PRAJYA

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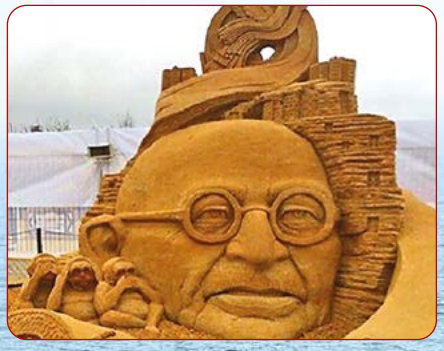
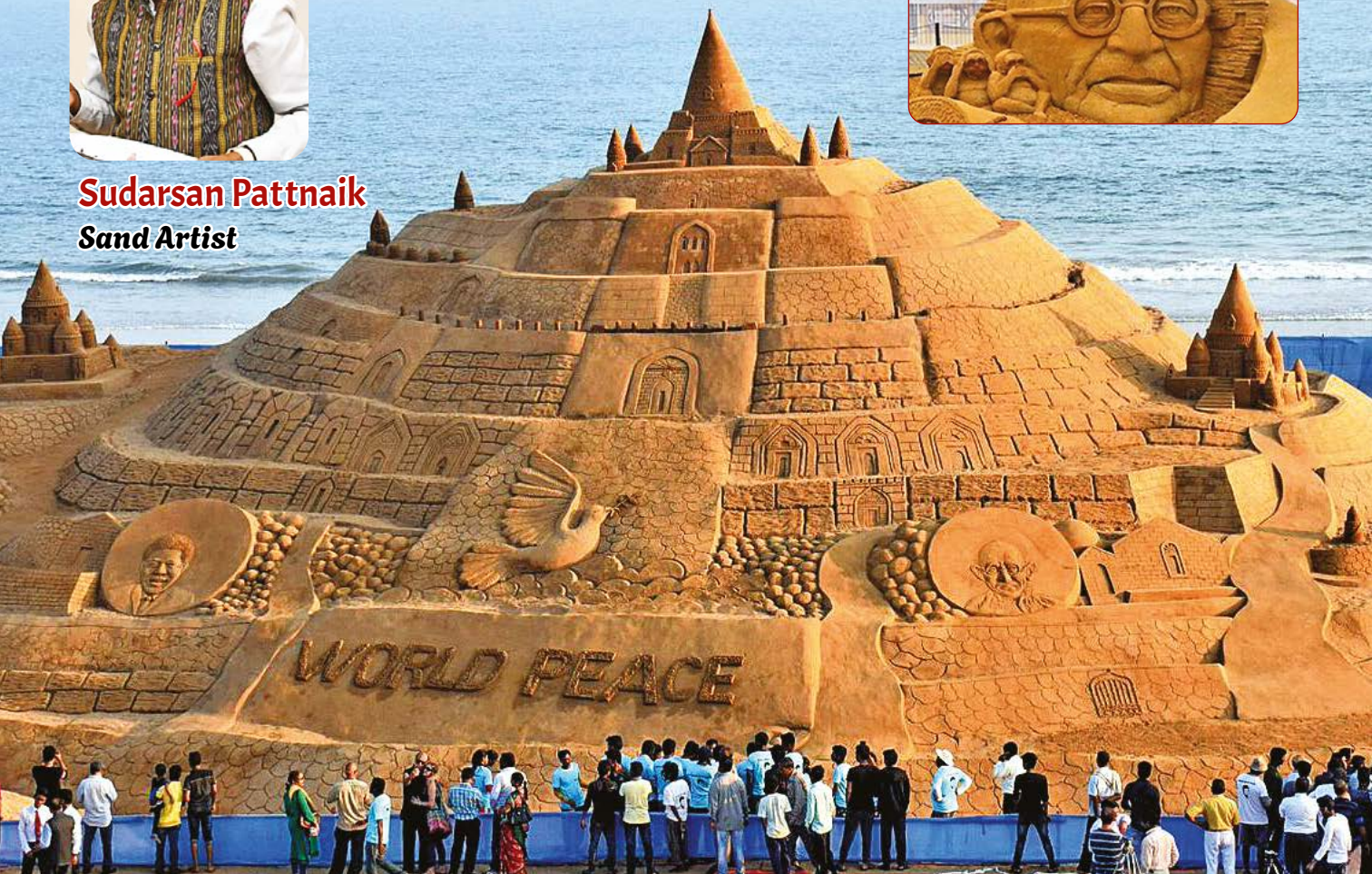
Sudarsan Pattnaik
Sand Artist





INTERNATIONAL DAY OF THE WORLD'S INDIGENOUS PEOPLES

9TH AUGUST

The **International Day of the World's Indigenous Peoples** is observed on 9th August each year to raise awareness and protect the rights of the world's indigenous population. This event also recognizes the achievements and contributions that indigenous people make to improve world issues such as environmental protection.

THE PRAJYA TEAM

Published by:
Arya Samaj Charitable Foundation

Editorial Board:

Smt Mali Nandakumar
Educational Consultant

Shri Nandakumar V
Educational Consultant

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

Teacher Contributors:
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Smt Manju Aildasani
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Smt Ramamani N
Smt Sarada Devi Ravutu
Kum Shrivaishnavi R
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Independent Contributors:
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Smt Anuradha V R
Smt Archana Sundar
Shri Bharath
Kum Deepasri
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Kum Sunita D Behera
Smt Uthra Dorairajan
Smt Vaishnavi V

Technical Editor :
Shri Guhaprasath Subramanian

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

COMMENTS & SUGGESTIONS
prajya.magazine@davchennai.org

FROM THE EDITOR'S DESK

Common heritage of humanity is a principle of international law. It holds that the defined territorial areas and elements of humanity's common heritage (cultural and natural) should be held in trust for future generations and be protected from exploitation by individual nation states or corporations. Heritage elements can be both tangible and intangible.

The discovery of **12,000-year-old ancient lunisolar calendar** with carvings of the sun, moon and various constellations on a pillar in southern Turkey gives a glimpse into the hitherto unknown past revealing fascinating secrets about how humans related to celestial phenomena.

Renowned archaeologist **Dr Vedachalam** richly deserves the **V.Venkayya Epigraphy Award.** His profound research on Pandyas and Jainism in ancient Tamil nadu and his many books on them make him an authority of Pandya history. He has been part of every excavation done in Tamil Nadu and has offered his insights into the archaeological findings. His invaluable contribution to our knowledge of history and heritage should be an inspiration to all.

India's **first sunken museum at Humayun's Tomb complex** showcases over 500 artefacts many of which are on public display for the first time.

By hosting the **UNESCO World Heritage** Committee meeting for the first time, along with **World Heritage Young Professionals Forum,** India is focusing on integrating global heritage concepts with local Indian heritage management and enhancing skills in heritage preservation and sustainable development.

परम्परा वंशान् बध्नाति।

(Translation: Heritage binds generations.) Yes, generations of humanity beyond narrow political borders.

Read, reflect and revert with your thoughts and feelings.

We look forward to your support and suggestions.

- Editorial Team

Dear Readers,

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

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

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

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

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

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

http://bit.ly/Prajya

Happy Reading !

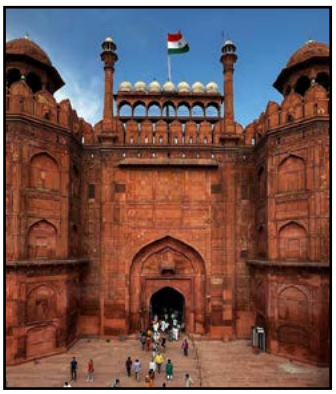
Watch out for the Monthly Prajya Quiz online

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

Content

International Current Affairs

National Current Affairs



Kum Kavya R

World's first 3D-printed Abra

Dubai's Roads and Transport Authority (RTA) has begun the trial run of the world's first ever electric *abra* manufactured using 3D printing technology. The *abra* is built to retain the traditional design and identity and can carry up to 20 passengers. This initiative aims to reduce *abra* manufacturing time by 90% and manufacturing costs by 30%. It will also cut operation and maintenance expenses by 30%. This will boost RTA's environmental sustainability strategy for maritime transport.

Measuring 11 meters in length and 3.1 meters in width, this is the longest monocoque structure that has been made with a 3D printer. It was manufactured by Al Seer Marine Company in Abu Dhabi in collaboration with several global companies, including Mitsubishi of Japan, Siemens of Germany, and Torqeedo of Germany. TASNEEF Company oversaw the manufacturing process to ensure compliance with safety standards.

The *abra* has an electric propulsion system powered by two 10-kilowatt motors and lithium batteries. During the trial phase, its performance will be monitored and compared with the current 20-passenger fibreglass abras. The RTA is working on upgrading the four old *abra* stations in Dubai Creek to enhance safety and security standards. These stations are used by over 14 million passengers annually.

Mattar Al Tayer, Director General, Chairman of the Board of Executive Directors of the RTA, stated: "The trial operation of the electric *abra* manufactured using 3D printing technology, along with the improvement of the traditional *abra* stations project, is part of the RTA's master plan to enhance the marine transport services, a vital mobility means in Dubai, adding much value to the maritime transport sector."

An *abra* is a traditional wooden ferry boat that has been used for centuries to transport people and goods across Dubai Creek in the United Arab Emirates. The word "abra" comes from the Arabic word *Abara*, which means "to cross." *Abras* are somewhere between a raft and a deck boat and have a unique design.

Shri Ramaswamy R

New Leaders across the world

Paul Kagame re-elected for fourth term as Rwandan President

Rwanda's President Paul Kagame (66) has been re-elected with over 99% of the votes in the elections held recently. There were complaints of not tolerating political opponents and curtailing media freedom. In 1994, Rwanda suffered great genocide of nearly 800,000 Tutsu tribal citizens in a matter of mere 100 days. The perpetrator Hutu tribe militias assumed that their leader and then President Habyarimana was assassinated only by Tutsu rebels.

To stop mass murder of innocent

Country / Region	Area (km^2)	Population (millions)	Language	Capital HQ	Currency (= USD)	Economy
Rwanda	26,338 (149th)	13.78	French, English and 2 other native languages	Kigali	Rwandan Franc ($75x10^{-5}$)	Developing nation. Steady rate of 7% for the last 2 decades. Ranked 143rd
Venezuela	882,050 (32nd)	28.30	Spanish	Caracas	Bolivar (0.027)	Socialist dependent on petroleum export. Ranked 174th
European Union	10.18x106	746.4	24 official languages	Brussels	Euro (0.90)	Joint Eco. 26 nations 3rd largest at PPP after China and USA.
Bangladesh	148,460 (92nd)	171.2	Bengali	Dhaka	Taka ($84x10^{-4}$)	Mixed economy. Ranked 25th

Venezuela has many natural resources, including petroleum, natural gas, coal, iron ore, gold, diamonds, bauxite and other minerals.

civilians, Tutsu leader Kagame's **Rwanda Patriotic Front** (RPF) marched into Rwanda with about 12,000 soldiers, who were Tutsu and moderate Hutus. During his three - decade rule, Kagame enjoyed good neighbourly relations only with President Museveni of Uganda. With 65% of the population under 30, Rwanda has shown consistent economic growth but suffers from high rate of youth unemployment. While he is credited with rebuilding a traumatised nation, Kagame is also accused of governing with an iron hand and creating instability in the neighbouring countries.

Venezuela's Nicolas Maduro becomes President for third time

Venezuela went to the polls in July 2024. Over a controversial verdict, Nicolás Maduro (61) continues as President. Prior to 2013 he was Vice President to Hugo Chavez. Maduro's authoritarian rule has led to repeated attempts by the opposition to remove him from office. Earlier in his career, Maduro rose from the ranks in workers union and was ably supported by his lawyer wife.

Venezuela has many natural resources, including petroleum, natural gas, coal, iron ore, gold, diamonds, bauxite and other minerals. The country also has hydroelectric power and self-sufficiency in many agricultural products. **It is a misfortune that a country of rich natural wealth like Venezuela has successive leaders who have caused total economic collapse during the last few decades.** In spite of the poor getting robbed of the country's riches, they have only supported their leader during difficult times. This has made it easy for Maduro to imprison many high-profile critics. Unimaginable thousands of percentage inflation and severe shortage of essential commodities have become part of people's life. Maduro accuses the USA of inciting street protests and for the state of the economy.

As of 2023, the economic conditions made nearly 8 million people flee the country. To divert people's attention, Maduro has re-ignited long standing territorial and offshore oil dispute with Guyana.

Roberta Metsola re-elected European Parliament President

Recently Roberta Metsola (55) was re-elected as President of the European Parliament and will lead in the 10th legislative term until 2027. Metsola hopes to make Europe "stronger, safer, fairer, more just and more equal."

In European Union there are 27 member states and 24 official languages. Brussels is considered the *de facto* capital, though the European Union (EU) has multiple headquarters located in Frankfurt, Luxembourg City and Strasbourg.

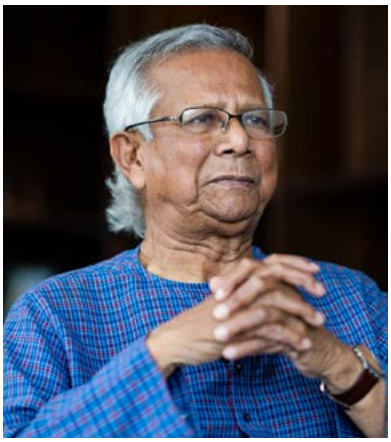
European Union (EU) was created in 1951 as the European Coal and Steel Community post-WWII, by Belgium, France, Germany, Italy, Luxembourg and Netherlands. The basic idea was the belief that trade and economic interdependence would eliminate wars. The focus is on a single market that allows people, goods, services and capital to move freely within member countries. The organization changed its name as European Economic Community in 1958. **Later in 1993, the Maastricht Treaty was created to further integrate politically and economically.** The treaty established the European Union with single Euro currency, a common foreign and security policy, and citizenship rights. Refugee crisis and violence are two major problems facing the community. In EU there are 27 member states and 24 official languages. Brussels is considered the *de facto* capital, though the European Union (EU) has multiple headquarters located in Frankfurt, Luxembourg City and Strasbourg.

Bangladesh : Muhammad Yunus heads interim govenment.

An interim government led by Muhammad Yunus was formed on 8th August 2024 in Bangladesh, following the resignation of PM Sheik Hasina. He was awarded the Nobel Peace Prize in 2006 for pioneering the use of microcredit to help poor people, especially women. Has a PhD from Vanderbilt University in US.

Sheikh Hasina (77) is the daughter of Late Sheikh Mujibur Rahman, the founding father and first president of Bangladesh. Her premiership ended in self-imposed exile following a series of violent protests in July.

Sheikh Mujibur Rahman was assassinated with almost his entire family in 1975. Sheikh Hasina and her husband had a providential escape. India gave shelter to her.



As a token of gratitude, she remains India's faithful ally.

Sheikh Hasina could provide economic development but had accusations of rampant corruption and maladministration. In 2017, she also had to face an influx of over a million Rohingya refugees. Ever since 2022, there were frequent anti-government protests.

In June, Sheikh Hasina had to withdraw the reservation she had promised for freedom fighters' children. But the protestors made more and more demands culminating in the call for her resignation. As Hasina was seen close to Indian government, the rioters targeted Hindu minorities, hundreds of them lost their lives, their properties were looted and burnt down.

Shri Sampath D

Paris Olympics

an overview

MEDAL TABLE				TOTAL
1 United States	40	44	42	126
2 China	40	27	24	91
3 Japan	20	12	13	45
4 Australia	18	19	16	53
5 France	16	26	22	64
7 Great Britain	14	22	29	65

The Paris 2024 Games began in a spectacular fashion on 26th July. For the first time in the history of the Olympic Summer Games, the Opening Ceremony was held outside a stadium. Instead of familiar images of athletes marching out along the athletics track, the guests and viewers were treated to a colourful river parade through the heart of the French capital.

The Seine, the city's main water artery, was the substitute for the traditional track; the quays became spectator stands, while the setting sun reflecting off famous Parisian landmarks provided the backdrop for the event. (Some of the games actually started on 24th July).

The Olympic torch relay for Paris 2024 was a journey through France's most iconic landscapes and landmarks.

Starting from ancient Olympia in Greece, the torch travelled through historic sites, symbolizing unity and the enduring spirit of the Games and culminated in Paris.

This edition marked the 33rd Summer Olympic Games and the third time Paris being the host, with previous editions in 1900 and 1924. The Paris 2024 Olympics was particularly significant as it commemorates the centenary of the last Paris Olympics. The Paris 2024 organizing committee which was responsible for planning, financing and organizing the games, was established in January 2018 and chaired by Tony Estanguet, a three-time Olympic champion and IOC member.

The committee's goals were to create a more sustainable, inclusive event.

The organizers pledged to use 100% renewable energy, minimize carbon emissions and prioritize eco-friendly practices. **Sustainable venues and efforts to reduce the environmental impact will become the benchmark for future Olympic Games.**

The Games saw 329 events across 32 sports and over 10,000 athletes from 204 nations participate in the pursuit of medals and glory, creating some phenomenal viral online moments along the way.

The highlight was 35 competition venues, 4 additional sports proposed by the Paris 2024 Organising Committee: Skateboarding, Sport climbing, Surfing and Breaking also known as break dancing. There were a total of 754 competition sessions, 20 mixed-gender medal events, 125 Olympic records broken in 10 disciplines and 32 world records broken in 8 disciplines.

At the final medals tally, the U.S. had won 126 in all, including 40 gold medals. It's the most won by the U.S.A since the 1984 Los Angeles Olympics. China finished second in the tally with 91 medals including 40 gold medals.

