow the legacy of the former minesweepers going by the same name.

The launch comes after the state-run CSL and the Defence Ministry signed a ₹6,311 crore contract in 2019 to build eight ASW(SWC) for the Navy.

These corvettes have similar powerhouse native features as the Arnala class vessels and are equipped with indigenous water sensors and are capable of anti-submarine operations in coastal waters, **Low Intensity Anti-Maritime Operations (LIMO)** and mine laying operations.





# Women empowerment in India's Armed Forces



In a historic stride towards gender inclusivity and breaking maritime barriers, **Commander Prerna Deosthalee** is set to make waves as the **first woman officer in the Indian Navy to command the Indian Naval warship, the INS Chennai**. Her appointment symbolizes a monumental leap in shattering gender norms within the traditionally male-dominated sphere of naval command.

The achievement of Commander Prerna is not an isolated event but part of a broader effort to empower women in the Indian Navy. The collective strength of these women is represented by the Agniveers. Admiral R Hari Kumar announced that **the number of women Agniveers has surpassed 1,000 marking a significant milestone in the Navy's commitment to an 'All roles, all ranks' approach.**

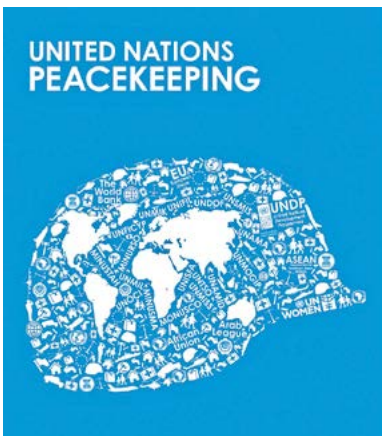
To further perfect the skills and readiness of women military personnel, the Indian Army conducted a Table-Top Exercise (TTX) at the Manekshaw Centre in New Delhi. The exercise, held in December 2023, was specifically designed for women officers from the Association of South-East Asian Nations (ASEAN). Organized by the Centre for United Nations Peacekeeping (CUNPK), the TTX aligns with CUNPK's ongoing commitment to international cooperation and capacity-building in peacekeeping missions, with a special emphasis on empowering women.

Preceding the TTX, CUNPK hosted the ASEAN Women Military Officers Course, providing foundational training for the participants. The TTX served as a dynamic platform for these women to simulate and strategize responses

## DO YOU KNOW ?

**Tabletop exercise** is a type of disaster preparedness activity. In this activity, the participants are trained to deal with a simulated disaster scenario.





**As India takes bold steps in advancing gender equality in its defence forces, these achievements become symbols of inspiration for the younger generation.**

to complex peacekeeping scenarios, offering valuable insights into the challenges they might face in real-world situations.

This commitment extends to international collaboration, as evidenced by the engagement with ASEAN women officers. **The TTX not only strengthens the skills of women officers but also fosters camaraderie and mutual understanding among nations in the pursuit of global peace and stability.**

As India takes bold steps in advancing gender equality in its defence forces, these achievements become symbols of inspiration for the younger generation. They send

a resounding message that barriers are meant to be broken, and every individual, irrespective of gender, deserves an equal opportunity to serve their nation with pride.

In conclusion, Commander Perna Deosthalee's impending command, the growing strength of Agniveers, and the collaborative training initiatives with ASEAN women officers exemplify India's commitment to fostering a diverse and inclusive military. These trailblazing women are not just officers; they are architects of change, constructing a more equitable and empowered future within the ranks of India's defence forces.





# Financial health

## Part 1



Financial health describes the state of a person's personal financial situation.

**S**hravan and Gita were at the neighborhood supermarket with their grandpa.

**Shravan** exclaimed. “It feels so good to visit the supermarket after so many months. Ever since mom started ordering groceries online, we have missed out on this shopping experience.”

**Gita** called out, “Grandpa, look here! This shelf has a new range of flakes and noodles.”

**Shravan** read out, “Wow, what new varieties – finger millet, little millet, barnyard millet.”

**Grandpa** smiled. “These are traditional foods that we used to eat in our childhood days in our home town. They are very healthy. Later when we moved to cities, rice and wheat became popular. Now, the government has announced 2023 as the year of millets. Millets are making a comeback.”

**Shravan:** “Grandpa, shall I pick up two packets?”

**Grandpa** nodded. Shravan pulled the basket trolley to the payment counter.

The staff at the counter greeted grandpa with a smile. “Hello sir.

Good to see you after a long time. Here is a special gift voucher for you.” He handed over a slip along with the bill to grandpa.

The children carried a basket each as they walked back home.

“What gift voucher is that grandpa?” Shravan was curious.

**Grandpa** smiled and showed the voucher. “₹500 off on purchase of items worth ₹2,000 and above at the Shoe emporium before 31<sup>st</sup> of December.”

**Shravan** clapped his hands. “Nice. I would like to buy a new pair of sports shoes.”

**Mom** commented, “You already have a pair of sports shoes.”

**Shravan** argued, “Yes. But I thought I will start the new year with a new pair of shoes. The coupon will go waste if we don’t buy now.”

**Grandpa** sighed. “Shravan, have you forgotten what we learnt about financial prudence? Is this a need or a want?”

**Shravan** shook his head. “I don’t need a new pair of shoes. I just got tempted by the coupon.”

**Gita** remarked, “It is so difficult



to avoid buying especially during the festive season. The offers seem so attractive that we don't want to miss out."

**Grandpa** nodded. "Shops announce discount offers and end of season sale to lure people to spend on things that they don't need."

He continued. "Just like avoiding junk food and eating healthy food like millets is good for our physical health, avoiding wasteful expenditure and protecting our wealth is good for our financial health."

