NCSC IAS

MARCH 2024 (CAAP)

CURRENT

AFFAIRS

ANALYSIS

PROGRAMME

DO NOT COPY

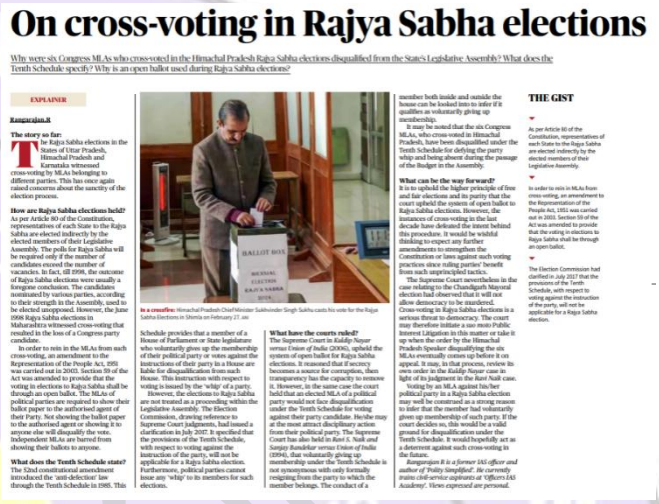
WEBSITE: WWW.NCSCIAS.COM

EMAIL: IASNCSC@GMAIL.COM

PH: 9100791003

1st March, 2024

1. Melanochlamys Droupadi
GS 3 (Science and Tech)



On cross-voting in Rajya Sabha elections

Why were six Congress MLAs who cross-voted in the Himachal Pradesh Rajya Sabha elections disqualified from the State's Legislative Assembly? What does the Tenth Schedule specify? Why is an open ballot used during Rajya Sabha elections?

EXPLAINER

Ranganjan.R

The story so far:

The Rajya Sabha elections in the States of Uttar Pradesh, Himachal Pradesh and Karnataka witnessed cross-voting by MLAs belonging to different parties. This has once again raised concerns about the sanctity of the election process.

How are Rajya Sabha elections held?

As per Article 80 of the Constitution, representatives of each State to the Rajya Sabha are elected indirectly by the elected members of their Legislative Assembly. The polls for Rajya Sabha will be required only if the number of candidates exceed the number of vacancies. In fact, till 1998, the outcome of Rajya Sabha elections were usually a foregone conclusion. The candidates nominated by various parties, according to their strength in the Assembly, used to be elected unopposed. However, the June 1998 Rajya Sabha elections in Maharashtra witnessed cross-voting that resulted in the loss of a Congress party candidate.

In order to rein in the MLAs from such cross-voting, an amendment to the Representation of the People Act, 1951 was carried out in 2003. Section 59 of the Act was amended to provide that the voting in elections to Rajya Sabha shall be through an open ballot. The MLAs of political parties are required to show their ballot paper to the authorised agent of their Party. Not showing the ballot paper to the authorised agent or showing it to anyone else will disqualify the vote. Independent MLAs are barred from showing their ballots to anyone.

What does the Tenth Schedule state?

The 52nd constitutional amendment introduced the 'anti-defection' law through the Tenth Schedule in 1985. This Schedule provides that a member of a House of Parliament or State legislature who voluntarily gives up the membership of their political party or votes against the instructions of their party in a House are liable for disqualification from such House. This instruction with respect to voting is issued by the 'whip' of a party.

However, the elections to Rajya Sabha are not treated as a proceeding within the Legislative Assembly. The Election Commission, drawing reference to Supreme Court judgements, had issued a clarification in July 2017. It specified that the provisions of the Tenth Schedule, with respect to voting against the instruction of the party, will not be applicable for a Rajya Sabha election. Furthermore, political parties cannot issue any 'whip' to its members for such elections.

What have the courts ruled?

The Supreme Court in *Kuldip Nayar versus Union of India* (2006), upheld the system of open ballot for Rajya Sabha elections. It reasoned that if secrecy becomes a source for corruption, then transparency has the capacity to remove it. However, in the same case the court held that an elected MLA of a political party would not face disqualification under the Tenth Schedule for voting against their party candidate. He/she may at the most attract disciplinary action from their political party. The Supreme Court has also held in *Rani S. Naik and Sanjay Bandekar versus Union of India* (1994), that voluntarily giving up membership under the Tenth Schedule is not synonymous with only formally resigning from the party to which the member belongs. The conduct of a member both inside and outside the house can be looked into to infer if it qualifies as voluntarily giving up membership.

It may be noted that the six Congress MLAs, who cross-voted in Himachal Pradesh, have been disqualified under the Tenth Schedule for defying the party whip and being absent during the passage of the Budget in the Assembly.

What can be the way forward?

It is to uphold the higher principle of free and fair elections and its purity that the court upheld the system of open ballot to Rajya Sabha elections. However, the instances of cross-voting in the last decade have defeated the intent behind this procedure. It would be wishful thinking to expect any further amendments to strengthen the Constitution or laws against such voting practices since ruling parties' benefit from such unprincipled tactics.

The Supreme Court nevertheless in the case relating to the Chandigarh Mayoral election had observed that it will not allow democracy to be murdered. Cross-voting in Rajya Sabha elections is a serious threat to democracy. The court may therefore initiate a *suo motu* Public Interest Litigation in this matter or take it up when the order by the Himachal Pradesh Speaker disqualifying the six MLAs eventually comes up before it on appeal. It may, in that process, review its own order in the *Kuldip Nayar* case in light of its judgment in the *Rani Naik* case.

Voting by an MLA against his/her political party in a Rajya Sabha election may well be construed as a strong reason to infer that the member had voluntarily given up membership of such party. If the court decides so, this would be a valid ground for disqualification under the Tenth Schedule. It would hopefully act as a deterrent against such cross-voting in the future.

Ranganjan R is a former IAS officer and author of 'Polity Simplified'. He currently trains civil-service aspirants at 'Officers IAS Academy'. Views expressed are personal.

THE GIST

- As per Article 80 of the Constitution, representatives of each State to the Rajya Sabha are elected indirectly by the elected members of their Legislative Assembly.
- In order to rein in MLAs from cross-voting, an amendment to the Representation of the People Act, 1951 was carried out in 2003. Section 59 of the Act was amended to provide that the voting in elections to Rajya Sabha shall be through an open ballot.
- The Election Commission had clarified in July 2017 that the provisions of the Tenth Schedule, with respect to voting against the instruction of the party, will not be applicable for a Rajya Sabha election.

- **Why in News:** Researchers of the Zoological Survey of India (ZSI) recently discovered a new species of head-shield sea slug from Odisha and the West Bengal coast named 'Melanochlamys Droupadi'.
- **About Melanochlamys Droupadi:**
  - It is a new **marine species of head-shield sea slug** with **ruby red spot.**
  - This species belonging to **Melanochlamys genus** was discovered from Digha of **West Bengal coast and** Udaipur of **Odisha coast.**
  - **Features**:
    - It is a **small invertebrate** with a maximum length of up to 7 mm.
    - **Habitat**: It inhabits **wet and soft sandy beaches**.
    - It is **brownish black** in colour with a **ruby red spot in the hind end**.
    - This particular species of sea slug is hermaphrodite (having both male and female reproductive parts); however, they need another sea slug for reproduction.
    - It has a shell inside the body. It has a posterior, accounting for 61 percent of its body length.
    - It continuously secretes transparent mucus to form a sheath that prevents sand grains from entering parapodial space.
    - It crawls beneath smooth sand to form a moving capsule where the body is rarely visible, leaving behind a trail like a turtle.
- **What are Sea Slugs?**
  - Sea slugs are a group of **molluscs that live primarily in marine habitats** and are **slug-like.**
  - They can be found from the shallow intertidal to the deep sea and from the polar regions to the tropics.
  - The sea slugs are **rapid hunters** and **feed upon mobile prey** such as other shelled and unshelled sea slugs, roundworms, marine worms, and small fishes.
  - So far, **18 species** have been discovered across the globe.
    - They are distributed in temperate regions of the Indo-Pacific Oceanic realm, but three species are truly tropically distributed, Melanochlamys papillata from the Gulf of Thailand, Melanochlamys bengalensis from West Bengal and Odisha coast and the present species.

2. Cross-voting & sanctity of the election process
GS 2 (Elections)

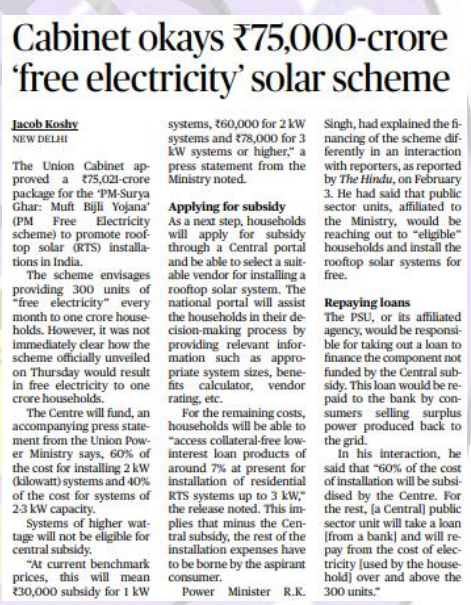
- **Why in News:** Heavy cross-voting by Opposition lawmakers turned the biennial Rajya Sabha elections into a thrilling contest.
- **Challenges to the Sanctity of Rajya Sabha Elections: A Bigger picture**
  - Despite constitutional provisions and legal safeguards in place, such incidents underscore the need for greater vigilance and accountability in ensuring free and fair elections.
  - **Sanctity of the Electoral Process**: The fundamental principle of democracy relies on the sanctity of electoral processes. However, instances of cross-voting challenge this principle, raising doubts about the fairness and transparency of the elections. The need to uphold the integrity of the electoral system becomes imperative to maintain public trust in democratic institutions.
  - **Implementation of Anti-Defection Laws:** The Tenth Schedule of the Constitution, commonly known as the anti-defection law, aims to curb unethical practices such as defection and voting against party lines. However, the applicability of these laws to Rajya Sabha elections has been a subject of debate. While the law prohibits defection, its enforcement during Rajya Sabha polls remains ambiguous, leading to loopholes that can be exploited.
  - **Role of the Judiciary:** The judiciary plays a crucial role in upholding the principles of democracy and ensuring adherence to constitutional norms. While the Supreme Court has upheld the use of open ballot for Rajya Sabha

elections to promote transparency, recent incidents of cross-voting highlight the need for judicial intervention to address electoral malpractices effectively. The court's proactive stance in safeguarding democratic values is essential to maintain the sanctity of the electoral process.

- **Upholding Democratic Values**: At the core of the issue lies the imperative to uphold democratic values and principles. Cross-voting not only undermines the democratic mandate but also erodes public confidence in the electoral system. Addressing this challenge requires a multi-faceted approach, encompassing legal reforms, judicial oversight, and institutional accountability, to ensure that the electoral process remains free, fair, and transparent.

- **What reforms are required?**
  - The incidents of cross-voting in Rajya Sabha elections underscore the pressing need for comprehensive reforms to safeguard the sanctity of the electoral process.
  - Upholding democratic values and principles should be a collective endeavor involving all stakeholders, including the legislature, judiciary, and civil society.
  - Only through concerted efforts can India's democratic institutions uphold the integrity of elections and preserve the essence of democracy.

3. PM Surya Ghar: Muft Bijli Yojana scheme
GS 2 (Governance)



Cabinet okays ₹75,000-crore 'free electricity' solar scheme

Jacob Koshy
NEW DELHI

The Union Cabinet approved a ₹75,021-crore package for the 'PM-Surya Ghar: Muft Bijli Yojana' (PM Free Electricity scheme) to promote rooftop solar (RTS) installations in India.

The scheme envisages providing 300 units of "free electricity" every month to one crore households. However, it was not immediately clear how the scheme officially unveiled on Thursday would result in free electricity to one crore households.

The Centre will fund, an accompanying press statement from the Union Power Ministry says, 60% of the cost for installing 2 kW (kilowatt) systems and 40% of the cost for systems of 2-3 kW capacity.

Systems of higher wattage will not be eligible for central subsidy.

"At current benchmark prices, this will mean ₹30,000 subsidy for 1 kW systems, ₹60,000 for 2 kW systems and ₹78,000 for 3 kW systems or higher," a press statement from the Ministry noted.

Applying for subsidy

As a next step, households will apply for subsidy through a Central portal and be able to select a suitable vendor for installing a rooftop solar system. The national portal will assist the households in their decision-making process by providing relevant information such as appropriate system sizes, benefits calculator, vendor rating, etc.

For the remaining costs, households will be able to "access collateral-free low-interest loan products of around 7% at present for installation of residential RTS systems up to 3 kW," the release noted. This implies that minus the Central subsidy, the rest of the installation expenses have to be borne by the aspirant consumer.

Power Minister R.K. Singh, had explained the financing of the scheme differently in an interaction with reporters, as reported by *The Hindu*, on February 3. He had said that public sector units, affiliated to the Ministry, would be reaching out to "eligible" households and install the rooftop solar systems for free.

Repaying loans

The PSU, or its affiliated agency, would be responsible for taking out a loan to finance the component not funded by the Central subsidy. This loan would be repaid to the bank by consumers selling surplus power produced back to the grid.

In his interaction, he said that "60% of the cost of installation will be subsidised by the Centre. For the rest, [a Central] public sector unit will take a loan [from a bank] and will repay from the cost of electricity [used by the household] over and above the 300 units."

- **Why in News:** The Union Cabinet approved a rooftop solar scheme as **'PM Surya Ghar: Muft Bijli Yojana'** to install rooftop solar panels across 10 million households with a total outlay of Rs 75,021 crore.
- **Key-details of the Scheme**
  - **PM Surya Ghar: Muft Bijli Yojana** is a government scheme that aims to provide free electricity to households in India.
  - **Financial assistance**: The scheme provides a **Central Financial Assistance** of 60 percent of system cost for 2 kW systems and 40 percent of additional system cost for systems between 2 to 3 kW capacity.
  - **Beneficiaries of scheme** will get free electricity of up to 300 units per month. It could result in savings of Rs 15,000-18,000 annually for households that install rooftop solar systems.
  - **National Portal:** Households will apply for subsidy through the National Portal and will be able to select a suitable vendor for installing rooftop solar.
  - **Model village**: Under the scheme, 'A Model Solar Village' will be developed in each district of the country to act as a role model for adoption of rooftop solar in rural areas.
- **Rooftop Solar Programme**
  - A residential rooftop solar scheme was already in place.
  - The Ministry of New and Renewable Energy (MNRE) had launched the old 'Rooftop Solar Programme Phase-II' in 2019, with the objective of achieving 4,000 MW of rooftop solar capacity in the residential sector by providing subsidy or central financial assistance.
  - As of November 2023, the capacity installed under Phase-II of the scheme was 2,651.10 MW.

4. India's leopard population
GS 3 (Environment)

- **Why in News:** India's leopard population has reached 13,874, with 1.08 percent per year growth between 2018 and 2022, as per a report released by the Environment Ministry.
- **Key-highlights of the Report**

India's leopard population rises to 13,874; M.P. on top

Forest surveyors cover nearly 6.5 lakh km looking for carnivore signs across 20 States; man-animal conflict is likely the reason for decline in the big cat population by 22% in Uttarakhand, says report

Jacob Koshy
NEW DELHI

India's leopard numbers rose by 8% from 12,852 in 2018 to 13,874 in 2022, according to a report made public by the Environment Ministry on Thursday.

While the highest number of leopards were reported in Madhya Pradesh (3,907), only three other States reported over 1,000 animals each – Maharashtra (1,985), Karnataka (1,879), and Tamil Nadu (1,070). While Uttarakhand reported a 22% decline in the big cat numbers – reportedly due to poaching and man-animal conflict, Arunachal Pradesh, Assam and West Bengal saw a collective 150% rise to 349 animals.

The survey covered 20 States of India, and focussed on about 70% of the animals' expected habitat, which are India's tiger reserves and protected forest areas. Unlike tigers, which are largely confined to forest reserves, leopards are far more adaptable and tend to be found in significant numbers, in villages and sometimes, even in cities, an report. The analysis coordinated by the Wildlife Institute of India – only looked at forest areas where a similar survey was done in 2018. The Shivalik hills and the Gangetic plains recorded a 3.4% annual decline, while Central India and the Eastern Ghats, the Western Ghats and the hills of the north-east, and the Brahmaputra flood plains recorded growth of 1.5%, 7%, and 1.3% per annum respectively. "The population in the last four years is stable, which also indicates the growth is minimal and in comparison to tigers, leopards are more likely to be getting impacted by people in multiple use areas," the report added.

Leopard numbers have declined in Ramnagar forest division (Uttarakhand), where tiger numbers have shown a very steep growth in the past four years. About 65% of the leopard population is present outside protected areas in the Shivalik landscape. In Uttar Pradesh, both leopard and tiger numbers have increased, the report noted.

Forest surveyors travel 6,41,449 km for carnivore signs and prey abundance estimation. Camera traps were deployed at 32,803 locations, resulting in 4,70,81,881 photographs.

"The leopard is the most numbers reported out of the northeastern States were the result of a "sampling artefact", said Dr. Qureshi, meaning that previous years saw very little of a systematic survey and fewer cameras installed.

On the prowl: Leopards are very adaptable and tend to be found in significant numbers in villages and sometimes, even in cities, an

Habitat conservation

"About a third of the leopards are within protected areas. When we conserve tiger reserves, we also conserve leopard habitat," said Qamar Qureshi of the Wildlife Institute of India and one of the authors of the

- The report is based on the **fifth cycle of the leopard population estimation**, conducted in 2022.
- **Madhya Pradesh** houses the largest population of leopards in the country: 3907 (2018: 3421), followed by **Maharashtra (1985), Karnataka (1,879) and Tamil Nadu (1,070).**
- **Tiger Reserves or sites with the highest leopard population** are, Nagarajunasagar Srisailam (Andhra Pradesh), followed by Panna (Madhya Pradesh), and Satpura (Madhya Pradesh).
- **Central India** shows a stable or slightly growing population of leopards (2018: 8071, 2022: 8820), Shivalik Hills and Gangetic Plains experienced a decline (2018: 1253, 2022: 1109).
  - **Growth:** The largest growth rate was in Central India and the Eastern Ghats at 1.5 percent.
  - **Decline:** However, there is a 3.4 percent decline per year in the population growth of leopards in the Shivalik Hills and the Gangetic Plains.

- **About Leopard**
  - **Leopard** *(Pathera pardus)* **is** one of the five big cat species of the genus *Panthera*.
  - They are the smallest of the large cats, which includes lions, tigers, and jaguars.
  - **Habitat**: Leopard habitats include forests, subtropical and tropical regions, savannas, grasslands, deserts, and rocky and mountainous regions. They can live in both warm and cold climates. Of all the big cat species, leopards are the only known species that live in both desert and rainforest habitats.
  - **Geography:** Their range covers a large stretch of **Africa, parts of the Middle East, and Asia, including China, India, and eastern Russia.**

5. India's Major Leap into Semiconductor Manufacturing: 3 Plants, Rs 1.26 Lakh Crore Investment Get Govt Nod

GS 2 (Governance)

Tata to build India's first fab as Cabinet approves ₹1.25 lakh cr. of chip facilities

The Hindu Bureau
NEW DELHI

The Union Cabinet on Thursday approved three semiconductor proposals totalling ₹1,25,600 crore, and to be located at Dholera and Sanand in Gujarat, and Morigaon in Assam.

The Dholera and Morigaon facilities would be built by Tata Electronics Pvt. Ltd. and Tata Semiconductor Assembly and Test Pvt. Ltd. The former would be India's first full-fledged fabrication unit with capacity to produce 50,000 'wafer starts' – the initial form of silicon chips – per month.

The announcement marks a milestone in India's efforts to kick-start a semiconductor ecosystem as while most of the current investments through government subsidies and Productivity-Linked Incentive schemes have only yielded less sophisticated packaging plants that rely on raw and intermediate material from other sources, fabrication is a more fundamental, expensive and technologically extensive domain. The move also reflects growing pressures on global electronics supply chains to diversify away from China.

Ashwini Vaishnaw

Tech from Taiwan

Powerchip Semiconductor Manufacturing Corporation (PSMC) of Taiwan would be the technology partner for the fab unit, while the technology partners for the assembly and testing unit in Morigaon had been kept confidential at their request, Minister of Electronics and Information Technology Ashwini Vaishnaw said.

The Dholera unit would make "high performance compute chips with 28 nanometre technology," and also produce chips for power management, which Mr. Vaishnaw said accounted for a large part of semiconductor demand. Both facilities would cater to domestic demand and also export chips, the Minister added.

Construction would start within 100 days, he said, adding that the work would hopefully be completed well before the standard 5-year timeline for such facilities. Micron's chip assembly facility, announced last year, would be completed by December, Mr. Vaishnaw added.

The facilities announced on Thursday will create 20,000 direct jobs and 60,000 indirect jobs, the IT Ministry estimates.