It was an awesome sight to see North Korea and South Korea sharing the podium in mixed doubles of table tennis, with North Korea team winning the silver, while the South Korean team won the bronze.

China and Taiwan also shared the podium in four events (women's boxing 66 kg, women's weightlifting, women's 60 kg boxing, and men's doubles badminton). It is evident that sports competition can be an ingredient for peace.

The 2024 Summer Olympics in Paris officially drew to a close on 11th August, capping off 19 days of eye-popping spectacle, jaw-dropping athletic triumphs and ear-splitting cheers from spectators across the French capital and around the world. More than 10,000 athletes paraded through the **Stade de France** north of Paris.

The indie group Phoenix and the R&B singer H.E.R. rocked out for the crowds. Tom Cruise, rappelled down into the stadium, accepted the Olympic flag and sped away on a motorcycle symbolizing the handover to the 2028 Summer Games in Los Angeles.

Following the Olympics, Paris hosted the Paralympic Games from 28th August to 8th September, showcasing the incredible athleticism of para-athletes from around the world. This integration promotes inclusivity and celebrates diversity in sports, highlighting the resilience and determination of athletes with disabilities.

Kum Anu Narayan

World's first carbon fibre high speed train

China is leading the world in high-speed rail, with a vast network that has rapidly developed over the past two decades. Recently, the country introduced the world's first passenger train made entirely from carbon fibre. This new train is a major breakthrough because it is much lighter than traditional trains, which could help reduce pollution.

Qingdao Sifang, the company that created the train, explained that reducing the weight of the train's body and lowering its energy consumption are crucial for creating a greener and more eco-friendly future. The train has already completed factory testing and is set to start operating in a coastal city later this year.

This new train can reach a top speed of 87 miles per hour and is expected to use 7% less energy than standard steel trains. This energy saving could make a big difference in cutting down pollution.

Even before this innovation, high-speed rail has been known as the most environmentally friendly form of long-distance travel. It creates less air pollution per passenger compared to cars or planes; produces less noise pollution, and takes up much less space than highways.

China's high-speed rail system is the largest in the world, with nearly 28,000 miles of track. The trains can travel at speeds of up to 125 miles per hour, allowing people to travel quickly, cheaply and efficiently across the country. **The entire network is now operated and maintained using artificial intelligence, showcasing China's technological advancements.**

While China is far ahead in high-speed rail, other countries are trying to catch up. The United States, for example, has been slow to develop high-speed rail, but there are some projects in progress. These include the long-awaited California High-Speed Rail network and a new privately owned high-speed rail system in Florida.

China's latest train made of carbon fibre represents a significant step forward in making transportation greener and more efficient, setting an example for other countries to follow.

Shri Sridhar P

China, Australia and India lead in forest area gains

DO YOU KNOW ?

Oxisols are highly weathered soils of tropical and subtropical regions. They are dominated by low activity minerals such as quartz, kaolinite and iron oxides. Most of these soils are characterized by extremely low native fertility, resulting from very low nutrient reserves, high phosphorus retention.

In a recent report by Food and Agricultural Organization (FAO), India has made significant strides in increasing its forest area by 2,66,000 hectares annually between 2010 and 2020. India fares amongst the top 10 countries which have made significant gains in forest cover. The first 2 places go to China (which added 19,37,000 hectares) and Australia (4,46,000 hectares).

Why forest cover is important

Worldwide forests occupy 31% of the land area ranging from tropical rainforests to temperate forests, coniferous forests and the savannah as the main ones, each of them thriving in an ecological niche. The world's climate is as much influenced by forests as oceans and solar insolation. Forests provide valuable timber, wood pulp, medicinal plants etc. Agro forestry is an outstanding ingenious concept that further advanced the understanding of forests and its value. Further, forests act as carbon sinks and sequester huge amounts of carbon. The impact and loss of forests manifest as soil erosion, loss of biological diversity, degradation of water shed areas, worsening floods, landslides, desertification etc. The world's most luxurious forests like the tropical rain forests are supported by soil called **oxisols** which are infertile.

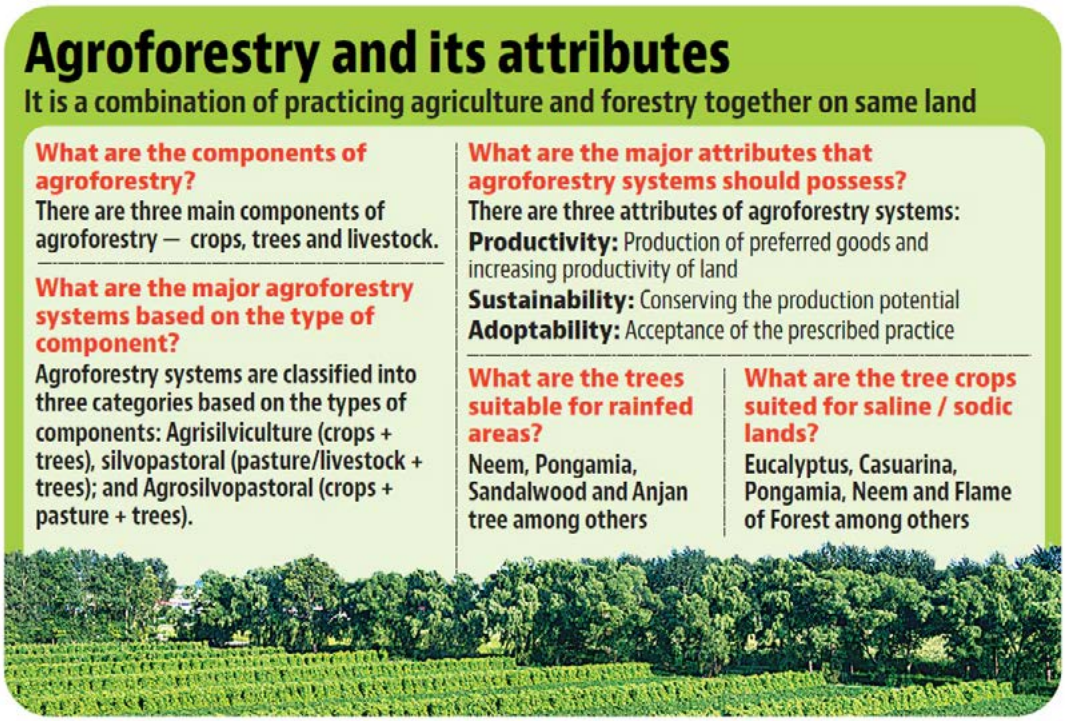


TABLE 8. Top ten countries for average annual net gain in forest area, 2010–2020

Ranking	Country	Annual net change	
		1 000 ha/yr	%
1	China	1 937	0.93
2	Australia	446	0.34
3	India	266	0.38
4	Chile	149	0.85
5	Viet Nam	126	0.90
6	Turkey	114	0.53
7	United States of America	108	0.03
8	France	83	0.50
9	Italy	54	0.58
10	Romania	41	0.62

Note: The rate of change (%) is calculated as the compound annual

FOOD AND AGRICULTURAL ORGANISATION

However, the leaf litter, rain, microorganisms all work in tandem to support a forest. **A destroyed rain forest is gone for ever and is very difficult to recreate a pristine one.**

Indian agroforestry and land restoration initiatives

FAO commended India for its innovative policies in restoring degraded lands and promoting agroforestry. This national level policy has been recognized as an important, key driver of restoration of forests and degraded land.

Global deforestation and mangrove loss

Mangroves are crucial. They stabilize coastal ecosystems, prevent coastline erosion, provide timber, sequester carbon and are very important for development of fisheries. FAO has reported a drop in deforestation rates including mangrove forests - a decline of 8.4% between 2021 and 2024. Mangrove forest deforestation fell 23% between 2000 and 2020.

Climate change and forest vulnerability

FAO has warned that climate change is increasing the vulnerability of forests to the threat of forest fires and pests. Climate change and increasing global temperatures act as stressors on forests. The number and intensity of wild fires are increasing world wide.

Kum Anu Narayan

World's first biomethane engine

Interstellar Technologies, a space start-up from Japan, has made a big leap in rocket technology by testing its Cosmos engine at the Hokkaido Spaceport. **What makes this rocket unique is that it uses methane gas made from cow dung as fuel.** This test is part of the company's goal to create the world's first orbital rocket powered by this eco-friendly resource.

The test was a success, with the engine firing for 10 seconds and producing a strong blue flame. This shows that biomethane, the fuel made from cow dung, can be a clean and available energy source for rockets. While the European Space Agency has also worked on rockets using cow dung, Interstellar Technologies is the first private company to achieve this breakthrough.

The Cosmos engine is special because of its advanced design. The engine uses a pintle injector, a part that controls how fuel is delivered, similar to the technology used by SpaceX. Pintle injectors are usually not very efficient, but Interstellar Technologies worked with experts from Tokyo University and JAXA Space Innovation to improve its performance. These improvements allowed the company to simplify the engine, reducing the number of parts to just one-tenth of what is usually needed.

This makes the engine not only more efficient but also cheaper to build, which is important because rocket engines are one of the most expensive parts of a rocket.

The company plans to continue testing the engine to further develop a larger, more powerful version that can generate 130 kN of thrust. This new engine model will be based on what they learned from testing a smaller, 60 kN version.

This achievement is a major step forward in using renewable resources for space exploration. It shows how space travel can be both innovative and sustainable.

DO YOU KNOW ?

The pintle injector is a type of propellant injector for a biopropellant rocket engine. Its purpose is to ensure appropriate flow rate and intermixing of the propellants as they are injected under high pressure into the combustion chamber, so that an efficient and controlled combustion process can happen.

Shri Ramaswamy R

Indo - Australian collaboration for cultural promotion and research

Democracy and multi-culturalism have brought Australia and India together during the last 50 years. The two big nations have many collaborations for research and culture. Some of them are listed below.

Australia-India Strategic Research Fund (AISRF)

The AISRF is Australia's largest bilateral science cooperation fund helping to build links between Australia and India's top universities and research institutions across 20 different mutually important areas. Fifteen recipients will share USD 3.8 million to help support scientific projects, including AI platforms to monitor soil health, recycling metals from mobile devices and nanomaterials for water treatment.

Maitri Grants

Maitri means 'friendship' in Sanskrit.

The grants shall

- Explore opportunities in areas such as agribusiness, critical technology, energy transition and advanced manufacturing.
- Support some of the best and brightest Indian students to study in Australia and will build links between our future leaders.
- Assist businesses to harness the opportunities created by India's economic transformation and build on its track record in innovation important for Australia's economic growth.
- Support projects, events, exhibitions and professional exchanges in the visual and performing arts, literature, film and music sectors.

India Economic Strategy to 2035

The IES describes growth

opportunities for Australian businesses from India over the coming decades.

Centre for Australia-India Relations

The Centre is established to include Australia's rich Indian diaspora community in strengthening our relations.

Australia-India Innovation Network

Shall help Australian and Indian firms commercialise critical technologies and services, access investment and encourage the development of deeper supply chains.

Consulate - General in Bengaluru will help plug Australian businesses into India's booming digital economy and innovation ecosystem, and reinforce growing links in Space sector.

India-Australia Rapid Innovation and Startup Expansion Accelerator

Supports Indian and Australian entrepreneurs and SMEs to launch innovation technology solutions to tackle shared national challenges and priorities.

Australia-India Future Skills Initiative

Industry-led will position Australia as a skills provider of choice for India to meet critical and emerging labour force requirements.

Australian Researcher Cooperation Hub

Shall continue to strengthen bilateral research collaboration and showcase the research excellence of both countries.

As the Australian Minister for Foreign Affairs, Senator the Hon Penny Wong has rightly stated, 'Whether it's shared research, commercial innovation, cultural exchanges – or just laughing together – we are proud to support these initiatives, because we understand that human connections and people to people links have always been at the heart of the Australia-India relationship."

A calendar that predates dates

Shri Mrithyunjay GN

If I were to ask you today's date, you would probably look at your phone or you may look at a watch on your wrist. But have you ever wondered how we know what the date is? A calendar is the most obvious answer of course, but when did we actually start using one? When did we figure out that usually, May to August were the hottest months and certain crops grew better at different times?

The calendar we use today was formalised in 1582 by Pope Gregory XIII. But a long while back, even before the pyramids were built, humans had found ways to keep track of days!

The proof? An ancient pillar nestled in the ruins of **Göbekli Tepe** in southern Turkey, a place that is 12,000 years old, is filled with carvings that seem to make up a calendar! The name Göbekli Tepe is a translation adapted from the Armenian name *Portasar*, meaning "mountain navel."

Scientists at the University of Edinburgh, as part of the discovery, found the calendar which not only records seasons and years but also points to a destructive comet strike as the possible basis for the site's intended use as a place of worship for a religious cult.

"Overall, it appears that naked-eye astronomical capabilities of ancient people were far in advance of what is generally assumed for this time," Remarked Chemical Engineer Martin Sweatman who was one of the leaders of the team.

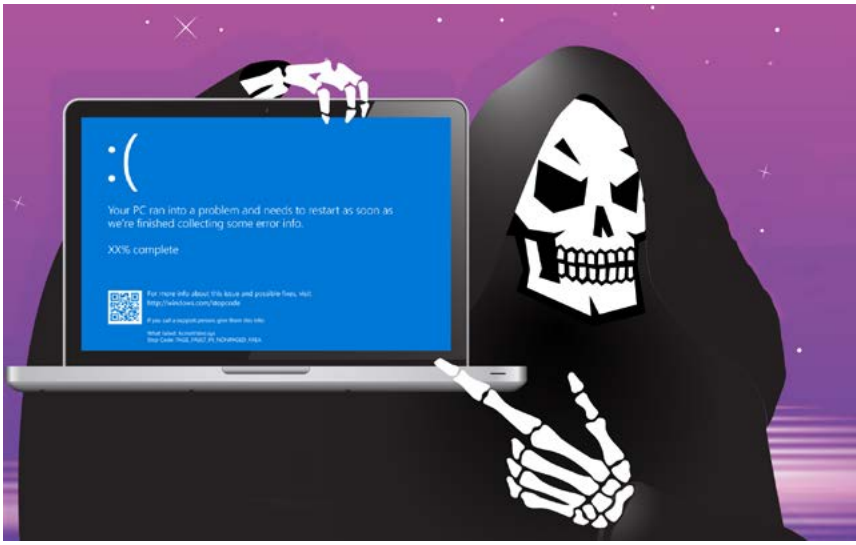
Made up of multiple V-shaped markings on one pillar that depicts a **lunisolar calendar**, scientists believe precisely pinpointing the date of this cataclysmic event to around 10,850 B.C.

This comet strike, which triggered a 1,200-year ice age and led to the extinction of many large animals, perhaps had a profound impact on human civilization. Dr. Sweatman's research suggests that ancient people were not only aware of this celestial event but also capable of recording their observations in a sophisticated calendar system.

"This event was important to them," Dr. Sweatman concluded, highlighting the significance of this discovery in understanding our ancestors' connection to the cosmos and their ability to document and respond to major astronomical occurrences.

Shri Mrithyunjay GN

THE BLUE SCREEN OF DEATH



Have you ever been working on something really important on your laptop or your computer and then suddenly everything freezes for a moment and the entire screen turns blue? Panic ensues, you wonder if you have lost all the work you have done and all you can do is stare in vain hoping your device comes back from the dead.

You have just encountered **The Blue Screen of Death (BSOD)**.

A BSOD is a critical error screen displayed by Microsoft Windows when the operating system encounters an unrecoverable error. The screen sometimes provides an error code which can be looked up to understand the cause of the issue.

The origins of BSOD can be traced back to the early days of Windows, when the operating system was still relatively new and prone to crashes. In those early versions, the screen was often black, with white text displaying the error message. The blue colour was introduced in later versions, likely to make the error more visually distinct.

Over the years, BSOD has evolved significantly, both in terms of its appearance and functionality.

Operating systems were once black screens with a white cursor into which we could type commands to execute actions. At that point, an error showed up as lines of random numbers and letters on the same black screen.

They were very cryptic and difficult to understand for non-technical users.

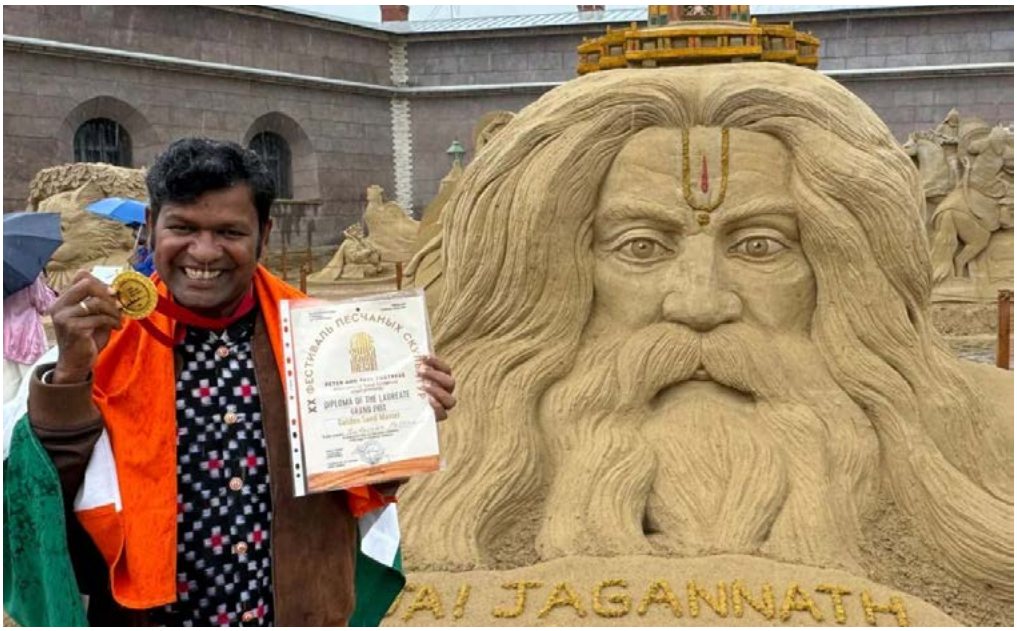
Over time they became more user-friendly, providing clearer explanations of the problem. BSOD also became more interactive allowing users to take screenshots or dump the contents of RAM for further analysis to pinpoint the exact time the error occurred.