"Does that mean we cannot have fun or never buy things that we desire? Life would be so boring." Shravan looked disappointed.

**Grandpa** smiled. "It is important to handle money with awareness. Once in a while, we can indulge in eating outside, watching movies and spending on objects we desire. We can allot a budget for travel, entertainment and gifts, and we must learn to adhere to our budgeted expenditure."

**Gita** asked, "What is financial health? How do we measure our financial health?"

**Grandpa** answered. "Here are some important parameters of

financial health that we ourselves can check."

### Parameters of financial health

1. Savings and investments aligned towards achieving financial goals
2. Availability of emergency funds
3. Diversification of risks
4. Adequate insurance
5. Positive net worth
6. Debt to income ratio

**Grandpa** continued. "Just like we need to do a periodic health checkup for our body, it is important to do a financial health checkup at regular intervals."

**Grandpa** asked, "We have already discussed some of the parameters. Do you remember?"

**Gita** answered, "Emergency funds. We need to save and set aside six months' household expenditure so that in an emergency, we can run the household."

**Shravan** added. "Setting of financial goals means we have to estimate how much money we would need for different purposes – buying a home, higher education, travel and retirement. We have to

plan our savings and investment so that we can accumulate enough money to achieve our goals."

**Grandpa** nodded. "Good. What we must remember is that we have to regularly revisit our financial goals. **Our goals and aspirations might change with times and we need to ensure that we calculate the finance required at each stage in our life and save accordingly.**

**Gita** added. "Adequate insurance. We learnt that we need to have adequate cover under life insurance as well as health insurance. This will give us peace of mind and a sense of financial security."

**Grandpa** nodded. "Here again we need to revise whether the insurance we had initially taken up is adequate and covers all emergencies or do we need additional insurance."

**Shravan** nodded. Diversification of risks. Isn't this about having a balance between fixed deposits, mutual funds and shares and again investing in different types of mutual funds and company shares?"

**Grandpa** said, "Yes. We have



to keep checking our portfolio of investments, review how each one is performing and take decision to buy or sell.”

**Shravan** added, “I understand that it is not enough to invest in mutual funds and stocks and then forget about it. We need to monitor how our investments are performing and make adjustments wherever necessary.”

**Grandpa** continued.

### External factors in the economy/market conditions that affect our investment decisions

1. New government schemes/ changes in existing schemes
2. New bond issues by Government and institutions
3. Initial public issue of shares by companies
4. Changes in interest rate
5. Changes in taxation policy

We will discuss the two parameters “Positive net worth and debt to income ratio.” in the next session.

Can you children think about internal factors that require a revisit of our financial goals?

**Gita** exclaimed. “Job change”

**Shravan** added. “Increase in income.”

**Grandpa** said. “Whenever



there is an increase in income, we have to be prudent and increase our savings and make our financial health stronger.”

**Mom** smiled. “I have good news for you all. I am taking up a new job from January 2024.”

The children exclaimed, “Wow. Congrats, Mom!”

**Mom** said, “This session was useful because we do need to revisit our financial goals and assess how our savings and investments have been doing this year.”

The next day during lunch dad served hot carrot halwa.

“Wow! It is so long since you made this at home. It tastes so fresh and yummy.” Gita was delighted.

**Grandpa** was all smiles as he

went in for a second helping of the sweet.

**Dad** announced.

“Mom and I have checked our financial statements and we are happy to announce that we are doing fine. As a special treat we are allocating a budget for New Year celebrations.”

**Mom** added. “And a special gift of ₹1000 each to Shravan and Gita for the new year. You can buy something that you really want.”

**Gita** said, “I’ve always wanted to start writing in a journal. I will use some of this money to buy a new fountain pen and a super soft note book. I will save the rest of the money!”

**Shravan** clapped his hands. “I can buy a new pair of sports shoes. I will take additional ₹ 500 from my savings. I will wear the new shoes for football practice only.”

**Gita** whispered to Shravan, “Can you contribute 200 rupees? Let us both buy a small gift for grandpa for the new year.”

“Sure! That’s a great idea.” Shravan said. “Let’s go to the shop today!”



## SCHEMES OF INDIAN GOVERNMENT





# Alternative Dispute Resolution



## DO YOU KNOW ?

The written decision of the arbitrator(s) at the end of an arbitration proceeding, is called an 'arbitral award.'

### Background

As we must all be aware by now, dispute resolution is a vital component of a robust legal system. Having a legal structure involves violation of the law or rules, and affected parties must have the right to obtain a relief or a remedy in such cases.

In today's scenario, litigation could be a lengthy process involving administrative and practical delays. Further, considering the increasing number of pending cases, there is an added issue of the courts being over-burdened.

At this juncture, **Alternative Dispute Resolution (ADR)** is the need of the hour. ADR includes mechanisms for dispute resolution such as arbitration, conciliation, mediation etc. ADR methods could offer a more swift and straightforward solution for resolution of certain disputes. Usually, ADR is aimed at being

less adversarial and providing an amicable resolution for the issue at hand.

### Methods of ADR

**Some of the ADR mechanisms which have been gaining traction over the past few decades are:**

#### 1. Arbitration

Arbitration is a procedure wherein the parties agree (often before a conflict arises) to refer any dispute to one or more arbitrators who hear the submissions of the parties and make a binding decision regarding the dispute. The arbitrators are usually neutral and appointed based on mutual agreement between the parties.

**Arbitration is a preferred mode of dispute resolution for many, considering that it is private, relatively quicker, and often confidential in nature.**





## DO YOU KNOW ?

The mutually agreeable solution arrived at after a mediation process, is put down in writing and called a **mediation settlement**.