- **Why in News:**
  - The Indian government has taken a significant step toward becoming self-reliant in semiconductor production by approving the establishment of 3 semiconductor fabrication units.
  - The approvals involve an investment of Rs 1.26 lakh crore ($15.2 billion) including Rs 76,000 crore support under the '**Development of Semiconductors and Display Manufacturing Ecosystem**' programme.
- **About the Announcements of the Indian Government:**
  - **A semiconductor fab in Dholera, Gujarat:** This will be established by Tata Electronics in collaboration with Taiwan's Powerchip Semiconductor Manufacturing Corp.
    - The facility is projected to produce 50,000 wafers per month and will require an investment of Rs 91,000 crore.
    - It will specialise in producing **high-performance computer chips using 28 nm technology** that will find applications in EVs, telecom, defence, etc.
  - **A semiconductor unit in Morigaon, Assam:** This will be set up by the Tata Semiconductor Assembly and Test Pvt Ltd (TSAT), with an investment of Rs 27,000 crore.
    - This is poised to churn out an impressive 48 million chips per day, catering to the automotive and electric vehicle sectors.
  - **A semiconductor unit in Sanand, Gujarat:** This will be established by CG Power, in conjunction with Japan's Renesas Electronics Corp and Stars Microelectronics of Thailand, with an investment of Rs 7,600 crore.
    - The construction of these plants **will commence within the next 100 days.**
- **Significance of the Move:**

- Semiconductors (essential for defence, automobiles and telecommunications sectors) have grown into **a key geopolitical battleground**, with the US, Japan and China investing heavily in developing domestic capabilities.
- As global demand for semiconductors surges, **India's initiative to build domestic chip-making capabilities** signifies a major leap towards –
  - Technological autonomy and
  - **Reduced import dependency**, particularly from manufacturing giants like Taiwan
- These developments are part of **India's broader vision to position India as a global hub for semiconductor manufacturing.**
- The initiative is expected to **bolster India's semiconductor market**, projected to reach $63 billion by 2026.
- With these units, the semiconductor ecosystem will get established in India and **advanced packaging technologies** will be indigenously developed in India.
- Finally, the establishment of these units is anticipated to **create ~20,000 direct advanced technology jobs** and around 60,000 indirect jobs and will **catalyse growth in related sectors.**

- **Challenges for India:**
  - India's chip incentive plans are focused on boosting all three aspects (ATMP facilities; OSAT plants; and Full-scale foundries) of the semiconductor ecosystem.
    - However, India's close allies (US, EU) **have rolled out more lucrative incentive schemes** than New Delhi.
  - **The country is focusing on older nodes like 28 nm.** TSMC, the most influential and important chip company in the world today, which counts Apple as a customer, is currently making chips with a node size of 3 nm.
  - **The other issue is the talent pool**. While India is the biggest back office for design engineers of all major chip companies, skilled talent that can work on factory floors of a fabrication plant is still hard to come by.
  - **India also currently lacks in original research in semiconductor design**, where the future of the chip is decided.
- **Steps Taken by India:**
  - The Indian government is aware of these shortcomings and is in the process of setting up a R&D lab at **Semiconductor Laboratory (SCL) in Mohali.**
    - It is working on a **Rs 10,000 crore modernisation plan** for the organisation, and a large chunk of that will go towards setting up the **Bharat Semiconductor Research Centre.**
    - Here, a majority of the research will focus on developing chips that can address India's unique needs and demands.
  - **In 2021,** the government had rolled out a Rs 76,000 crore chip incentive scheme, under which the Centre offered half the amount of a plant's capital expenditure costs as subsidy.
  - There are schemes like the **production linked incentive (PLI) plan** for smartphone and laptop manufacturing, where the government is offering a subsidy to companies on the basis of their sales bills.
- **Way Ahead for India:**
  - **The government's commitment,** coupled with significant **private sector investments,** underscores the strategic importance of developing indigenous capabilities in semiconductor fabrication and assembly.
  - As construction progresses and operational capabilities develop, **India will attract more global players**, mirroring the success seen in its smartphone assembly industry.
  - These initiatives represent a milestone in India's journey towards **technological self-sufficiency** and positions the country as a potential leader in the global semiconductor market.

6. Judicial discretion and case management
GS 2 (Judiciary)

No automatic vacation of stay orders after six months, says SC

Overturns 2018 ruling by 3-judge bench

ANANTHAKRISHNAN G
NEW DELHI FEBRUARY 25

A CONSTITUTION bench of the Supreme Court Thursday overturned a 2018 ruling wherein a three-judge bench of the court held that stay granted in civil or criminal cases will automatically lapse upon expiry of six months unless extended by a court.

The bench presided by Chief Justice of India D Y Chandrachud said, "There can't be automatic vacation of stay". The bench also comprised Justices Abhay S Oka, J B Pardiwala, Pankaj Mithal and Manoj Misra.

Reading out the operative part, Justice Oka said, "We have held that we don't agree with the view" propounded by the three-judge bench in the case Asian Resurfacing of Road Agency Pvt Ltd & Anr vs. CBI.

The bench, for the CJI, Justices Pardiwala and Misra, Justice Oka said, "We framed two questions. Whether this court in exercise of its jurisdiction under Article 142 of the Constitution can order automatic vacation of all interim orders of the High Courts of staying civil and criminal cases on the expiry of certain period, whether this court in exercise of its jurisdiction under Article 142 can direct the High Courts to decide the pending cases in which interim orders of stay of proceedings has been granted on a day-to-day basis and within a fixed period?".

The bench said, "Constitutional courts should not normally fix a time-bound schedule for disposal of cases pending in any court. The pattern of pendency of various category of cases pending in every court, including High Court is different. The situation at grassroots level is better known to the judges of the concerned courts."

It said, "Therefore the issue of giving such directions should be best left to the concerned courts and orders fixing the outer limit for the disposal of cases should be passed only in exceptional circumstances to meet extraordinary situations."

The bench said it is "unable to concur with the directions issued in paragraphs 36 and 37 of the Asian Resurfacing judgement".

In para 36 of the 2018 ruling, the SC, while dealing with the issue of delay in trials, had said that "In all pending matters before the High Courts or other courts relating to PC Act or all other civil or criminal cases, where stay of proceedings in a pending trial is operating, stay will automatically lapse after six months from today unless extended by a speaking order as above". The directions were passed by the SC also be imposed by civil and criminal appellate supervisional courts under the jurisdiction of the High Courts. The trial court may, on expiry of above period, resume the proceedings without waiting for any other intimation unless express order extending stay is produced."

In para 37, it said, "The High Courts may also issue instructions to this effect and monitor the same so that civil or criminal proceedings do not remain pending for undaily period at the trial stage".

Overruling these, the constitution bench said that "a direction that all interim orders of stay of proceedings passed by every High Court automatically expires only by reason of lapse of time cannot be issued in exercise of jurisdiction of this court under Article 142 of the Constitution of India".

- **Why in News:** The recent verdict by the Supreme Court on the **automatic vacation of stay orders** in civil and criminal cases has sparked considerable debate within legal circles. The ruling, delivered by a five-judge Constitution Bench headed by Chief Justice DY Chandrachud, diverged from the precedent set by a 2018 judgement, highlighting the nuanced complexities surrounding judicial discretion and case management.
- **Balance between judicial discretion and procedural rigidity**
  - **Judicial Discretion and Stay Orders**: The crux of the issue lies in the balance between judicial discretion and procedural rigidity.
    - While the 2018 judgement advocated for the automatic

expiration of stay orders after six months, the recent ruling emphasizes the importance of judicial discretion in evaluating the merits of each case individually.

- This approach acknowledges the diverse nature of legal proceedings and the need for flexibility in adjudicating complex matters.
- **Implications for Case Management**: The Supreme Court's decision to refrain from fixing a timeline for the disposal of cases underscores the inherent challenges in setting **rigid deadlines for judicial proceedings.**
  - By recognizing that grassroots issues are best understood by the concerned courts, the judgement acknowledges the inherent complexities involved in case management and underscores the importance of context-specific decision-making.
- **Balancing Expediency and Justice**: The ruling prompts a critical examination of the tension between expediency and justice within the legal framework.

- The Supreme Court's verdict on the automatic vacation of stay orders in civil and criminal cases underscores the complexities inherent in judicial decision-making. The judgement serves as a catalyst for ongoing dialogue on the intersection of judicial expediency and procedural integrity in the Indian legal system.

DO NOT COPY

2nd March, 2024

1. India to set up International Big Cat Alliance
GS 3 (Environment)

- **Why in News:**
  - The Union Cabinet approved the establishment of International Big Cat Alliance (IBCA) with **headquarters in India** with a one-time budgetary support of Rs.150 crore for a period of five years from 2023-24 to 2027-28.
  - Framework of Agreement of IBCA has been drafted largely on the pattern of International Solar Alliance (ISA).

India to establish international alliance to protect big cats

Jacob Koshy
NEW DELHI

The Union Environment Ministry plans to set up and coordinate an International Big Cat Alliance (IBCA), along the lines of the International Solar Alliance, an India-headquartered initiative to promote solar installations globally. The Cabinet approved the proposal on Thursday.

"India's global leadership in tiger conservation has been recognised. The IBCA, which will be headquartered in India and to which India has already committed ₹150 crore [for five years], will lead initiatives to disseminate good practices in conserving big cats," Environment Minister Bhupendra Yadav said on Friday.

16 nations

There is no international body addressing the conservation challenges of big cats across their range of habitats. The pioneering and long-standing tiger and other big cat conservation good practices which evolved in India may be replicated in other range countries, Mr. Yadav said.

So far, 16 countries have given their written consent to be part of the IBCA. There are 96 countries that harbour 'big cats' and the alliance is also open to other countries, conservation organisations, scientific organisations, businesses, and corporates interested in supporting 'big cats'.

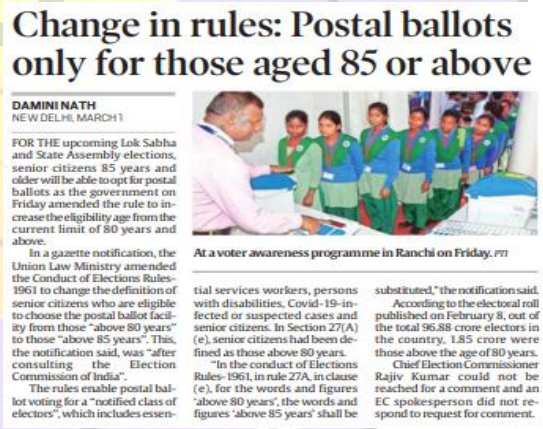
The advantages of membership, an accompanying document noted, are a central common repository for technical know-how and a corpus of funds. The alliance will strengthen existing species-specific intergovernmental platforms, networks, and transnational initiatives on conservation and protection. Frontline staff in member-countries will be trained in eliciting local support for big-cat conservation, and research and development in wildlife monitoring. Communities living near forests will be trained in developing eco-tourism and livelihood opportunities.

- **International Big Cat Alliance (IBCA)**
  - **Background:**
    - During the Global Tiger Day event in 2019, PM Modi urged global leaders to unite against poaching in Asia.
    - He repeated this call during the 50th anniversary celebration of India's Project Tiger on April 9, 2023, announcing the launch of an International Big Cat Alliance
  - **About**
    - The International Big Cat Alliance (IBCA) is a global alliance that aims to conserve the world's seven main big cats.
    - It will provide a platform for the member nations to share knowledge and expertise and extend support to recovery efforts in potential habitats.
  - **Aim:** To work towards the protection and conservation of the seven major big cats — tiger, lion, leopard, snow leopard, puma, jaguar and cheetah.
  - **HQ:** India
  - **Membership**
    - Membership to the alliance will be open to 96 range countries.
      - These are the countries which contain the natural habitat of these big cats.
    - The alliance is also open to other countries, conservation organisations, scientific organisations, businesses, and corporates interested in supporting big cats.
    - So far, **16 countries have given their written consent to be part of the IBCA.**
    - In addition, nine international organizations, including the International Union for Conservation of Nature (IUCN), and the World Wildlife Fund (WWF) International, have given consent to join the alliance.
  - **Governance Structure**
    - A **General Assembly** consisting of all member countries.
    - A **Council** of at least seven but not more than 15 member countries elected by the General Assembly for a term of 5 years, and a Secretariat.
    - Upon the recommendation of the Council, the General Assembly will appoint the IBCA Secretary General for a specific term.
    - A Secretariat
  - **Funding**
    - The first five years (2023-24 to 2027-28) will be supported by India's 'total grant assistance' ofRs.150 crore.
    - After that, the IBCA is expected to sustain itself through membership fees and contributions from bilateral and multilateral institutions and the private sector.
  - **Activities**
    - It will provide a platform for the member nations to share knowledge and expertise and extend support to recovery efforts in potential habitats.
    - Its major activities will include **advocacy, partnership, knowledge e-portal, capacity building, eco-tourism, partnerships between expert groups, and finance tapping.**
    - IBCA will also assist existing species-specific inter-governmental platforms to boost conservation efforts.
  - **Benefits**
    - The advantages of membership are a central common repository for technical know-how and a corpus of funds.
    - The alliance will strengthen existing species-specific intergovernmental platforms, networks, and transnational initiatives on conservation and protection.
    - Frontline staff in member-countries will be trained in eliciting local support for big-cat conservation, and research and development in wildlife monitoring.
    - Local communities living in the vicinity of the forests will also be encouraged and trained in developing eco-tourism and livelihood opportunities.
    - It recognizes the importance of integrating biodiversity policies with sustainable development goals (SDGs) to achieve holistic and inclusive conservation outcomes.

- **Is India Home to All Seven Big Cats?**
  - Out of 7 big cats, **India is home to 5:** Tiger, Lion, Leopard, Snow Leopard and Cheetah
  - **Royal Bengal Tiger**
    - As per the latest Tiger Census conducted in 2018-19, tiger population in India has increased to **2967**.
    - India now accounts for about **70% of the world's tiger population**.
  - **Asiatic Lion**
    - **Gir National Park** in Gujarat is the last abode for the surviving population of the Asiatic Lions in the world.
    - Since the late 1960s, population of Asiatic Lions has increased from less than 200 to **674** (Census 2020).
  - **Leopard**
    - It is estimated that **12,000-14,000** leopards occur in India, and the population is the most genetically diverse/outbred out of all the subspecies in Asia.
  - **Snow Leopard**
    - Snow leopard is native to the mountain ranges of Central and South Asia.
    - In India, their geographical range encompasses a large part of the **western Himalayas** including the territories of Jammu and Kashmir, Ladakh, Himachal Pradesh, Uttarakhand and Sikkim and Arunachal Pradesh in the **eastern Himalayas**.
    - In 2021, **there are about 7,500 snow leopards left in the world, out of which 500 are in India**.
  - **Cheetah**
    - Cheetah had become extinct in India since 1952.
    - In September 2022, Cheetahs have been reintroduced in the wild in India as 8 Cheetahs were imported from **Namibia**.
    - They were released into the **Kuno National Park in Madhya Pradesh** in November, 2022.

2. Govt amends rules related to postal ballots
GS 2 (Elections)

- **Why in News:**
  - In the next Lok Sabha and State Assembly elections, elderly citizens aged 85 and above can choose postal ballots.
  - The government has changed the rule, increasing the eligibility from the previous limit of 80 years.



Change in rules: Postal ballots only for those aged 85 or above

DAMINI NATH
NEW DELHI, MARCH 1

FOR THE upcoming Lok Sabha and State Assembly elections, senior citizens 85 years and older will be able to opt for postal ballots as the government on Friday amended the rule to increase the eligibility age from the current limit of 80 years and above.

In a gazette notification, the Union Law Ministry amended the Conduct of Elections Rules-1961 to change the definition of senior citizens who are eligible to choose the postal ballot facility from those "above 80 years" to those "above 85 years". This, the notification said, was "after consulting the Election Commission of India".

The rules enable postal ballot voting for a "notified class of electors", which includes essential services workers, persons with disabilities, Covid-19-infected or suspected cases and senior citizens. In Section 27(A)(e), senior citizens had been defined as those above 80 years.

"In the conduct of Elections Rules-1961, in rule 27A, in clause (e), for the words and figures 'above 80 years', the words and figures 'above 85 years' shall be substituted," the notification said.

According to the electoral roll published on February 8, out of the total 96.88 crore electors in the country, 1.85 crore were those above the age of 80 years.

Chief Election Commissioner Rajiv Kumar could not be reached for a comment and an EC spokesperson did not respond to request for comment.

At a voter awareness programme in Ranchi on Friday. PTI

- **Postal Voting**
  - **About**
    - Postal voting, also known as absentee voting, is a method of voting in which electors cast their ballots by mail rather than in person at a polling station.
    - This method is particularly useful for individuals who are unable to vote in person due to various reasons.
      - E.g., being away from their home constituency, having a disability, or being engaged in essential services on election day.
  - **Eligibility**
    - **Service voters**:
      - Members of the armed forces, paramilitary forces, and other government employees deployed on election duty far from their home constituencies.
    - **Absentee voters**:
      - Individuals who are unable to vote in person due to reasons such as being away from their home constituency for work, illness, or disability.
    - **Electors on election duty**:
      - Government officials and polling staff who are assigned duties at polling stations other than their own
    - **Electors under preventive detention**:
      - Individuals who are detained under preventive custody orders during the election period.
  - **Eligibility during Covid pandemic**
    - During the Covid-19 pandemic, the facility was extended to those infected or suspected to be infected with the coronavirus, starting with the Bihar Assembly elections in 2020.
    - Before the Bihar elections, the EC had recommended extending the postal ballot facility to those above 65 years of age and the Law Ministry had notified the amendment in June 2020.
      - However, the ECI eventually decided not to extend the facility to those above 65 years.
      - This was because the number of polling parties that would be required to cover the expanded age group would have been impractical.
    - Finally, in August 2023, the Law Ministry again amended the rule to take the eligibility back to 80 years from 65 years.
  - **Significance**

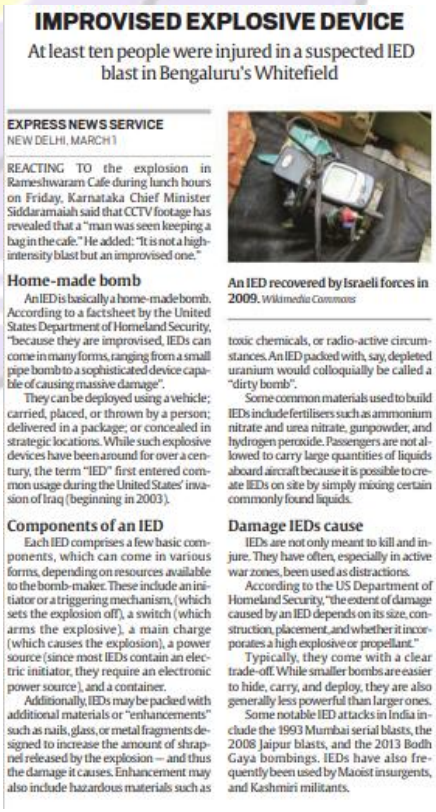
- Postal ballots play a crucial role in ensuring that eligible voters exercise their franchise, even when they are unable to vote in person.
- They expand the accessibility of the electoral process and contribute to a more inclusive and representative democracy.

  - **Issues associated with postal ballot**
    - **Vote buying**
      - There is a chance that someone else is casting the vote on behalf of the voter because the voter chooses to sell his or her vote
    - **Freedom of voting & secrecy might be affected**
      - As the voter will have vote on a printed ballot from their respective home, someone might observe the voter casting her/his vote.
      - This might lead to coercion or forcing the voter to make a particular choice.
    - **Reliability and delay of postal services**
      - While the reliability and delay of postal services in one's own country are well known to the election commission, conditions might be worse in other countries.
      - Consequently, the postal voting process must start early enough to take into accountany unforeseeable conditions.

- **News summary:**
  - The government, in consultation with the Election Commission, amended the Conduct of Election Rules (1961) **to raise the minimum age for senior citizens, eligible for voting by postal ballot, to 85 years from 80 years.**
  - As per **Rule 27A of the Conduct of Election Rules**, postal ballot facility was extended to:
    - senior citizens above 80 years,
    - persons with disability,
    - poll officers, and
    - Covid-positive persons starting with the 2020 Bihar assembly poll, which coincided with the pandemic period.
  - However, a review by the Election Commission showed that no more than 2-3% of 80-plus voters had opted to vote through postal ballots; the rest insisted on turning up at the polling station to cast their vote.
    - The total number of senior citizens above 80 years is 1.75 crore, with those aged 80-85 years being 98 lakh.
  - Hence, the govt decided to amend the rule.

3. Improvised Explosive Devices (IEDs)
Recent events of importance

- **Why in News:** At least nine people were injured after an explosion at the bustling Rameshwaram Cafe in Bengaluru's Whitefield area possibly by an Improvised Explosive Device (IED).
- **About Improvised Explosive Devices:**
  - IED is a type of **unconventional explosive weapon** that can take any form and be activated in a variety of ways.
  - An IED is basically a home-made bomb because they are improvised.
  - IEDs can **come in many forms**, ranging from a small pipe bomb to a sophisticated device capable of causing massive damage and loss of life.
  - They can be **deployed using a vehicle**, carried, placed, or **thrown by a person**, delivered in a package, or concealed on the roadside.
  - While they have been in used for over a century, the term "IED" first entered common usage during the United States' Iraq invasion (beginning in 2003), where such bombs were commonly used against US forces.
  - **Components**
    - Each IED comprises a few basic components, which can come in various forms, depending on resources available to the bomb-maker.
    - These include an **initiator** or a **triggering mechanism**, (which sets the explosion off), **a switch** (which arms the explosive), **a main charge** (which causes the explosion), a **power source** (since most IEDs contain an electric initiator, they require an electronic power source), and a container.
    - Additionally, IEDs may be packed with additional materials or "enhancements" such as nails, glass, or metal fragments designed to increase the amount of shrapnel released by the explosion — and thus the damage it causes.
    - Enhancement may also include hazardous materials such as **toxic chemicals, or radio-active circumstances** — an IED packed with, say, depleted Uranium will be colloquially **called a "dirty bomb"**



IMPROVISED EXPLOSIVE DEVICE

At least ten people were injured in a suspected IED blast in Bengaluru's Whitefield

EXPRESS NEWS SERVICE
NEW DELHI, MARCH 1

REACTING TO the explosion in Rameshwaram Cafe during lunch hours on Friday, Karnataka Chief Minister Siddaramaiah said that CCTV footage has revealed that a "man was seen keeping a bag in the cafe." He added: "It is not a high-intensity blast but an improvised one."

Home-made bomb

An IED is basically a home-made bomb. According to a factsheet by the United States Department of Homeland Security, "because they are improvised, IEDs can come in many forms, ranging from a small pipe bomb to a sophisticated device capable of causing massive damage".

They can be deployed using a vehicle; carried, placed, or thrown by a person; delivered in a package; or concealed in strategic locations. While such explosive devices have been around for over a century, the term "IED" first entered common usage during the United States' invasion of Iraq (beginning in 2003).

Components of an IED

Each IED comprises a few basic components, which can come in various forms, depending on resources available to the bomb-maker. These include an initiator or a triggering mechanism, (which sets the explosion off), a switch (which arms the explosive), a main charge (which causes the explosion), a power source (since most IEDs contain an electric initiator, they require an electronic power source), and a container.

Additionally, IEDs may be packed with additional materials or "enhancements" such as nails, glass, or metal fragments designed to increase the amount of shrapnel released by the explosion — and thus the damage it causes. Enhancement may also include hazardous materials such as toxic chemicals, or radio-active circumstances. An IED packed with, say, depleted uranium would colloquially be called a "dirty bomb".

Some common materials used to build IEDs include fertilisers such as ammonium nitrate and urea nitrate, gunpowder, and hydrogen peroxide. Passengers are not allowed to carry large quantities of liquids aboard aircraft because it is possible to create IEDs on site by simply mixing certain commonly found liquids.

Damage IEDs cause

IEDs are not only meant to kill and injure. They have often, especially in active war zones, been used as distractions.

According to the US Department of Homeland Security, "the extent of damage caused by an IED depends on its size, construction, placement, and whether it incorporates a high explosive or propellant."

Typically, they come with a clear trade-off. While smaller bombs are easier to hide, carry, and deploy, they are also generally less powerful than larger ones.