BSOD often happens when there are hardware failures or driver conflicts. It can also be caused by software bugs, viruses or RAM failure. To prevent BSODs, it is important to keep our operating systems and drivers up to date. We must avoid running multiple programmes simultaneously and scan our computer regularly for malware.

How do we fix it?

We can try turning off the computer, unplugging and plugging back all external devices and when the computer turns back on checking for viruses or software errors. If the problem persists, it is best to contact the manufacturer of the device for support.

Smt Silpa Nandakumar



A golden touch to Sand sculpting

Renowned Indian sand artist **Sudarsan Pattnaik** has won the prestigious **Golden Sand Master Award** and a **gold medal** at the International Sand Sculpture Championship in St. Petersburg, Russia, held in July 2024. Pattnaik had created a 12-foot sculpture depicting a chariot and Lord Jagannath with his devotee Balaram Das, the famous Odia poet of the 14th century. 21 master sculptors from around the world participated in the event.

Highlights

- Padma Shri (2014),
- People's Choice Award at the Sand Sculpting World Cup (2014)
- Gold medal at Moscow Sand Sculpture Championship (2016)
- The Italian Sand Art Award (2019).

The unique art of sand sculpting was developed in Puri, Odisha, from where it spread all over the world. To carve a sand sculpture, the only raw materials, fine granule sand and water, are mixed with each other. Using this type of sand and magic of the fingers, beautiful and attractive sculpture can be created on the beach.

Nowadays, stone sculpting is treated as the first stage of sand sculpting. Carving on sand is considered easier and quicker than carving in stone. Although they are eye-catchy and transferrable, it can also be destroyed easily.

Sudarsan Pattnaik, who hails from Odisha, is one of the very few people who have left indelible marks on the sands of time.

Kum Pavithra S

unesco
World Heritage Convention

World Heritage Young Professionals Forum 2024

The World Heritage Young Professionals Forum 2024 was held in New Delhi, India, from 14th to 23rd July. This event was part of the 46th session of the **World Heritage Committee,** hosted by the Ministry of Culture and the Archaeological Survey of India. The forum aimed to enhance the skills and knowledge of young professionals in protecting, preserving and promoting natural and cultural World Heritage sites.

50 young professionals from around the world, including 20 from India, participated in the forum. They were selected based on their expertise in heritage conservation, archaeology, urban planning, tourism and related fields. The forum focused on the theme "World Heritage in the 21st Century: Building Capacities and Exploring Opportunities for Youth."

Participants engaged in discussions, presentations and site visits to World Heritage properties, including Qutb Minar, Red Fort, Humayun's Tomb and the Taj Mahal. Key topics included climate change and its impact on World Heritage sites, innovative technologies for promoting world heritage, community involvement in heritage conservation and sustainable tourism & development.

The young professionals presented their declaration to the World Heritage Committee outlining their vision for implementing the World Heritage Convention in the modern era. This event marked the first time India hosted the UNESCO World Heritage Committee meeting, bringing together global experts in heritage conservation. The forum provided a platform for young professionals to share knowledge, ideas and best practices in preserving our cultural and natural heritage.

Interesting facts

- **Qutb Minar** is the tallest minaret in India and was built using red sandstone and marble.
- The **Red Fort** was built by Mughal Emperor Shah Jahan in 1648 and took nearly 10 years to complete.
- **Humayun's Tomb** was the first garden-tomb in India and inspired the design of the Taj Mahal.
- The **Taj Mahal** attracts over 8 million visitors each year, making it one of the most visited tourist destinations in the world.

Smt Meenakshi S

Indians triumph in International Science Olympiads

It was raining medals for the Indian contingents at the International Science Olympiads. The Indian delegations were led by eminent educators, including Professor Deepak Garg and Dr. Shirish Pathare for the IPhO, and Professor Gulshanara Shaikh and Dr. Shraddha Tiwari for the IChO.

35th International Biology Olympiad 2024

This event was organized by the Ministry of Education of the Republic of Kazakhstan. The Olympiad assessed their ability to tackle biological problems and conduct experiments.

Gold	
Vedant Sakre	From Mumbai
Silver	
Ishan Pednekar	Ratnagiri, Maharashtra
Shrijith Sivakumar	Chennai
Yashashwi Kumar	Bareilly, Uttar Pradesh

54th International Physics Olympiad 2024

The event was held at Isfahan in Iran. All five Indian participants bagged medals. The Olympiad included theoretical problems and experimental tasks focusing on global warming, ion trapping, and binary star dynamics. This time, a total of 193 students from 43 countries participated in the International Physics Olympiad. Overall, India was placed at the fourth position, jointly with Vietnam.

Gold	
Rhythm Kedia	Chhattisgarh
Ved Lahoti	Madhya Pradesh.
Silver	
Akarsh Raj Sahay	Maharashtra
Bhavya Tiwari	Uttar Pradesh
Jaiveer Singh	Rajasthan

56th International Chemistry Olympiad 2024

This was held in Riyadh, Saudi Arabia. The competition included both theoretical and experimental components. The theoretical problems covered a range of topics, from semiconducting metal oxides to the synthesis of antibiotics. The experimental tasks involved thin-layer chromatography and mass-based titrations.

Gold	
Devesh	Jalgaon Maharashtra
Silver	
Avaneesh	Kota, Rajasthan
Harshin	Hyderabad
Bronze	
Kashyap	Mumbai

The International Science Olympiads are a group of worldwide annual competitions in various areas of the formal sciences, natural sciences and social sciences. The competitions are designed for the 4-6 best high school students from each participating country selected through internal National Science Olympiads.

ASMITA is the acronym for **Augmenting Study Materials in Indian languages through Translation and Academic writing.** This is a project led by the University Grants Commission (UGC) in collaboration with the **Bharatiya Bhasha Samiti.**

About the project

This is an initiative, launched in July to produce 22,000 books in the 22 Indian languages listed in the eighth schedule of our Constitution, over the next five years. This project aims to create a robust ecosystem for original book writing and translation in Indian languages across various disciplines of higher education.

The primary objective is to promote and integrate Indian languages more deeply into the education system, thereby enriching the learning experience and making it more inclusive. This is aligned to the goal of National Education Policy 2020, which is to increase the number of students who can learn subjects in their mother tongues to 50% by the year 2035.

This would not only promote better understanding and critical thinking in students but also provide recognition for the diverse communities by respecting their language identities. Thirteen nodal universities have been identified to carry the project forward, along with member universities from various regions.

The UGC has also created a standard operating procedure (SOP) for the book-writing process in each assigned language.

Other initiatives launched

Bahubhasha Shabdakosh (Dictionary) - The Ministry of Education has launched the Bahubhasha Shabdakosh, a single-point reference for all the words in all Indian languages with their meanings. This will be developed by the Central Institute of Indian Languages (CIIL) in collaboration with the Bharatiya Bhasha Samiti.

This will help in using Bharatiya words, phrases and sentences in various domains like IT, industry, research and education.

Real-time Translation Architecture - This would enhance the capability of translation into Indian languages and will promote real-time translation solutions that can integrate Indian languages into the educational landscape. This will be developed by the **National Educational Technology Forum (NETF)** and the Bharatiya Bhasha Samiti.

Impact

The medium of instruction chosen in higher education has a significant impact on the learning experience, academic results and hence career opportunities. **Learning in one's mother tongue ensures better understanding of topics, preservation of heritage and culture, accessibility, inclusivity, cognitive development and critical thinking.** ASMITA will help in promoting mother tongue and multi lingual medium of education that would bridge linguistic divide, foster social cohesion and unity and also transform the nation's youth into socially-responsible global citizens.

Asmita in Samskritam means pride and self-respect. By promoting education in Bharatiya Bhashas, project ASMITA is bound to enhance *bharatiya asmita.*

Kum Kavya R

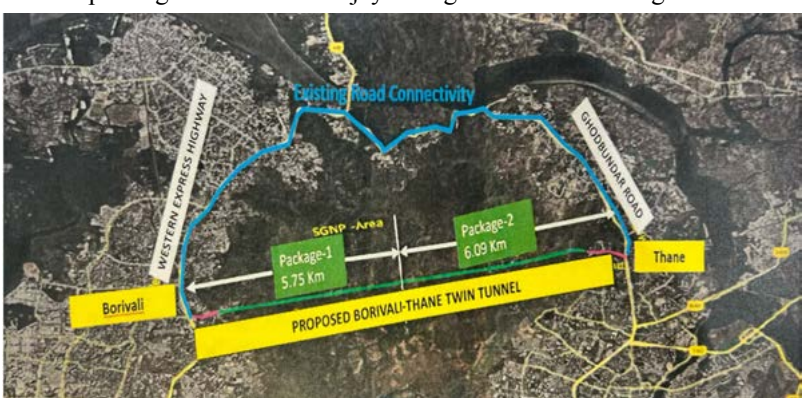
Foundation laid for India's longest and largest urban tunnel

On 13th July 2024, PM Modi virtually laid the foundation stone for the Thane Borivali Tunnel project, developed by the **Mumbai Metropolitan Region Development Authority (MMRDA)**. He also inaugurated various other infrastructure projects related to the road, railways and port sector worth over ₹29,000 crore. The Thane Borivali Twin project was the most important of them all, as it aims to build India's longest and largest urban tunnel.

This inter-district tunnel between Borivali in Mumbai and Ghodbunder Road in Thane is estimated to cost over ₹16,000 crore. It will feature twin tube tunnels passing beneath the Sanjay Gandhi National Park (SGNP), offering a direct and efficient link between the Eastern Express Highway and Western Express Highway.

The current road between Thane and Borivali is 23km long and the commute takes anywhere between 60 and 100 minutes. The Thane Borivali Tunnel is just 11.8 km long in comparison and is expected to reduce the travel time to a mere 12 minutes. The project consists of twin tunnels with three lanes each—two operational lanes and one emergency lane.

The tunnels include 10.25 km of bored sections, which will be built in several tranches using the largest tunnel-boring machines in India. A dedicated ventilation system will be provided all through the tunnel, with cross passages at every 300 meters, fire extinguishers, smoke detectors, LED lights, etc., for safety, maintenance and the convenience of travellers.



This project, proposed almost ten years ago, got the long-awaited approval from the Maharashtra State Wildlife Board in October 2023. MMRDA claims that the construction of these tunnels will not harm the ecology of the National Park and will help reduce air and noise pollution. Upon project completion in 2028, it is expected to reduce 1,50,000 metric tons of carbon emissions annually.

While laying the foundation stone, PM Modi said, **"This project will prove to be better for the people of Mumbai in terms of connectivity. After completing the construction of Coastal Road and Atal Setu, the Borivali Thane tunnel is yet another way to facilitate connectivity in and around Mumbai".**

Smt Laxmi A

Andhra pradesh's geological links with Gondwana Supercontinent

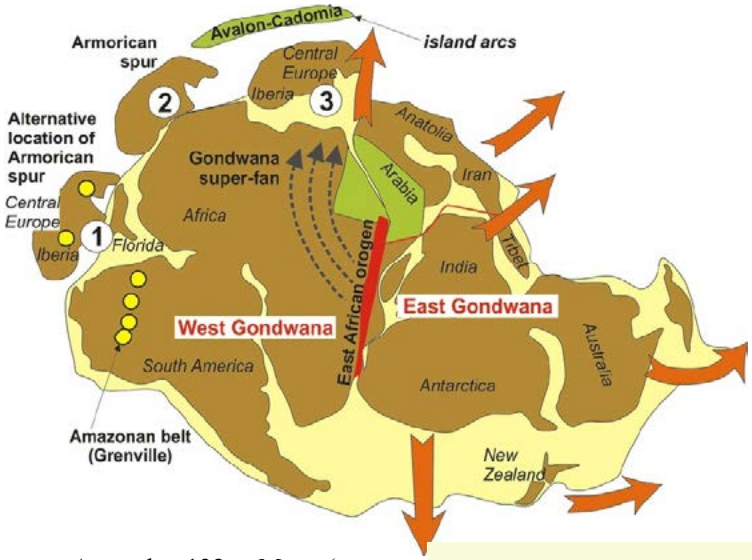
DO YOU KNOW ?

- Other prominent supercontinents are Columbia / Nuna, Rodinia, Ur, Laurasia, Pannotia and Pangaea.
- Proterozoic era is a period of Earth's history that lasted from 2.5 billion to 543 million years ago. It is the third of the four geologic eons of Earth's history, and is the longest eon, making up almost 4/9ths of geologic time. The Proterozoic era is divided into three periods:
  - The Paleoproterozoic (2.5 to 1.6 billion years ago)
  - The Mesoproterozoic (1.6 billion to 900 million years ago)
  - The Neoproterozoic (900 to 543 million years ago).

National Geophysical Research Institute (NGRI) scientists Dr. K Chandrakala, OP Pandey, Biswajit Mandal, K Renuka, and N Prem Kumar from Hyderabad found a historic collision between India and East Antarctica over a billion years ago when they discovered a hidden ridge beneath Andhra Pradesh's Darsi and Addanki regions.

Background

- The Indian subcontinent is believed to have been a part of an ancient supercontinent called Gondwana.
- Gondwana, which also comprised modern-day Antarctica, Africa, South America, Australia, Arabia and Madagascar, took shape 600 million years ago.

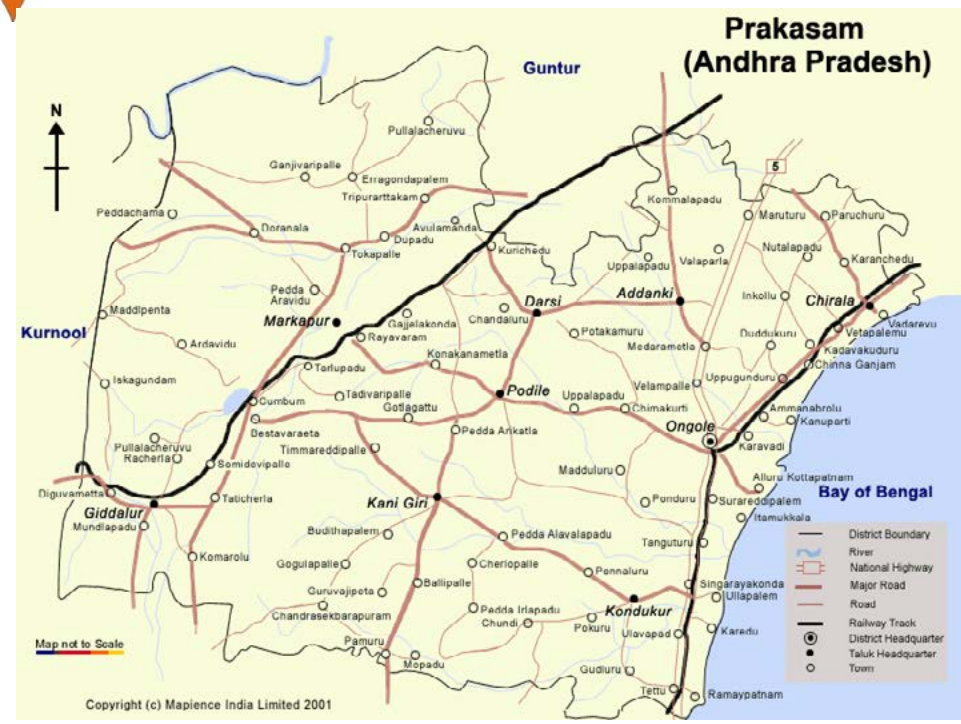


TRIASSIC
200 million years ago

- Around 132 Ma (mega annum, million years) ago, when Greater India broke away from Antarctica and Australia, there was a small lake between them.
- As it started to drift northwards, this lake began to expand to form the Indian Ocean.

What is a supercontinent?

A supercontinent is the assembly of most or all of Earth's continental blocks to form a single large landmass. Gondwana was a supercontinent that had formed around 500 million years ago, and started breaking up about 180 million years ago.



Recent findings

- A hidden ridge in Andhra Pradesh's Darsi and Addanki regions, suggest significant geological shifts.
- This ridge is attributed to the historic collision, suggesting a tilting of the Cuddapah basin towards the south.
- Both upper and lower Proterozoic Cuddapah sediments directly lie over the crystalline basement.
- The subsurface crustal (relating to or originating in the earth's crust) seismic structure of the north Cuddapah basin had a thin layer of alluvium underlain by Gondwana sediments and Proterozoic sedimentary layers.
- Seismic data reprocessing uncovered Proterozoic sediment layers, shedding new light on India's eastern coast evolution.
- The study indicates signs of past seismic activity in the area, hinting at the presence of a marginal ocean basin along the east coast during the Columbia and Rodinia supercontinent assembly periods.

Significance of the findings

- Highlights the role of the Gondwana supercontinent in the geological evolution of various regions.
- Contributes to the understanding of ancient geological events that shaped the Indian subcontinent and its connections with Antarctica.