However, arbitration could also become an expensive due to costs such as arbitrator fees.

### 2. Mediation

Mediation is a mechanism involving the intervention of a neutral third party into the dispute, called a mediator. **This mediator is not an adjudicating party, but merely enables the parties to negotiate and arrive at a mutually amenable resolution of the conflict.** The mediator meets both the parties (often multiple times) at a neutral location, where the parties can discuss the dispute and explore solutions which would be a middle ground, as opposed to only a win-lose scenario.

An obvious benefit of mediation is the personal and non-adversarial nature of the proceedings, and the possibility of a win-win outcome. However, the success of a mediation depends heavily on the mindset and flexibility of the parties involved

and therefore, could end up not being fruitful.

### 3. Conciliation

Conciliation is a voluntary, non-binding process whereunder a professional facilitator, called a conciliator, assists parties in resolving disputes. **It can be understood to be a facilitated search for mutual agreement between parties with conflicting interests.**

The conciliator may facilitate the process by giving their opinion regarding the conflict, to help parties reach a compromise. This is one feature which differentiates conciliation from mediation. Additionally, the conciliator usually has to make a settlement proposal.

The conciliation process is relatively time and cost-efficient. However, since it is an interest-based and closed process, it may only end up suitable for certain kinds of disputes.

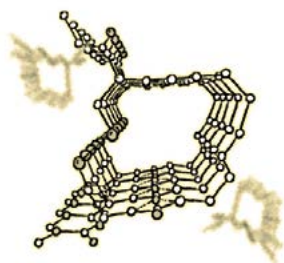




# Darshan Ranganathan

(4.6.1941 - 4.6.2001)

First woman  
recipient of the  
**TWAS Award**



She is the only woman of our country who received the research scholarship of the Royal Commission for the Exhibition of 1851.

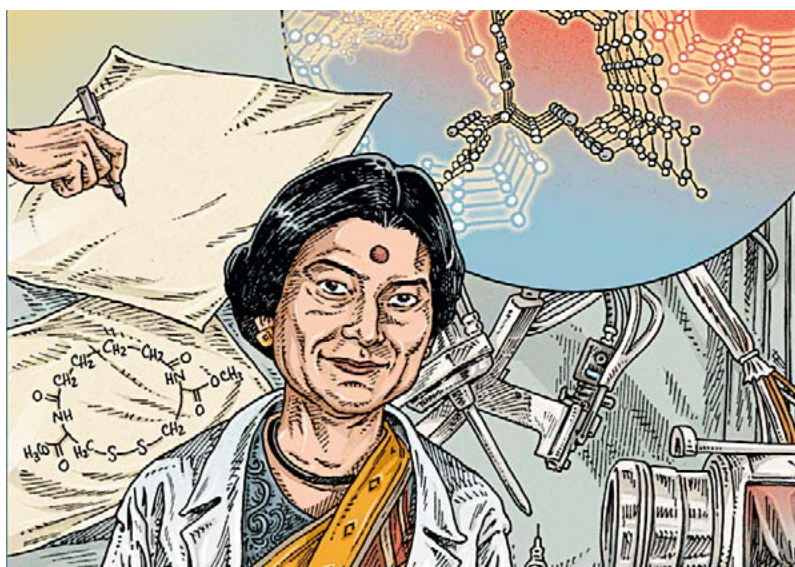
A very useful strategy for aspiring women scientists in India, is to adopt the path taken by Darshan, who had realised that women scientists would face additional impediments and had planned her career rather than worrying about it. Till the very end of her life she worked very hard. Her courage and will to fight with a smile and verve and no acrimony and made all those who met her love her.

Darshan was born as a third child to Vidyavati and Shantiswarup Markan in New Delhi. Her teacher SVL Ratan greatly influenced her to pursue chemistry. "Even at a young age she was full of life and fond of music, dancing and drawing, excesses of which many times, won her rebukes from some teachers!" quips her husband and co-researcher Dr.Ranganathan. She joined as

teacher at Miranda College, while pursuing research and completed Ph.D. under the guidance of the legendary Professor T.R.Seshadri. **She is the only woman of our country who received the research scholarship of the Royal Commission for the Exhibition of 1851.** Erstwhile Indian royal families have contributed to this fund enormously with the vision of helping our countrymen to do research in the west. But this was not awarded to any of our people till Prof.S.P.Agarkar unearthed and fought the colony authorities to open their treasury to young Indian researchers. Our soil benefitted by this, securing funding to the father of Indian nuclear programme Homi Bhabha, the only other Indian to have received this grant.

Passionate towards research and with brilliant scholarship, young





## DO YOU KNOW ?

**Supramolecule complexes** are formed by non-covalent interactions between two chemical moieties, which can be understood as a host and a guest. Generally, the interacting species are held together by hydrogen bonds. The definition excludes compounds formed by electrostatic interactions, which are called **ion pairs**.