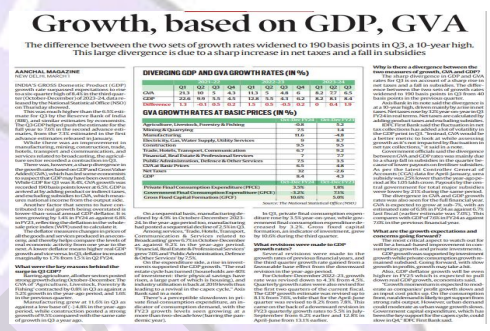
Some notable IED attacks in India include the 1993 Mumbai serial blasts, the 2008 Jaipur blasts, and the 2013 Bodh Gaya bombings. IEDs have also frequently been used by Maoist insurgents, and Kashmiri militants.

An IED recovered by Israeli forces in 2009. *Wikimedia Commons*

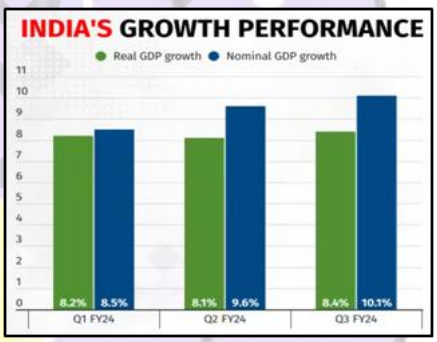
- **Some common materials** used to build IEDs include **fertilisers** such as ammonium nitrate and urea nitrate, gunpowder, and hydrogen peroxide.

4. GDP Growth Accelerates to 8.4% in Q3
GS 3 (Economy)

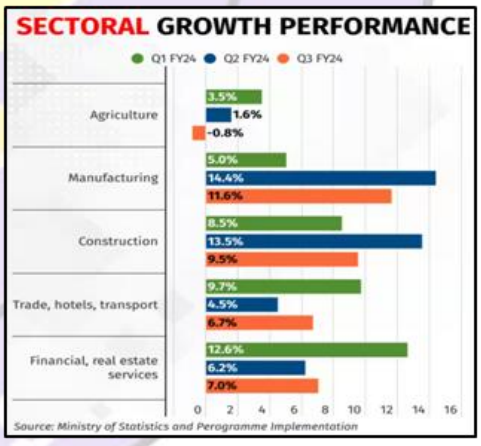
- **Why in News:**
  - India's Gross Domestic Product (GDP) growth surged to a six-quarter high of 8.4% in October-December period of 2023.
  - This has pushed up the growth rate for 2023-24 to 7.6% as against the earlier estimate of 7.3%, data for third quarter GDP and second advance estimates for 2023-24 released by the National Statistical Office showed.


Growth, based on GDP, GVA
The difference between the two sets of growth rates widened to 190 basis points in Q3, a 10-year high. This large divergence is due to a sharp increase in net taxes and a fall in subsidies

- **About National Statistical Office (NSO):**
  - In May 2019, the Central Government merged the **National Sample Survey Office** (NSSO) and the **Central Statistics Office** (CSO) under the Ministry of Statistics and Programme Implementation (MoSPI).
  - The merger created an overarching body i.e., **National Statistical Office**.
  - Hence, the statistical wing of the MoSPI is now called the NSO.
  - NSO acts as the **nodal agency for planned development of the statistical system in the country**.
  - It lays down and maintains norms and standards in the field of statistics, involving concepts and definitions, methodology of data collection, processing of data and dissemination of results.



- **Key Highlights of the Data Released by the NSO:**
  - The estimate for growth in the second quarter has now been revised up to 8.1 percent, while that for the first quarter has been revised higher to 8.2 percent from 7.8 percent.
  - At 8.4 percent, the latest quarterly GDP growth rate is the highest in six quarters.
  - Last time India's economy grew at a faster rate was in the first quarter of 2022-23, when it grew by 13.1 percent, now revised down to 12.8 percent.
  - The Reserve Bank of India's projection for growth in Q3 was pegged at 6.5%.
  - In the third quarter of the current financial year, among sectors, manufacturing posted the highest growth rate in double digits at 11.6%, while the construction sector grew 9.5%.Agriculture recorded a contraction of 0.8% in October-December.
  - Private final consumption expenditure, an indicator of consumption demand, rose by 3.5% year-on-year in October-December.
  - On the other hand, government final consumption expenditure decreased by 3.2%.
  - Gross fixed capital formation, an indicator of investment, grew by 10.6% during the third quarter.



- **Key Words:**
  - **What is GDP?**
    - The **total monetary or market value of all finished goods and services produced within a country's borders within a specific period of time** is called its gross domestic product (GDP).
    - It is a comprehensive measure of the country's economic health, expressed in terms of the overall domestic production and functions.
    - The GDP of a country **includes all private and public consumption**, government outlays, investments, additions to private inventories, paid-in construction costs, and foreign balance of trade.
  - **What is GVA?**
    - In situations where the GDP fails to measure the real economic scenario, the Gross Value Added (GVA) is a better gauge.
    - The GVA measures the **total value of goods and services produced in an economy, and the amount of value added to a product**.
    - It is defined as the output produced after the deduction of the intermediate value of consumption. The GVA, in India, is measured at '**basic prices**'.
  - **How are GDP and GVA Related?**
    - GDP and GVA are related as follows:
      - **GDP** = **GVA** + **Taxes** levied by governments on products – **Subsidies** provided by government on products

- Typically, the absolute level of GDP is more than the absolute level of GVA because taxes received are more than subsidies spent by the government.

5. Agalega Islands & Its Significance for India
GS 2 (International Relations)

Development of Agaléga and India's vision for its maritime neighbourhood

EXPERT EXPLAINS
BISWAJIT DASGUPTA

ON THURSDAY, Prime Ministers Narendra Modi and Pravind Jugnauth jointly inaugurated an airstrip and the St James jetty on North Agalega Island in the Indian Ocean.

Agaléga — a group of two islands with a total area of 26 sq km and a native population of about 300 people — lies approximately 650 nautical miles/ 1,050 km/ north of Mauritius, and belongs to the island nation.

The development of the Agaléga Islands is in the socio-economic and national security interest of Mauritius, and also aligns with India's maritime vision.

Why is Agaléga important to Mauritius?

The islands, a dependency of Mauritius, were not developed for many years. Situated two days' steaming distance away, the sustainability and well-being of the islands' inhabitants presented a challenge, as even the most basic needs required referral to Mauritius. The near absence of an official government or security presence was a serious vulnerability.

This vulnerability could be converted to strength by developing the islands and creating facilities that could operate ships and aircraft. Building a jetty and an airstrip was therefore considered imperative by the government of Mauritius. They chose India as their preferred development partner.

Why did Mauritians choose India?

Ties between India and Mauritius go back to 1948, 20 years before the country's independence from Britain. Seventy per cent of the inhabitants of Mauritius are of Indian origin, and the two countries share deep historical, social, and cultural bonds.

The consistent feature in the history of bilateral relations has been friendship and trust at all levels — the political leadership, the diplomatic and military communities, as well as between the peoples of the two countries. The development of these strategically located islands required trust more than anything else. India was the obvious choice.

Deliberations took place from the end of the first decade of this century onward. Considering the sensitivities in Mauritius over issues of sovereignty and security, both sides progressed with utmost caution, and every concern was appropriately addressed before the project got off the ground.

How will the development of Agaléga help Mauritius?

The benefits are so obvious and substantial that it appears odd that it took so long to begin the process of developing Agaléga.

For the people of the islands, the two-day passage (if a ship was available) will be cut to less than an hour's flight. The development of associated infrastructure will create employment for the local population and improve their overall well-being. The government of Mauritius may improve and expand these facilities in the future. The tourism potential of the islands could be tapped as well.

The new jetty and airstrip will enable a larger and more credible government presence on the islands, and the stationing or forward deployment of ships of the Mauritius Coast Guard. It will be possible to better monitor and police the vast Exclusive Economic Zone (EEZ) that extends 200 nautical miles outward from these islands.

What is in it for India?

The goodwill and trust between the two countries will be further enhanced. India will welcome opportunities to further develop these islands in collaboration with Mauritius as the latter deems appropriate.

The joint development of Agaléga underscores India's commitment to the vision of SAGAR, and its willingness to assist smaller maritime nations in building capacity and developing capability.

It will indicate to other maritime neighbours that India is a benign and friendly country that respects the sovereignty of independent nations. India would like to emerge as the preferred development and security partner in the Indian Ocean Region.

Will India assist Mauritius in enhancing its maritime security?

Yes, if requested by Mauritius. India has never forced its security apparatus upon any country; all military and maritime cooperation with its partners has been through established mechanisms of political, diplomatic, and military dialogue.

In pursuance of the vision of SAGAR, India will provide material and technical support to the maritime security apparatus of Mauritius, offer information exchange mechanisms, and conduct joint maritime security exercises and patrols, as mutually agreed.

Visits by Indian military assets and joint deployments, if considered, would be in consonance with diplomatic mechanisms.

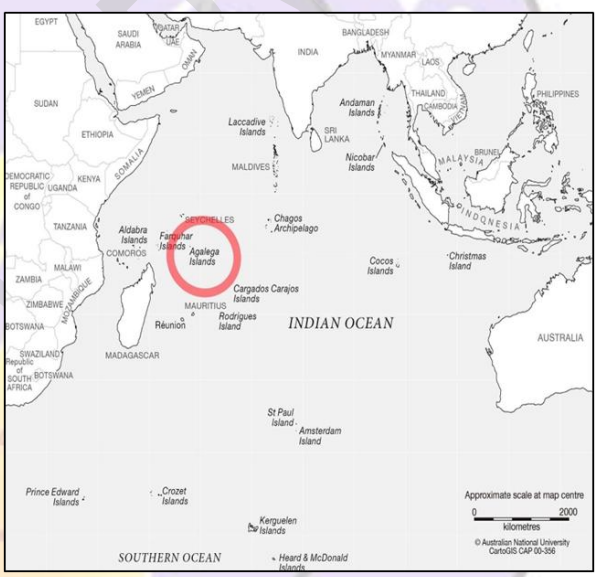
Will Agaléga be an Indian military base?

No. India understands the importance of sovereignty, and the sensitivities of smaller nations when they interact with larger ones. India has always played by the rules — even when it has suffered on account of its respect for international law, and by trusting other countries that have resorted to deceit.

India does not believe in economic colonisation of smaller countries by luring them into debt traps. It has demonstrated that its methods of aiding smaller neighbours is more trustworthy and humane, even if somewhat inefficient. India's reputation as a democratic nation that believes in peaceful coexistence is unimpeachable, and it can be expected to never violate the sovereignty or offend the sensitivities of a trusted and friendly nation like Mauritius.

Vice Admiral Biswajit Dasgupta (Retd) is a former Commander-in-Chief of the Eastern Naval Command, Indian Navy

- **Why in News:** Prime Minister **Narendra Modi** and Mauritius Prime Minister **Pravind Jugnauth** virtually inaugurated an air strip and a jetty to ensure maritime security and connectivity to Mauritius' Agalega islands.
- **About Agalega Islands:**
  - Agalega islands lies approximately 650 nautical miles (1,050 km) north of Mauritius.
  - It is a group of two islands with a total area of 26 sq km and a native population of about 300 people.
- **Significance of Agalega Islands:**
  - The development of the Agalega Islands is in the socio-economic and national security interest of Mauritius, and also aligns with India's maritime vision.
  - The islands, a dependency of Mauritius, were not developed for many years.
  - The sustainability and well-being of the islands' inhabitants presented a challenge, as even the most basic needs required referral to Mauritius.
  - The near absence of an official government or security presence was a serious vulnerability.
  - This vulnerability could be converted to strength by developing the islands and creating facilities that could operate ships and aircraft.
  - Building a jetty and an airstrip was therefore considered imperative by the government of Mauritius.
  - They chose India as their preferred development partner.



- **Why Did Mauritians Choose India?**
  - Ties between India and Mauritius go back to 1948, 20 years before the country's independence from Britain.
  - **Seventy per cent of the inhabitants of Mauritius are of Indian origin**, and the two countries share deep historical, social, and cultural bonds.
  - The consistent feature in the history of bilateral relations has been friendship and trust at all levels — the political leadership, the diplomatic and military communities, as well as between the peoples of the two countries.
  - The development of these strategically located islands required trust more than anything else. Hence, India was the obvious choice.
- **Significance for India:**
  - The goodwill and trust between the two countries will be further enhanced.
  - India will welcome opportunities to further develop these islands in collaboration with Mauritius as the latter deems appropriate.
  - The joint development of Agalega underscores India's commitment to the vision of **Security and Growth for All in the Region (SAGAR)**.
  - It will indicate to other maritime neighbours that India is a benign and friendly country that respects the sovereignty of independent nations.
  - India would like to emerge as the preferred development and security partner in the Indian Ocean Region.
- **News Summary:**
  - Prime Minister Narendra Modi and Mauritius Prime Minister Pravind Jugnauth virtually inaugurated an air strip and a jetty in Mauritius' Agalega islands.
  - PM Modi said the two countries are working actively towards ensuring security, prosperity and stability in the Indian Ocean region.
  - These projects will "enhance the island's capacity and capabilities in marine surveillance and security, while also meeting development objectives".
  - Since 2003, several attempts had been made to upgrade the air strip, but nothing concrete materialised.
  - The move to develop and build the new airstrip and the jetty came after PM Modi's visit to the island country in March 2015.

- PM Modi flagged concerns over challenges in the Indian Ocean region and said India and Mauritius are “natural partners” in the maritime domain to deal with them.

NEELOFER CIVIL SERVICE CLASSES *UPSC AND KPSC WITH JKPSC* JAMMU AND KASHMIR
DO NOT COPY

4th March, 2024

1. Mountains of plastics are choking the Himalayan States

GS 3 (Environment)

Mountains of plastic are choking the Himalayan States

Plastic is ubiquitous everywhere, from the top of the highest mountain to the deepest of trenches in the ocean. It is found even inside the human lungs and placenta. Microplastics are formed by the degradation and the fragmentation of large plastic pieces that are improperly disposed of. Microplastic deposition and accumulation has been found in the Himalayan mountains, rivers, lakes and streams. These microplastics can be trapped in glaciers for a long time and released into rivers during snow melting. The Indian Himalayan Region is a critical source of water in the subcontinent, feeding a number of major rivers of India that include the Indus, Ganges and Brahmaputra river systems. Unscientific plastic disposal is causing soil and water pollution in the Indian Himalayan Region and impacting its biodiversity, which is having an adverse impact on the fresh water sources that communities downstream depend on.

Rapid and unplanned urbanisation and changing production and consumption patterns are responsible for the plastic waste crisis in the Indian Himalayan Region. A quantum jump in tourist footfalls is another reason for exacerbation of the problem. A recent report by the Social Development for Communities (SDC) Foundation Dehradun highlighting the plight of towns in Uttarakhand drowning in plastic waste is no surprise – almost all the mountain States face a similar situation. Recently, the National Green Tribunal issued notices to the Ministry of Environment, Forest and Climate Change, the Central Pollution Control Board (CPCB), the Himachal Pradesh State Pollution Control Board, the Deputy Commissioner Lahaul and Spiti and the Panchayat of Koksar in Himachal Pradesh on waste dumping in eco-sensitive areas by tourists and commercial establishments. In Assam, at the Ramsar site of Deepor Beel, Greater adjutant storks have been feasting on the plastic waste in the landfill instead of fish from the wetland. In Manipur, growing pollution in rivers, that include the Nambul, has been widely reported. The Himalayan Clean up (2018-23) that was conducted by the Integrated Mountain Initiative with Zero Waste Himalayas and the National Productivity Council of India's waste and brand audit show increasing plastic waste, especially non-recyclables, in the Indian Himalayan Region. The Himalayan Clean up (2022) waste audit results showed that 92.7% of trash was plastic, with 72% of waste being non-recyclable plastic.

Plastic waste versus management capacities

Every year, there is a day when the amount of plastic waste surpasses the capability of waste management systems to manage this. Environment Action, a Swiss-based organisation, calls it Plastic Overshoot Day. In 2023, India reached its plastic overshoot day on January 6, which is shocking especially as the EPR portal of CPCB claims that there is a systemic ability to deal with plastic waste. India has one of the highest mismanaged waste index (MWI), at 98.55%, in the world (after Kenya, Nigeria and Mozambique) which is the gap in waste management capacity and plastic consumption. The Government of India claims that it recycles 60% of plastic waste. In statistical analysis done by the Centre for Science and Environment (CSE) using CPCB data, India is merely recycling through mechanical recycling 12% of the plastic waste. Close to 26% of this waste is channelised for end-of-life solutions such as co-incineration, plastic-to-fuel and road making, which means we are burning 20% of our plastic waste and still calling it 'recycling' and when 68% of plastic waste is unaccounted for.

Legal mandate for waste management

Solid Waste Management Rules (SWM) 2016, Plastic Waste Management (PWM) Rules 2016 and Extended Producer Responsibility (EPR) 2022 constitute the regulatory framework for plastic waste management for India (at the country level). Special needs of hill areas are recognised by the SWM but are not factored in while creating a mandate for both local bodies and producers, importers and brand owners (PIBOs), while PWM and EPR have not even recognised the special needs of the hills.

States across the Indian Himalayan Region have also been taking various initiatives including enacting laws to curb this menace. Himachal Pradesh and Sikkim have special State laws banning the use of plastics. Himachal Pradesh has a buy back policy for non-recyclable and single-use plastic waste since 2095, but there is still widespread littering of plastic waste. Sikkim banned packaged mineral water use from January 2022 and has a fairly robust regulatory system, but in the absence of proper infrastructure to handle plastic waste, the State is still grappling with the issue. Mizoram has been proactive on the regulatory front – the Aizawal Municipal Corporation made by-laws under the PWM in 2019. Tripura has made policy changes, enacted municipal by-laws and has a State-level task force to eliminate Single Use Plastic though the results are not visible. The collective mandate of SWM/PWM/EPR requires waste segregation at source. Segregation of not only plastic from other waste but also different types of plastics is a prerequisite for any strategy to dispose of plastic waste in a scientific and sustainable manner. Waste segregation exists on paper, but a closer look shows landfills overflowing with mixed waste. The leachate from the mixed waste causes soil and groundwater pollution while fumes from such mixed waste cause air pollution. A huge amount of plastic waste which can be recycled still remains in landfills.

Under the SWM, PWM and EPR, the task of waste management from collection to its scientific disposal is the duty of local bodies. They can take help from PIBOs for the setting up and operationalisation of the plastic waste management system, as mandated under the EPR. Though local bodies are the pivot of the waste management system in the country, a commensurate devolution of power to them is still work in progress. Very few States have enacted model by-laws and very few local bodies themselves have made by-laws to operationalise the mandate. There is no clarity regarding the mandate to ensure collaboration between local bodies and PIBOs. There is a need to include traditional institutions within the definition of local bodies when it comes to the Indian Himalayan Region (prevalent in many States in the northeast). It is important to note that under Swachh Bharat Mission (SBM) and the Fifteenth Finance Commission, money was allocated to these traditional institutions.

Plugging data gaps is one step

There is a need for appropriate resource allocation and support that is considerate of and reflective of the rich biodiversity, ecological sensitivity and fragility of the Indian Himalayan Region, besides taking into account the specific geographical challenges of mountain waste management. Empowering local bodies and creating the necessary infrastructure for waste management need immediate attention. Segregation of waste and the participation of the people in this endeavour with the help of sustained public education campaigns are a sine qua non. Geographical neutrality of targets under the EPR could be countered if the higher cost of EPR operationalisation in the mountain region is given its due consideration. The value of the EPR certificate which is earned by a PIBO in the Indian Himalayan Region could be higher than one earned in the rest of the country for every ton of plastic waste processed.

Data gaps in terms of the quantum and quality of waste being generated in the Indian Himalayan Region States should be plugged. Convergence in existing schemes such as SBM, the Mahatma Gandhi National Rural Employment Guarantee Act and the Finance Commission's grants could be used to create the infrastructure, maintain and run operations. The Swachh Bharat Kosh Trust set up to facilitate the channelisation of philanthropic contributions and corporate social responsibility funds towards this cause could also be used to augment resources. The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Scheme under which many cities in the Indian Himalayan Region are selected, could also work in convergence on the issue of scientific waste management and making cities in the Indian Himalayan Region free of plastic.

Archana Vaidya is a Natural Resource Management (NRM) and Environment Law consultant and an advocate at the High Court of Himachal Pradesh

Vikram Hegde is an advocate in the Supreme Court of India

Empowering local bodies and creating the necessary infrastructure for waste management in the Indian Himalayan Region need immediate attention

- **Why in News:** Plastic pollution in the Indian Himalayan Region has become a significant concern due to rapid urbanization, changing production patterns, and increasing tourist footfalls, leading to adverse impacts on biodiversity and freshwater sources.
- **Impact of Plastic Pollution**
  - **Ubiquitous Presence of Plastic:** Plastic pollution is widespread, affecting diverse ecosystems from mountains to oceans, and even inside human bodies like lungs and placenta.
  - **Environmental Degradation:** Improper disposal of plastic waste in the Indian Himalayan Region is causing soil and water pollution, threatening biodiversity and freshwater sources vital for downstream communities.
  - **Challenges from Tourism:** Increasing tourist footfalls exacerbate the plastic waste crisis, with reports of towns drowning in plastic waste and fragile ecosystems like Ramsar sites affected.
- **Regulatory Framework and Challenges**
  - **Legal Mandates:** Solid Waste Management Rules (SWM) 2016, Plastic Waste Management (PWM) Rules 2016, and Extended Producer Responsibility (EPR) 2022 constitute the regulatory framework, but specific needs of hill areas are often overlooked.
  - **State Initiatives:** Some states like Himachal Pradesh, Sikkim, and Mizoram have enacted laws to curb plastic use, but challenges persist in enforcement and infrastructure development.
  - **Waste Management Gap:** Despite legal mandates, waste segregation and scientific disposal remain inadequate, with overflowing landfills contributing to soil, water, and air pollution.
- **Solutions and Policy Recommendations**
  - **Resource Allocation and Support:** Adequate resource allocation, infrastructure development, and empowerment of local bodies are crucial for effective waste management, considering the region's ecological sensitivity.
  - **Public Participation and Education:** Public engagement through sustained education campaigns and waste segregation initiatives is essential to address the plastic waste crisis.
  - **Convergence of Schemes:** Convergence of existing schemes like Swachh Bharat Mission, Finance Commission grants, and corporate social responsibility funds can enhance resources for waste management infrastructure and operations

2. Odisha's Rupa Tarakasi gets GI tag

GS 1 (Art and Culture)

Odisha's famed Rupa Tarakasi, Banglar Muslin earn GI tag

Sangeetha Kandavel
CHENNAI

The famous Cuttack Rupa Tarakasi (silver filigree) has been given the Geographical Indication (GI) tag by the Geographical Indications Registry in Chennai. The application was filed by the Odisha State Cooperative Handicrafts Corporation Limited and was facilitated by the Department of Textile and Handicrafts, Government of Odisha. Filigree has been traditionally associated with fine craftsmanship and luxurious design in classical jewellery.