Shri Shyam Sekhar

Union Budget 2024

New beginnings towards becoming a developed nation

The Budget for 2024-25 puts the Indian economy firmly on a strong growth trajectory. It exudes the confidence of a nation which is working to create the right balance between welfare and investment. Welfare, job creation, housing for all, agricultural productivity, skilling and logistics development are the clearly identified priorities of this budget.

The budget's focus is centred on creating ample opportunities for all. The government put forward five schemes with an outlay of ₹2 lakh crores intended towards creating 4 crore jobs for youth over the next five years.

This would significantly reduce unemployment among the youth and guide them towards economic progress through job creation. Taking care of 140 crore people, a large section of whom are still being brought out of poverty with concerted state support continues to remain a priority of the budget. The government intends to provide food subsidy, agricultural subsidy, higher outlays for education and healthcare and ensuring that all Indians have access to housing in a time bound manner. The budget provides ample, continued support for subsidies to this section of society.

But, at the same time, it also focuses on enabling their joining of the middle class in increasing numbers. The PMAY version 2 (Pradhan Mantri Awas Yojana), an ambitious scheme to provide housing for all gets accelerated spending in this year's budget. The outlay of ₹10 lakh crore as investment and ₹2.67 lakh crore as subsidy will build houses for one crore families.

The government focuses on employment generation and skilling in this budget by encouraging job creation with direct subsidy transfers for new job creation. The government encourages smaller, self-employed entrepreneurs to

Pradhan Mantri Awaas Yojana
Housing for All

grow faster by raising access to capital through enhancement of PMMY scheme's loan limit from ₹10 lakhs to ₹20 lakhs.

Investment in hybrid seed development for multiple crops is intended to raise the income of farmers significantly. This along with the rural infrastructure allocation of ₹2.66 lakh crores will significantly raise the quality of life in rural India, improving their spending capacity, access to better markets and overall development. The government focussed heavily on rural development recognising the rural stress building up due to lack of adequate growth opportunities for rural Indians.

While the South and West are developed adequately and far more economically evolved than the rest of the country, the government is focusing on developing the Eastern region as a corridor through a plan called **Purvodaya** covering Bihar, Jharkhand, Bengal, Orissa, Andhra Pradesh. This would greatly homogenise economic development. When these regions grow at a faster rate, this would reduce migration from the East to the South.

- **Equity - is the value of a company, divided into many equal parts owned by the shareholders. Shareholders' equity (or owners' equity for privately held companies), represents the amount of money that would be returned to a company's shareholders if all of the assets were liquidated and all of the company's debt was paid off in the case of liquidation. In the case of acquisition, it is the value of company sales minus any liabilities owed by the company not transferred with the sale.**
- **Indexation is a provision in income tax laws that allows the investors to estimate the total gain or losses incurred on the investments. It reduces the tax burden on long-term capital gains by adjusting the purchase price of an asset for inflation. It promotes long-term investing, as investors can get indexation benefits.**
- **PMMY (Pradhan Mantri Mudra Yojana) is a government scheme that provides loans to small and micro enterprises (SMEs).**
- **MUDRA (Micro Units Development & Refinance Agency Ltd.)**

The budget had one area where it could have done better. The government continues to follow a rather tight fisted approach towards the middle class and urban demography. It has not really given away much in terms of tax concessions or reliefs. This budget raised the tax rates for equities while lowering the rates for other asset classes. But, it set the direction on removing indexation benefits for properties bought post budget.

This would mean property purchase decisions ought to be taken very carefully and run the risk of not beating inflation. **The middle class has to manage its own budgets and investment effectively and take responsibility for its own financial well-being**. That is the core of this budget to our middle class.

Overall, balancing the interests of such diverse sections of society is not an easy job. The government has to achieve its revenue targets in order to be able to even spend what it plans to. This government has been able to achieve its revenue targets and this budget will also manage to exceed that goal.

This means that our government is steadily improving its financial strength and building the nation into a far more inclusive, developing nation. With overall development reaching all regions of the country and homogenising the delivery of schemes and services to all Indians, we are gradually marching towards our goal of a **Viksit Bharat.** This budget is definitely reassuring and guiding us towards that goal.

"The land of opportunity is an attitude. It is an openness to new ideas, a willingness to listen, an eagerness to learn, a desire to grow and the flexibility to change."- B.J.Gallagher & Warren H Schmidt.

Smt Sandhya Nair

India's First Sunken Museum

India's first Sunken Museum was inaugurated by the Union Culture Minister Gajendra Singh Shekhawat and Prince Rahim Aga Khan in New Delhi.

WHAT IS A SUNKEN MUSEUM?

A sunken museum is an architectural design where the structure is built below ground level. This design helps integrate the museum seamlessly into the surrounding landscape, often creating a more immersive experience and providing natural insulation.

Location and significance

The first sunken museum in India is located at the Humayun's Tomb Complex in New Delhi, a UNESCO World Heritage Site.

The museum, developed by the Aga Khan Trust for Culture (AKTC) in partnership with the Archaeological Survey of India (ASI), is the culmination of 25 years of conservation efforts.

Architectural inspiration

The museum's design is inspired by the ancient 'baolis' or step wells of Delhi, reflecting traditional architectural elements.

HIGHLIGHTS

- The museum includes a permanent exhibit, galleries for temporary exhibits and also an auditorium for film screenings. The main edifice is about six meters below the ground level while the galleries are above the ground level.
- Has over 500 artifacts from the National Museum, ASI and AKTC.
- Exhibits include miniatures, manuscripts, coins, contemporary art, astrolabes, celestial spheres, stone inscriptions and architectural models.

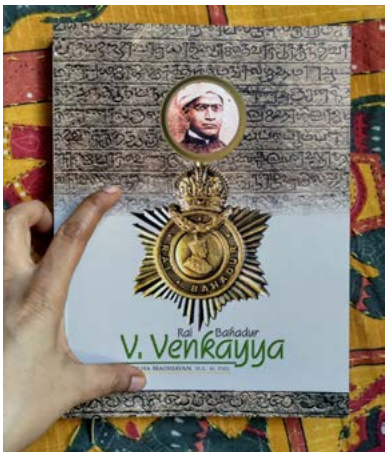
- **Astrolabe is an instrument used to make astronomical measurements like the altitudes of celestial bodies; and in navigation for calculating latitude, before the development of the sextant.**
- **Celestial sphere is an imaginary sphere surrounding the earth. Another way of imagining the celestial sphere is to picture Earth inside a transparent, celestial dome on which the sun, moon, planets and stars are fixed.**

Shri Sampath D

V Venkayya Epigraphy Award for Dr V. Vedachalam

The year 2024 marks a significant milestone in the field of Indian epigraphy as Dr V. Vedachalam, a renowned Tamil epigrapher and historian, received the prestigious V Venkayya Epigraphy Award (VVE Award). It was presented to him on 27th July 2024. This accolade not only recognizes Dr. V. Vedachalam's extensive contributions to the field but also highlights the continuing importance of epigraphic studies in understanding India's rich historical tapestry.

Dr. Vedachalam, who has written and co-written more than 25 books on subjects such as epigraphy, numismatics, temple art, religion and society, said he was honoured to receive the award named after **V. Venkayya, the first Indian Chief Epigraphist to the Government of India**.



This annual award was instituted by Ms Sunitha Madhavan, the great-granddaughter of V. Venkayya, in association with the Tamil Heritage Trust.

The award aims to recognize exceptional individual contributions towards the discovery of unrecorded inscriptions, interpretation of inscriptions from a refreshingly new perspective, dissemination of wealth of knowledge contained in them by conventional as well as digital medium and preservation of epigraphic resources for posterity.

By recognising outstanding work in this area, the award aspires to encourage interest and involvement of all the stakeholders including the general public in Indian heritage and epigraphy in particular, thereby raising the awareness and appreciation of history, literature, arts and culture which deserve our attention and care.

Dr Vedachalam had worked in the Department of Archaeology in Tamil Nadu for 33 years which enriched his knowledge in various aspects of archaeology. He came to Chennai in 1974 to join the Department and during his tenure, he was part of teams that conducted excavations at Madurai, Tondi, Karur, Thiruththangal, Mangudi, Alagankulam and Keeladi.

At the event where he was presented the award, he spoke about the historical and political geography of *Pandya Naadu*. He also emphasised the need to record history and its significance accurately. This stance underscores the ethical responsibilities of historians and epigraphers in presenting unbiased historical narratives.

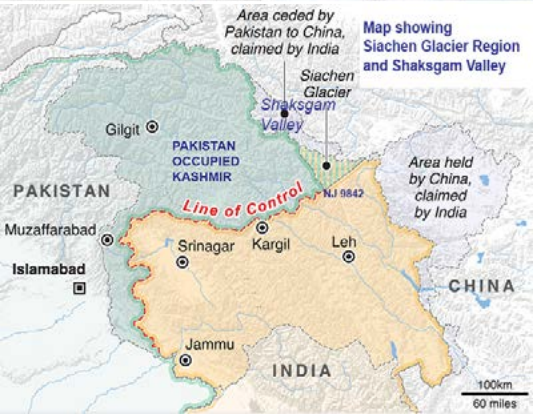
The event was graced by V. Muralidharan, Founder and Managing Trustee of Sevalaya, an NGO and Prof S. Swaminathan, co-founder of Tamil Heritage Trust.

The award is based on a nomination and selection process. It consists of a citation and a prize of ₹20,000. The earlier winners of the award include Dr. Y Subbarayalu and Dr P V Krishnamurthy.

Kum Shrivaishnavi R

Captain Supreetha

First woman officer of the Corps of the Army Air Defence at Siachen



In another feat of women reaching heights and breaking gender barriers, Captain Supreetha. C. T has now become the first female officer of Army Air Defence to be deployed operationally at Siachen glacier.

The Siachen glacier is known to be the world's highest battlefield,situated in the Eastern Karakoram range of the Himalayas. This range falls in the border of India, PoK and China. It is a strategic location, where security is tight and the threat to danger is high. Additionally, the conditions at the glacier pose a challenge to the soldiers posted there – the extreme cold (temperatures dipping down to -50^{0}C), high altitude (an average of 15,000 feet), formidable terrain and harsh weather (severe blizzards and avalanches).

Getting deployed in this post requires rigorous training for weeks. Captain Supreetha proved her grit, determination and abilities. Being the daughter of Sub-Inspector of Police Thirumallesh, Captain Supreetha's intentions and perseverance for the nation are well established from a young age. She is now setting an example for people throughout the country to the heights to which women can serve their nation, quite literally. This decision will also pave the way for more women officers to serve in combat-heavy locations and motivate women officers to accept frontline roles in challenging posts.

Captain Supreetha is the second woman to be deployed operationally to Siachen. **The first ever Indian woman officer to be deployed to Siachen is Captain Shiva Chouhan of the Fire and Fury Corps.**

Indian legends *in* International Tennis Hall of Fame

During his eventful career Vijay Amritraj beat all the top ranked players of his time like Bjorn Borg, Jimmy Connors and Rod Laver.

International Tennis Hall of Fame inducted former Indian legends **Vijay Amritraj** and **Leander Paes** into their hallowed portals on 20th July 2024. While Leander Paes was inducted into the **player category,** Vijay Amritraj was inducted in the **contributor category** for his monumental contribution to the sport. They are the **first Asian men** to be inducted. British tennis journalist and author Richard Evans was also inducted the same day at New port, Rhode Island.

Sporting icons of India

International sports can be a great leveller. Sporting heroes from countries with limited resources often take the giant leap forward and produce stunning performances that enable them to straddle the rarefied and slippery peaks of greatness. Vijay Amritraj and Leander Paes have seen it all in ample measure.

Vijay Amritraj now 70 years of age took to tennis to overcome a childhood medical problem. He excelled, winning 15 ATP (Association of Tennis Professionals) singles titles, helped India get into Davis cup finals twice in 1974 and 1987. His career spanned 23 years from 1970 to 1993. He reached Wimbledon quarter finals in 1973 and in 1981. During his eventful career he beat all the top ranked players of his time like Bjorn Borg, Jimmy Connors

and Rod Laver. The ultimate icing on the cake was when Vijay, Borg and Connors were called the ABC of tennis. His extraordinary organisational skills were evident when he served ATP as its president. Even today he is an easily recognizable figure in tennis circles and is a sought after commentator. **He was awarded Padma Shri in 1983.**

The achievements of Leander Paes in tennis is the stuff of legends. **He is considered as one of the greatest doubles players in tennis history.** Paes won 18 grand slam titles, 8 in men's doubles and 10 in mixed doubles.

He is the only Indian Olympic medal winner in tennis. Paes started as the junior champion of Wimbledon and US open. He spent 462 weeks in the top 10 of ATP rankings. He along with his doubles partner **Mahesh Bhupathi** made a total of 34 Grand Slam finals across men's and mixed doubles in his career which is the joint 2nd highest of all-time among men. He holds a career Grand Slam in men's doubles and mixed doubles making him one of only three men in the Open era to achieve this distinction.

Highlights

- **Major Dhyan Chand Khel Ratna award (1996-97)**
- **Arjuna Award (1990)**
- **Padma Shri (2001)**
- **Padma Bhushan (2014))**

Both Vijay Amritraj and Leander Paes were extraordinarily modest after being honoured. They just owed to their fans and country men who made it happen.

Often the larger than life image of these iconic sportsmen serves in other spheres too. **Vijay Amritraj was nominated as the United Nation's Ambassador of peace.**

Kum Sunita D Behera

Single National Software Network for PACS computerisation

The Government of India is implementing a ₹2,516 crore project for the digitisation of functional **Primary Agricultural Credit Societies (PACS)**.

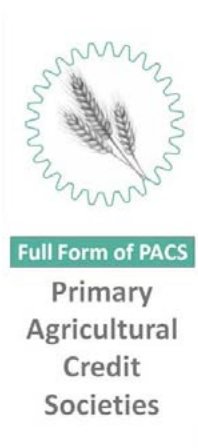
PACS are village-level cooperative credit societies that serve as the last link in a three-tier cooperative credit structure headed by the State Cooperative Banks (SCB) at the state level.

PACS provide short-term and medium-term agricultural loans to the farmers for various agricultural and farming activities. The first PACS was formed in 1904.

This initiative aims to integrate PACS with an ERP-based national software, linking them with NABARD through State Cooperative Banks (StCBs) and District Central Cooperative Banks (DCCBs).

The objective is to enhance the viability of PACS by diversifying their business activities **thereby enabling them to undertake over 25 activities, including dairy, fisheries, floriculture, warehousing and more.**

This diversification is intended to make PACS multi-service centres, improving transparency and accountability, providing additional income sources for farmers. As of July 2024, 25,904 PACS across 27 states and UTs are onboarded on this ERP system.



Significance of PACS

1. Providing small farmers with access to credit, which they can use to purchase seeds, fertilisers and other inputs in the farms. This helps them to improve their production and increase their income.
2. Increases financial inclusion in rural areas, where access to formal financial services is limited. They provide basic banking services such as savings and loan accounts to farmers who may not have access to formal banking services.
3. Often located in rural areas making it convenient for farmers to access their services. This is important because many farmers are unable to travel to banks in urban areas to access financial services.
4. Extend credits with minimal paperwork within a short time.

Smt Ghana Saraswathy M

Periyar Tiger Reserve's innovative wind turbine solution

DO YOU KNOW ?

- Periyar Tiger Reserve established in 1978 is India's tenth tiger reserve under Project Tiger.
- Located in Kerala, over approximately 925 square kilometres, it has nearly 2,000 plant species, 76 animal species and 338 bird species.

In a ground-breaking move towards sustainable conservation, the Periyar Tiger Reserve (PTR) in Thekkady has installed a wind turbine to power real-time monitoring cameras and Wi-Fi connectivity across its vast forested areas. This initiative marks a significant leap in the reserve's ongoing efforts to integrate advanced technology with environmental protection.

Periyar Tiger Reserve, renowned for its rich biodiversity, has always prioritized the protection and monitoring of its wildlife. To support these efforts, the PTR East Division, which encompasses 17 forest sections, had been relying on solar power for its wireless communication and operational needs.

However, the reserve's climate posed a challenge to this approach. The frequent foggy conditions and heavy rainfall often rendered solar panels less effective, leading to power shortages that compromised the reliability of monitoring systems.

Recognizing the need for a more dependable energy source, the reserve has now turned to wind power. The newly installed wind turbine is designed to address the shortcomings of solar energy by providing a steady and reliable supply of electricity. This will ensure that the reserve's monitoring cameras and communication networks remain operational even during adverse weather conditions.

The wind turbine installation is a testament to PTR's commitment to adopting innovative solutions for wildlife conservation. By ensuring uninterrupted power for surveillance systems, the reserve can maintain real-time monitoring of its diverse species, thereby enhancing protection efforts against poaching and illegal activities.

Moreover, this initiative underscores the importance of sustainable energy in conservation practices. By harnessing wind power, PTR not only reduces its carbon footprint but also sets an example for other wildlife reserves facing similar challenges.

Smt Manju Aildasani

Fiji's highest civilian award for President Murmu

DO YOU KNOW ?

- Fiji, officially the Republic of Fiji is an island country in Melanesia, part of Oceania in the South Pacific Ocean. It consists of an archipelago of more than 330 islands.
- There are strong cultural links between India and Fiji as 38% of Fiji's population is of Indian descent.