**Moiety** - Each of two parts into which a thing is or can be divided.

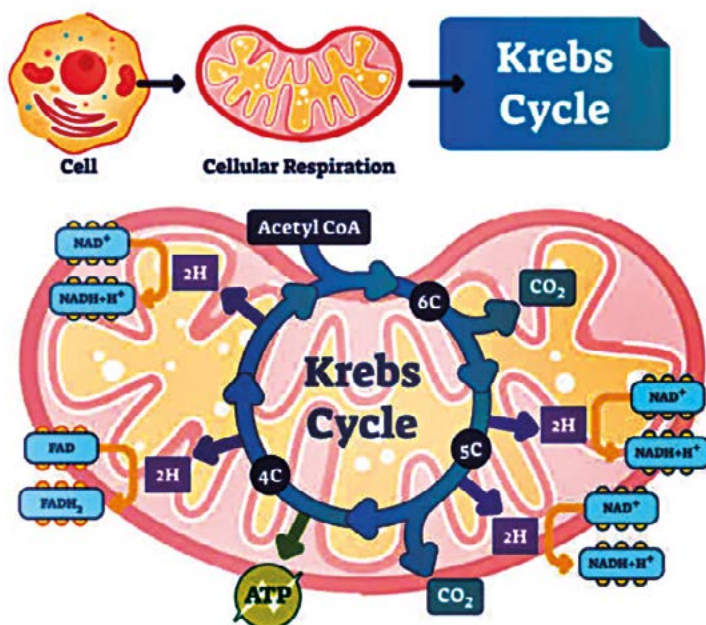
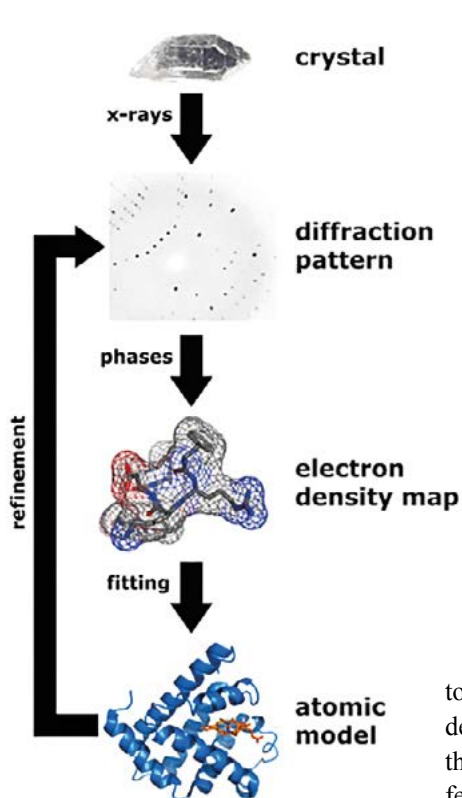
Darshan carried out outstanding postdoctoral work on organic natural products under Prof. DHR Barton at Imperial College London. There, she studied compounds such as cycloartenol, a type of plant sterol found in jackfruit. Since jackfruits were not available in England, her mother bought them from Delhi market and shipped them.

Completing her research, she returned to serve the motherland in 1969. In a few months' time, she got married to Dr. Ranganathan who was then working as an assistant professor in the department of chemistry at IITK. Soon she moved to Kanpur, but could not secure a teaching post in that institution due to the rules that did not allow spouses to work as colleagues in the same department. He later recalls, "Darshan joined our laboratory at IITK, with no scholarship at that time, but was perfectly happy to have a laboratory. She loved to work with her own hands and worked for long hours cheerfully with unparalleled skills. We counted on mercies and I am truly grateful to IITK and the Chemistry Department for permitting her to do research. I knew from the beginning that she was better than me and was proud

to share my funds and students with her so that she could work on her own problems and published on her own." With sheer determination and perseverance, she blossomed into an organic chemist who won international recognition.

Her contribution to chemical education was monumental. She co-authored several books and a generation of young organic chemists grew up with a monthly analysis of current literature, *Current organic chemistry highlights*, with her husband. Her collaboration with Dr. Isabella Karle of Naval Research Laboratory, Washington can be described as very unique in the field of research, as these two great women never met. Through continuous correspondence, these two gifted women solved the structures of many complex crystals using X-ray studies. "Towards the later stages, Darshan's output was so prodigious that I was not able to assess their impact. I believe that there is a latent running thread that serves as link in the evolution of novel ideas. I edited the quintessence of her work with Isabella Karle, named *Patterns for supramolecular design*," recalls Dr. Ranganathan.





She brought in a fresh wave to organic chemistry. Darshan demonstrated Krebs's cycle in the laboratory and its salient features which is considered as a magnificent achievement. She simulated the process of genesis of pituitary hormones and discovered several specific DNA cleaving agents. She became a wizard in conjuring supramolecules. She successfully designed and assembled many membranes, ion channels, ionophores, nanotubes, cyclic and hybrid peptides in laboratory. In most cases, she had their structure established by X-ray crystallography. With these immense contributions, she was elected as a Fellow of Indian Academy of Sciences. In 1992, she got a permanent position at RRL (now CSIR NIIST), Trivandrum. She later moved to Indian Institute of Chemical Technology, IICT Hyderabad in 1998.

She ventured into domains that others feared to tread and succeeded brilliantly. She played on molecules like an instrumentalist and created divine melodies with the minimum tones. She collaborated extensively and all were happy to be associated

with her. The wonderful human being's end came early in the form of cancer. Destiny has its own ways and sometimes it is cruel! At the time of her passing away in 2001, she was the most prolific organic chemist in India, having dozens of publications in internationally reputed journals. A few of her works were later published posthumously.

She became a **Fellow of The Indian National Science Academy** (1996); won **AV Rama Rao Foundation Award** from JNCASR (Jawaharlal Nehru Centre for Advanced Scientific Research) and **Jawaharlal Nehru Birth Centenary Visiting Fellowship** from INSA (Indian National Science Academy).

**She was the first woman recipient of the most coveted The World Academy of Sciences Award (TWAS) in 1999.**

This was given in recognition of her outstanding contributions to bio-organic chemistry, particularly on supramolecule assemblies. All these achievements assume special significance, particularly for young aspiring women scientists in India!

*twas*

The World Academy of Sciences  
for the advancement of science in developing countries

She was the first woman recipient of the most coveted **The World Academy of Sciences Award (TWAS) in 1999.**







# UNDERSTANDING CONSTIPATION

Constipation is a common digestive issue that affects people of all ages and backgrounds. It is characterized by infrequent bowel movements, difficulty in passing stools and a feeling of incomplete evacuation.