The historical records attached along with the GI filing mention: "Archaeological evidence suggests that filigree was incorporated in the region as early as 2,500 BCE in Mesopotamia where it is practised even today as Telkari work. According to historians, there is every possibility that the Tarakasi work reached Cuttack from Persia through Indonesia 2,500 years ago through trade. The argument is based on similar workmanship seen in both Cuttack and Indonesia."

"There are multiple pieces of evidence that mention the exchange of pottery and goods between Kalinga and Indonesia," the record noted.

The other products to join the GI league are Banglar Muslin, one of the popular traditional handloom crafts of Bengal, Nagpur Orchard Santra, pink ducts, and Kutch rogan craft.

Ratlam Riyawan Lahsun (Garlic), a variety named after Riyan village in Ratlam district of Madhya Pradesh, has received the GI tag along with the Ambaji White Marble, which is formed when limestone is re-crystallised under the region's vast due to intense pressure and heat. Tripura Eksa Textile, Hyderabad Lac Bangles, Majuli Mask and Sikkim Large Cardamom are other products that got GI tag.

The Majuli Mask of Assam is made in different varieties and sizes as they are mainly divided into different categories – Ahakhu (huge mask) which is worn by the Zoraloi hanging mask, which is bigger in size, extends to the chest, while Cho Ahakhu (huge mask) covers the head and body.

- **Why in News:** The famous silver filigree (Rupa Tarakasi) of the millennium Cuttack city in Odisha has received the geographical indication (GI) tag from the Chennai-based Geographical Indications Registry.
- **More on News:**
  - It is a centuries-old sophisticated craft practiced in the sliver city of Cuttack.
  - Rupa Tarakasi is one of the most exquisite silver crafts. In this work of craft, silver bricks are transformed into thin fine wires (tara) or foils, from which silver filigree is made with

all designs (kasi).

3. Calcutta HC judge Abhijit Gangopadhyay to resign

GS 2 (Judiciary)

Justice Gangopadhyay of Calcutta HC says quitting to join politics, slams TMC

BJP, Cong say he is welcome; TMC calls him political party worker

SWEETY MISHRA & APURVA VISHWANATH
KOLKATA, NEW DELHI, MARCH 3

IN AN UNPRECEDENTED move, Justice Abhijit Gangopadhyay, a sitting judge of the Calcutta High Court, said Sunday that he will resign Tuesday as a judge and join politics.

The judge, who is due to retire in August, has been at the centre of controversy for his frequent remarks against some of his own colleagues, the ruling TMC and its leader Abhishek Banerjee.

"I will enter the field of politics. I am not telling you today which party I will start with. I want to first finish the little work that is still left in court. Tomorrow, I will wrap that up, I will verbally inform the Chief Justice. And the day-after morning, I will send my resignation to the President," Justice Gangopadhyay said in an interview with Bengali TV news channel ABP Ananda.

His announcement came a CONTINUED ON PAGE 2

Justice Abhijit Gangopadhyay in Kolkata on Sunday. PTI

In a divided Bar, judge's move raises questions on independence of judiciary

APURVA VISHWANATH
NEW DELHI, MARCH 3

A SITTING judge of a Constitutional court resigning to join politics is not new.

Former Chief Justice of India Koka Subba Rao in 1967 had resigned three months before his retirement to contest Presidential elections as the Opposition candidate against Congress's Zakir Hussain.

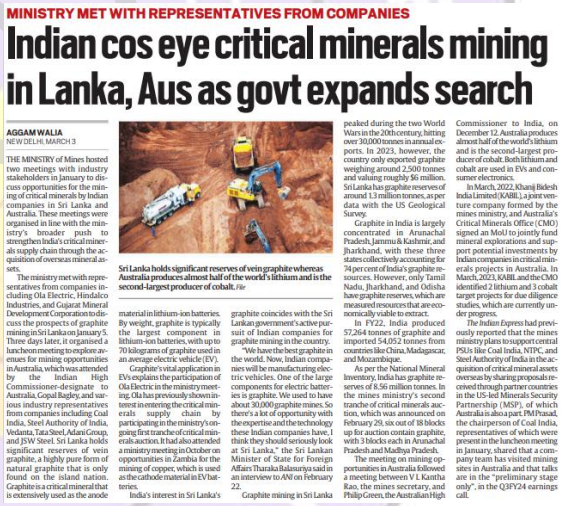
Barely six weeks before his retirement, former SC judge Baharul Islam resigned in 1983 to contest the Lok Sabha elections from Barpeta, Assam, as a Congress candidate.

Yet, Calcutta High Court Judge Abhijit Gangopadhyay's announcement of his resignation and that he CONTINUED ON PAGE 2

- **Why in News:** In an unprecedented move, Justice Abhijit Gangopadhyay, a sitting judge of the Calcutta High Court, said that he will resign as a judge and join politics.
- **Procedure to appoint judges of High Courts**
  - **Constitutional Provision**
    - **Article 217** of Indian Constitution covers the appointment and conditions of a High Court Judge.
    - It says that every Judge of a High Court shall be **appointed by the President** by warrant under his hand and seal after consultation with the Chief Justice of India, the Governor of the State.
      - In the case of appointment of a Judge other than the Chief Justice, the Chief Justice of the High Court shall also be consulted.
      - The Chief Justice of the High Court is appointed as per the policy of having Chief Justices from outside.
        - The collegium system takes a call on the issue of elevation of Judges.
        - For the promotion to Chief Justices, the seniority of judges below the Chief Justice will be based on their rank within their own High Courts.
        - They will be eligible for consideration as Chief Justices in other High Courts when it would have been their turn for consideration in their own High Courts.
  - **Eligibility**
    - A person shall not be qualified for appointment as a Judge of a High Court unless he is a citizen of India and—
      - has for at least ten years held a judicial office in the territory of India; or
      - has for at least ten years been an advocate of a High Court in any State specified in the First Schedule or of two or more such Courts in succession.
      - A High Court judge holds office until they are **62 years old**.
  - **Procedure**
    - A Collegium comprising the CJI and two senior-most judges recommends the names for the appointment for Judges of HCs.
      - The CJI is required to consult with two senior-most judges of the Supreme Court.
    - However, this process is initiated by the Chief Justice of the High Court concerned.
      - The **Chief Justice of the High Court is also required to consult his two senior-most puisne Judges** before recommending a name for appointment to the High Court.
      - The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister.
  - **Controversy over the Word Consultation**
    - The constitutional provision gave the CJI and other judges the status of consultant and left the decision of appointment to the executives.
    - This has been interpreted by the SC in a different way ultimately leading to the evolution of Collegium system.
  - **Evolution of Collegium System**
    - **First Judges Case (1982)**
      - SC held that consultation does not mean concurrence
      - Gave Primacy to Executive
    - **Second Judges Case (1993)**
      - Court reversed its earlier ruling by changing the meaning of consultation to concurrence.
      - Advice tendered by CJI is binding.
      - CJI would take into account the views of two of his senior most colleagues.
    - **Third Judges Case (1998)**
      - Court gave primacy to the opinion of CJI in the matter of appointment of Judges.
      - However, Chief Justice must consult four senior most judges of SC
      - Opinion of all members of the collegium should be in writing.
    - **Resigning/Removal of judges of High Courts**
      - A Judge may, by writing under his hand addressed to the President, resign his office;
      - a Judge may be removed from his office **by the President** in the manner provided in clause (4) of article 124 for the removal of a Judge of the Supreme Court (impeachment process).

- **Justice Abhijit Gangopadhyay to resign – Analysis**
  - **Not a new phenomenon**
    - A sitting judge of a Constitutional court resigning to join politics is not new.
    - Former CJI Koka Subba Rao in 1967 had resigned three months before his retirement to contest Presidential elections as the Opposition candidate against Congress's Zakir Hussain.
    - Barely six weeks before his retirement, former SC judge Baharul Islam resigned in 1983 to contest the Lok Sabha elections from Barpeta, Assam.
  - **Debate around the independence of the judiciary**
    - The recent announcement by the Abhijit Gangopadhyay marks a telling moment in the discourse around the independence of the judiciaryIt comes at a time when the bar in the state is deeply divided, reflecting – and sometimes shaped by – the fault-lines of the state's politics.
    - Moreover, for more than two years, both in his judicial orders and in media interviews, Justice Gangopadhyay has attacked the ruling party of WB.
    - Against these backdrops, Justice Gangopadhyay's decision would send a bad message about the judiciary.
      - It is not in judicial temperament to be hearing cases, deciding for or against the government till a week ago, and then to resign and join politics when elections are announced.
  - **No internal mechanism to maintain judicial discipline**
    - There is no mechanism to deal with judges for crossing the line between judicial discipline and entering politics, while still in office.

4. India eye critical minerals mining in Sri Lanka, Australia
GS 3 (Environment)


MINISTRY MET WITH REPRESENTATIVES FROM COMPANIES

Indian cos eye critical minerals mining in Lanka, Aus as govt expands search

AGGAM WALIA
NEW DELHI, MARCH 3

THE MINISTRY of Mines hosted two meetings with industry stakeholders in January to discuss opportunities for the mining of critical minerals by Indian companies in Sri Lanka and Australia. These meetings were organised in line with the ministry's broader push to strengthen India's critical minerals supply chain through the acquisition of overseas mineral assets.

The ministry met with representatives from companies including Ola Electric, Hindalco Industries, and Gujarat Mineral Development Corporation to discuss the prospects of graphite mining in Sri Lanka on January 9. Three days later, it organised a luncheon meeting to explore avenues for mining opportunities in Australia, which was attended by the Indian High Commissioner-designate to Australia, Gopal Bagley, and various industry representatives from companies including Coal India, Steel Authority of India, Vedanta, Tata Steel, Adani Group, and JSW Steel. Sri Lanka holds significant reserves of vein graphite, a highly pure form of natural graphite that is only found on the island nation. Graphite is a critical mineral that is extensively used as the anode material in lithium-ion batteries. By weight, graphite is typically the largest component in lithium-ion batteries, with up to 70 kilograms of graphite used in an average electric vehicle (EV).

Graphite's vital application in EVs explains the participation of Ola Electric in the ministry meeting. Ola has previously shown interest in entering the critical minerals supply chain by participating in the ministry's ongoing first tranche of critical minerals auction. It had also attended a ministry meeting in October on opportunities in Zambia for the mining of copper, which is used as the cathode material in EV batteries.

India's interest in Sri Lanka's graphite coincides with the Sri Lankan government's active pursuit of Indian companies for graphite mining in the country.

"We have the best graphite in the world. Now, Indian companies will be manufacturing electric vehicles. One of the large components for electric batteries is graphite. We used to have about 30,000 graphite mines. So there's a lot of opportunity with the expertise and the technology these Indian companies have, I think they should seriously look at Sri Lanka," the Sri Lankan Minister of State for Foreign Affairs Tharaka Balasuriya said in an interview to ANI on February 22.

Graphite mining in Sri Lanka peaked during the two World Wars in the 20th century, hitting over 30,000 tonnes in annual exports. In 2023, however, the country only exported graphite weighing around 2,500 tonnes and valuing roughly $6 million. Sri Lanka has graphite reserves of around 1.3 million tonnes, as per data with the US Geological Survey.

Graphite in India is largely concentrated in Arunachal Pradesh, Jammu & Kashmir, and Jharkhand, with these three states collectively accounting for 74 per cent of India's graphite resources. However, only Tamil Nadu, Jharkhand, and Odisha have graphite reserves, which are measured resources that are economically viable to extract.

In FY22, India produced 57,264 tonnes of graphite and imported 54,052 tonnes from countries like China, Madagascar, and Mozambique.

As per the National Mineral Inventory, India has graphite reserves of 8.56 million tonnes. In the mines ministry's second tranche of critical minerals auction, which was announced on February 29, six out of 18 blocks up for auction contain graphite, with 3 blocks each in Arunachal Pradesh and Madhya Pradesh.

The meeting on mining opportunities in Australia followed a meeting between V L Kantha Rao, the mines secretary, and Philip Green, the Australian High Commissioner to India, on December 12. Australia produces almost half of the world's lithium and is the second-largest producer of cobalt. Both lithium and cobalt are used in EVs and consumer electronics.

In March, 2022, Khanij Bidesh India Limited (KABIL), a joint venture company formed by the mines ministry, and Australia's Critical Minerals Office (CMO) signed an MoU to jointly fund mineral explorations and support potential investments by Indian companies in critical minerals projects in Australia. In March, 2023, KABIL and the CMO identified 2 lithium and 3 cobalt target projects for due diligence studies, which are currently under progress.

The Indian Express had previously reported that the mines ministry plans to support central PSUs like Coal India, NTPC, and Steel Authority of India in the acquisition of critical mineral assets overseas by sharing proposals received through partner countries in the US-led Minerals Security Partnership (MSP), of which Australia is also a part. PM Prasad, the chairperson of Coal India, representatives of which were present in the luncheon meeting in January, shared that a company team has visited mining sites in Australia and that talks are in the "preliminary stage only", in the Q3FY24 earnings call.

Sri Lanka holds significant reserves of vein graphite whereas Australia produces almost half of the world's lithium and is the second-largest producer of cobalt. *File*

- **Why in News:** The Ministry of Mines hosted two meetings with industry stakeholders in January to discuss opportunities for the mining of critical minerals by Indian companies in Sri Lanka and Australia. These meetings were organised in line with the ministry's broader push to strengthen India's critical minerals supply chain through the acquisition of overseas mineral assets.
- **Need**:
  - India's international commitments towards **reducing carbon emissions**, which require the country to urgently relook at its mineral requirements for **energy transition and net-zero commitments.**
  - Critical Minerals forms part of multiple strategic value chains, including **clean technologies initiatives**such as **zero-emission vehicles**, wind turbines, solar panels; information and communication technologies, including semiconductors; and advanced manufacturing inputs and materials such as defence applications, permanent magnets, and ceramics.
- **Major concerns globally and for India:**
  - **Dependence on China**: If India is not able to explore and produce these minerals, it will have to depend on other countries, including China, to power its energy transition plans to electric vehicles.
  - **Lack of Expertise**: the reason India would not have found a place in the Minerals Security Partnership grouping is because the country does not bring any expertise to the table.
  - **Difficult to mine**: Although they are more abundant than their name implies, they are difficult and costly to mine and process cleanly.
  - **Monopoly of few**: Most of the reserves being present in few nations causes problems for most of the world because of the concentration of reserves in the hands of few countries.
  - **Supply Chain**: Forming forward and backward supply chains will create problems when the reserves are mostly limited to one country.

- **Environmental Impact**: The chief concern is that the rare earth elements are bound up in mineral deposits with the low-level **radioactive element thorium**, exposure to which has been linked to an increased risk of developing lung, pancreatic, and other cancers.
- **Capital-Intensive:**The mining and extraction processes are capital-intensive and consumes large amounts of energy.
- **Health hazards:** The mining of these minerals releases toxic by-products which are harmful for the environment and human health.

- **India's position on Critical minerals:**
  - Though India has **6% of the world's rare earth reserves**, it only produces **1% of global output**, and meets most of its requirements of such **minerals from China**.
  - In 2018-19, for instance, **92% of rare earth metal imports** by value and 97% by quantity were sourced from China.
  - In India, **monazite and thorium** is the principal source of rare earths.
- **Critical Minerals in major economies:**
  - **The US** has declared 50 minerals critical in light of their role in national security or economic development.
  - **The UK** considers 18 minerals critical, the **European Union** has declared 34 minerals critical, and **Canada and Japan** 31 each.
  - **Australia** has 26 critical minerals.
  - **India-Australia Critical Minerals Investment Partnership:** India and Australia recently decided to strengthen their partnership in the field of projects and supply chains for critical minerals. Australia will commit 5.8 million dollars to the **three-year India-Australia Critical Minerals Investment Partnership.**

5. Scheme for Providing Financial Assistance to the States for Capital Expenditure GS 2 (Governance)

- **Why in News:**
  - Introduced in FY21, the scheme for providing financial assistance to the states for capital expenditure was extended to FY25 in the Interim Budget 2024.
  - Recently, the central government has introduced conditions for untied capex loans to states, such as the States must follow the branding norms for centrally sponsored schemes (CSSs) to access interest-free loans.

States must follow branding norms for central schemes to get interest-free loans

PRASANTA SAHU
NEW DELHI, MARCH 3

TO RECEIVE interest-free capital expenditure loans from the Centre under the "untied" category, states will have to comply with the branding norms for centrally sponsored schemes (CSSs) and deposit interest accrued on the unutilised central-schemes funds lying with the state-level single nodal agencies (SNA) by March 31.

The scheme for providing financial assistance to the states for capital expenditure, introduced in FY21, was extended to FY25 in the interim Budget with an outlay of Rs 1.3 trillion as against the revised estimate of Rs 1.05 trillion for FY24.

Of the Rs 1.3 trillion for FY25, Rs 55,000 crore in untied capex loans would be rolled out from April 1, 2024. The reform/project linked Rs 75,000 crore would be rolled out after the new government is formed in May-June.

With many states tweaking the names of CCSs, the Centre has made it mandatory that to avail of the the capex loan, they would have to retain the official name of all schemes and any guidelines/instructions issued in this regard. Further, the SNA model requires states to notify an SNA for each CSS to receive funds from both the Centre and from state budgets. The Centre has now mandated that states have to deposit the central share of interest earned in SNA accounts till March 31, 2024, in the Consolidated Fund of India and submit a certificate in this regard to benefit from the loan facility.

Funds provided under the 50-year interest loan scheme would be over and above the normal borrowing ceiling allowed to the states for FY25, during which the loan amount has to be spent.

The untied loans would be released to states in two instalments with the first instalment of 66 per cent of the approved amount on meeting the mandatory conditions and the second instalment of 34 per cent will be released on utilization of at least 75 per cent of the amount released in the first installment.

Separately, the government would also release Rs 5,000 crore tied loans approved in FY24 under the component for housing for police personnel or as part of police stations in urban areas, construction of Unity Malls and libraries/digital infrastructure.

It has also earmarked another Rs 5,000 crore for the development of iconic tourist centres to a global scale.

Guidelines for this would be unveiled after the new government assumes power along with other reforms to be mandated under the Rs 75,000 crore tied component to make India a developed nation by 2047. FE

- **What is Capital Expenditure/Capex?**
  - Capital expenditure includes money spent by the government on the following:
    - **Development of physical assets** like machinery, equipment, building, **health facilities, education**, etc.
    - Acquiring fixed (land) and intangible assets
    - Upgrading an existing asset
    - Repairing an existing asset
    - Repayment of loan
  - The Budget estimate of the government of India's capital expenditure for the year 2020-21 was Rs 1,084,748 crore.
  - Capex of government has been **considered to be the prime driver of capex in the economy** in the last few years.
    - This is because the private sector has not been in a position to invest due to lower demand and high inflation.
- **Why is Capital Expenditure Important?**
  - Capital expenditure, which leads to the **creation of assets**, is **long-term** in nature and allows the **economy to generate revenue for many years** by adding or improving production facilities and boosting **operational efficiency.**
  - Acquiring fixed assets gives **profits or dividends in future**, repayment of loan **reduces liability.**
  - It also increases **labour participation**, takes stock of the economy and **raises its capacity** to produce more in future.
- **Capex vs Revenue Expenditure and Concerns about the Rising Capex in India:**
  - Unlike capital expenditure, **revenue expenditure** (salaries of employees, interest payment on past debt, subsidies, pension, etc) is one that neither creates assets nor reduces any liability of the government.
    - **It is recurring in nature.**

- In the FY 2019-20, capital expenditure was **14.2% of Budget Estimates**.
- **The government had to cut public spending** sharply towards the end of the financial year in order that the **deficit target** could be met.

- **Interim Budget 2024 Announcements wrt Capex:**
  - The scheme for providing financial assistance to the states for capital expenditure was extended to FY25 with an **outlay of Rs 1.3 trillion** as against the revised estimate of Rs 1.05 trillion for FY24.
    - In the Interim Budget, **the Centre cut the outlay for the capex facility by 19% to Rs 1.05 trillion** from the budget estimate of Rs 1.3 trillion **for FY24** as some states failed to meet conditionalities.
    - Andhra Pradesh, Kerala and Punjab did not receive any funds in FY24 from the liberal loan facility as these states –
      - Did not fulfil the conditionalities or
      - Failed to fully spend the amounts allocated to them in the previous fiscal under the scheme.
    - Of the Rs 1.3 trillion for FY25, **Rs 55,000 crore in united capex loans** would be rolled out from April 1, 2024.
    - **The reform/project linked Rs 75,000 crore** would be rolled out after the new government is formed in May-June.
- **Conditions for Untied Capex Loans to States:**
  - **The untied loans would be released to states in two instalments –**
    - With the first instalment of 66% of the approved amount on meeting the mandatory conditions and
    - The second instalment of 34% will be released on utilisation of at least 75% of the amount released in the first instalment.
  - To receive interest-free capital expenditure loans from the Centre under the "untied" category, **states will have to comply with the branding norms for centrally sponsored schemes (CSSs)**.
  - Also, they **have to deposit interest accrued on the unutilised central-schemes funds** lying with the state-level single nodal agencies (SNA) by March 31.
  - With many states tweaking the names of CSSs, the Centre has made it mandatory that to avail the capex loan, they would have to r**etain the official name of all schemes**.
  - Further, the SNA model requires states to notify an SNA for each CSS to receive funds from both the Centre and from state budgets.

6. Grey zone warfare
Recent events of importace

- **Why in News:**
  - On the last day of the 2024 Raisina Dialogue, India's Chief of Defence Staff General Anil Chauhan said that **grey zone warfare** is the latest in informal warfare.
  - During a discussion titled 'The New Wars: Policies, Practices, and Preparation', he gave an example of the situation in the South China Sea.
    - Occasionally, confrontational incidents involving small boats have been reported in the region, over the fact that several countries have extended competing territorial claims here.

GREY ZONE WARFARE

The term was recently used by Chief of Defence Staff General Anil Chauhan at the Raisina Dialogue

RISHIKA SINGH
NEW DELHI, MARCH 3

ON THE last day of the 2024 Raisina Dialogue (on February 24), India's Chief of Defence Staff General Anil Chauhan said "grey-zone warfare" was the latest in informal warfare.

During a discussion titled 'The New Wars: Policies, Practices, and Preparation', he gave an example of the situation in the South China Sea, where several countries have extended competing territorial claims, and where occasional confrontations involving small boats have been reported.