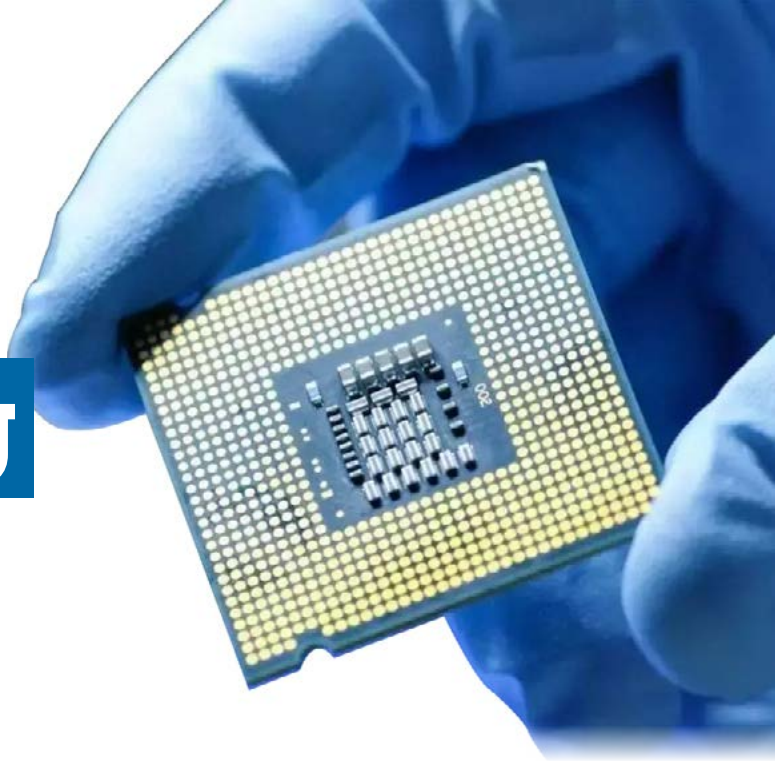
President Droupadi Murmu was conferred with **'Companion of the Order of Fiji'**, the country's highest civilian award, by Fijian President Ratu Wiliame Maivalili Katonivere on 6th August 2024. The award was presented during President Murmu's three-day state visit to Fiji, marking the first-ever visit by an Indian head of state to the South Pacific nation.

President Murmu, described the honour as "a reflection of the deep ties of friendship" between India and Fiji and stated that India stands ready to partner with Fiji to build a stronger, resilient and more prosperous nation while addressing the Parliament.

Upon her arrival in Suva, President Murmu was accorded a Guard of Honour by the Fiji Military Police, followed by a traditional welcome attended by Fijian Prime Minister Sitiveni Rabuka. She held a brief interaction with the local Indian community in Suva. The warm reception extended to the streets, where hundreds of school children lined up to greet the visiting dignitary.

At State House, President Droupadi Murmu also witnessed the progress of the 'Solarisation of Heads of State Residences' project, an Indian initiative which was inaugurated in February last year.

Shri Bharath



'Chip'ping it up in Assam

In March this year PM Modi laid the foundation stones for three semiconductor facilities – two in Gujarat and one in Assam. The total financial implication for this would be around ₹ 1.25 lakh crores. The TATA group is setting up two out of the three facilities -one each in Gujarat and Assam and the third is being set up by Renesas in Gujarat. This is aligned to the "Development of Semiconductors and Display Manufacturing Ecosystems in India" initiative.

Shortage of semiconductors across the globe

The entire world witnessed an acute shortage of semiconductors when Covid 19 struck and the gross inadequacy of semiconductor infrastructure across the globe came to light. Almost every sector – Electronics, Consumer durables, Industrial, Automotive and Telecom - faced shortages and some sectors are not out of the woods yet. It is in this context that this initiative gains significance and an immense one at that. The facility in Assam assumes greater significance for reasons beyond this.

Why is this important to the North East?

The contribution of the NE to India's GDP is a paltry 2.8%.The NE with its rich cultural diversity and natural resources is a fertile ground for leveraging on various fronts. This would be imperative to achieve India's goal of USD 5 Trillion economy. The NE is lagging behind in many human development indices and it certainly deserves targeted development. Such initiatives will help in skilling up the population of the NE and will help seamless integration with the rest of India. Both from an economic and a strategic viewpoint such an integration is essential. This would catapult Assam on to the global map too.

Assam CM and the Tatas- shared honours

Major part of the credit for this should go to the dynamic CM of Assam Himanta Biswas Sarma who convinced the TATA group and the Central government that the Assam venture will be successful. Credit is also due to the TATA group that has always been sympathetic to the Eastern part of India. They have their Steel and CV plants in Jamshedpur and have invested heavily in Odisha.

They initially set up their Nano plant in West Bengal which was spoiled by ungainly shortsighted politics.

They have earlier invested in setting up cancer care hospitals in Assam along with the State government. This is however a different cup of tea. Assam's industrial sector is predominantly public sector and contract driven. Only in the last decade it started getting investments from some FMCG players like Hindustan Unilever, Patanjali and Emami and some pharma companies. It therefore does not have an enabling ecosystem with the requisite skill levels to support the semiconductor industry. Despite this the Tatas have embarked on this bold and nationalist initiative to set up this facility in Assam.

A game changer for Assam

TSAT (TATA Semiconductor Assembly and Test Pvt. Ltd.) will set up the facility at an investment of ₹ 27000 crores which is thus far the largest private sector investment in Assam. Commercial production will start in 2026 and will cover segments such as Automotive, Electric vehicles, Telecom, consumer electronics Mobile phones etc.

The capacity of this facility shall be 48 mn per day and this is expected to generate a direct employment for 25,000 people. TSAT will be developing indigenous advanced packaging technologies. Of course the CM of Assam has a lot of responsibility to prove to the nation that this is a real game changer and not a flash in the pan. One is tempted to believe so, as the CM has already cast his net on the defense sector subsequent to Health, Petroleum refining and Semiconductors. It looks as though Assam is all set to join the league of industrially developed states like Gujarat and Tamil Nadu soon.

Smt Sarada Devi Ravutu

Million Designers, Billion Dreams initiative launched

DO YOU KNOW ?

Systems design is the process of developing and designing systems that satisfy a business or organization's specific needs and requirements.

India's rural landscape is a treasure trove of creativity, craftsmanship and untapped potential. Recognizing this, the **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission** (DAY-NRLM) has launched a project, "Million Designers, Billion Dreams" to support rural artisans.

The design and innovation organization LEAP (The Lab for Economic Applications and Policy) leads the initiative in collaboration with DAY-NRLM, and Transform Rural India Foundation. It is funded by the Bill and Melinda Gates Foundation.

The mission aims to

- Identify one million rural designers and provide them with modern design techniques and tools.
- Provide financial support and systems design knowledge.
- Promote eco-friendly production methods.
- Help artisans connect with national and international buyers.

The training covers traditional crafts like weaving and pottery to digital design and fashion. By combining age-old craftsmanship with modern trends, this initiative helps artisans create products that appeal to today's markets.

This not only ensures fair compensation but also promotes the unique craftsmanship of rural India on a global platform.

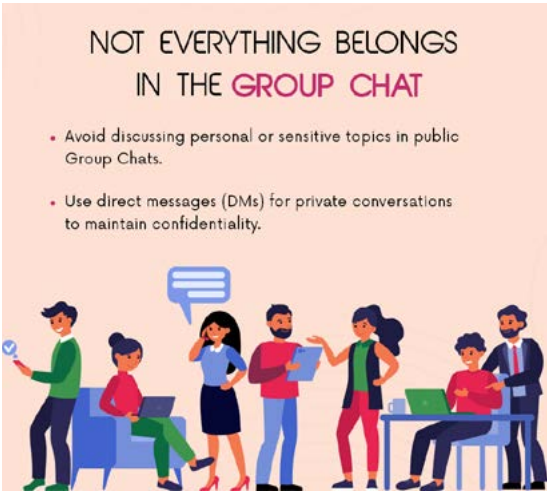
Join the movement

The success of the "Million Designers, Billion Dreams" initiative depends on the collective efforts of government agencies, private sector partners, NGOs and individuals like you. **Whether through purchasing handmade products, supporting artisan cooperatives or spreading the word about this initiative, everyone can play a role in empowering rural India.**

Smt Shyamala Viswanathan

DO YOU KNOW ?

- India's first Cyber Crime Police Station was started in the year 2001, in Bengaluru.
- Telangana is the top region by number of cyber-crimes in India.
- In August 2018, Pune witnessed a devastating cyber-attack on Cosmos Cooperative Bank.
- My-Doom is the most expensive computer virus in the world and in the history of cyber security, which has caused financial damage of about USD38 billion.
- Some malicious file extensions hide in the plain sight- you never would guess it's a malware!!



DIGITAL SHAKTI Centre

The National Commission for Women (NCW) has inaugurated the Digital Shakti Centre in New Delhi to address the rising cybercrimes against women. As a dedicated facility aimed at raising awareness about cyber-crimes, it will provide essential technical support for registering and addressing complaints. This aims to empower women with cyber safety knowledge, provide support for complaint registration and create a safe digital environment.

Cyber-crime

- It encompasses a wide range of criminal activities carried out using digital devices and/or networks - using technology to commit fraud, identity theft, data breaches, computer viruses, scams and other malicious acts.
- Cybercriminals exploit vulnerabilities in computer systems and networks to gain unauthorized access, steal sensitive information, disrupt services and cause financial or reputational harm to individuals, organizations, and governments.

NCW had launched the Digital Shakti campaign in 2018, reaching millions of women and equipping them with the knowledge and tools to safeguard their digital spaces. As part of the next step, the Digital Shakti Centre aims to address the concern of alarming rise of cyber-crime cases against women in the country.

The Centre is expected to

- Provide training on emerging technologies, cyber safety, data privacy, and digital rights.
- Foster a supportive community of women engaged in cyber security and technology.
- Serve as the hub for the Digital Shakti 5.0 campaign, aiming to empower more than 10 lakh women across India.
- Offer comprehensive cyber safety education, practical technology training and support for cybercrime victims.

Smt Anuradha V R

Rashtriya Vigyan Puraskar
A celebration of excellence

Rashtriya Vigyan Puraskar (RVP) is a prestigious national-level award in India, recognizing outstanding contributions in the field of science & technology. The President of India presents the award to the winners. This year, 33 scientists were honoured.

The inaugural Rashtriya Vigyan Puraskar ceremony was held at Gantantra Mandap, Rashtrapati Bhavan, with President Droupadi Murmu presenting the awards to 33 distinguished scientists across the four categories. The Minister of Science & Technology, Dr. Jitendra Singh was also present for the occasion.

Science and Technology are essential tools for development of the society. Scientists play a pivotal role and they are the backbones of the nation who contribute tirelessly to the society's development.

Eligibility

Scientists/ technologists / innovators working in government, private sector organizations or individuals working outside any organisation, who have made distinguished contributions in terms of path-breaking research or innovation or discovery in any fields of science, technology or technology- led innovation. People of Indian origin staying abroad with exceptional contributions benefiting the Indian communities or society are also eligible.

The Awards

- The awardees shall be presented a Sanad (certificate) and a medallion. A commemorative brochure, containing the citation and photograph of the awardees shall also be released on the day of the ceremony.
- RVP shall be given in the following 13 domains:

1. Physics
2. Chemistry
3. Biological Sciences
4. Mathematics & Computer Science
5. Earth Science
6. Medicine
7. Engineering Sciences
8. Agricultural Science
9. Environmental Science
10. Technology & innovation
11. Atomic Energy
12. Space Science and Technology
13. Others

Sl. No	Category	Criteria	Max No.of Awardees
1	Vigyan Ratna (VR)	Lifetime achievements and contributions	03
2	Vigyan Shri(VS)	Distinguished contributions	25
3	Vigyan Yuva- Shanti Swarup Bhatnagar (VY-SSB)	Exceptional young scientists	25
4	VigyanTeam (VT)	Team of three or more scientists/researchers/ innovators in collaboration	03

Sl. No.	Award	Name	Field / Domain
1	Vigyan Ratna	Prof. Govindarajan Padmanabhan	Biological Sciences
2	Vigyan Shri	Dr. Anandharamakrishnan C	Agricultural Science
3	Vigyan Shri	Dr. Avesh Kumar Tyagi	Atomic Energy
4	Vigyan Shri	Prof. Umesh Varshney	Biological Sciences
5	Vigyan Shri	Prof. Jayant Bhalchandra Udgaonkar	Biological Sciences
6	Vigyan Shri	Prof. Syed Wajih Ahmad Naqvi	Earth Science
7	Vigyan Shri	Prof. Bhim Singh	Engineering Sciences
8	Vigyan Shri	Prof. Adimurthi Adi	Mathematics and Computer Science
9	Vigyan Shri	Prof. Rahul Mukherjee	Mathematics and Computer Science
10	Vigyan Shri	Prof. Dr Sanjay Behari	Medicine
11	Vigyan Shri	Prof. Lakshmanan Muthusamy	Physics
12	Vigyan Shri	Prof. Naba Kumar Mondal	Physics
13	Vigyan Shri	Dr. Annapurni Subramaniam	Space Science and Technology
14	Vigyan Shri	Prof. Rohit Srivastava	Technology and Innovation
15	Vigyan Yuva	Dr. Krishna Murthy S L	Agricultural Science
16	Vigyan Yuva	Dr. Swarup Kumar Parida	Agricultural Science
17	Vigyan Yuva	Prof. Radhakrishnan Mahalakshmi	Biological Sciences
18	Vigyan Yuva	Prof. Aravind Penmatsa	Biological Sciences
19	Vigyan Yuva	Prof. Vivek Polshettiwar	Chemistry
20	Vigyan Yuva	Prof. Vishal Rai	Chemistry
21	Vigyan Yuva	Dr. Roxy Mathew Koll	Earth Science
22	Vigyan Yuva	Dr. Abhilash	Engineering Sciences
23	Vigyan Yuva	Dr. Radha Krishna Ganti	Engineering Sciences
24	Vigyan Yuva	Dr. Purabi Saikia	Environmental Science
25	Vigyan Yuva	Dr. Bappi Paul	Environmental Science
26	Vigyan Yuva	Prof. Mahesh Ramesh Kakde	Mathematics and Computer Science
27	Vigyan Yuva	Prof. Jitendra Kumar Sahu	Medicine
28	Vigyan Yuva	Dr. Pragya Dhruv Yadav	Medicine
29	Vigyan Yuva	Prof. Urbasi Sinha	Physics
30	Vigyan Yuva	Dr. Digendranath Swain	Space Science and Technology
31	Vigyan Yuva	Dr. Prashant Kumar	Space Science and Technology
32	Vigyan Yuva	Prof. Prabhu Rajagopal	Technology and Innovation
33	Vigyan Team	ISRO - Team Chandrayaan 3	Space Science and Technology

Shri Nagarajan R

E-Shoes for live location tracking

The Indian Institute of Technology (IIT) Indore has made significant strides in wearable technology by developing innovative shoes that generate electricity from walking and feature GPS for real-time location tracking. These advanced shoes, created with **Tribo-Electric Nanogenerator (TENG)** technology, have been specifically designed to enhance the safety and efficiency of armed forces personnel. However, their potential applications extend far beyond the military, offering benefits in sports, healthcare and various other fields.

Technology overview

At the heart of these shoes is TENG technology, which ingeniously converts kinetic energy from each step into electrical energy. This process is facilitated by advanced tribo-pairs, such as **Fluorinated Ethylene Propylene (FEP)** and Aluminium, which interact within the shoe's sole to generate power. The harvested energy is stored in a central device within the shoe, providing a reliable source of power for small electronic devices. Additionally, the shoes are equipped with sophisticated tracking technologies, including embedded **Radio Frequency Identification (RFID)** and a satellite-based Global Positioning System (GPS) module, enabling precise live location tracking.

Applications and benefits

The primary application of these shoes is within the military, where they aim to improve the safety, coordination and operational efficiency of soldiers. The real-time location data provided by the GPS and RFID technologies allow for better coordination during missions, while the electricity generated can power essential electronic devices carried by the personnel.

Beyond the military, these shoes have potential applications in various other fields. In sports, they could be used to analyse athletes' movements, leading to performance enhancements. The shoes also offer significant benefits in healthcare, particularly in monitoring the movements of patients with Alzheimer's and tracking the location of school children. Additionally, in industrial settings, these shoes could be invaluable for monitoring worker attendance and movement.

Development and delivery

Under the leadership of Professor Suhas Joshi and guided by Professor I.A. Palani, IIT Indore has successfully developed and delivered the first batch of 10 pairs of these cutting-edge shoes to the Defence Research and Development Organisation (DRDO).

This ground-breaking project not only showcases the innovative capabilities of IIT Indore but also sets the stage for future advancements in wearable technology.

One India One Ticket initiative

To provide seamless and hassle free travel, in a first of its kind the Indian Railways and National Capital Region Transport Corporation (NCRTC) have collaborated to promote the 'One India - One Ticket' scheme. This would enhance the travel experience for passengers on main line railway and Namo Bharat trains in NCR/Delhi region.

Highlights

- Earlier, Delhi Metro tickets can be booked only on the day of travel with same day validity. With the proposed scheme, DMRC-IRCTC QR based tickets is synchronized with Indian Railways **Advance Reservation Period (ARP)** allowing passengers to book even Metro tickets upto 120 days in advance.

- Users booking tickets, on IRCTC platform, can opt for booking **RRTS (Regional Rapid Transport System)** tickets. They can also book RRTS tickets later by visiting the Booking History. The RRTS ticket booking allows for eight travellers per booking as an add-on service.

- A unique QR code will be generated for each RRTS ticket and is valid for 4 days commencing from a day prior to RRTS journey date. The QR Code is shared via SMS & email to registered phone numbers/email ids.