While occasional constipation is normal, chronic constipation can lead to discomfort and various health problems.

## Causes

1. **Dietary factors:** One of the primary causes is a low-fibre diet. Fibre adds bulk to the



stools, making it easier to pass through the digestive tract. Insufficient intake of fruits, vegetables and whole grains can lead to slow bowel movements and difficulty in evacuation.

2. **Dehydration:** Inadequate water intake can contribute to constipation. Water plays a crucial role in softening the stools, allowing it to move more easily through the intestines. When the body lacks sufficient hydration, the stools become dry and hard, making it harder to pass.

3. **Lack of physical activity:** Sedentary lifestyles can also contribute to constipation. Regular physical activity helps stimulate the muscles in the intestines, promoting bowel movements. Individuals who lead a predominantly inactive lifestyle may experience sluggish bowel movements.

4. **Ignoring the urge:** Ignoring the natural urge to have a bowel movement can disrupt the body's natural rhythm. Over time, consistently suppressing this urge can lead to constipation as the stool spends more time in the colon, becoming drier and harder.

5. **Medications:** Certain medications including but not limited to antacids containing aluminium or calcium, can cause constipation as a side effect. It is essential to be aware of the potential effects of medications on digestive health.

## Natural Remedies

1. **Triphala:** Triphala is an ancient Ayurvedic remedy composed of three fruits – *amla* (Indian gooseberry), *haritaki*, and *bibhitaki*. This combination is known for





Being **less mobile** and not getting **enough exercise** or especially in the **elderly**.



**Not going to the toilet** when you feel the **urge to defecate**, or **rushing** and not giving enough time on the toilet.



Some **medical conditions**.



Certain **medicines**.

its natural laxative properties. Triphala helps regulate bowel movements, cleanse the colon, and promote overall digestive health. It can be consumed as a powder, capsule or decoction.

2. **Isabgol (Psyllium Husk):** *Isabgol*, a popular natural remedy for constipation is a rich source of soluble fibre that adds bulk to the stool and facilitates its passage through the intestines. Mixing *isabgol* with warm water or milk and consuming it before bedtime can be an effective relief.
3. **Ghee:** Consuming a small amount of warm *ghee* in the morning on an empty stomach can lubricate the intestines and promote bowel regularity. It is crucial to use *ghee* in moderation to avoid excessive calorie intake.

4. **Fruits:** Several fruits in the Indian diet are rich in fibre and contribute to digestive health. Papaya, banana, guava and figs are known for their natural laxative effects. Including these fruits in the daily diet provides relief.
5. **Yogurt and curd:** Probiotics present in yogurt and curd promote the growth of beneficial bacteria in the gut, enhancing overall digestive function. Consuming a bowl of plain, unsweetened yogurt or curd regularly can contribute to a healthy gut microbiome and alleviate constipation.
6. **Jeera (Cumin) Water:** *Jeera* or cumin seeds have carminative properties that aid in digestion. Boiling cumin seeds in water and consuming the infused water can provide good relief. This remedy is simple yet effective and has been a part of traditional Indian households for centuries.
7. **Ajwain (Carom seeds):** *Ajwain* with digestive and anti-flatulent properties can be consumed directly or mixed with warm water. *Ajwain's* active compounds help relax the gastrointestinal tract and promote smoother bowel movements.
8. **Methi (Fenugreek seeds):** These are rich in soluble fibre and can help soften the stool. Soaking fenugreek seeds in water overnight and consuming the water in the morning is a common remedy.

While over-the-counter medications are available, many individuals prefer natural remedies, especially those rooted in traditional practices.

Incorporating a balanced, fibre-rich diet with traditional Indian remedies like *triphala*, *isabgol*, ghee and various seeds can provide a holistic approach to preventing and relieving constipation.

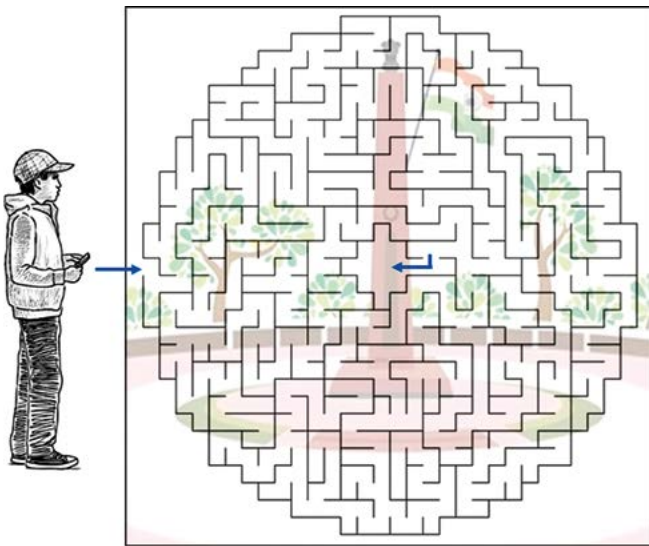
Additionally, adopting a healthy lifestyle that includes regular physical activity and proper hydration is essential for maintaining optimal digestive health. As we navigate the complexities of modern life, rediscovering and embracing these time-tested remedies can offer a natural and effective solution to the prevalent issue of constipation.