In commentaries on China and Taiwan too, the term crops up in descriptions of Chinese actions around the island that it claims as its own.

What is grey zone warfare?

Grey zone warfare generally means a middle space between the black and white of direct conflict and peace.

A blog from the thinktank Atlantic Council quotes Clementine G Starling, a resident fellow in the Transatlantic Security Initiative, as saying, "A multitude of activities fall into this murky in-between — from nefarious economic activities, influence operations and cyberattacks to mercenary operations, assassinations, and disinformation campaigns."

Other experts include economic actions too, such as debt traps and economic sanctions.

Tactics of grey zone warfare became more popular during the Cold War, the phase of intense US-USSR rivalry for ideological and economic dominance after the Second World War in 1945. Since both powers were nuclear-armed, direct conflict could not be risked.

Experts told the thinktank that such methods can also be employed by parties who have not had access to massive resources or power traditionally. Such tactics, thus, can help them gain an advantage over a technically superior adversary more used to conventional warfare.

What can it look like?

Experts from the US and Europe have characterised certain Russian and Chinese actions of late as examples of grey zone warfare.

This includes the Chinese military's presence in the South China Sea. The Philippines is one of the countries which has challenged China's territorial claims extending to over 80 per cent of the region. In December 2023, it termed the presence of more than 135 Chinese maritime militia vessels near a disputed reef as "illegal". It accused China of firing water cannons at its boats and ramming into others, while the Chinese coast guard blamed the Philippines for hitting Chinese boats.

Another example can be found in a recent *Reuters* report, which said, "Taiwan has complained for four years of stepped-up Chinese military action, such as fighters regularly flying over the strait as part of a 'grey zone' strategy to wear down Taiwan with activities that stop short of a full-blown conflict."

In a paper from the foreign policy research institute Pacific Forum, titled 'The Gray Zone Issue: Implications for US-China Relations', a researcher argued that the US has also engaged in similar tactics. These include its economic sanctions against China and imposition of duties on Chinese imports to the US, along with maritime reconnaissance.

What risks does it pose?

A country could be indulging in grey zone warfare only as bait, getting its rival to react in a way that then legitimises military reprisal from its side.

Taiwan's Lion Islet, with China's Xiamen in the background. China's actions around Taiwan have been termed grey zone warfare. *Reuters*

- **What does grey zone warfare mean?**
  - **About**
    - Grey zone warfare generally means a **middle, unclear space that exists between direct conflict and peace in international relations.**
    - Multitude of activities fall into this zone — from nefarious economic activities, influence operations, and cyberattacks to mercenary operations, assassinations, and disinformation campaigns.
    - Other experts include economic actions too, such as debt traps and economic sanctions.
  - **Features**
    - Activities in the grey zone have always been a feature of great-power competition.
    - Proxy wars, destabilizing insurgencies, legal warfare (lawfare), and information warfare—by adversaries and allies alike—have been a feature of this conflict.
    - Experts claim that such methods are often employed by parties who have not had access to massive resources or power, traditionally. Therefore, such tactics can help gain an advantage over a more technically well-equipped adversary that is more used to conventional warfare.
  - **Origin**
    - Experts believe the Cold War era, which began after the end of the Second World War in 1945, led to conditions that favoured grey zone warfare.
    - Amid the US-USSR rivalry for ideological and economic dominance, the knowledge that both parties were armed with nuclear weapons meant direct conflicts had to be restrained.

DO NOT COPY

- In today's nuclear age, the price of traditional wars has become too high, and the danger of things getting worse is very serious.
- Because of this, countries are trying to achieve their goals by being aggressive in secret or by hiding.

- **What grey zone warfare looks like?**
  - Experts from the US and Europe have characterised certain Russian and Chinese actions of late as examples of grey zone warfare.
  - It includes the Chinese military's presence in the South China Sea.
    - The Philippines is one of the countries which has challenged China's claims, extending over around 80 per cent of the region.
    - In December 2023, it termed the presence of more than 135 Chinese maritime militia vessels near a disputed reef as illegal.
    - It accused China of firing water cannons at its boats and ramming into others, while the Chinese coast guard blamed the Philippines for hitting Chinese boats.
  - A recent Reuters report mentioned that Taiwan has been expressing concerns for the past four years about increased military actions by China.
    - This includes Chinese fighter jets flying over the strait regularly.
    - It is part of China's strategy to pressure Taiwan with activities that fall just short of starting a full-scale conflict.
  - Analysts claim that the US has also engaged in similar tactics.
    - These include its economic sanctions against China and imposition of duties on Chinese imports to the US, along with maritime reconnaissance.
- **Why is grey zone warfare seen as a separate category of action?**
  - The challenges that grey zone warfare poses differ from those of an open conflict.
    - Here, action is often covert or indirect, meaning a country's response needs to be appropriate in terms of its scale.
    - These actions could be designed to bait the other party into escalation.
    - If this happens, the use of force would then be legitimised as a form of self-defence or response in kind to what the other party does.
  - Other reasons for engaging in such tactics include the projection of strength, and to normalise disputed territorial claims by repeatedly marking a presence in those regions.
  - Judging by its appearance, grey zone conflict seems mild when compared to traditional strategic competition.
  - However, the limited intensity does not make grey zone conflict less vicious
  - Rather than escalate in one-dimension, grey zone conflict tends to escalate in multiple dimensions and leads to unintended over-escalation, creating a nightmare for crisis management.

7. Obesity on the Rise, High Levels of Undernutrition Persist in India

GS 2 (Health)

Why obesity, undernutrition high in India: what a Lancet study says

ANONNA DUTT
NEW DELHI, MARCH 3

INDIA HAS seen a steady increase in obesity levels, not only in adults but in children too, over the last 32 years. At the same time, the prevalence of undernutrition has remained high in the country. As a result, India is among countries with a high "double burden," according to a new *Lancet* study that examined the trends of malnutrition across the world over the last 32 years.

The study, published last Thursday, blamed a lack of access to affordable and nutritious food for the undernutrition and obesity. While lack of access to food can lead to undernutrition, increased access to processed foods high in fats, salt, and sugar has driven up obesity, the study added.

What are the parameters of being obese, underweight?

According to the World Health Organisation (WHO), obesity is an abnormal or excessive accumulation of fat that poses health risks.

Adults — anyone over the age of 20 years — are considered obese if they have a body mass index (BMI) of 30 kg/m2 or more. BMI is a person's weight in kilograms divided by the square of height in meters, according to the Centers for Disease Control and Prevention. School-aged children and adolescents — anyone between the ages of 5 and 19 years — are considered obese if their BMI is two standard deviations more than the mean.

Underweight is one of the four broad sub-forms of undernutrition. An adult is considered underweight if their BMI is less than 18 kg/m2. Children are considered underweight if their BMI is two standard deviations below the mean.

What do the numbers say about India?

Obesity in women has spiked in the past three decades — it increased from 1.2% in 1990 to 9.8% in 2022, according to the study. There were 44 million women living with obesity in 2022. Obesity in men increased by 4.9 percentage points during the same period, with 20 million men living with obesity in 2022.

EXPLAINED HEALTH

Among children, there has been a spike of 3 percentage points in girls and 3.7 percentage points in boys.

The study also found that 13.7% of women and 12.5% of men were underweight. Thinness — a measure of being underweight in children — in Indian girls was found to be the highest in the world, with a prevalence of 20.3%. It was the second-highest in Indian boys, with a prevalence of 21.7%.

Why are more women obese than men?

Speaking to *The Indian Express*, Dr V Mohan, one of the authors of the study from India, said: "Women are more prone to putting on weight because most of them do not have access to or time for physical activities such as walks or gyms. They are likely to put the nutrition of the family above theirs. They are also likely to have fewer hours of proper sleep."

What is the role of socio-economic conditions?

Dr Mohan explained that obesity is no longer the disease of the rich in India. He said: "Eating junk food is cheaper and easier. For example, the cost of samosas and pakodas at roadside shacks is less than fruit and vegetables. It is the same as the West, where a McDonald's burger will cost say a dollar but fresh vegetables cost much more."

While it is affecting more people, there continues to be a rural-urban divide in obesity. NFHS-5 data from last year shows that the prevalence of obesity was 31.7% in urban women and 19% in rural women. It was 26.6% among urban men and 18.8% among rural men.

Undernutrition persists in remote and rural parts of poorer states. "Undernutrition is prevalent in the extremely poor populations in states like Bihar, Jharkhand, or Odisha, where people might be eating just one meal a day," said Dr Mohan.

What are the impacts?

The health consequences of obesity are obvious. An increase in obesity, especially in children, is likely to lead to an increase in diseases such as diabetes, hypertension, heart attacks, and strokes. The effect of undernutrition, however, is not so obvious.

Dr Mohan said that undernutrition is likely to increase the burden of non-communicable diseases. "There is a well-known hypothesis that says babies who are born small are likely to have smaller organs and vessels. They have a catch-up growth later in life, but their bodies are less likely to adjust to increases in nutrition, making them more prone to lifestyle diseases. So when a healthy-weight baby and an under-weight baby become obese later in life, the risk of diabetes or other diseases is much higher in the under-weight baby," he said.

LONGER VERSION ON indianexpress.com/explained

- **Why in News:** According to a new study published by the Lancet, India has become one of the countries with a high "**double burden**," of **Obesity** and **Undernutrition**.
- **Meaning of Obesity & Undernutrition in Health-Related Studies:**
  - **Obesity**:
    - According to the World Health Organisation (WHO), obesity is an abnormal or excessive accumulation of fat that poses health risks.
    - **Adults** — anyone over the age of 20 years — are considered to be obese, if they have a **body mass index** (BMI) of 30 kg/m2 or more.
      - BMI is a person's weight in kilograms divided by the square of height in meters, according to the Centers for Disease Control and Prevention.
    - **School-aged children** and **adolescents** — anyone between the ages of 5 and 19 years — are considered obese, if their BMI is two standard deviations above the mean.
  - **Underweight**:
    - Underweight is one of the four broad sub-forms of undernutrition.
    - An adult is considered underweight if their BMI is less than 18 kg/m2.
    - School-aged children and adolescents are considered underweight if their BMI is two standard deviations below the mean.
- **Key Highlights of the Study Published by the Lancet:**
  - **Obesity in India:**
    - Obesity in women has spiked in the past three decades — it increased from 1.2% in 1990 to 9.8% in 2022, according to the study.
    - There were **44 million women living with obesity in 2022**.

- Meanwhile, obesity in men increased by 4.9 percentage points during the same period, with 26 million men living with obesity in 2022.
- Notably, there has also been a significant increase in childhood obesity.
- There has been a spike of 3 percentage points in girls and 3.7 percentage points in boys over the 32 years that the study examined.
- In 2022, 3.1% of girls and 3.9% of boys were obese.

- **Underweight in India**:
  - Despite a significant decline, the prevalence of underweight and thinness continues to be high across genders and age groups.
  - The study found that **13.7% of women and 12.5% of men were underweight**.
  - Thinness — a measure of being underweight in children — in Indian girls was found to be the highest in the world, with a prevalence of 20.3%.
  - And, it was the second highest in Indian boys, with a prevalence of 21.7%.
- **Why Women are more Obese than Men?**
  - Women are more prone to putting on weight because most of them do not have access to or time for physical activities such as walks or gyms.
  - They are also likely to put the nutrition of the family above theirs.
  - if central obesity were to be considered, obesity in women would be as high as 40% to 50% in many parts of the country.
  - A better predictor of future risk of diseases like diabetes and hypertension, **central obesity is an excess accumulation of fat in the abdominal area**.

- **Impact of Socio-economic Conditions on Obesity and Undernutrition:**
  - Obesity is no longer the disease of the rich in India. Eating junk food is cheaper and easier.
    - For example, the cost of samosas and pakoras available at roadside shacks is less than fruit and vegetables. While it is not nutritious, it is tastier.
  - While it is affecting more people, there continues to be a rural-urban divide when it comes to obesity.
  - An analysis of the National Family Health Survey-5 (NFHS-5) data from last year shows that the **prevalence of obesity was 31.7% in urban women and 19% in rural women**.
    - It was 28.6% among urban men and 18.8% among rural men.
  - Undernutrition persists in extremely remote and rural parts of poorer states where access to any kind of food is low.
  - Undernutrition is prevalent in the extremely poor populations in states like Bihar, Jharkhand, or Odisha, where people might be eating just one meal a day
- **Impact of Obesity & Undernutrition on Health:**
  - The health consequences of obesity are obvious. An increase in obesity, especially in children, is likely to lead to an increase in diseases such as diabetes, hypertension, heart attacks, and strokes.
  - The effect of undernutrition, however, is not so obvious. Undernutrition is likely to increase the burden of non-communicable diseases.
    - Non-communicable diseases are diseases that are not spread through infection or through other people, but are typically caused by unhealthy behaviors.
- **Way Ahead:**
  - Obesity and underweight should not be considered in isolation, according to the study.
  - As per the study, the underweight-obesity transition can occur rapidly, leaving their combined burden unchanged or higher.
  - It proposes that the **focus has to be on programmes that enhance healthy nutrition**.
    - These may include programmes such as targeted cash transfers, food assistance as subsidies or vouchers for healthy foods, free healthy school meals, and primary care-based nutritional interventions
  - Other than ensuring food security, the study also mentioned that there is an urgent need for supporting weight loss in those with obesity.
  - Prevention and management are especially important because the age of onset of obesity has decreased, which increases the duration of exposure.

5th March, 2024

1. Bribes for votes case - SC says MLAs and MPs not immune from prosecution

GS 2 (Governance)

SC ends immunity for legislators taking bribes

Seven-judge Bench overrules the 25-year-old JMM bribery case judgment, saying representative democracy is at stake; the court dismisses the fears of abuse of law by political parties in power

Krishnadas Rajagopal
NEW DELHI

A seven-judge Bench of the Supreme Court on Monday declared that parliamentary privilege or immunity will not protect legislators who take bribes to vote or speak in Parliament or State Legislative Assemblies from criminal prosecution.

"Privileges and immunities are not gateways to claim exemptions from the general law of the land... Corruption and bribery of members of the legislature erode the foundation of Indian parliamentary democracy," the Supreme Court observed.

The unanimous verdict authored by Chief Justice of India D.Y. Chandrachud overruled a 25-year-old majority view of the Supreme Court, laid down in the JMM bribery case judgment of 1998, that lawmakers who took bribes were immune from prosecution for corruption if they go ahead and vote or speak in the House as agreed.

The seven-judge Bench said the majority on the five-judge Bench in the JMM bribery case had erred. The court did not want to perpetuate the grave error. Representative democracy was at stake. Chief Justice Chandrachud clarified that the offence of bribery was complete the moment the corruption money was accepted.

"The legislator will face criminal prosecution whether or not he makes a speech or votes in favour of the bribe-giver. The offence of bribery is complete on the acceptance of the money or on the agreement to accept money being concluded," Chief Justice Chandrachud observed.

The Constitution Bench dismissed notions that whittling down parliamentary immunity would expose a vote or a speech made by Opposition lawmakers in the House to criminal investigation and thus enhance the possibility of abuse of the law by political parties in power.

CONTINUED ON » PAGE 10

Taking away privilege

A look at the observations made by the seven-judge Bench of the Supreme Court in its unanimous verdict:

- The JMM bribery case judgment of 1998, granting lawmakers immunity from prosecution for bribery, had wide ramifications on public interest, probity in public life and parliamentary democracy
- A claim of immunity should fulfil the twofold test that it is tethered to the collective functioning of the House and that it is necessary for the discharge of the essential duties of a legislator
- The offence of bribery is complete at the point when the legislator accepts the bribe

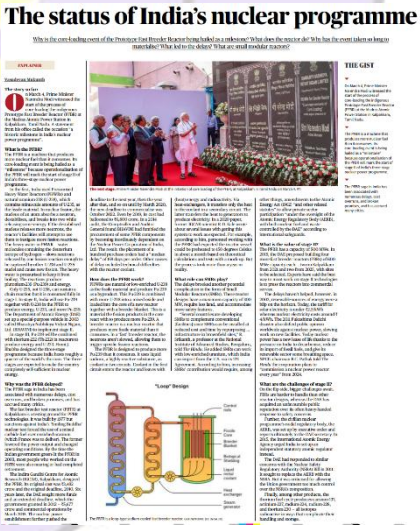
- **Why in News:**
  - A seven-judge Constitution Bench of the Supreme Court said that Members of Parliament and state legislatures who take bribes to vote or speak in a certain manner in the House are not immune from prosecution.
  - With this judgement, the apex court has overruled its 1998 judgment (JMM bribery case) which granted immunity to such lawmakers.
- **Privileges and Immunities to the MPs and MLAs:**
  - **Meaning:** Privileges are special rights, immunities and exemptions enjoyed by the two Houses of Parliament and legislature of States, and their committees and their members.
    - The Constitution has also extended these privileges to those persons who are entitled to speak and take part in the proceedings of a House or any of its committees.
    - For example, **the Attorney General of India**.
  - **Constitutional provisions: Article 105 and Article 194 to the Constitution of India** grant privileges or advantages to the MPs (Article 105) and to the MLAs (Article 194) of every State.
    - These powers, privileges and immunities should be **defined by the law** from time-to-time.
    - These privileges are considered as **special provisions** and have an overriding effect in conflict.
    - It must be clarified here that these privileges **do not extend to the President** (or Governor) who is also an integral part of the Parliament (or state legislature).
  - **Privileges mentioned in the Constitution:**
    - It gives the MPs **freedom of speech** [Article 115 (1)].
    - It provides that **no MP will be liable** to any proceedings before any Court for anything said or any vote given by him/her in the Parliament or any committee thereof [Article 105(2)].
      - Also, **no person will be held liable for any publication of any report, paper, votes or proceedings** if the publication is made by the parliament or any authority under it.
    - The same provisions are stated under **Article 194**, where MLAs of a state are referred instead of MPs.
  - **Purpose:** These privileges and immunities –
    - Are granted so that MPs/MLAs can perform their duties or can function properly without any hindrances - essential for democratic functioning of the legislatures.
    - Without these privileges,
      - The Houses can neither maintain their authority, dignity and honour.
      - Nor can protect their members from any obstruction in the discharge of their parliamentary responsibilities
  - **Difference between Article 19 and Article 105:**
    - Both the Articles, (Article 19(1)(a) and Article 105) of the Constitution talks about freedom of speech.
    - Article 105 applies to the members of parliament not subjected to any reasonable restriction. But, Article 19(1)(a) applies to citizens and is subject to reasonable restrictions.
    - This means, Article 105 is **an absolute privilege** given to the members of the parliament but this privilege can be used **in the premises of the parliament** and not outside the parliament.
- **Background of the present case**
  - **1998 P.V. Narsimha Rao Case**
    - In 1993, Jharkhand Mukti Morcha (JMM) leader Shibu Soren and some of his party MPs were accused of taking bribes to vote against the no-confidence motion against the then P V Narasimha Rao government.
    - The apex court (by a 3:2 majority) **granted immunity** from prosecution to MPs who took bribes and voted to save the then Congress government in Parliament.
    - The SC held that **legislators enjoy immunity from criminal prosecution for bribery in matters connected to their speech and votes in Parliament and Legislative Assemblies.**
  - **Matter reached Supreme Court again**
    - An MLA from the JMM, Sita Soren, was accused of accepting a bribe in return for her vote for a candidate during the 2012 Rajya Sabha elections.
    - **She moved the Jharkhand HC** for quashing the chargesheet and criminal proceedings against her, relying on the provisions of Article 194 (2), but the HC had declined to do so.
    - As a result, she appealed in the Supreme Court
  - **1998 Judgement referred to larger bench**
    - In March 2019, SC observed that the decision in P.V. Narasimha dealt directly with such cases.
    - However, the bench took note of the fact that the case was decided by a narrow margin (a 3:2 split among the five judges) and stated that the issue was a matter of substantial public importance.

- As a result, they referred the matter to a larger bench.
- In September 2023, a five-judge bench led by CJI Chandrachud demarcated three issues that needed to be reconsidered from the case and referred the case to a seven-judge bench.

- **Key highlights of the current judgement**
  - **No immunity on the charges of accepting bribe**
    - An individual member of the legislature cannot assert a claim of privilege to seek immunity under Articles 105 and 194 from prosecution on a charge of bribery in connection with a vote or speech in the legislature.
  - **Accepting bribes do not pertain to the duties of lawmakers**
    - Accepting a bribe is a **separate crime** that is not linked to the actions or words of a lawmaker within the Parliament or legislative assembly.
    - Therefore, the immunity provided under Articles 105 and 194 does not extend to cases of bribery, as these do not pertain to the duties of lawmakers.
  - **Threat to the functioning of Indian parliamentary democracy**
    - The court cautioned that granting such protection would create a group of individuals who enjoy unregulated exemption from the law.
    - It emphasized that corruption and bribery by legislators have the potential to undermine the functioning of Indian parliamentary democracy
    - Such a claim to immunity fails to fulfill the two-fold test:
      - that the claim is tethered to the collective functioning of the House and
      - that it is necessary to the discharge of the essential duties of a legislator.
  - **On the question of when the offence of bribery is considered as complete**
    - The court stated that the bribery is considered complete once the offer or agreement to bribe is made, regardless of whether the vote is cast in the agreed direction or if the vote is cast at all.

2. India's Nuclear Power Programme

GS 3 (Science and Tech)


The status of India's nuclear programme

- **Why in News:** Indian Prime Minister Narendra Modi witnessed the start of fuel loading at the **500 MWe Prototype Fast Breeder Reactor** at **Kalpakkam** in Tamil Nadu. **Fast breeder reactors** form the second stage of India's three-stage nuclear programme
- **India's three-stage programmes & Goals**
  - India has adopted a three-stage nuclear power programme, with the long-term goal of deploying a **thorium-based closed nuclear fuel cycle.**
    - The **first stage** involves the use of pressurised heavy water reactors (PHWRs), fuelled by natural uranium, and light water reactors.
    - The **second stage** involves reprocessing used fuel from the first stage to recover the plutonium to fuel FBRs.
    - In **stage 3,** Advanced Heavy Water Reactors (AHWRs) will burn thorium-plutonium fuels and breed fissile uranium-233.
  - The PFBR will initially use a core of **uranium-plutoniummixed oxide (MOX) fuel**, surrounded by a **uranium-238 'blanket'**, with plans to use a blanket of uranium and thorium to "breed" plutonium and **U-233** for use as driver fuels for AHWRs.
- **Significance**
  - The growth of the Indian nuclear power program is imperative to meet the twin goals of **energy security and sustainable development.**
  - As a **responsible nuclear power with advanced technology**, India remains committed to expand peaceful applications of nuclear technology, both in power and non-power sector, while ensuring the security of nuclear and radiological materials.