- In case of cancellation of an RRTS ticket, the entire RRTS fee is refunded.

- Users can also book the Namo Bharat train tickets separately (for daily usage) on IRCTC platform.

- This scheme saves valuable time for the rail passengers by avoiding long queues in purchasing tickets.

- Delhi Metro is also planning to provide unlimited travel time passes with validity for 3 days to promote tourism.

Col Shashidhar M V (Retd)

25th anniversary of Kargil Vijay Diwas

Kargil Conflict – The Nation's pride

Kargil conflict was a significant milestone as its relevance goes beyond India's military and diplomatic victory. The conflict had many striking factors and groundswell of pride in that it showcased

- The gritty resolve and selfless devotion to duty of an average soldier.
- The acts of bravery and reality of war to the youth.
- Admiration for the men in uniform.
- Capturing the nation's imagination.
- The morale of the Armed Forces as this conflict had no previous parallel.
- A game changer in that stories of heroism were getting directly beamed to our drawing rooms in true reality highlighting the indomitable soldiers, their saga of courage and physical assaults to conquer and vanquish the adversaries entrenched on mountain peaks.

Significance

The significance emerges from number of factors when our adversary wanted to settle a long-standing dispute over Kashmir and to avenge many ignominious defeats since partition.

Analysed from the backdrop between two nuclear armed nations there was this ever - presenting opportunity of exploring the

potential of employing military force below the threshold of a full-scale conventional war.

Pakistan's intrusion in Kargil sector warranted a potential and robust Indian response. The Indian strategy emanated from three factors:

(i) Focus of attention was not fighting terrorism

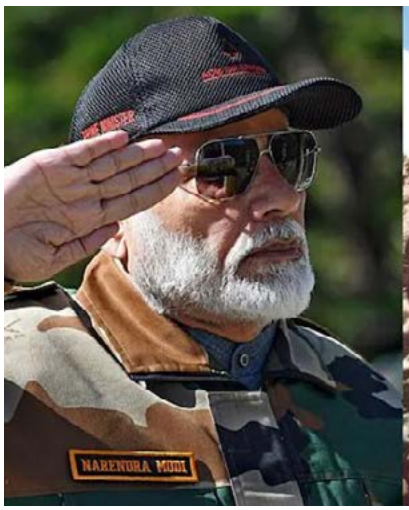
(ii) Need for counter-infiltration deployment

(iii) Physical occupation of heights had always favoured the first mover.

Pakistan's failure to force a strategic or even a limited territorial advantage at the end of the war has emerged as a very critical lesson. It was a thorough and extraordinary victory for India. India not only acted as a mature nuclear power but resolutely conducted operations on own side of LoC only and displayed exemplary restraint till the last intruder was evicted by not escalating operations in other theatres despite our adversary's adventurism and nuclear brinkmanship.

Celebrations

Kargil Vijay Diwas is commemorated every year on 26th July 1999 to honour the valiant soldiers who laid down their lives in operations to oust enemies from mountain peaks in Dras to Batalik sectors in Ladakh. The day marks India's victory, one of unmatched bravery and sacrifice by the Indian Armed Forces.



Pakistan initially denied its involvement, attributing the conflict to Kashmiri militants. However, evidence from casualties, testimonies of prisoners of war, and statements from Pakistani leaders, including Prime Minister Nawaz Sharif and Army Chief Pervez Musharraf confirmed the participation of Pakistani paramilitary forces and regulars.

Nationwide celebrations include a tribute by the Prime Minister at the Amar Jawan Jyoti at India Gate in New Delhi along with various functions across the country to recognize the contributions of the Indian Armed Forces.

Celebrations included wreath-laying ceremonies, cultural performances and speeches at the Kargil War memorial. A memorable day, one that inspires future generations with stories of bravery, saga of unmatched courage and highlights the importance of national security.

Kargil Vijay Diwas history

After the Indo-Pakistani War of 1971, direct military conflicts between India and Pakistan were relatively few, aside from skirmishes over the Siachen Glacier in the 1980s. However, the 1990s saw rising tensions due to separatist activities in Kashmir and nuclear tests by both countries in 1998.

In February 1999, India and Pakistan signed the Lahore Declaration, pledging a peaceful resolution to the Kashmir conflict. Despite this, during the winter of 1998-1999, Pakistani forces covertly infiltrated the Indian side of the Line of Control (LoC) under "Operation Badri." The aim was to sever the link between Kashmir and Ladakh and force India to negotiate over Kashmir.

Initially, Indian troops mistook the infiltrators for militants but soon realized the scale of the incursion led by Pakistan paramilitary forces and supported by regulars and covered an area of nearly 200 sq km. Two army divisions and 250 artillery guns with sorties of 1,200 fighters and 2,500 helicopters besides own para-military forces were employed in the conflict zone which resulted in the loss of our 527 soldiers.

25th Kargil Vijay Diwas

The silver jubilee of Kargil victory was celebrated with much pomp nationwide with various events organized by the government, armed forces and civilians.

HIGHLIGHTS

Kargil Bike Rally: The Indian Army hosted a bike rally on 2nd July 2024 from old memorial to Randhawa Top (Point 13620) in collaboration with SAEL and NGO Pawan Prithvi Paani.The route, characterized by its challenging serpentine curves, echoes the formidable courage our troops displayed in capturing this strategic peak from the enemy three times.

Randhawa Top, a peak of immense strategic importance, has been captured by the Indian Army twice from Pakistan and has witnessed all four Indo-Pak wars since 1947.

Air Force celebrations: The Indian Air Force honoured the heroes of Operation Safed Sagar (codename given by IAF for Kargil operations) at Air Force Station Sarsawa.

Kargil War Memorial Ceremony: The Defence Minister, Chief of Defence Staff, General Anil Chauhan, along with the Army, Navy and Air Force chiefs, led a ceremony at the Kargil War Memorial in Dras, laying wreaths and paying respects to their fallen comrades.

Nationwide celebrations: Schools, colleges and public institutions organized events, documentary screenings, exhibitions and cultural programmes to educate and inspire youth about the Kargil War. Military parades, cultural programmes and patriotic performances were also organized to celebrate the day.

Social media campaigns: Social media platforms were abuzz with tributes, stories of valour and messages of patriotism, spreading awareness about the significance of the day.

Conclusion

Kargil Vijay Diwas is a day of national pride and gratitude for every Indian. It serves as a poignant reminder of the sacrifices made by our indefatigable soldiers and reinforces our commitment to the nation's security and unity. A red-letter day in our nation's journey when its collective consciousness unites to remember and draw inspiration from the heroes who made the ultimate sacrifice, valour and dedication to duty.

Col Shashidhar M V (Retd)

Advanced Frigate INS Triput launched

The launch of INS Triput marks a significant step in India's naval expansion and self-reliance in defence technology.

Maritime deterrence

Defence of India's coastline (approx 7500 km), island territories and its **Exclusive Economic Zone (EEZ)** presents a daunting security challenge for our Navy. Swift reaction to hostile presence on the high seas/ littoral regions is met by our seaboard-based fleets. There is also a larger requirement to project maritime deterrence which is showcased by your demonstrated capability to strike adversary's maritime assets with minimal warning, by obscuring the visual/ electronic detection capability at his/her disposal.

The launch

On 23rd July 2024, in a significant milestone, Goa Shipyard Limited (GSL) in partnership with our Navy witnessed the launch of the first of two Advanced Frigates.

This frigate of the P1135.6 Class was constructed by GSL with Russian technology transfer. India had contracted four such frigates from Russia in October 2016 with two to be built in Russia and two at GSL.

The launch marks a significant step in India's naval expansion and self-reliance in defence technology

and our strategic partnership with Russia besides advancements in indigenous shipbuilding capabilities.

TRIPUT Class frigates

TRIPUT named after the mighty arrow symbolises the indomitable spirit of our Navy and its capability to strike far and deep.

Contract signed in January 2019 between the MoD and GSL.

Triput class frigates are follow-on ships of the Teg and Talwar classes acquired from Russia.

These are the first indigenously constructed frigates by an Indian shipyard at GSL

Technical specifications

Length: 124.8 m

Width: 15.2 m

Draught: 4.5 m

Displacement: ~3,600 tons

Speed: Max 28 knots

- Fitted with a potent combination of state-of-the-art weapons and sensors, an integrated platform and bridge management system, its air defence capability is designed to counter enemy aircraft and anti-ship cruise missiles.
- The hull of the vessel is made from indigenous steel, a specialized low-carbon micro-alloy grade steel.
- Equipped with indigenous power generation and distribution systems, an AC system, a steering system and stabilizers designed and developed by private industry.

Conclusion

It showcases our stealth ship technology and its lethality to strike upon an adversary's coastal or naval assets with a minimum window available to the adversary between detection and counter action. Both China and Pakistan possess stealth ships. It is essential that we also possess similar technology in our warships as an effective counter.

As an **'Aatmanirbhar Bharat'** initiative, these frigates incorporate a substantial percentage of indigenous equipment including weapons and sensors thus underscoring India's commitment to enhancing local defence production, fostering employment opportunities and capability enhancement.

Col Shashidhar M V (Retd)

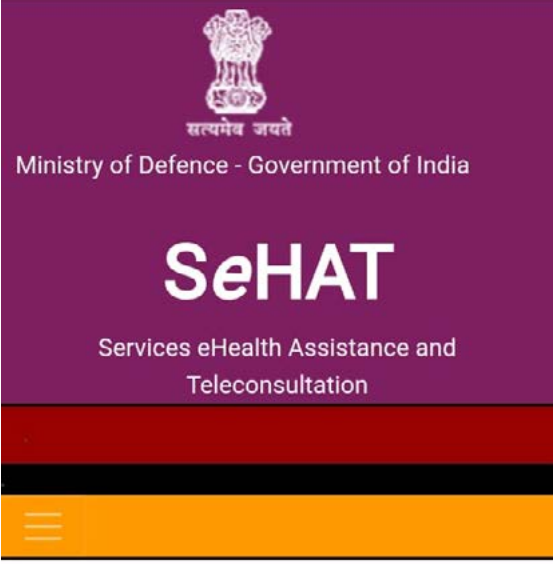
E-SeHAT
Teleconsultancy for Veterans

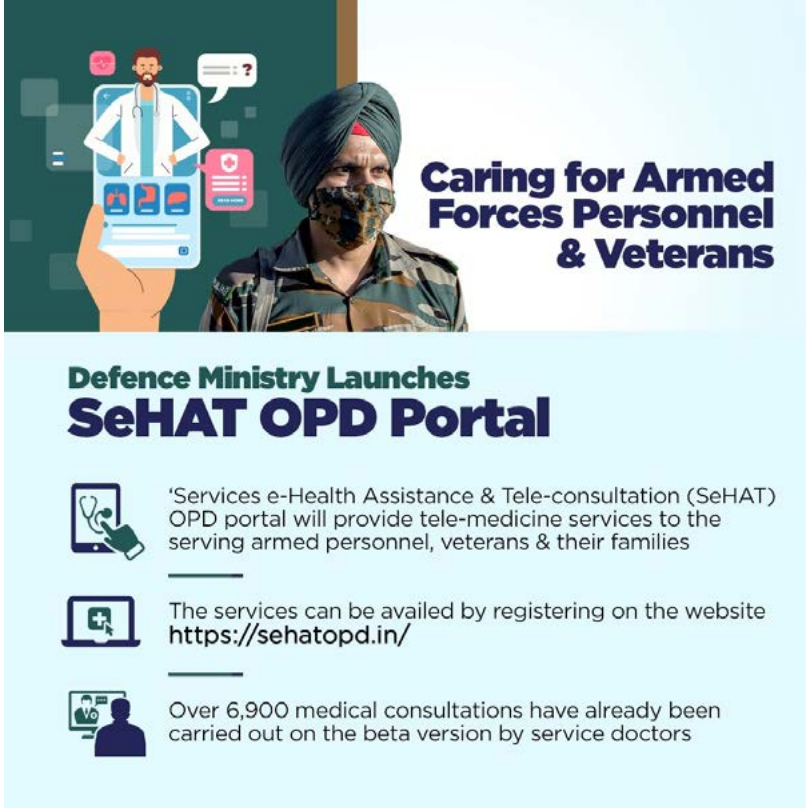
What is SeHAT Initiative?

- A tri-services teleconsultation service of the MoD designed for all entitled personnel and their families.
- The E-SeHAT module complies with telemedicine practice guidelines issued by the Ministry of Health and Family Welfare in consultation with NITI AAYOG.
- Aims to provide healthcare services to patients in their homes.

- SeHAT OPD is a patient to doctor system where the patient can consult a doctor remotely through the internet.

The E-SeHAT module or the **Electronic Services e-Health Assistance and Tele-consultation** mainly aims at supporting medical consultations through a remote means for all ECHS beneficiaries. This module will offer guided tele-pharmacy consultations based on videos so that the veterans do not have to travel to the ECHS polyclinics. The main purpose is to enhance the quality of health care through increasing the access and utilization by veterans especially those in the rural areas and efficiency through home delivery





of medicines, and referrals besides empowerment of veterans through self- governance of their health .

Launching of E- SeHAT module

On 30th July 2024, the **Department of Ex-Servicemen Welfare (DESW)** launched the pilot project of the Electronic Services e-Health Assistance and Tele-consultation (E-SeHAT) service at 12 ECHS polyclinics across the country, including seven in Delhi NCR and five in remote locations of Baramulla, Imphal, Churachandpur, Dimapur and Aizawl, before the pan India rollout in November 2024. This would facilitate consultation by ex-servicemen for medical treatment without visiting the polyclinics.

The SeHAT-OPD developed by C-DAC Mohali was implemented successfully in many locations. To facilitate seamless integration of veterans and their families' database, medical records, some additional features related to e-Prescription have been developed. During the next phase, pre-consultation check of vitals, home delivery of medicines and hospital referrals have been planned.

Conclusion

Its implementation is set to revolutionize the way healthcare is accessed and delivered to the veterans ensuring timely and quality medical care from the comfort of their homes. It aligns with the government's Digital India vision, promoting digital inclusivity and efficiency in accessing public services. Its further improvements in the future can be mapped and the system can therefore become a significant model for providing veterans efficient healthcare in the country.

Implementation of E-SeHAT is set to revolutionize the way healthcare is accessed and delivered to the veterans ensuring timely and quality medical care from the comfort of their homes.

ECHS - Ex-Servicemen Contributory Health Scheme is a health care scheme for ex-servicemen who receive pensions, including disability and family pensions, as well as their dependents. It is part of the Department of Ex-Servicemen Welfare in the Ministry of Defence.

Smt Gaayathiri G

Indian Army's first woman Director General of Medical Services

In a boost to women empowerment in the Armed Forces, Lieutenant General Sadhna Saxena Nair assumed the office of the Director General of Medical Services (Army) on 1st August 2024. She is the first woman to hold this prestigious post. Lt Gen Sadhna Saxena Nair is a third-generation member of a family which has served in the Indian Armed Forces in various capacities for the last seventy years.

Achievements

- She graduated from the Armed Forces Medical College, Pune and was commissioned into the Indian Army Medical Corps in December 1985.
- Before joining the post of DGMS (Army), she was the Director General of Hospital Services (Armed Forces). She also has the distinction of being the first woman to be appointed as the Director General of Hospital Services (Armed Forces).
- She was the first woman to be appointed as the Principal Medical Officer of the Western Air Command and Training Command of the Indian Air Force.
- She has undergone training in Biological, Chemical, Radiological and Nuclear Warfare with the Israeli Defence Force.
- She undertook training in Military Medical Ethics with the Swiss Armed Forces in Spiez, Switzerland.
- The President of India has honoured her with the Air Officer Commanding-in-Chief, Western Air Command, and Chief of the Air Staff Commendations, as well as the Vishisht Seva Medal.

Director General Armed Forces Medical Services

- **The Army, Navy and Air Force have a medical wing each that caters to the needs of the personnel respectively.**
- **All three Medical services were integrated, and the government of India set up an Armed Forces Medical Service in 1948 under the Ministry of Defence on the recommendation of the Dr B C Roy Committee on Armed Forces Medical Services and Research Integration.**
- **The head of the Armed Forces Medical Services is called the Director-General. It can be an officer of the Indian Army (rank of Lt General), Indian Navy (rank of Vice Admiral) or Indian Air Force (rank of Air Marshal).**

You might have come across the news of the Supreme Court taking '*suo motu*' cognizance of the shocking RG Kar Medical College and Hospital case at Kolkata. In light of this, let us analyse what '*suo motu*' cognisance is and how it works.

Background and meaning

Courts in India follow adversarial litigation, wherein one party initiates a case against another, and the court hears and decides on the case. However, over the past few decades, the Supreme Court has, on its own, taken up several issues which pose a larger issue or a potential threat to public safety.

Thus evolved the concept of '*suo motu*' exercise of jurisdiction, which is also considered to be a limb of public interest litigation. '*Suo motu*' is a Latin term which translates to 'on its own motion.' This power stems from the Constitution and has developed through judicial precedents.

DO YOU KNOW?

During the COVID-19 pandemic, the Supreme Court had, *suo motu*, taken up the issue of distribution of essential supplies and services.

Emergence and grounds for *suo motu* cases

Though *suo motu* jurisdiction has been known to have been exercised since as early as 1979, in the Sunil Batra case (referenced earlier in Prajya), in the aftermath of the Emergency and in the wake of evolving flexibility offered by public interest litigation (discussed earlier), such cases have gained traction over the past two decades. Cases initiated through suo motu cognizance are now often labelled *Suo motu* writ petitions (Civil) or *Suo motu* writ petitions (Criminal).