# Lesser-known facts about Delhi

## I Rakshak Chakra

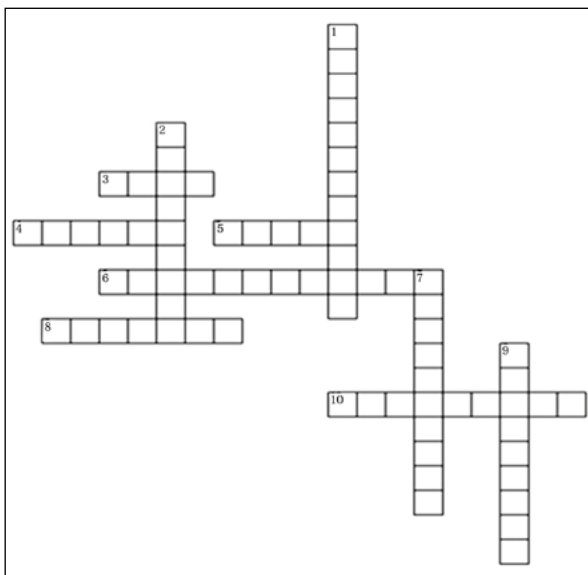
Pritam is in the Rakshak Chakra, the outermost circle of the National War Memorial. His friends went ahead and have turned their live location tracker on. Let's help him reach the Amar Chakra to pay homage to the war heroes.



## II Do you know?

1. The flame of this memorial, which burnt honouring the martyrs of the Indo-Pakistan War of December 1971 was merged with the flame of the National War Memorial in 2022.
2. Delhi might be the most polluted city in India. Ironically it is also the greenest city where the public transport system from autorickshaws to buses run on this fuel.
3. The three UNESCO World Heritage sites in Delhi.
4. The colour of the Red Fort.
5. Delhi houses one of the largest Hindu temple complexes in the world.
6. There were 14 gates built during the Mughal era to protect the city. This gate is one of the entrances to the Red Fort.
7. This garden is called the soul of the Rashtrapati Bhavan.
8. This section in the National War Memorial holds the busts of 21 Param Vir Chakra recipients.

## III. CROSSWORD



### ACROSS

3. Famous garden named after a dynasty.
4. The city is on the banks of this river.
5. \_\_\_\_\_ temple - Asia's only structure of Bahai faith.
6. Busiest market place in Delhi.
8. \_\_\_\_\_ Delhi - Another name of this city honouring the chief designer.
10. Tallest brick minaret.

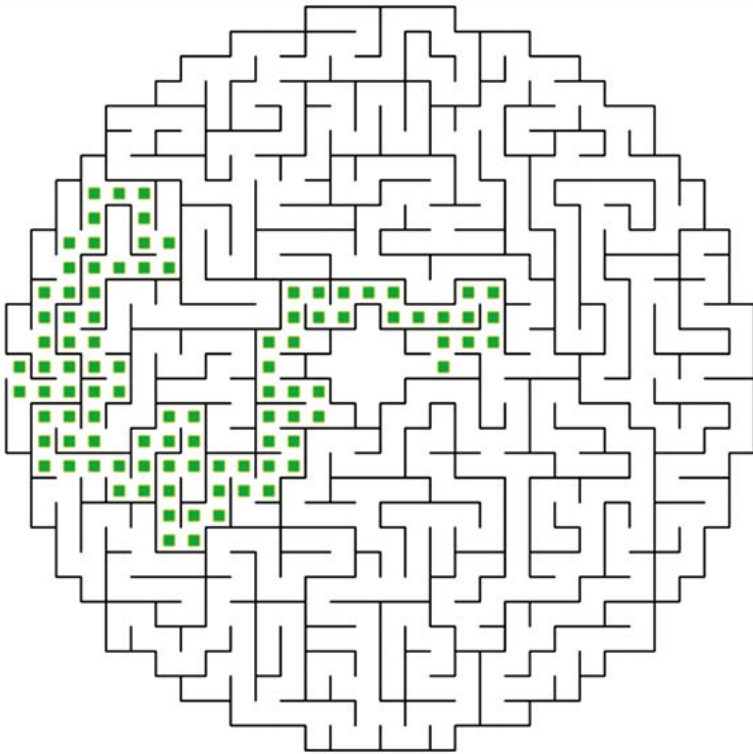
### DOWN

1. Delhi gets its mention in the Mahabharata but by a different name.
2. World's largest war memorial.
7. Asia's largest spice market.
9. \_\_\_\_\_ place is the most expensive office space in India.