- Once commissioned, India will be the second country after Russia to have a commercially operating fast breeder reactor. Many countries, including the US, Japan and France, have tried developing fast breeder reactors and have given up due to repeated failure to safely handle liquid sodium.

- **About PFBR**
  - The Prototype Fast Breeder Reactor (PFBR) is a machine that produces more nuclear fuel than it consumes.
  - The operationalisation of the PFBR marks the start of stage II of India's three-stage nuclear power programme.
  - The Prototype Fast Breeder Reactor (PFBR) has been developed by BHAVINI (Bharatiya Nabhikiya Vidyut Nigam Limited), a government enterprise under the Department of Atomic Energy (DAE) which was set up in 2003 to focus on fast breeder reactors.
  - Construction of the PFBR began in 2004, with an original expected completion date of 2010.
  - In the first, India used pressurised heavy water reactors (PHWRs) and natural uranium-238 (U-238), which contains minuscule amounts of U-235, as the fissile material.

3. Need to reform bail law

GS 2 (Governance)

A case to reform bail law and guidelines, but make the right diagnosis first

A large number of undertrials continue to remain in prison despite being granted bail due to challenges in complying with bail conditions. Lack of means to arrange for money/property and local sureties are the most significant reasons accounting for the inability to comply with bail conditions

Medha Deo
Mayank Labh

Recently, the Chief Justice of India D.Y. Chandrachud said that there is a growing reluctance on the part of trial judges to grant bail and that jail, and not bail, was becoming the rule. In this article, dated July 26, 2022, Medha Deo and Mayank Labh further complicate the question of granting bail to undertrials, most of whom are unable to furnish the necessary bond/money to avail of bail.

Over 75% of India's prison population are undertrials while overcrowding in Indian prisons stands at 118%. These stark realities are often cited to represent the scale of the crisis in India's criminal justice system. The Supreme Court of India recently acknowledged, in *Satender Kumar Antil vs CBI*, the ineffectiveness of India's bail system and its contribution to this crisis. The Court noted that despite repeated guidelines on bail law, things have not changed much on the ground. The Court provided comprehensive guidelines on laws related to bail, such as mandating timelines for the disposal of bail applications and laying emphasis on the need to enact a separate legislation. The judgment noted that crowding jails with undertrial prisoners ignored the principle of 'presumption of innocence' and that 'bail not jail' should be the norm. However, there is still a need to reflect on why these established principles are honoured more in their breach than observance.

Any reimagination of the law on bail needs to first understand the exact nature of the problem that results in large-scale undertrial incarceration. This assessment needs to be based on multiple parameters and we have no real empirical evidence on how each of these impacts the issue. What proportion of undertrials are applying for bail? What proportion of bail applications are accepted or rejected, and on what grounds? Is bail compliance a far bigger problem than denial of bail? These are some fundamental empirical questions which need answers. An effective bail law must be based on the correlation of these answers with variables such as the demographics of undertrials, category of offences and timelines for bail, and also address socio-economic and structural barriers. The foundations of the current bail law ensure that it is anti-poor and disproportionately burdens those from marginalised backgrounds. The solutions we intend to craft must be based on a realistic understanding of the problem.

Lack of safeguards

The Court averred that effective enforcement of safeguards against arbitrary arrest would eliminate the need to seek bail from courts. However, these safeguards exclude a significant proportion of arrested persons, especially those from disadvantaged sections of society, who form the large majority of undertrial prisoners. For example, the arrest of a person is justified as 'necessary' if the police have 'reasons to believe' that it is required to ensure their presence in court. Such vague justifications put migrants, persons without assets or those with no contact with family at higher risk of arrest because of their socio-economic conditions. Data from the Fair Trial Programme (FTP) in Yerwada and Nagpur central prisons can be instructive here. Of the undertrials (2,313) represented by the FTP , 18.50% were migrants, 93.48% did not own any assets, 62.22% did not have any contact with family, and 10% had a history of previous incarceration. Evidently, a significant proportion from the sample would be unjustifiably excluded from protections against arrest and contribute to the large proportion of undertrials in our prisons.

Approach to bail adjudication

The power to grant bail is largely based on the court's discretion and depends on the facts of each case. The Supreme Court has time and again laid down principles for guiding the exercise of such discretion by courts in deciding bail applications. While these guidelines lay stress upon the need to release applicants on bail, they also validate the denial of bail or imposition of onerous bail conditions based on the gravity of the offence, character of the accused and likelihood of the accused absconding or tampering with evidence. In all such cases, courts rarely exercise their discretion for granting bail and are likely to take a more stringent approach against release on bail. Despite existing guidelines, courts do not usually record reasons for rejecting bail; the rationale behind how courts factor in offence-based and person-based considerations in deciding bail applications remains unclear.

This is important because marginalised persons bear the brunt of these broad exceptions. They are either denied bail or granted bail with onerous conditions, in absolute disregard of their realities. Bail conditions in the nature of cash bonds, surety bond, proof of property ownership and solvency, as is commonplace, are at odds with the reality of undertrial prisoners languishing in jails.

Challenges in bail compliance

A large number of undertrials continue to remain in prison despite being granted bail due to challenges in complying with bail conditions. Lack of means to arrange for money/property and local sureties are the most significant reasons accounting for an undertrial's inability to comply with bail conditions, realities borne out by our experience in the FTP. However, factors such as lack of residence and identity proof, abandonment by family and limitations in navigating the court system also undermine an undertrial's ability to comply with bail conditions. Compliance with bail conditions and ensuring presence in courts for the overwhelmingly structurally disadvantaged undertrials requires constant handholding, as is evident by the FTP's interventions in the past three years. This is a crucial aspect of ensuring last mile delivery of justice that the extant bail law does not consider.

Our experience shows that in 14% of cases, undertrials were unable to comply with bail conditions and remained in prison despite being granted bail. In almost 35% of these cases, it took over a month after obtaining the bail for undertrials to comply with bail conditions and secure their release.

Flawed assumptions

The bail system, as it currently operates, has flawed assumptions that every arrested person will be propertied or have access to propertied social connections. It presumes that the risk of financial loss is necessary to ensure the presence of the accused in court. Such assumptions have the effect of rendering the rule of 'bail not jail' meaningless for a significant proportion of undertrial persons. For any bail law to effectively provide relief, a careful re-evaluation of the said presumptions is imperative. There is an urgent need for bail reform but it would be counterproductive to undertake a reform exercise without first developing the basis to understand and diagnose the problem at hand.

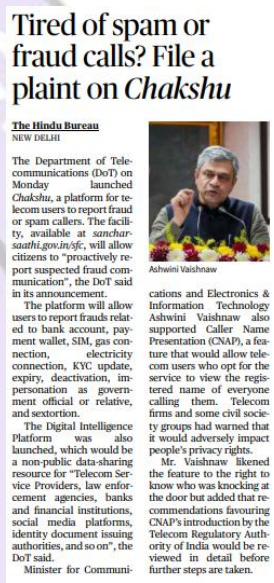
Medha Deo and Mayank Labh are with the Fair Trial Programme, an undertrial legal aid initiative of Project 39A, National Law University Delhi. The programme provides legal aid to undertrials in Pune and Nagpur central prisons

- **Why in News:** The Supreme Court of India recently acknowledged the **ineffectiveness of India's bail system** and its contribution to crisis. Despite repeated guidelines on bail law (such as timelines, separate legislation), things have not changed much on the ground.
- **Crisis in India's criminal justice system**
  - **Large number of undertrials:** Over 75% of India's prison population are undertrials while overcrowding in Indian prisons stands at 118%.
  - **Marginalised persons bear the brunt**: The foundations of the current bail law ensure that it is anti-poor and disproportionately burdens those from marginalised backgrounds.
    - Data from the Fair Trial Programme (FTP) in Yerwada and Nagpur central prisons can be instructive here. Of the undertrials (2,313), 18.50% were migrants, 93.48% did not own any assets, 62.22% did not have any contact with family, and 10% had a history of previous incarceration.
  - **Bail rejections with no clear rationale:** The power to grant bail rests on court discretion, guided by principles emphasizing release but allowing denial or imposing stringent conditions based on offense severity, accused character, and flight risk, yet often lacking clear rationale for rejection.
  - **Incompliance**: Lack of means to arrange for money/property and local sureties are the most significant reasons accounting for an undertrial's inability to comply with bail conditions.
  - **Flawed assumptions:** The current bail system operates on flawed assumptions of wealth and social connections, undermining the principle of "**bail not jail**" for many undertrial individuals, necessitating urgent reform grounded in empirical understanding.
- **Required measures**
  - **Presumption of innocence:** Crowding jails with undertrial prisoners ignored the principle of '**presumption of innocence'** and that '**bail not jail'** should be the norm. However, there is still a need to reflect on why these established principles are honoured more in their breach than observance.

- **Effective bail law:** An effective bail law must be based on the correlation of these answers with variables such as the demographics of undertrials, category of offences and timelines for bail, and also address socio-economic and structural barriers.
- **Enforcement of safeguards** against arbitrary arrest would eliminate the need to seek bail from courts.

4. India launches Chakshu
GS 2 (Governance)

- **Why in News:** The Department of Telecommunications launched the **Digital Intelligence Platform** and **Chakshu** as part of the **Sanchar Saathi portal**, which was unveiled in May last year.


Tired of spam or fraud calls? File a plaint on *Chakshu*

The Hindu Bureau
NEW DELHI

The Department of Telecommunications (DoT) on Monday launched *Chakshu*, a platform for telecom users to report fraud or spam callers. The facility, available at *sancharsaathi.gov.in/sfc*, will allow citizens to "proactively report suspected fraud communication", the DoT said in its announcement.

The platform will allow users to report frauds related to bank account, payment wallet, SIM, gas connection, electricity connection, KYC update, expiry, deactivation, impersonation as government official or relative, and sextortion.

The Digital Intelligence Platform was also launched, which would be a non-public data-sharing resource for "Telecom Service Providers, law enforcement agencies, banks and financial institutions, social media platforms, identity document issuing authorities, and so on", the DoT said.

Minister for Communications and Electronics & Information Technology Ashwini Vaishnaw also supported Caller Name Presentation (CNAP), a feature that would allow telecom users who opt for the service to view the registered name of everyone calling them. Telecom firms and some civil society groups had warned that it would adversely impact people's privacy rights.

Mr. Vaishnaw likened the feature to the right to know who was knocking at the door but added that recommendations favouring CNAP's introduction by the Telecom Regulatory Authority of India would be reviewed in detail before further steps are taken.

Ashwini Vaishnaw

- **Chakshu**
  - Chakshu can be used by citizens to **report suspected fraudulent communication**, wherein users can report numbers, messages and phishing attempts.
  - Users can log on to the Chakshu window inbuilt on the **Sanchar Saathi portal** and fill out a form with details pertaining to the medium of the fraud communication, such as SMS, call or WhatsApp.
  - Users are then required to define what category the communication fits in, such as sextortion, fake consumer helpline, fake KYC, and impersonation, among others.
  - This is followed by screenshots of the communication and any other details to be added.
- **Digital Intelligence Platform**
  - The Digital Intelligence Platform is an inter-agency effort to enable the sharing of cybercriminal data between banks, social media platforms, and wallet operators, among other stakeholders.
- **Sanchar Saathi platform**
  - **Launched in:** 2023
  - **Introduced by:** Department of Telecommunications
  - The Sanchar Saathi Portal is an innovative initiative aimed at empowering mobile subscribers and enhancing their security while increasing awareness of government initiatives.

5. China, Maldives sign military deal
GS 2 (International Relations)

- **Why in News:** Amid shifting dynamics in the **Indian Ocean region**, the **Maldives and China** have inked two military agreements.

China to provide free military assistance to Maldives, signs deal

PRESS TRUST OF INDIA
MALE, MARCH 4

CHINA MONDAY signed a defence cooperation agreement with the Maldives to provide free military assistance to foster "stronger" bilateral ties, weeks after President Mohamed Muizzu set a deadline for the withdrawal of the first group of Indian military personnel from his island nation.

Defence Minister of the Maldives Mohamed Ghassan Maumoon met with Major General Zhang Baoqun, Deputy Director of the Office for International Military Cooperation of China, to discuss enhancing defence cooperation between the two countries.

Maumoon and Major General Baoqun "signed an agreement on China's provision of military assistance gratis to the Republic of Maldives, fostering stronger bilateral ties," the Maldivian defence ministry posted on X.

The details of the defence cooperation agreement were not provided. Meanwhile, China has also gifted 12 eco-friendly ambulances to Maldives, Edition.mv news portal reported on Monday.

In a ceremony held at the Ministry of Health Sunday, Chinese Ambassador to Maldives Wang Lixin presented the letter gifting the ambulances to the Maldives, it said.

The visit of the Chinese military delegation took place days after Male allowed a hi-tech Chinese research ship to make a port call for the "rotation of its personnel and replenishment."

On January 5, Sri Lanka, while denying entry to the same ship, said it had declared a moratorium on foreign research ships for a year amid concerns from India over Chinese research vessels docking in its neighbourhood and collecting data from the oceans, including in the Indian Ocean Region, for military purposes, especially for submarine operations.

- **Objectives of the Agreement :**

i. The Maldives, situated in a strategically vital location in the Indian Ocean, plays a crucial role in maritime security and trade routes in the region.
ii. China has pledged to provide **military assistance** to the Maldives at **no cost**.
iii. Additionally, a parallel agreement was signed concerning the Chinese research vessel Xiang Yang Hong 3, which recently made its presence felt in the Maldives

- **Significance of the move :**

- **Deepening ties:** It signifies a deepening of military and strategic ties between the two countries. This agreement could potentially impact maritime research in the **Indian Ocean Region (IOR),** further solidifying their bilateral relations.
- **Recalibrating the balance of power:**These agreements come at a critical juncture when the Maldives' relationship with India appears to be cooling off. Maldives' increased engagement with China signals a strategic pivot, possibly recalibrating the balance of power and influence in the region.
- **Evolving geopolitical landscape**: They are a testament to the evolving geopolitical landscape in the Indian Ocean.

6. Super Tuesday - a key day in the US Presidential elections
GS 2 (International Relations)

- **Why in News:**
  - March 5, 2024, is going to be a Super Tuesday in the ongoing cycle of the US Presidential elections, scheduled for November.
  - On this day, supporters of the Democratic and Republican candidates in 15 states will vote for their preferred party candidate in the presidential race.
- **How US elections work?**
  - **Primaries and Caucuses**
    - **i.** American voters usually have a strong affiliation with either of the two major political parties.
    - **ii.** As part of the Presidential elections, **they first vote in the primary and caucus polls, or in a third setup that is a combination of the two.**
    - **iii.** In some of these, only registered Democrats or Republicans can vote, instead of general voters.
    - **iv.** In primaries, voters go to polling stations and check the box against the name of their favoured candidate.
    - **v.** For example, Republican voters will have Donald Trump and Nikki Haley as their options, since other candidates have dropped out of the race.
    - **vi.** In comparison, caucuses are lengthier. Voters attend meetings at public places such as school gymnasiums, churches, and community centres, debate candidate preferences and openly raise their hands for their choice of vote.

SUPER TUESDAY

Super Tuesday is an important day in the Presidential elections process of the US. Here's what happens

RISHIKA SINGH
NEW DELHI, MARCH 4

TODAY IS 'Super Tuesday', a landmark day in the ongoing US Presidential elections process. On this day, supporters of the Democratic and Republican parties in 15 states will vote for their preferred candidate in the Presidential race.

How US polls work

Super Tuesday is part of a round of polls that are conducted before the Presidential election, held in November.

American voters, who usually have a strong affiliation with either of the two major political parties — Democratic Party and Republican Party — vote in the primary and caucus polls to zero in on their Presidential candidate.

In primaries, voters go to polling stations and check the box against the name of their favoured candidate. For example, Republican voters will have Donald Trump and Nikki Haley as their options.

In caucuses, voters attend meetings at public places such as school gymnasiums, churches, and community centres, debate candidate preferences and openly raise their hands for their choice of vote.

Why this matters

For candidates, winning a primary or caucus means winning the support of the several "delegates" that are assigned to each state. Delegates are the parties' members or local supporters of a candidate.

These delegates later vote to select the official party nominee at the Democratic and Republican National Conventions, held in the summer.

Delegates are seen as representing the party's will, although some have criticised the process for not letting voters directly choose their candidate.

Nikki Haley has challenged Trump as the Republican Party's Presidential candidate. *Reuters*

Super Tuesday

This year, states will hold their primaries and caucuses from January to June. In March or February, one Tuesday sees multiple states going to polls the same day, and is called Super Tuesday. March 5 will see polls in 15 states, including Alabama, Alaska, California, Massachusetts, and Texas. The results of a Super Tuesday have often indicated the candidate who will eventually be chosen as the party nominee for the Presidential polls.

The scenario this year

No surprises are likely. From the Democratic Party, US President Joe Biden is seeking re-election and he does not have significant challengers.

Among Republicans, a crowded field that initially included Florida Governor Ron DeSantis and entrepreneur Vivek Ramaswamy has now thinned to Trump and Haley.

  - **National Conventions of Each Party**
    - After the primaries and caucuses are over, a national convention is held in which a party's nomination for president is formally announced to the public.
    - During the convention, the elected delegates cast their vote for a party candidate and the candidate with the most delegates gets the party's nomination.
  - **Significance of primary or caucus**
    - For candidates, winning a primary or caucus means winning the support of the several delegates that are assigned to each state.
      - Delegates are the parties' members or local supporters of a candidate.
    - At this stage, delegates matter because it is they who later vote to select the party nominee at the Democratic and Republican National Conventions held in the summer.
    - If no candidate gets the majority of a party's delegates during the primaries and caucuses, convention delegates vote to choose the nominee.
    - Delegates are seen as representing the party's will, although some have criticised the process for not letting voters directly choose their candidate.
- **What is a Super Tuesday?**
  - Super Tuesday is the day when **the largest number of states hold their presidential primaries and caucuses.**
  - Those state-level races help candidates from the two major political groups — the Democrats and the Republicans — gather the delegates they need to earn their party's nods.
    - Based on the result of each contest, **party officials known as delegates are awarded to the top candidates.**
    - A certain number of delegates is needed to formally appoint the nominee at each party's convention this summer.
  - Delegates ultimately represent their states at a party convention, where they cast votes for the nominee based on the primary and caucus results.

6th March, 2024

1. Green jobs and the problem of gender disparity
GS 2 (Social Issues)

Green jobs and the problem of gender disparity

The transition to low-carbon development has the potential to add about 35 million green jobs in India by 2047. The International Labour Organization defines green jobs as "decent jobs that contribute to preservation or restoration of the environment". Many of these span across sectors, such as manufacturing, construction, renewable energy, energy efficiency and automobiles, which traditionally saw a lower representation of women.

Globally, men are likely to transition to green jobs faster than women. Even as India increased its renewable energy capacity by 250% between 2015 to 2021, women comprised merely 11% of workers in the solar rooftop sector. The Annual Survey of Industries 2019-20 shows that women workers are mostly concentrated in industries such as apparel, textile, leather, food, and tobacco. In contrast, a Confederation of Indian Industry (CII) 2019 report shows that men comprise 88% of the work force in sectors such as infrastructure, transport, construction, and manufacturing.

A study in 2023 by the Skill Council for Green Jobs indicated that 85% of the training for green skills was imparted to men while over 90% of women believed that social norms limited their participation in training for green jobs. These restrictive social norms include factors such as the belief that women are unsuitable for certain technical roles, safety concerns, lower representation in science, technology, engineering, and mathematics (STEM) subjects, and familial constraints.

As India embraces a green transition, empowering women and advancing gender equity in climate actions will be one of the keys to unlock the co-benefits of a low-carbon and environmentally sustainable economy. Increasing women's representation in green jobs has several benefits.

In the short run, it can address the gender biases in the Indian labour market and improve women's labour force participation rates. In the long run, this can contribute to improving women's agency and their empowerment by creating economic, technical, and social opportunities.

Address the gaps in data

There is limited data to understand the landscape of women's work for green jobs in India. Mapping emerging areas for green growth and collecting sex-disaggregated data on green jobs could be the starting point to improve women's participation. There is need to build evidence on the present and future impact of low-carbon transitions on women workers and entrepreneurs while considering the hidden and invisible roles played by women across different sectors and geographies. This could be done by conducting gender analysis, collecting gender statistics on green jobs through periodic labour force surveys and mobilising additional resources to emphasise and encourage women's role in the green transition.

Globally, women are being left behind in the worldwide race to achieve climate targets and sustainability goals. This is particularly evident in the transition to a low-carbon economy, where new opportunities are created alongside job displacement and transformation. Recently in a critical stride towards justice and inclusivity in transition planning, COP 28's high-level dialogue launched 'Gender-Responsive Just Transitions and Climate Action Partnership' with a focus on improved data, targeted finance, and skill development.

Given the unequal landscape of women's work and participation in green jobs, we need to ensure that women can access emerging opportunities from low-carbon transitions. There is a strong need to review the status quo, map the current roles of women, address structural barriers that hinder women's employment choices, and also create a conducive ecosystem to foster their participation in green jobs.

In India, despite 42.7% of the total number of STEM graduates being women, they represent only 30.8% in engineering, manufacturing and construction programmes which are the key sectors for green transition. To bridge this gap early hands-on learning, mentorship, scholarships, financial assistance, and awareness generation are crucial to empower women in green jobs-related fields.

Supporting women entrepreneurs

Gender-focused financial policies and products catering to the requirements of women entrepreneurs can spur their ability to enter the green transition market. Collateral-free lending, financial literacy training and building supportive networks are crucial steps to unlock their potential. Suitable tools must be developed to assess creditworthiness, disburse loans, and reduce operational costs for women-owned businesses.

Finally, bringing in more women into leadership positions to incorporate gender-specific needs in low-carbon development strategies can promote women's integration in green jobs.

A gender-just transition demands a multi-pronged strategy that focuses on employment, social protection, reduces the burden of care work, and enables skill development. Partnerships across government, private sector and other stakeholders are necessary to leverage the benefits of innovation, technology and finance for women entrepreneurs and workers.

Businesses must recognise the centrality of gender justice and ensure equity throughout the process of green transition by mitigating barriers that exist due to stereotyping or gender bias and fostering equitable job opportunities for a just transition that benefits everyone. This is the time to build the capacity and support women in meeting the demands of the new world of work and co-design a future pathway that is socially equitable and inclusive for all.