Generally, the Supreme Court exercises *Suo motu* jurisdiction in cases of humanitarian issues, matters of public interest, environmental concerns or other incidents warranting swift action. For instance, in 2019, the Supreme Court took *suo motu* cognizance pertaining to cutting of trees in the Aarey forest [(2019) 9 SCC 363], asking the Maharashtra government to stop cutting trees in the forest area.

Adverse opinions on *suo motu* jurisdiction

In light of the increasing number of cases being taken up by constitutional courts in exercise of their *suo motu* jurisdiction, the same has also faced scrutiny and criticism. The prime arguments are that

(a) the courts are crossing the line of judicial action to judicial over-reach and

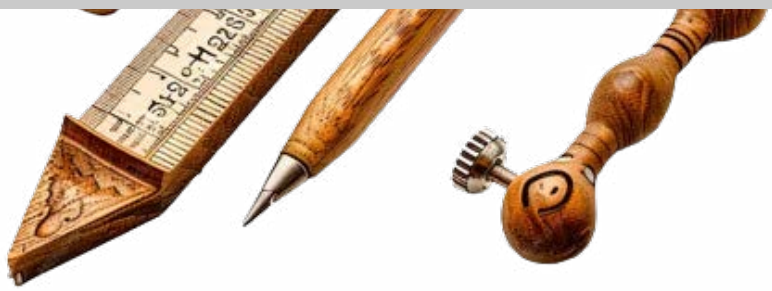
(b) potentially intruding into administrative and executive actions.

Another concern which has been expressed is that *suo motu* jurisdiction is based on the discretion of the court as opposed to a uniform list of matters/concerns or rigid principles, which may raise concerns of selective cognizance. Despite such concerns, *suo motu* jurisdiction and jurisprudence continue, serving as an expression of the court's conscience and power to protect constitutional principles and rights, and to bring certain critical issues to light swifter than otherwise.

Prof. Rajinder Jeet Hans-Gill

(Born 29.08.1943)

A mathematician driven by passion



Life of Professor Rajinder Jeet Hans-Gill, an eminent mathematician who had to dress up as a boy to attend school is one of the most inspiring stories of women in STEM one can come across. Her doctor father Gursher Singh Hans was transferred to different rural areas of Punjab. So she had to spend her childhood in small villages of Ludhiana district. Her mother Gurdeep Kaur continued learning privately after marriage and believed in women's education.

When Rajinder saw her elder brothers going to school, she curiously began reading their second standard Urdu books, writing Urdu script and was also learning addition and multiplication tables. There was only a boys' school up to Class 4 situated about a mile away. As girls were not permitted, the first few years of her life were spent studying at home, longing to go to school. Seeing her keen interest, her father requested the headmaster for admission. Though he refused to formally enrol her, he allowed little Rajinder to come and sit in the class with her brothers. "I had the blessings of my grandfather who had called me Vidya noticing my inclination towards learning at an early age. I would daydream that I would do something great when the right opportunity arose. It bothered me that I was a girl and I made up for this by speaking like a boy and dressing up like my brothers", she quips.

When transferred to Isru, the family found a primary school for girls housed in a *dharamshala* (like a community-centre) that had only one room in which all the five primary classes were held. As she was already proficient in arithmetic and Punjabi, her father convinced the headmistress to admit the six-year-old girl in Class 5. She "didn't enjoy this school at all. The atmosphere wasn't stimulating. There were no books to read." In the final examination they were supposed to do some cooking and washing. Her grown up classmates had no problem with these. The teacher was kind enough to just pass her in these subjects. Despite these challenges and the absence of a middle school for girls, she continued learning at school and from her brothers at home. Her father taught her English and geometry.

Her brother Bhupinder passed Class 4 exam and won a scholarship. He was sent to their uncle's house at Garhshankar, while their uncle's son was staying with her family

in Isru. There was a teacher from Isru teaching at Garhshankar, with whom her brother would come home or cousin would go to visit his parents.

Rajinder's uncle refused to host her, as he believed that girls need not be educated. But time changes people! A few months later, the school teacher was going back to Garshankar from Isru and the uncle had asked his son to come back with the teacher. Knowing her uncle's good heart, Rajinder's father hit upon an idea and told her, "Well, if you go there, I think he will not send you back home. If you want, you can go with the teacher and your cousin." This chirpy girl jumped at the opportunity, packed her bag and reached Garshankar with her cousin. Uncle and aunt were shocked to see her initially. But after a couple of days, seeing her enthusiasm to learn, her uncle agreed, "Okay, I'll find out if you can be admitted to the Arya School for boys. If you get dressed like a boy, you could go. He gave strict instructions that I should henceforth be addressed and dressed as a boy." Rajinder was trained for tying a turban and went to boys' school with her brothers. She was provisionally admitted to Class 7 and was addressed as Rajinder Jeet instead of Rajinder Jeet Kaur. Every day, she attended school as a boy for the next six months, till fate made her change school soon.

When she found maths and history tough, her brothers helped her. Later, in her undergraduation too, her brothers helped her cope with new subjects, as she was mostly self-taught and took the unconventional path of learning! "Just going to school was very satisfying for me, even though I had missed many normal activities of that age. It was fun at home since I got some privileges sporting as a boy, which my uncle's two daughters did not have."

The best part is even at that age, she took life as it came with the attitude of a *jnani!* Her uncle got transferred to Hoshiarpur, where he got her admission to class 8 at a Khalsa school for girls. With her passion for learning and hardwork, she became a teachers' pet. She spent only a few months and had to soon move out, as the scene at home changed once again!

Rajinder's father got transferred to Gujjarwal where there was a girls' school. But this new school had no teaching in Class 8. There were no desks and one had to sit on the floor. In Class 9 and Class 10 they did not teach mathematics; only arithmetic as one subject and household as another. There was no science teaching either.

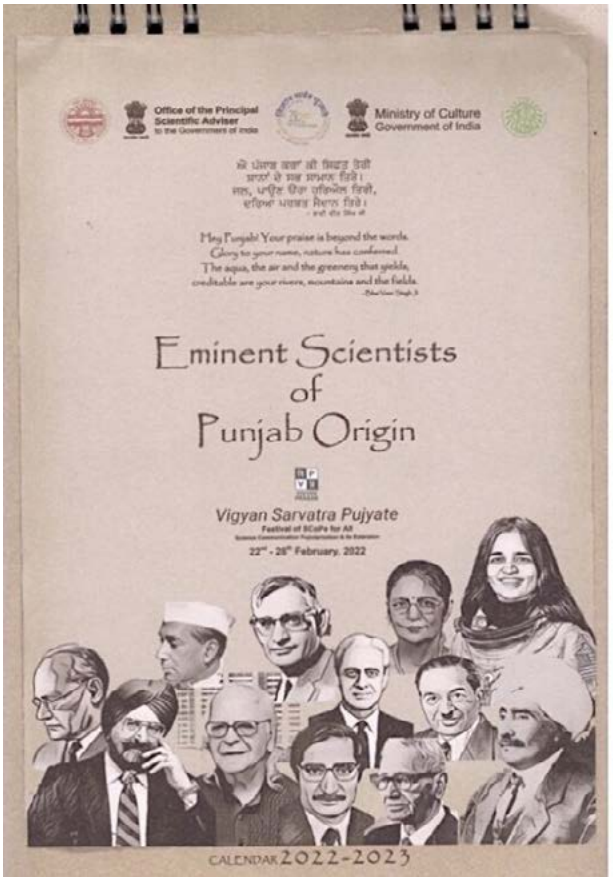
Knowing the intelligence of his daughter, her father asked the headmistress if she could introduce the mathematics paper. But she was not in favour of it, as she felt that maths was a difficult subject for girls! In the final exam of Class 9, Rajinder, got full marks in arithmetic while in household it was the opposite. "Don't worry! You will not do household!" said the encouraging father and advised her to learn algebra and geometry during the summer vacation and he tutored her. Rajinder wanted to do something really practical which is useful to humanity, becoming a doctor like her father. Well, life has its own plans!!.

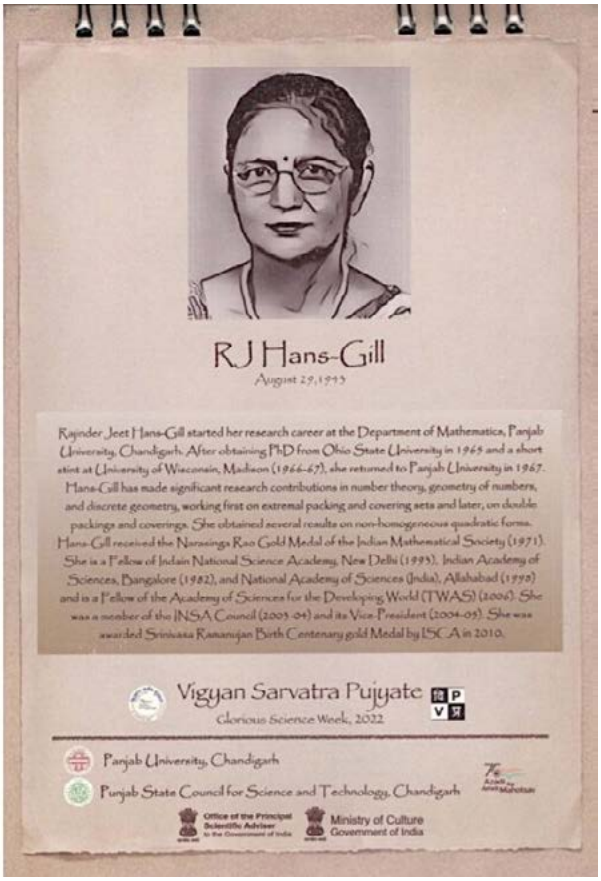
After the vacation, Rajinder's father contacted the headmaster in the boys school to allow her to write Maths and Science exams, so her dream to become a doctor would come true. "Well if you need a certificate for maths, we'll give it. But for science, there are practicals. You will have to send her for practicals," was the reply they got.

"My father was sort of doubtful. He didn't want me to do medicine because he thought it's a very hard life for a doctor. Also I was rather young at that time. One had to be above 18 to be admitted to a medical college after the intermediate. He was of the opinion that I would have completed my MA by that time and be teaching already. It seemed logical, and we decided that I will take up maths in Class 10. So for one year I studied maths at home. I liked maths. I liked science too but I really didn't get the opportunity to study it. I wanted to do something really practical which is useful to humanity. That is how I came to maths, and it worked out alright," says Rajinder on her entry into the field of mathematics.

Rajinder later got admission in the Government College for Women at Ludhiana, topped in the university with three medals, standing first in Panjab University in B.A.

"I don't quite remember the textbooks. I was much interested





in calculus, algebra and geometry. I remember solving questions and discussing with my classmates in most free periods sitting on the floor in the corridors.

I liked my maths teacher Ms.Manchanda very much because she was an enthusiastic teacher. She contributed a lot towards my developing interest in mathematics," she says. For MA, she joined the Government College Ludhiana, which also had co-education.

Her teachers were very encouraging, particularly Professor K.R. Chaudhary. When she stood first in Punjab University in the first year of M.A., getting 98% marks Prof.Chaudhary strongly advised her to go in for the civil services.

She had the fortune to meet Prof. Ram Prakash Bambah on some questions in abstract algebra which she could not solve. He could assess her mathematical ability and advised her to pursue research. Soon Rajinder decided that the pursuit of further studies in Mathematics was her calling!

Rajinder had secured a junior research assistantship with a teaching component and soon joined as a research scholar in the Department of Mathematics at Chandigarh under the guidance of Prof. Bambah. Initially the vastness of mathematical literature, unsolved problems, adjusting to the hostel environment, meeting the expectations of the faculty, participating in seminars and interacting with other research students were overwhelming.

With her unwavering spirit and focus, she had obtained results considered enough for a thesis by the end of 1963. She was awarded Narasinga Rao gold medal for publishing two papers from her thesis in the Journal of Indian Mathematical Society.

In 1964, when Prof. Bambah decided to proceed to the USA, he chose a few of his research students Vishwa Chander Dumir, Satish Kumar Aggarwal, Gurnam Kaur and Rajinder Jeet Hans with him, each of whom contributed to the field of Mathematics immensely. As Gurnam Kaur had got married, she could not accompany them due to her family restrictions. But she continued her research here to become the first woman to receive a PhD in mathematics from Panjab University.

On the other hand, Rajinder's family was very supportive of her going abroad to do research, instead of getting married. Under the mentorship of Prof. Bambah, she went on to obtain Ph.D. in 1965,

as the youngest scholar of the Ohio State University. At OSU, great minds like Prof.Hans Zassenhaus and Prof.A.C. Woods made a remarkable impact in her journey. She was appointed at University of Wisconsin, Madison for three years with the possibility of extension. After working there for a year, she came back to India on one year leave with the thought of going back.

Life again took a different turn and she stayed back! She had an offer from the Tata Institute of Fundamental Research (TIFR). But then as she had been away from home for almost three years and as she wanted to be near her family, she joined Panjab University. In 1968, her parents arranged her marriage with Prof. Jagjit Singh Gill, who was then working at the Indian Agricultural Research Institute in Delhi. She had to face what is famously known as two body problem, meaning husband and wife both working and living in different cities. When their children were small, Rajinder sought support from her parents and in-laws. "I was very conscious of the fact that one should not let domestic issues affect the department work. If a woman is lax about her job, it is noticed more. It seemed to me that it is the reputation of women that is at stake, so I tried to take up these responsibilities very seriously. My husband was very supportive and always encouraged me to attend to my official duties on priority."

At University, she was also involved in the **College Science Improvement Programme (COSIP),** authoring textbooks, training teachers and guiding students. She also served as the Dean and University instructor at Panjab University, Chandigarh during 2002-04. Owing to her brilliant research work, she was made Professor Emeritus in 2007 and senior scientist at Indian National Science Academy in 2009. She was a visiting professor at OSU during 1986-88.

Dr.Rajinder Jeet Hans has made valuable research contributions in the field of geometry of numbers, discrete geometry, Diophantine approximations, view obstruction problems and billiard ball motion problems. Her innovative idea of proving Watson's conjecture on the non-homogeneous minima of quadratic forms is world renowned. There exists a conjecture bearing her name as Bambah, Dumir and Hans-Gill conjecture.

Highlights

- Srinivasa Ramanujan Birth Centenary Gold Medal, ISCA, 2010.
- Co-authored Lectures on Geometry of Numbers with her young colleagues Madhu Raka and Ranjeet Sehmi.
- Fellow of Indian Academy of Sciences and National Academy of Sciences.
- Council Member and Vice President of Indian National Science Academy.
- Fellow of the Third World Academy of Sciences, Italy.
- Member of National Board for Higher Mathematics (2003-06) and 'WiS' (Women in Science) project of the Indian Academy of Sciences.

"What I feel is that generally one has to make a decision at some stage about what one wants to do. There are so many directions these days, you may become an engineer, computer engineer, artificial intelligence expert or a doctor. There are so many attractions and the parents may also be putting some pressure. There are more opportunities now than before; ….Maybe there is more competition also but the joy of research, you know, and solving a problem is unmatchable," she avers.

Home remedies for allergies and itching

Allergies and itching are common ailments that affect millions of people globally and India is no exception. With the increasing prevalence of synthetic drugs and their side effects, there is a growing interest in natural and holistic approaches to health. Ayurveda, an ancient Indian system of medicine, offers a treasure trove of remedies for various conditions, including allergies and itching. Rooted in the principles of balance and harmony, Ayurveda provides a comprehensive approach to managing these issues through diet, lifestyle changes and natural remedies.

Understanding allergies and itching in Ayurveda

In Ayurveda, allergies are often linked to an imbalance in the body's *doshas—vata, pitta* and *kapha*. Each person has a unique constitution, and imbalances in these *doshas* can lead to various health issues, including allergies and itching. For example, an excess of *kapha* can lead to respiratory allergies, while an imbalance in *pitta* can cause skin-related allergies and itching. The Ayurvedic approach to treating allergies involves restoring balance to the *doshas* through diet, lifestyle and herbal remedies.

Common causes

1. Dietary factors: Consumption of incompatible foods (*viruddha ahara*) or heavy, oily and spicy foods can aggravate the *doshas*, leading to allergic reactions.

2. Environmental factors: Pollutants, dust, pollen and certain chemicals can trigger allergic reactions, particularly in those with a sensitive constitution.

3. Seasonal changes: In Ayurveda, each season is associated with a particular *dosha*. For example, spring is linked to *kapha*, which can increase the likelihood of respiratory allergies.

4. Stress and emotional factors: Stress and negative emotions can disturb the balance of the *doshas*, weakening the immune system and making the body more susceptible to allergies.

Ayurvedic home remedies

1. Turmeric (*Haldi*)

Turmeric is a well-known anti-inflammatory and antioxidant spice used in Ayurveda for centuries, particularly effective in treating respiratory allergies and skin conditions.

How to use: Mix a teaspoon of turmeric powder in a glass of warm milk and drink it daily. This helps in reducing inflammation and boosting immunity. For skin allergies, turmeric can be applied topically by mixing it with honey or coconut oil to soothe itching and irritation.

2. *Tulsi* (Holy Basil)

Tulsi is revered in Ayurveda for its ability to strengthen the immune system and combat respiratory ailments. It has anti-allergic and anti-inflammatory properties, making it ideal for treating allergies.

How to use: Boil a few *tulsi* leaves in water and drink the decoction daily. You can also inhale steam from *tulsi*-infused water to relieve nasal congestion caused by allergies.