ANSWERS ON PAGE 60



## I. Rakshak Chakra

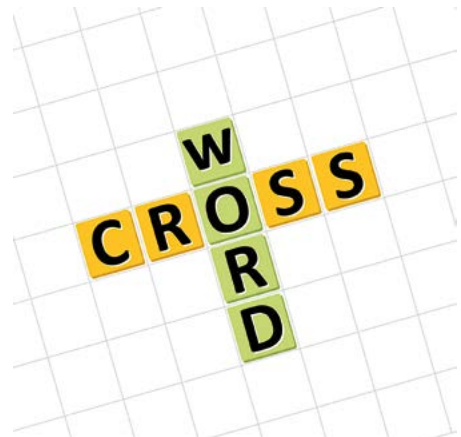
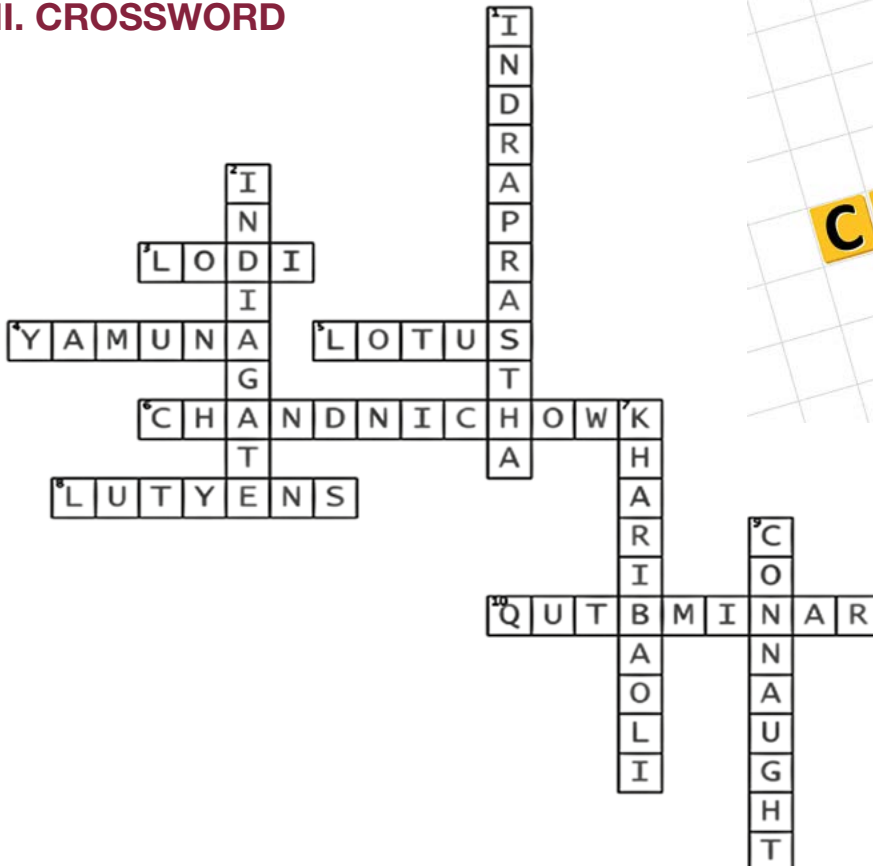


## ANSWERS OF PAGE 59

### II. Do you know?

1. Amar Jawan Jyoti from the India Gate
2. CNG (Compressed Natural Gas)
3. Qutb Minar, Humayun's tomb and the Red Fort
4. White. Made of sandstone. When the white stones started chipping off, the fort was painted red by the British.
5. Akshardham
6. Lahore Gate. Only 5 remain today - Kashmiri, Turkman, Ajmer and Delhi gates.
7. Amrit Udyan earlier known as Mughal gardens.
8. Param Yodha Sthal

## III. CROSSWORD





# Naik Jadunath Singh

**N**aik Jadunath Singh (Second Param Veer Awardee-1948) was a brave soldier who gave his life for the country during the Jammu & Kashmir operations in 1947. He was only thirty-six years old when he made the ultimate sacrifice to protect Kashmir from enemy takeover. Born on 21<sup>st</sup> November 1916 in Shahjahanpur, Uttar Pradesh, he joined the 1 Rajput on his birthday in 1941. During the operations, Pakistani raiders captured Jhangar on 24<sup>th</sup> December, which gave them a strategic advantage in the Naushahra sector. However, the Indian Army quickly responded and prevented the enemy build-up in the area. They occupied Kot village to the Northwest of Naushahra in January 1948.

On the foggy morning of 6<sup>th</sup> February, at 06:40 hrs, the enemy launched an attack on Naushahra. The attack began with the enemy opening fire on an Indian patrol from their pickets on the Taindhar ridge. Simultaneously, there were bursts of machine guns and crunches of mortar fire from Taindhar and the surrounding hills. Under darkness, the enemy crept up to the Indian pickets. In the first light of dawn, men on the post saw thousands of hostiles sneaking up on them. Naik Jadunath Singh was in charge of a forward post of picket No.2 at Taindhar.

Nine men were garrisoned in the post. The enemy launched successive waves of attack to take over the post. Naik Jadunath Singh used his small force in such a way that the enemy

retreated in utter confusion. When four of his men got wounded, he re-organised the battered force to face another onslaught. Despite being outnumbered, the post did not give in. When all the men, including Naik Jadunath Singh got wounded, he took over the Bren gun from the wounded Bren gunner. The enemy was now on the walls of the post. Naik Jadunath Singh, without worrying about his own life, motivated his men to fight back. His fire was so intense that what looked like an inevitable defeat became a victory.

By now all men of the post had turned into casualties. The enemy made his third and final attack determined to capture the post. Naik Jadunath Singh, wounded and alone, rose to give a battle for the third time. He came out of the Sangar and firing his sten gun charged on the advancing enemy. The surprised enemy fled in disorder. He met a gallant death, in this third and last charge, when two enemy bullets pierced him in the head and the chest. At a critical stage in the battle for the defence of Naushahra, he saved his picket from being overrun by the enemy. Naik Jadunath Singh was honoured with the highest wartime gallantry medal, Param Vir Chakra, posthumously.





# Dr Ratan Chandra Kar

**D**r Ratan Chandra Kar is a remarkable medical professional who dedicated his life to serving the people of the Andaman & Nicobar Islands. He has made significant contributions to the region's healthcare system and is particularly known for his pioneering medical intervention for the Jarawa tribe.

Dr Kar's illustrious career spans over four decades. He received his M.B.B.S Degree from Nil Ratan Sircar Medical College, Kolkata in 1981 and served in Nagaland to provide medical care to the Kolyak Tribe and jawans of Assam Rifles, 26 BN while posted in Tripura.

In September 1988, he joined the services of the Andaman & Nicobar Administration as a Chief Medical Officer.

During his tenure, Dr Kar came in contact with the Jarawas and won over their trust despite initial resistance. During the measles outbreak of 1999, he and his team saved the tribe from the brink of extinction. He has been popularly known as "*Jarawas ke jeevan data*" for his pioneering medical care and intervention, which has led to a significant increase in the Jarawa population.