Anagya Chakraborty is with the World Resources Institute, India

Bhawna Ahuja is with the World Resources Institute, India

Arivudai Nambi Annadurai is with the World Resources Institute, India

Increasing women's representation in green jobs will lead to benefits such as boosting a low-carbon and environmentally sustainable economy

The views expressed are personal

- **Why in News:** The gender disparities observed in green jobs and the imperative of empowering women within the framework of low-carbon transitions underscores the hurdles faced by women in accessing opportunities in environmentally sustainable sectors and advocates for inclusive strategies to address these challenges.
- **Gender Disparities in Green Jobs:**
  - **Underrepresentation:** Despite the potential for 35 million green jobs in India by 2047, women remain significantly underrepresented in sectors such as renewable energy and manufacturing.
  - **Gender disparities**: Existing data reveals stark gender disparities in training for green skills, with social norms and safety concerns limiting women's participation in technical roles.
  - **Unequal distribution:** The unequal distribution of green jobs perpetuates gender biases in the labor market and constrains women's economic empowerment and agency.
- **Addressing Data Gaps and Structural Barriers:**
  - **Limited data on women's participation** in green jobs underscores the need for sex-disaggregated data collection and gender analysis to understand the landscape better.
  - **Overcoming structural barriers**, including inadequate representation in STEM fields and societal norms, requires targeted policies and interventions to enhance women's access to green job opportunities.
  - **COP 28's initiative** on 'Gender-Responsive Just Transitions and Climate Action Partnership' highlights the global commitment to inclusivity in transition planning and the importance of data-driven strategies.
- **Strategies for Women's Empowerment:**
  - **Bridging the gender gap** in STEM education and promoting early hands-on learning and mentorship can enhance women's participation in key sectors for green transition.
  - **Tailored financial policies**, including collateral-free lending and financial literacy training, are essential to support women entrepreneurs entering the green economy.
  - **Promoting women's leadership** in decision-making processes and fostering partnerships across sectors are critical for ensuring gender equity and inclusivity in low-carbon development strategies.

2. Why did Google De-list some Indian Apps from Play Store?
GS 3 (Economy)

Why did Google delist some Indian apps from Play Store?

What is the platform fee issue that has brought Indian tech firms and the tech giant at crossroads?

Aroon Deep

The story so far:

On March 1, Google announced that it was pulling the apps of almost a dozen firms out of its marketplace for Android apps. While the announcement came suddenly, it was preceded by years of wrangling between the search giant and Indian companies, with proceedings in the Madras High Court and the Supreme Court. After the Ministry of Electronics and Information Technology intervened, the apps were restored subsequently, but the issue remains unresolved.

What is the problem?

At the heart of the issue is Google's platform fees. For all in-app purchases that involve a purely digital service — such as an ebook purchase or an OTT streaming subscription — Google collects a fee of anywhere between 11 to 30% per transaction. This fee, Google argues, helps the company pay for Google Play and develop the Android ecosystem. The exact fee paid by each developer varies. If the app is the only source of a digital product, and is offering a recurring subscription service, or if they make less than $1 million a year in revenue from in-app payments, the company charges the lower 15% commission. For others, the amount is 30%. In India and South Korea, where regulatory scrutiny on these fees has been among the most intense, Google collects 11% or 26% in fees if developers choose to use a different payment method. However, Indian companies say that 11% is the counterparts — see these fees as a high price to pay. Some, including Bharat Matrimony and Disney+ Hotstar, approached the courts at different stages in the past few years to fight the fees.

"While Google should definitely be able to charge a fee for creating and maintaining the app store ecosystem, the main contention is the size of the fee," Rohit Kumar, founder of the public policy firm The Quantum Hub explained.

What about other marketplaces?

Apple has not faced similar pushback in India, as relatively fewer Indians use its products. Android, however, dominates the smartphone market, and Google Play is widely seen as the best bet for developers who want to be discovered by the maximum number of users. Apple has also faced serious international resistance to these fees, and both firms have pushed back strongly against developers' resistance. The music streaming firm Spotify filed a complaint with the European Commission, after Apple forced it to charge its Indian users how to pay for its service using a browser to avoid the App Store's fees. Additionally, Spotify said this was anti-competitive because Apple Music was not subject to the fees that it was forced to. Following the complaint, Apple was hit with a €1.84 billion fine by the European Commission, which ruled that it had fined the company over unfair trading conditions. Similarly, in the U.S., Epic Games, the developer of the popular Fortnite franchise, sued Apple as well as Google over the 30% fee. Epic Games has launched its own third-party app stores around the world, something that gives app developers a little more leeway in avoiding these fees. But Google Play comes installed by default on most Android phones.

How have regulators responded?

The Competition Commission of India (CCI) had in 2022 fined Google ₹936.44 crore for its Play Store policies. The company is in the process of appealing the fine. In 2023, the CCI ordered Google to give developers comprehensive choice for in-payments. An appeal by Google against this fine is pending at the National Company Law Appellate Tribunal.

Google has also been forced to submit to the Court are back on the platform for now. In-app payments are not yet a major part of the digital economy in India, as purely digital services for which Indian consumers have been willing to pay have been limited to content streaming, dating and gaming services, a relatively small segment that is largely up in arms against Google's fees. "What we really need is regulation to increase competition in the app store market," Mr. Kumar said. "This is the only way to ensure the long-term adoption of other app stores (by placing restrictions on arrangements that Google makes with phone manufacturers to set defaults and give primacy to its own apps) and allowing sideloading (for apps to be downloaded via websites)."

THE GIST

On March 1, Google announced that it was pulling the apps of almost a dozen firms out of its marketplace for Android apps.

At the heart of the issue is Google's platform fees. For all in-app purchases that involve a purely digital service, Google collects a fee of anywhere between 11 to 30% per transaction. However, Indian developers — like many global counterparts — see these fees as a high price to pay.

Apple has not faced similar pushback in India, as relatively fewer Indians use its products.

- **Background:**
  - On March 1, Google announced that it was pulling the apps of almost a dozen firms out of its marketplace for Android apps.
  - However, after the Ministry of Electronics and Information Technology intervened, the apps were restored subsequently, but the issue remains unresolved.
- **What is the Issue?**
  - At the heart of the issue is **Google's platform fees**.

- For all in-app purchases that involve a purely digital service — such as an e-book purchase or an OTT streaming subscription — Google collects a fee of anywhere **between 11 to 30% per transaction**.
- This fee, Google argues, helps the company pay for Google Play and develop the Android ecosystem.
- The exact fee paid by each developer varies.
  - For example, if a developer is using Google's own billing product, and is offering a recurring subscription service, or if they make less than $1 million a year in revenue from in-app payments, the company charges 15%.
  - For app purchases for bigger firms, the amount is 30%. In India and South Korea, where regulatory scrutiny on these fees has been among the most intense, Google collects 11% or 26% in fees if developers choose to use a different payment method.
- However, **Indian developers — like many global counterparts — see these fees as a high price to pay**.
- Some, including Bharat Matrimony and Disney+ Hotstar, approached the judiciary at different stages to avoid paying the fee altogether.

- **What about other Marketplaces?**
  - Apple has not faced similar pushback in India, as relatively fewer Indians use its products.
  - Android, however, dominates the smartphone market, and Google Play is widely seen as the best bet for developers who want to be discovered by consumers.
  - However, **both Apple and Google have faced serious international resistance to these fees**, and both firms have pushed back strongly against developers' resistance.
  - For example, the music streaming firm Spotify filed a complaint with the European Commission, after Apple stopped Spotify from telling its users how to pay for its service using a browser to avoid the App Store's fees.
  - Additionally, Spotify said this was anti-competitive because Apple Music was not subjected to the 30% barrier that was erected for Spotify.
  - Following the complaint, **Apple was hit with a €1.84 billion fine by the European Commission**, which ruled that it had fined the company over "**unfair trading conditions**"
  - Similarly, in the U.S., Epic Games, the developer of the popular Fortnite franchise, sued Apple as well as Google over the 30% fee.
  - Unlike Apple, Google allows third party app stores around the world, something that gives app developers a little more leeway in avoiding these fees.
  - But Google Play comes installed by default on most Android phones.
- **How has the Competition Commission of India Responded?**
  - The Competition Commission of India (CCI) had in 2022 fined Google Rs. 936 crores for its Play Store policies.
  - The company is in the process of appealing that fine, as well as orders by the CCI that it give developers comprehensive choices for in-payments.
  - An appeal by Google against this fine is pending at the **National Company Law Appellate Tribunal**.
  - Meanwhile, the Indian apps that went to the Court are back on the platform for now.
  - In-app payments are not yet a major part of the digital economy in India, as purely digital services for which Indian consumers have been willing to pay have been limited to content streaming, dating and matrimonial service.
- **About Competition Commission of India (CCI):**
  - The Competition Commission of India (CCI) is a statutory body established in March 2009 under the **Competition Act, 2002**.
  - **Objectives**:
    - Eliminate practices having adverse effect on competition
    - Promote and sustain competition
    - Protect the interests of consumer
    - Ensure freedom of trade in the markets of Indi
  - The CCI aims to establish a robust competitive environment through:
    - Proactive engagement with all stakeholders, including consumers, industry, government and international jurisdictions
    - Being a knowledge intensive organization with high competence level
    - Professionalism, transparency, resolve and wisdom in enforcement
  - The Commission consists of **one Chairperson and six members who shall be appointed by the Central Government**.
- **Functions of CCI:**
  - Ensure consumer interests are protected in the market
  - Implement the policies enumerated in the Competition Act, 2002
  - Advocate and educate other Government bodies about the Competition Act, 2002. Such as state governments and ministries etc.
  - To promote fair and constructive competition practices in the market
  - To prevent the realisation of anti-competitive agreements
  - To cooperate with other regulatory bodies to work more efficiently in ensuring the continuity of a free and fair market
- **Powers of CCI:**

- The Competition Commission of India has the power to inquire into a certain agreement as well as the dominant position of enterprises.
- It has the power to inquire into any acquisition or combination if it determines that such acquisition or combination may adversely affect competition in the Indian market.
- It has the power to regulate its own procedures.
- It has the power to **impose monetary penalties** upon violation of the Competition Act, 2002.
- It has the power to pass an interim order for any act where there has been anti-competition agreements or abuse of position by dominant parties which adversely affects the competition in the market.

3. 'Article 371-like' shield for Ladakh
GS 2 (Governance)

Govt considers 'Art 371-like' shield for Ladakh

DEEPTIMAN TIWARY
NEW DELHI, MARCH 5

IN THE backdrop of protests across Ladakh, the Centre is mulling granting Article 371-like protection to the Union Territory.

Sources said during a meeting of the representatives of the region — Leh Apex Body and Kargil Democratic Alliance — with Union Home Minister Amit Shah on Monday, the minister told them that all their concerns about land, jobs and culture would be addressed through special provisions under Article 371 of the Constitution.

Shah, sources said, made it clear that it would not be possible for the government to accommodate the region's demand to be included in the Sixth Schedule of the Constitution. The Centre is also learnt to have turned down the request for a legislature. Unlike J&K, Ladakh is a UT without a legislature.

"The minister was sympathetic to the concerns of the people on land, jobs and culture and said these can be addressed through special provisions under Article 371. He said the government was willing to reserve up to 80% of the jobs in the region for local people," a Ladakh leader, who was part of the discussions, said.

The representatives of the region met top officials of Ministry of Home Affairs (MHA), including Home Secretary Ajay Bhalla.

Recently, Ladakh witnessed massive protests demanding statehood, legislature and inclusion in the Sixth Schedule, apart from concerns about environmental degradation due to possible industrialisation. "Right now people have no say in the administration of the region. Everything has become bureaucratic. One of the key demands of the region is public representation through a legislature. However, there is no commitment from the Centre on that," another leader said.

Sources said while turning down the demand for a legislature, Shah assured the delegations from Leh and Kargil that the government would ensure representation and participation of the local people through hill councils.

"He said hill councils could also be given enough powers and their budget be as good as a state's," one of the leaders of the delegation said.

A government-appointed high-powered committee is already looking into these demands from the region. Sources in the ministry said the government was inclined to provide protection for culture, language, land and jobs for Ladakh but not in the way that representatives seek.

Sources among the Ladakh leaders said they would continue to push for their demands through democratic means.

EXPLAINED

Art 371 and Sixth Schedule

ARTICLE 371 of the Constitution includes special provisions for 11 states, including six of the Northeast. The Sixth Schedule of Constitution under Article 244 has provisions for formation of autonomous administrative divisions within a state, with certain legislative, judicial and administrative autonomy.

- **Why in News:** In the backdrop of protests across Ladakh the Centre is mulling granting Article 371-like protection to the Union Territory.
- **What is Article 371?**
  - Articles 371, 371A, 371B, 371C, 371D, 371E, 371F, 371G, 371H, and 371J define special provisions with regard to another state (or states).
    - **Article 371,** Maharashtra and Gujarat
    - **Article 371A (13th Amendment Act, 1962),** Nagaland
    - **Article 371B (22nd Amendment Act, 1969),** Assam
    - **Article 371C (27th Amendment Act, 1971),** Manipur
    - **Article 371D (32nd Amendment Act, 1973; substituted by** The Andhra Pradesh Reorganisation Act, 2014), Andhra Pradesh and Telangana
    - **Article 371E**
    - **Article 371F (36th Amendment Act, 1975),** Sikkim
    - **Article 371G (53rd Amendment Act, 1986),** Mizoram
    - **Article 371H (55th Amendment Act, 1986),** Arunachal Pradesh
    - **Article 371J (98th Amendment Act, 2012),** Karnataka
- **Role of Special status**
  - The main objectives behind the Article 371 granting special provisions to some states are to meet the unique needs of the backward regions of these states, protect the economic and cultural interests of these regions, combat the local challenges and protect the customary laws in these regions.

4. MethaneSAT to Track Methane
GS 3 (Science and Tech)

METHANESAT

A satellite that will name and shame the worst methane emitters on Earth

ALIND CHAUHAN
NEW DELHI, MARCH 5

METHANESAT, a washing machine-sized satellite that will track and measure methane emissions on a global scale, was launched aboard a SpaceX Falcon9 rocket from California on Monday.

Why track methane emissions?

Methane is the most widespread greenhouse gas after carbon dioxide. Its atmospheric concentration has more than doubled in the last couple of centuries — this increase is responsible for 30% of climate warming since the Industrial Revolution. Over a period of 20 years, methane is about 80 times more potent at warming than carbon dioxide, according the UN Environment Programme.

Methane also contributes to the formation of ground-level ozone, exposure to which could be contributing to a million premature deaths every year, according to a 2022 report.

It is crucial to cut methane emissions from their main source: fossil fuel operations, which account for about 40% of all human-caused methane emissions. The objective of MethaneSAT is to help achieve this goal.

What is MethaneSAT?

The entity behind MethaneSAT is the Environmental Defense Fund (EDF), a US-based nonprofit environmental advocacy. EDF partnered with Harvard University, the Smithsonian Astrophysical Observatory, and the New Zealand Space Agency to build the satellite.

MethaneSAT will orbit the Earth 15 times a day, monitoring the oil and gas sector. It will generate data that will show "how much methane is coming from where, who's responsible, and are those emissions going up or down over time", EDF said in a statement.

MethaneSAT's data will be made public for free in near real-time. This will allow stakeholders and regulators to take action to reduce methane emissions.

Where does MethaneSAT score?

Historically, tracking the source of methane emissions and measuring them has presented a challenge. Satellites that can provide high-resolution data can often only scan specific, pre-targeted sites; others can examine larger areas and detect large emitting events, but not "smaller sources that account for the majority of emissions in many, if not most, regions," EDF said. Due to these limitations, global methane emissions are about 70% higher than levels reported by national governments, according to a report by the International Energy Agency (IEA).

MethaneSAT is expected to fix this problem. It is equipped with a high-resolution infrared sensor and a spectrometer, and can track differences in methane concentrations as small as three parts per billion in the atmosphere — which enables it to pick up smaller emissions sources than the previous satellites. MethaneSAT also has a wide-camera view of about 200 km by 200 km, allowing it to identify larger, so-called "super emitters".

According to a report in *The New York Times*, "the new satellite is also designed to track releases over time, to see whether they're increasing or decreasing, and by how much".

The collected data will be analysed using cloud-computing and AI technology developed by Google — the company is a mission partner — and will be made public through Google's Earth Engine platform, *The NYT* report said.

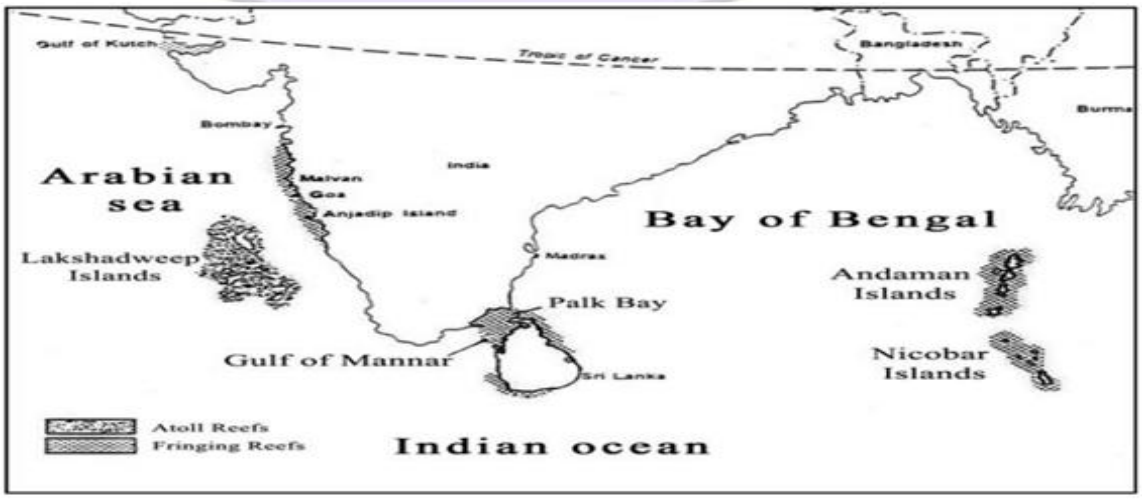
- **Why in News: MethaneSAT** — a satellite to **track and measure methane emissions at a global scale** — was launched aboard a **SpaceX Falcon9 rocket.**
- **Methane's role in global warming**
  - Methane is an invisible but **strong greenhouse gas**, and the **second largest contributor to global warming** after **carbon dioxide**, responsible for **30 per cent of global heating** since the Industrial Revolution. Over a period of 20 years, methane is **80 times more potent** at warming than carbon dioxide.
  - The gas also contributes to the formation of **ground-level ozone** — a colourless and highly irritating gas that forms just above the Earth's surface.
    - According to a 2022 report, exposure to ground-level ozone could be contributing to one million premature deaths every year.

- Therefore, it is crucial to cut methane emissions. And the main culprit: **fossil fuel operations**, which account for about 40 per cent of all **human-caused methane emissions**. The objective of MethaneSAT is to help achieve this goal.

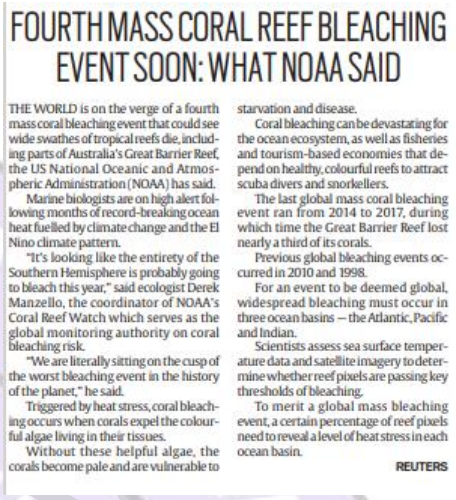
- **Role of MethaneSAT is filling critical data gaps**
  - Essentially, MethaneSAT will orbit the Earth 15 times a day, monitoring the oil and gas sector.
  - It will create a large amount of data, which will tell "how much methane is coming from where, who's responsible, and are those emissions going up or down over time".
  - The data is to be available public for free in near real-time to allow stakeholders and regulators to take action to reduce methane emissions.
  - Equipped with a **high-resolution infrared sensor** and a **spectrometer**, MethaneSAT will fill critical data gaps.
  - It can track differences in methane concentrations as small as three parts per billion in the atmosphere, which enables it to pick up smaller emissions sources than the previous satellites.
  - MethaneSAT also has a wide-camera view — of about 200 km by 200 km — allowing it to identify larger emitters so-called **"super emitters".**
- **Why is MethaneSAT significant?**
  - The launch of MethaneSAT has come at a moment when the world is implementing more stringent methane management policies.
  - More than 150 countries signed the Gl**obal Methane Pledge in 2021,**to cut their collective methane emissions by at least 30 per cent from 2020 levels by 2030.
  - At last year's COP, more than 50 companies committed to **virtually eliminating methane emissions and routine flaring**. MethaneSAT will help them meet these targets.

5. Fourth Mass Coral Reef Bleaching
GS 3 (Environment)

- **Why in News:** According to the U.S. NOAA, the world is on the verge of a fourth mass coral bleaching event which could see wide swathes of tropical reefs die, including parts of Australia's Great Barrier Reef.
- **What are Corals and Coral Reefs?**
  - **Corals** are animals (polyps), which live in a **symbiotic** relationship with tiny algae called **zooxanthellae**.
    - These algae provide the corals with food and oxygen, and in return, the corals provide them with a safe place to live.
  - **Coral reefs** are limestone structures formed by thousands of tiny coral animals and are found in tropical climates.
- **Major coral reefs in India:**



- **What is Coral Bleaching and Why is it a Cause for Concern?**
  - **When corals are exposed to stressful conditions**, such as high temperatures, pollution, or changes in the water's chemistry, **they expel the zooxanthellae**.
  - Without them, the coral loses its color and **turns white**, hence the term "bleaching." Corals cannot live very long in this state.
  - **Coral bleaching doesn't necessarily mean the end of the reef**. If the stressor is removed in time, the zooxanthellae can come back and the corals can recover.
  - **Coral reefs provide a home and a source of food** for countless species of fish and other marine creatures.
  - **They also protect coastlines from erosion and storms**, and play a vital role in **regulating** the Earth's climate by absorbing and storing carbon dioxide.
  - Additionally, coral reefs are **a stunning display of biodiversity and natural beauty**, and their loss would be a tragedy for future generations.
  - When coral reefs suffer, so do the ecosystems and the people that depend on them.



FOURTH MASS CORAL REEF BLEACHING EVENT SOON: WHAT NOAA SAID

THE WORLD is on the verge of a fourth mass coral bleaching event that could see wide swathes of tropical reefs die, including parts of Australia's Great Barrier Reef, the US National Oceanic and Atmospheric Administration (NOAA) has said.

Marine biologists are on high alert following months of record-breaking ocean heat fuelled by climate change and the El Nino climate pattern.