3. Neem

Neem is another powerful Ayurvedic herb known for its purifying properties, particularly effective against skin allergies and infections due to its antibacterial and antifungal properties.

How to use: Make a paste of neem leaves and apply it to the affected area to alleviate itching. Alternatively, neem oil can be mixed with a carrier oil like coconut oil and applied to the skin.

4. *Amla*

Amla is rich in Vitamin C and has potent antioxidant properties, which help in boosting immunity and fighting off allergic reactions.

How to use: Consume *amla* juice or raw *amla* daily to strengthen your immune system and reduce the frequency of allergic reactions. *Amla* powder can also be mixed with honey for added benefits.

5. Ginger (*Adrak*)

Ginger is a common household spice with powerful anti-inflammatory and antihistamine properties. It is particularly beneficial for respiratory allergies and can also soothe itching.

How to use: Prepare a ginger tea by boiling fresh ginger slices in water. Drink this tea daily to alleviate symptoms of allergies. For skin itching, ginger juice can be applied directly to the affected area.

Ayurvedic remedies for itching

1. Sandalwood (*Chandan*)

Sandalwood is renowned in Ayurveda for its cooling and soothing properties. It is particularly effective in relieving itching and inflammation caused by skin allergies.

How to use: Prepare a paste of sandalwood powder with rose water and apply it to the affected area. This not only relieves itching but also leaves the skin feeling cool and refreshed.

2. Coconut oil

Coconut oil is a natural moisturizer with anti-inflammatory properties that help in soothing dry, itchy skin.

How to use: Apply pure coconut oil to the affected area several times a day. It provides instant relief from itching and prevents the skin from drying out.

3. *Aloe Vera*

Aloe vera is another excellent remedy for itching, especially for conditions like eczema and psoriasis. It has cooling, moisturizing and anti-inflammatory properties.

How to use: Extract fresh *aloe vera* gel from the plant and apply it to the itchy areas. Leave it

on for 20-30 minutes before rinsing off with lukewarm water.

4. Camphor (*Kapur*)

Camphor is commonly used in Ayurveda for its cooling and anti-itching properties. It is particularly effective for relieving itching caused by insect bites and rashes.

How to use: Dissolve a small amount of camphor in coconut oil and apply it to the affected area. This provides quick relief from itching and irritation.

5. Baking soda

Though not traditionally Ayurvedic, baking soda is widely used in Indian households for its ability to relieve itching and skin irritation.

How to use: Make a paste of baking soda with water and apply it to the affected area. Leave it on for 15-20 minutes before rinsing off with cool water.

Dietary and lifestyle recommendations

Ayurveda emphasizes the importance of diet and lifestyle in managing allergies and itching. Here are some key recommendations:

1. Balanced diet

Consume a diet that balances your *doshas*. For example, if you are prone to *pitta*-related allergies (like skin rashes and itching), avoid spicy, oily and sour foods. Instead, opt for cooling and soothing foods like cucumbers, melons and coconut water.

2. Stay hydrated

Adequate hydration is essential for flushing out toxins from the body. Drink plenty of water, herbal teas and natural fruit juices to keep your body hydrated.

3. Yoga and *pranayama*

Regular practice of yoga and *pranayama* (breathing exercises) can help in balancing the *doshas* and improving immunity. Specific asanas like *Sarvangasana* (Shoulder stand) and *pranayama* techniques like *anulom vilom* (alternate nostril breathing) are particularly beneficial.

4. Avoid known allergens

Identify and avoid foods or environmental factors that trigger

your allergies. Keeping your surroundings clean and free from dust and mould is also essential.

5. Stress management

Since stress can aggravate allergies, incorporating stress management techniques like meditation, yoga and mindfulness into your daily routine is crucial.

Ayurveda offers a holistic approach to managing allergies by addressing the root cause of the imbalance in the body. By embracing these Ayurvedic home remedies, along with a balanced diet and lifestyle, one can effectively manage and even prevent allergies.

In the Indian context, where Ayurveda is deeply rooted in tradition and culture, these natural remedies provide a sustainable and side-effect-free alternative to modern medications. By living naturally and in harmony with the principles of Ayurveda, we can achieve not only relief from allergies and itching but also overall well-being and health.

Smt Ramamani N

CQMH Abdul Hamid

The **Company Quarter Master Havildar (CQMH)** was born on 1st July 1933 in Dhamupur village in Ghazipur, Uttar Pradesh, to Mohammad Usman and Sakina Begum. Due to financial hardships, he pursued education only till Class 8 and then joined his father's tailoring shop. However, in 1953, he joined the Indian Army and underwent training at the Grenadiers Regimental Center in Nasirabad before being posted to 4 GRENADIERS in 1955.

4 GRENADIERS battalion showed exceptional courage in a difficult war, even without its regular commanders. CQMH Abdul Hamid of 4 GRENADIERS was awarded the Param Vir Chakra for going beyond the call of duty. Abdul Hamid served in a rifle company before being reassigned to the Recoil-Less Platoon (RCL). During his service, he was stationed in various locations including Agra, Amritsar, Jammu and Kashmir, Delhi, **North-East Frontier Agency** (NEFA) and Ramgarh.

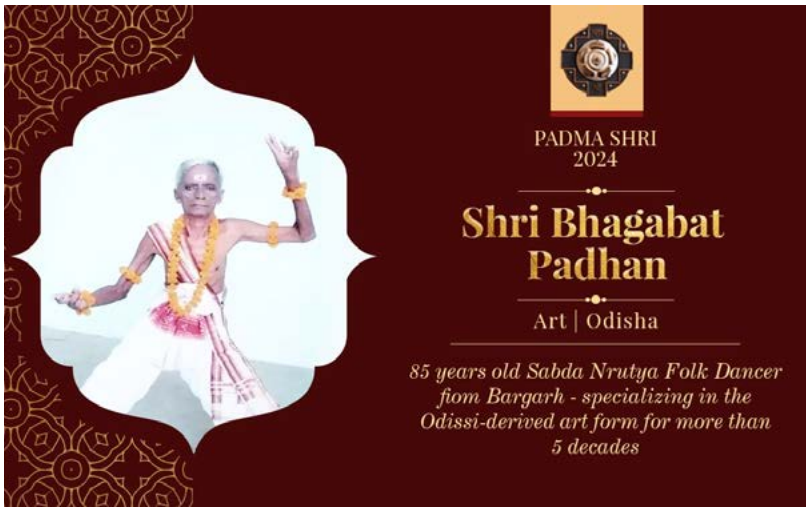
Pakistan has been trying to take control of the region of J&K since 1947, which has led to ongoing tension between India and Pakistan. As a result, India has had to take defensive actions to protect itself. The attempts by Pakistan have been met by the Indian Armed Forces with commendable bravery and resilience, always showing great restraint to avoid escalation of conflict. When India was still recovering from the damages of the 1962 Sino-India war, Pakistan regarded it as an opportunity to acquire J&K, assuming India was weak in defence preparation. The 1965 war began on 24th April when the Pakistan Army attacked Indian territory in the Rann of Kutch and penetrated six to eight miles inside. This act violated the Indo-Pak Border Agreement of 1960 and international law. The Pakistani forces subsequently intruded into Kashmir with the launch of Operation Gibraltar. The war was fought in various sectors, with CQMH Abdul Hamid fighting in the Khem Karan Sector of Punjab.

On the morning of 10th September 1965, Pakistani forces launched a fierce attack near the village of Chima on the Bhikhiwind road in the Khem Karan Sector. Using a regiment of Patton tanks and heavy artillery shelling, the enemy quickly advanced to the forward position by 9:00 am.

In the face of this dire situation, CQMH Abdul Hamid, in command

of a recoilless gun detachment, demonstrated remarkable courage. There was heavy enemy shelling and tank fire, he manoeuvred his gun-mounted jeep to a flanking position and destroyed the leading enemy tank while evading intense enemy fire directed at his jeep. Despite sustaining fatal injuries, Havildar Abdul Hamid continued to fire at another enemy tank until the very end.

Inspired by his bravery, his comrades engaged in a courageous resistance, successfully repelling the enemy's massive tank onslaught. His unwavering bravery and disregard for his safety in the face of persistent enemy fire exemplify the highest traditions of the Indian Army. In recognition of his exceptional bravery and conspicuous courage, CQMH Abdul Hamid was posthumously awarded the Param Vir Chakra.



Bhagabat Padhan

Bhagabat Padhan is the Guru of *'Sabda Nrutya',* which is one of the oldest dance forms based on mythology from Odisha.

Padhan was born on 24th June 1938. His journey began as a government teacher, but his unwavering passion for the arts led him to a significant career shift. He made the bold decision of leaving his teaching job and fully immersing himself in the world of art by joining the illustrious cultural institution **Brajeswari Nrutya Kala Sansad.** This institution, a government-registered entity of Lokakala Grama in Bargarh district, Odisha, became the nurturing ground for his artistic pursuits. With dedication and commitment, Padhan rose to become a revered guru and a mentor to over 600 artists, earning the esteemed title of "BHAGA MASTRE" in the region. His unwavering dedication to the *sabda nrutya* dance form has garnered him widespread acclaim, earning numerous awards, including prestigious silver and gold medals bestowed upon him by both government and private institutions.

Guru Bhagabat Padhan's institution attracted many educationists, artists, Odishi dancers, scholars and researchers who were eager to learn about the unique dance form. Visitors from various countries like Italy, Germany, Japan, Sri Lanka, Thailand, America etc also praised the institution. This dance form has gained recognition both within and outside Odisha.

DO YOU KNOW ?

- The *Sabda nrutya* dance form is considered the dance of Mahadev.
- It has vigorous movements and demands physical agility and strength. It also has intricate facial expressions. Sometimes, due to the strong and exhausting movements, the dancer might enter into a trance by the end of the performance.

Smt Vaishnavi V

CURIOSITY CORNER

Vishakapatnam

I Quick Five on Vishakapatnam!

1. State, the city is located in - _____
2. Coast, it lies on - _____
3. Water body, the city borders -_____
4. Rivers that flows through it- _____
5. Mountain range near Visakhapatnam - _____

II Crossword

Across

5. _____Utsav is celebrated every year reflecting the vibrancy and spirit of the region. (7)

6. Oldest and the first shipyard of India constructed in 1941. (9)

8. 100 year old tomb with an amalgamation of Mughal, European and Rajasthan Architecture. (7)

10. The Colonial British built this settlement away from the port which housed their residence and the University. (7)

11. Ancient port city in Europe, Visakhapatnam had trade relations with. (4)

Down

1. An Indian navy submarine base in this city. (10)

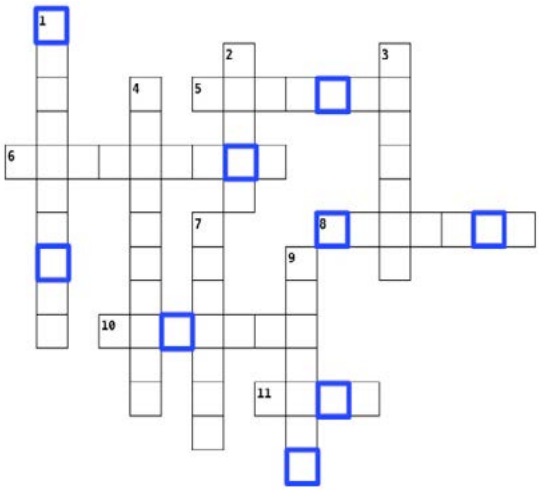
2. British called Vishakapatnam as _____ (5)

3. Naval Command headquartered in this city. (7)

4. Primary railway zone headquartered in Visakhapatnam. (5,5)

7. Vishakapatnam is known as the city of '_____'. (7)

9. It is the only natural _____ on the eastern coast of India. (7)



III Facts Fantastic!

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

1. These two museums are unique in Asia situated on the Ramakrishna beach. The first type can be seen in the USA, the UK and Russia. The second one is where an actual naval aircraft has been converted into a museum.

2. During the World War II, the Japanese planes bombed the harbour causing damage. One of their bombs went astray and did not explode which was later defused. Now it rests in the Visakha Museum. Do you know where it landed?

3. One of India's presidents served as the Vice Chancellor of Andhra University at Waltair.

4. It is the oldest municipality after Surat in India. A bustling port once upon a time and a host to the Dutch East Indies Company and became a sleepy hamlet after the port was shifted to Vishakapatnam.

5. A huge rocky head land 174 meters high and 358 meters above sea level jutting out into the sea resembling the shape of a sea animal and thus the name. The powerful light house set here directs ships 65 km away.

IV

What am I?

Unscramble the highlighted boxes in the crossword to find me.

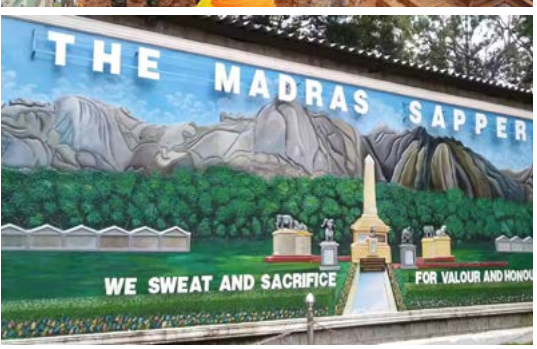
Hint: A type of hand-painted cotton textile produced in Andhra Pradesh which uses only natural dyes and involves twenty-three steps to complete the work.

Answers on page 66

Major Sita Ashok Shelke

A beacon of heroism in Wayanad

In the landslide-ravaged village of Chooralmala in Wayanad, Kerala, a 190-foot Bailey bridge now stands as a testament to resilience, constructed by the Indian Army's Madras Engineering Group (MEG) in just 31 hours. Leading this remarkable effort was Major Sita Ashok Shelke, a determined officer from Gadilgaon village, Ahmed Nagar, Maharashtra.



Major Shelke, who joined the Indian Army in 2012 after training at the Chennai Officers Training Academy (OTA), **is the only woman officer in the 70-member team of the 'Madras Sappers.'**

This elite unit, with a history dating back over two centuries, specializes in building bridges, clearing paths and conducting rescue operations during natural disasters. The team has been instrumental in various crises, including the 2018 Kerala floods.

Despite facing heavy rainfall, treacherous terrain and limited space, Major Shelke and her team overcame these significant challenges to connect the landslide-hit villages of Chooralmala and Mundakkai.

The bridge, constructed using 19 steel panels supported by a single pier, was completed with materials transported from Bengaluru in 20 trucks, arriving on the same day as the landslide. The bridge, capable of carrying 24 tonnes, became a critical route for ongoing rescue operations, allowing heavy machinery like excavators and ambulances to reach the affected areas.

Major Shelke worked relentlessly, often foregoing sleep and regular meals, to ensure the bridge's timely completion.

She has been a constant presence in the disaster-hit areas, addressing every exigency with unwavering dedication. Her leadership not only facilitated the swift construction of the bridge but also inspired her team to push through extreme conditions.

The Madras Sappers, with their distinctive Shakos (military cap) and engineering expertise, are known for their contributions in both wartime and peacetime operations.

The successful completion of the Bailey bridge in Wayanad is a testament to their legacy and Major Shelke's exceptional leadership. Her actions during the crisis exemplify true heroism, demonstrating the indomitable spirit of the Indian Army and the incredible impact of her leadership.

Bakshi Jagabandhu

Bakshi Jagabandhu was the commander of the forces of the King of Khurda. Born into a warrior family, Jagabandhu held the hereditary title of "*Bakshi*," which signified his role as the military commander under the king of a princely state in Odisha. The traditional warrior class of Odisha was called as *paikas*. He was one of the earliest freedom fighters of India.

The Britishers brought all cess-free farmlands of paika under taxation. Taxes were imposed on salt, fisheries and internal trade. The tax settlement for farming land was not stable and grew every year despite drought and floods. The company put taxes on pilgrims who visit the Jagannath temple at Puri and forest produce collected by tribals.

In March 1817, the Paika Rebellion began as a mass uprising against British authorities, with Bakshi Jagabandhu emerging as the leader. The rebellion quickly spread across Odisha as the *paikas*, supported by zamindars (landowners) and other regional leaders, attacked British officials, set fire to police stations and disrupted colonial governance. The attack on the British government was severely destructive and it wiped out their rule from coastal Odisha for a year. Thousands of *paika* soldiers were killed in this rebellion when the East India Company lost an equal number of men, including some top commanders.

However, Britishers utilized their superior military strength and strategic reinforcements to suppress the rebellion.

Jagabandhu continued to resist through guerrilla warfare in the dense forests but ultimately surrendered in 1825. He was imprisoned and lived in captivity until his death in 1829.

This rebellion has been recognized as a significant precursor to India's struggle for independence. Bakshi Jagabandhu remains a celebrated figure in Odisha and a symbol of resistance against colonial oppression, inspiring future generations to fight for freedom and justice.

I Quick five!

1. Andhra Pradesh
2. East
3. Bay of Bengal
4. Gosthani, Sarada, Varaha, Sarpa and Thandava
5. Eastern Ghats

III Facts Fantastic!

1. Submarine Museum and TU 142 Air Craft museum.
2. St. Aloysius High School
3. Dr. Sarvepalli Radhakrishnan
4. Bheemunipatnam (or Bhimli)
5. Dolphin's nose

II Picture quiz

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	V			o			z					s
6 H	i	n	d	u	s	t	a	n				t
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IV

What am I ? Hidden word :

KALAMKARI

WORLD Lion DAY

10TH AUGUST

World Lion Day is an international annual event conceived to create awareness of the conservation needs of lions and to promote engagement with organizations undertaking conservation efforts for lions via fundraising events, donations and other means of support.

KARGIL VIJAY DIWAS