Dr Kar's selfless dedication to serving the community and his

contributions to the healthcare system in the Andaman & Nicobar Islands have been outstanding. His work is an inspiration to all medical professionals, and his legacy will continue to benefit the region's people for years to come.

Dr Kar has also served as Deputy Director (Tribal Health and Welfare) of, the Andaman & Nicobar Administration from 2006 to 2011 and as Executive Secretary, of *Andaman Aadim Jan Jaati Vikas Samiti (AAJVS)* in 2009. He has been instrumental in devising and formulating medical care policies of the Jarawas, Onges and Shompen tribes. He has documented his experience and covered some unknown facts of the Jarawas in his book titled "*Andamaner Aadim Jan Jaati Jarawa*" (Bengali) and "The Jarawas of the Andaman" (English). He has also authored books on Cellular Jail and history of Andaman Penal Settlement.

In recognition of his love, compassion and distinguished medical service towards the Jarawa Tribe, Dr Kar was conferred the Honorable Lt. Governor's Commendation Certificate in 2000.





# Jaisalmer Fort

The magnificent complex, also known as Sonar Khila ("Golden Fort"), was an important centre for trade along the Silk Route.

The Jaisalmer Fort is the second-oldest fort in Rajasthan, and the oldest continuously inhabited fort in India with about 3,000 people living within the complex. It is one of the world's largest fully preserved fortified cities and is recognized as a UNESCO World Heritage Site. Like much of the city, the fort is made from the golden-hued Jurassic sandstone of the region.

Built in 1156 by Rawal Jaisal, the king of the fearsome Bhatti Rajput warriors, it became a focal point for battles between the Bhattis, the Mughals of Delhi and the Rathores of Jaipur. Jaisalmer Fort dominates the countryside

in the far northwestern corner of Rajasthan, near the border of India and Pakistan. It was strategically constructed to serve as a stronghold and protect the kingdom from invasions. The magnificent complex, also known as *Sonar Khila* ("Golden Fort"), was an important center for trade along the Silk Route.

Merchants built elaborately designed havelis among the numerous palaces, temples, bazaars and residences inside the walls of the complex. The superb architecture within the fort was protected by double fortification walls and circular bastions, mainly used for defense and battle.



Additional features of the fort include a pitching wall to hold the clay soil of the hill in place, a toe wall, and the *mori*, a pathway between the inner and outer fortification walls that allowed soldiers and horses to move throughout the structure in times of war.

The Jaisalmer Fort stands as a splendid example of medieval Rajasthani architecture. It has four main intricately designed gates named as *Ganesh Pol*, *Akshya Pol*, *Suraj Pol*, and *Hawa Pol*, providing access to the fort. The palace of the *Maharawal* remains the jewel in the fort's crown and now houses a museum. The streets are lined with shops, stalls and houses, giving visitors a glimpse of the daily life and vibrant culture of the people living within the fort.

However, the increasing influx of tourists and modernization has challenged the fort's preservation. The fort is deteriorating due to human activities, especially the introduction of modern plumbing. In addition, changing weather patterns—increasingly frequent and severe monsoons—are endangering the fort. Efforts are being made to balance tourism and conservation, ensuring the long-term sustainability of this iconic landmark.







# Captain Fatima Wasim

*First woman doctor deployed at Siachen*

**Captain Fatima's journey stands as a testament to resilience and determination making her a trailblazer in the realm of military service.**

In a momentous development for the Indian Army, Captain Fatima Wasim has challenged traditional gender roles, becoming the medical officer assigned to an operational post on the Siachen Glacier, renowned for its strategic importance, harsh weather conditions and demanding topography in the northern Himalayas, recognized as the highest battlefield globally.

Captain Fatima, a dedicated member of the Siachen Warriors within the Indian Army's Fire and Fury Corps, underwent rigorous training at the Siachen Battle School, situated at the Siachen Base Camp. Following her training, she was deployed to a post at an altitude

of 15,200 feet, showcasing her indomitable spirit and unwavering motivation.

The Siachen Battle School, functioning as a pre-induction training, orientation and acclimatization centre for fresh troops, played a pivotal role in preparing Captain Fatima for her challenging role. Her journey stands as a testament to resilience and determination making her a trailblazer in the realm of military service.

This milestone comes as Captain Fatima joins Captain Geetika Koul, who earlier this month became the first woman medical officer to be posted at Siachen.



The Siachen Glacier, located near the Indo-Pak Line of Control (LOC), is renowned as the highest-altitude battleground globally.



Together, their deployments underscore the Indian Army's commitment to breaking gender barriers and promoting inclusivity in demanding and crucial postings.

The Siachen Glacier, located near the Indo-Pak Line of Control (LOC), is renowned as the highest-altitude battleground globally. Its extreme climatic conditions and strategic significance make it a challenging yet pivotal posting for the Indian Army, highlighting the

exceptional courage and dedication of its personnel.

Captain Fatima's deployment paves the way for future generations of women in the armed forces, symbolizing not only a personal triumph but also a broader stride towards gender equality and representation in one of the world's most demanding military environments. It is a recognition of the invaluable contributions of women in safeguarding the nation's security.





**20 November**

**WOMEN'S**  
Entrepreneurship  
*Day*

**Be in charge of your own life. Turn  
negatives into positives and be  
proud to be a woman.**

---

**"Women are the largest untapped reservoir  
of talent in the world".**

**- Hillary Clinton**



**The international civil aviation network carries over 4 billion passengers a year.**

**The global air transport sector supports 65.5 million jobs.**

**3.6% of the global economic activity is supported by this industry.**

**Each day, 1,20,000 flights carry 12 million passengers safely to their destination.**