"It's looking like the entirety of the Southern Hemisphere is probably going to bleach this year," said ecologist Derek Manzello, the coordinator of NOAA's Coral Reef Watch which serves as the global monitoring authority on coral bleaching risk.

"We are literally sitting on the cusp of the worst bleaching event in the history of the planet," he said.

Triggered by heat stress, coral bleaching occurs when corals expel the colourful algae living in their tissues.

Without these helpful algae, the corals become pale and are vulnerable to starvation and disease.

Coral bleaching can be devastating for the ocean ecosystem, as well as fisheries and tourism-based economies that depend on healthy, colourful reefs to attract scuba divers and snorkellers.

The last global mass coral bleaching event ran from 2014 to 2017, during which time the Great Barrier Reef lost nearly a third of its corals.

Previous global bleaching events occurred in 2010 and 1998.

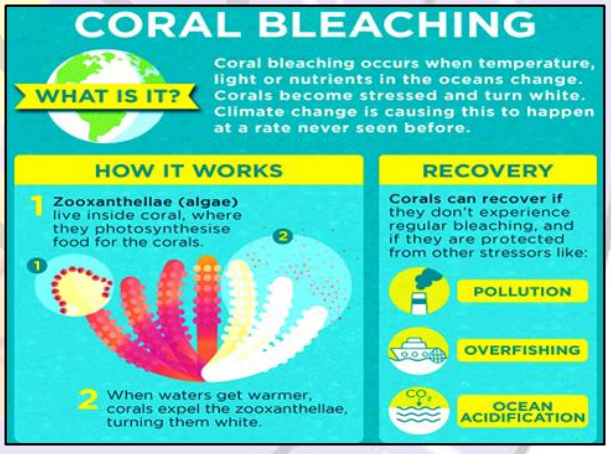
For an event to be deemed global, widespread bleaching must occur in three ocean basins – the Atlantic, Pacific and Indian.

Scientists assess sea surface temperature data and satellite imagery to determine whether reef pixels are passing key thresholds of bleaching.

To merit a global mass bleaching event, a certain percentage of reef pixels need to reveal a level of heat stress in each ocean basin.

REUTERS

- **What are the Findings of the National Oceanic and Atmospheric Administration (NOAA)?**
  - The world is on the verge of a **fourth mass coral bleaching event** (after 1998, 2010 and 2014).
  - For an event to be deemed global, widespread bleaching must occur in three ocean basins - the **Atlantic, Pacific and Indian**
  - The last global mass coral bleaching event ran from **2014 to 2017**, during which time the Great Barrier Reef lost nearly a third of its corals.
    - Preliminary results suggest that **about 15% of the world's reefs** saw large coral die-offs in this event.
  - **This year is turning out to be even worse**. For example, following the Northern Hemisphere summer last year, the **Caribbean** registered its worst coral bleaching on record.
  - Coral bleaching is often tied to the naturally occurring **El Nino** climate phenomenon which leads to warmer ocean waters.
  - The world also just registered (as a result of climate change) its first 12-month period with **an average temperature over 1.5 degrees Celsius** (2.7 degrees Fahrenheit) above pre industrial levels.
    - A rise of 1.5C is believed to be the **tipping point** for mass coral die-offs, with scientists estimating that 90% of the world's corals could be lost.



6. Former DU professor GN Saibaba acquitted over alleged Maoist links

Recent events of importance

- **Why in News:**
  - The Nagpur Bench of the Bombay HC acquitted former Delhi University Professor G.N. Saibaba and five others in a Maoist links case under the Unlawful Activities (Prevention) Act (UAPA).
  - The court said that the prosecution could not prove the case against them beyond reasonable doubt.

Why HC acquitted Saibaba again

This is the second time that the Bombay HC has emphasised that the prosecution did not follow due procedure in the Saibaba case. It has also said that there is no material to infer a conspiracy

OMKAR GOKHALE & APURVA VISHWANATH
MUMBAI & NEW DELHI, MARCH 5

Former Delhi University professor G N Saibaba (in wheelchair) in 2014. Archive

- **The Unlawful Activities Prevention Act (UAPA), 1967**
  - **About**
    - Enacted in 1967, UAPA is the primary counter-terror law in India.
    - It was enacted to outlaw and penalise unlawful and terrorist activities, which pose a threat to the integrity and sovereignty of India.
    - These activities include:
      - **i.** Aiding and abetting terrorists
      - **ii.** Funding terrorist
      - **iii.** Inciting anti-national feeling in the masses
      - **iv.** Other unlawful activities against the state

- **Key provisions of UAPA**
  - **Wide ranging powers to Central Govt**
    - It provides wide-ranging powers to the Central Government to designate organisations as terrorist organisations
    - It also prescribes the penalties for taking part in the activities of such organisations.
  - **Applicability**
    - It is also applicable if the offences are committed outside India. Both Indian and foreign nationals can be charged.
  - **Timeline**
    - A charge sheet can be filed in maximum 180 days after the arrests.
    - The investigation has to be completed within 90 days.
    - If investigation is not completed with the stipulated time, the accused is eligible for default bail.
  - **Special court**
    - The act establishes a special court designated to conduct trials.

  - **Sanction to prosecute under UAPA**
    - Section 45(1) of the UAPA **says no court shall take cognizance of any offence under the Act without the previous sanction of the central or state government or any officer authorised by them.**
    - Under Section 45(2), the sanction for prosecution has to be given within a prescribed time only after considering the report by the competent authority.
- **2019 Amendment of UAPA**
  - The original act was amended in the years 2004, 2008, 2013, and 2019 to increase its scope and ambit. 2019 amendment changed the following:
  - **Who may commit terrorism**:
    - The amendment additionally empowers the government to **designate individuals as terrorists on the same grounds.**
  - **Approval for seizure of property by NIA**:
    - The Amendment adds that if the investigation is conducted by an officer of the NIA, the approval of the Director General of NIA would be required for seizure of such property.
  - **Insertion to schedule of treaties**
    - The Act defines terrorist acts to include acts committed within the scope of any of the treaties listed in a schedule to the Act.
    - The Schedule lists nine treaties, including the Convention for the Suppression of Terrorist Bombings (1997), and the Convention against Taking of Hostages (1979).
    - The Amendment adds another treaty to the list. This is the International Convention for Suppression of Acts of Nuclear Terrorism (2005).
- **Background of the case**
  - **Conviction of Saibaba and 5 others**
    - G N Saibaba and five others were arrested between 2013 and 2014.
    - All six accused were charged with **criminal conspiracy to wage war against the Government of India through unlawful activities by use of violence.**
      - They were arrested on allegations that they were members of the banned Communist Party of India (Maoist) and its frontal group Revolutionary Democratic Front.
    - They were convicted of alleged involvement in Maoist activities in March 2017.
    - Five of the convicts, including Saibaba, were given life imprisonment; the sixth, Vijay Tirki, was given rigorous imprisonment because he was a first-time offender.
  - **Acquittal by Bombay High Court in 2022**
    - In October 2022, the Nagpur bench of the Bombay HC acquitted G N Saibaba and four others of aiding and abetting Naxal activities (the fifth one had died by that time).
    - The court held the entire trial against them to be null and void in the **absence of a valid sanction under section 45(1) of the Unlawful Activities Prevention Act**.
    - As per the Court, the sanction to prosecute under UAPA was accorded by the Maharashtra govt after the trial began against the accused.
      - However, as per section 45(1) of UAPA, it should have been submitted before the trail.
    - As for other accused, the reviewing authority's report to the State home department seeking grant of sanction was without reasons.
      - The bench held that this exclusion was a breach of the mandatory provisions of sub-section (2) of Section 45 of the UAPA.
    - The division bench underlined the importance of following due process in legal proceedings.
  - **Supreme Court set aside the October 2022 HC verdict**

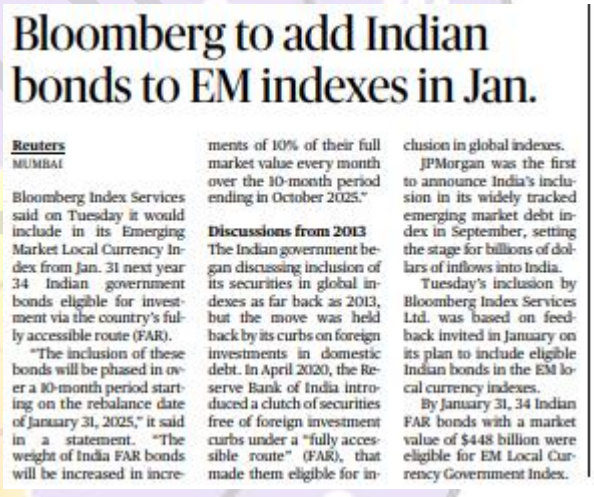
- In October 2022, the SC suspended the Nagpur bench verdict
- It held that the high court had not gone into the merits of the case or the seriousness and gravity of the offences for which the accused were convicted.
- In April 2023, the SC directed the HC to hear the appeal filed by Saibaba afresh.

- **News Summary:**
  - Former Delhi University Professor G.N. Saibaba was acquitted by the Bombay High Court.
  - The Court noted that the prosecution failed to prove the case beyond reasonable doubt against him and other accused in the case.
  - The court ordered the immediate release of the academician-activist, who is completely wheelchair-bound and 90 per cent disabled.
  - HC noted that the entire **prosecution was vitiated on account of an invalid sanction to prosecute the accused.**
  - The court also noted that the **trial that was held despite the violation of mandatory provisions of law amounted to a failure of justice.**
  - It further pointed out that the prosecution failed to establish legal seizure of material and could not prove any incriminating material against the accused.

7. Bloomberg to add Indian bonds to EM indexes

GS 3 (Economy)

- **Why in News:** Bloomb**erg announced including Indian government securities called "**Fully Accessible Route (FAR) bonds" in the **Bloomberg Emerging Market (EM) Local Currency Government Index** and related indices, to be phased in over a ten-month period, starting January 31, 2025.



Bloomberg to add Indian bonds to EM indexes in Jan.

Reuters
MUMBAI

Bloomberg Index Services said on Tuesday it would include in its Emerging Market Local Currency Index from Jan. 31 next year 34 Indian government bonds eligible for investment via the country's fully accessible route (FAR).

"The inclusion of these bonds will be phased in over a 10-month period starting on the rebalance date of January 31, 2025," it said in a statement. "The weight of India FAR bonds will be increased in increments of 10% of their full market value every month over the 10-month period ending in October 2025."

Discussions from 2013

The Indian government began discussing inclusion of its securities in global indexes as far back as 2013, but the move was held back by its curbs on foreign investments in domestic debt. In April 2020, the Reserve Bank of India introduced a clutch of securities free of foreign investment curbs under a "fully accessible route" (FAR), that made them eligible for inclusion in global indexes.

JPMorgan was the first to announce India's inclusion in its widely tracked emerging market debt index in September, setting the stage for billions of dollars of inflows into India.

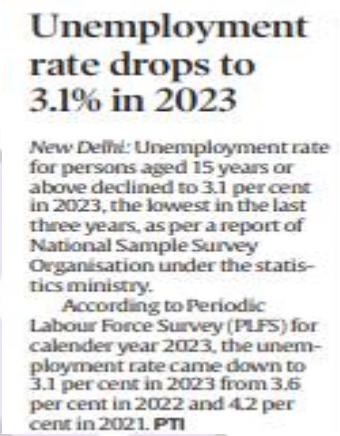
Tuesday's inclusion by Bloomberg Index Services Ltd. was based on feedback invited in January on its plan to include eligible Indian bonds in the EM local currency indexes.

By January 31, 34 Indian FAR bonds with a market value of $448 billion were eligible for EM Local Currency Government Index.

- **Impact of index inclusion**
  - The weighting of FAR bonds will be increased in increments of 10 per cent of their full market value every month over the 10-month period ending in October 2025, when they will be weighted at their full market value in the indices.
  - Within the **market cap weighted version** of the index, India is expected to be the largest country after **China and South Korea.**
  - The inclusion could attract billions of dollars of foreign investment in the **Indian government securities (G-Sec) market.**
  - Bloomberg Indices will create an **ex-India version of the EM Local Currency Government Index** and other standard and custom versions of the index.
  - This is an **important marker in the development of India's financial markets** and a reflection of India's growing importance to the global economy.
- **Scope for inclusion**
  - **Indices in scope for inclusion** include the:
    - Bloomberg EM Local Currency Government Index
    - Bloomberg EM Local Currency Government Index
    - 10 per cent Country Capped Index
    - all related sub-indices
  - India will continue to be excluded from the **Bloomberg Global Aggregate and related indices.**
  - FAR is a separate channel introduced by the RBI, in consultation with the Government, for non-resident investment in G-Secs with effect from April 1, 2020.
  - The eligible investors can invest in specified Government securities without any investment ceilings.

8. India's unemployment rate dips

Recent events of importance



Unemployment rate drops to 3.1% in 2023

New Delhi: Unemployment rate for persons aged 15 years or above declined to 3.1 per cent in 2023, the lowest in the last three years, as per a report of National Sample Survey Organisation under the statistics ministry.

According to Periodic Labour Force Survey (PLFS) for calender year 2023, the unemployment rate came down to 3.1 per cent in 2023 from 3.6 per cent in 2022 and 4.2 per cent in 2021. PTI

- **Why in News:** India's unemployment rate for persons aged 15 years or above declined to 3.1 per cent in 2023, the lowest in the last three years, as per a report by the National Sample Survey Organisation under the statistics ministry. The **Periodic Labour Force Survey (PLFS)** for the calendar year 2023 indicates a positive trend, showcasing a decline from 3.6% in 2022 and 4.2% in 2021.
- **Key-highlights of the Data**
  - The **Periodic Labour Force Survey (PLFS)** for the calendar year 2023 shows the unemployment rate came down to 3.1 per cent in 2023 from 3.6 per cent in 2022 and 4.2 per cent in 2021.
  - The employment situation is improving after the Covid pandemic hit the country.
  - **Gender-wise data:**
    - **For females**, the **unemployment rate** declined to 3 per cent in 2023 from 3.3 per cent in 2022 and 3.4 per cent in 2021.
    - **For males**, it came down to 3.2 per cent in 2023 from 3.7 per cent in 2022 and 4.5 per cent in 2021.
  - **Region-wise data**
    - **In Urban areas:** The overall rate of unemployment also declined to 5.2 per cent in 2023 from 5.7 per cent in 2022 and 6.5 per cent 2021.
    - **In rural areas**: It came down to 2.4 per cent in 2023 from 2.8 per cent in 2022 and 3.3 per cent in 2021.
  - **Labour force participation rate (LFPR)** in Current Weekly Status (CWS) in urban areas for people aged 15 years and above increased to 56.2 per cent in 2023 from 52.8 per cent in 2022 and 51.8 per cent in 2021.

DO NOT COPY

7th March, 2024

1. Trees in Jim Corbett National Park Fell Prey to Greedy Nexus: Supreme Court
GS 3 (Environment)

Trees in Corbett fell prey to greedy nexus, says SC

'Amazed at the audacity' of ex-Minister, officials involved in felling of 6,000 trees in reserve, says Bench; court wants panel to study if tiger safaris should be allowed in buffer zones of reserves

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday condemned the illegal felling of over 6,000 trees to construct buildings, ostensibly for "eco-tourism" at the Jim Corbett National Park in Uttarakhand, as a "classic case" of nexus between politicians and officials working to ransack the environment for short-term commercial ends.

"The present case depicts a sorry state of affairs of human greed devastating one of the most celebrated abodes of tigers, i.e. the Corbett Tiger Reserve," a three-judge Bench headed by Justice B.R. Gavai observed.

The court also directed the Ministry of Environment, Forest and Climate Change to form a specialised committee to study and recommend whether tiger safaris should be permitted in the buffer areas of a tiger reserve.

On the "huge devastation" caused by the illegal felling, the court said it was "amazed at the audacity" of former Uttarakhand Forest Minister and Congress leader Harak Singh Rawat and former Divisional Forest Officer Kishan Chand for giving forest and wildlife conservation laws a complete go-by and throwing the public trust doctrine "into the dustbin".

The judgment approved the Central Bureau of Investigation probe initiated into the case and directed the agency to submit a report in three months.

The Bench said Uttarakhand could not "run away" from its responsibility to restore the forest to the last tree.

Justice Gavai said the tigers needed the forest as much as the forest depended on the tigers. "The presence of tigers in the forests is an indicator of the well-being of the ecosystem. Unless steps are taken for the protection of tigers, the ecosystem which revolves around tigers cannot be protected... Events like illegal construction and illicit felling of trees like the one in Corbett cannot be ignored," he said.

The Bench said Uttarakhand could not 'run away' from its responsibility to restore the forest to the last tree. GETTY IMAGES

CONTINUED ON » PAGE 12
TROUBLE WITH RESORTS » PAGE 14

- **Why in News:** The Supreme Court has slammed the **political-bureaucrat nexus over illegal construction and felling of trees** at the Jim Corbett National Park in Uttarakhand, saying public trust had been thrown into the "waste bin".
- **Jim Corbett National Park:**
  - Jim Corbett national park is located in Nainital district of **Uttarakhand**.
  - **Flora**:
    - Sal, Semal, Kharpat, Sissoo, Khair, Dhak, Khingan, Bakli Bel, Ber, Bamboo, Khingam, Jamun, Kanju, Rohini and Pula.
    - Sal, Khair and Sissoo are the most visible trees found in Corbett.
  - **Fauna**:
    - Tiger, Leopard, Elephant, Chital Deer, Sambar Deer, Hogg Deer, Barking Deer, Wild Boar, Langur, Wild pig, Rhesus Monkey, Jackal, Rabbit, Yellow Throated Martin, Otters.
    - Reptiles such as Crocodile, Gharial, King Cobra, Common Krait, Cobra, Russel Viper, Rock Python, and Monitor Lizard are also found.
  - **Rivers Associated**:
    - The eastern periphery of Corbett National Park is entirely fed by the **Kosi River**.
    - The **Ramganga River** (West) along with its significant tributaries Sonanadi, Palain and Mandal forms the prominent hydrological resource for the Corbett.
  - **Key Facts**:
    - It is **India's oldest national park** (1935).
    - It was named Hailey National Park after its **founder Sir Malcolm Hailey**.
    - In 1956, in honour of Jim Corbett, who took the initiative for wildlife preservation in India, the Indian Government renamed it as Corbett National Park
    - It has the **highest population of tigers in India**.
- **News Summary:**
  - In 2023, alleged illegal buildings and waterbodies were being created. The issue was brought before the court through a batch of applications.
  - The petitioners tried highlighting the violation of environmental norms and the encroachment into core wildlife habitats.
  - During the proceedings, the petitioners presented evidence of unauthorised constructions within the national park
  - The court was shown photographs depicting concrete and iron enclosures purportedly meant for a 'safari' experience
  - The court was also informed that a significant number of trees, over 6,000, had been cut down in the national park under the guise of safari development.
- **Supreme Court's Observation:**
  - The Court has raised questions about the necessity of creating such facilities within natural forest environments, particularly in areas designated for the protection of endangered species like tigers.
  - The **Supreme Court has directed the Government to constitute a committee to recommend whether tiger safaris should be permitted in the buffer or fringe areas**.
    - Also, what guidelines should be promulgated for establishing such safaris, if permitted
  - The Court also took a stern view of the illegal constructions and rampant felling of trees in Uttarakhand's Corbett National Park.
- **About Core Areas and Buffer Areas in Tiger Reserves:**
  - According to the **Wild Life (Protection) Amendment Act of 2006**, a Tiger Reserve must have a core or critical habitat and a buffer zone peripheral to it.
  - The Core areas have the legal status of a National Park or a Sanctuary.
  - The Buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple-use area.
  - The buffer area further, absorbs the "shock" of poaching pressure on populations of tiger and other wild animals.

2. Italian Court's Ruling on Sea Migrants from Libya
GS 2 (International events of importance)

- **Why in News:** The Italian top court's recent ruling regarding sea migrants from Libya brings attention to the ongoing humanitarian crisis and legal complexities surrounding the rescue and treatment of migrants at sea.

The Italian top court's ruling on sea migrants from Libya

What was the case about? Why is Libya's port not considered safe for refoulement of migrants?

Saumya Kalia

The story so far:

Libya is not a safe harbour, and it is "unlawful" to force migrants rescued from the sea to return to a territory where their fundamental rights are at risk, Italy's highest court held in a ruling in February.

What was the case?

On July 30, 2018, the ship Asso 28, picked up 101 migrants, including five pregnant women and five minors, from a dinghy and returned them to the Libyan coastguard at the Tripoli port. A lower Italian court prosecuted the ship's captain in 2020, finding him guilty of violating international humanitarian and refugee laws. The principle of non-refoulement forbids the forced return of people to countries where their lives or rights are at risk. Per international law, Libya is currently not a port of safety. The Supreme Court of Cassation in the present verdict reiterated this stance. The court said that once picked up, the migrants were under the captain's charge, and in 'abandoning' them, the captain violated directives of the International Maritime Organization and the International Convention for the Safety of Life at Sea. The migrants faced a "high risk" of being subjected to "inhuman and degrading treatment in the detention centres... in Libyan territory, with the impossibility of seeing their fundamental rights protected."

What are legalities of sea rescues?

The expanse of the Mediterranean Sea between Libya and Italy is among the most dangerous albeit oft-used passage for migrants from sub-Saharan Africa fleeing ethnic conflict, war and famine. Human Rights Watch estimates at least 25,313 people have died in the Mediterranean Sea since 2014.

Under Article 98 of the United Nations Convention on the Law of the Sea, every shipmaster is required "to render assistance to any person found at sea in danger of being lost." International maritime law also requires coastal states to conduct search and rescue services, and if needed, coordinate with other nations during these operations. Still, countries like Italy and Malta have delayed ships' arrivals or ignored requests for disembarking altogether. More than 24,000 people were intercepted and forced to go back to Libya in 2022, according to HRW.

What's happening in Libya?

A UN Human Rights Council fact-finding mission last year said there were "reasonable grounds to believe that crimes against humanity have been committed against Libyans and migrants throughout Libya," with crimes, including torture and sexual slavery, committed in detention centres under the control of authorities including Libyan coastguards.

War-torn Libya has been under militia rule since 2011. Humans rights groups notes that this has allowed the proliferation of human trafficking especially in detention centres, where commanders "could be running their own militias and profiteering from picking up migrants at sea, sending them to be detained, and then demanding more money from the detained migrants," as per a report. The same Libyan authorities have received funding, vessels, aerial surveillance and training from Italy and the European Union. Italy and Libya signed a memorandum in 2017 – renewed for a second time in 2023 – under which the Italian Government gifted commercial vessels to Libya, trained crew in conducting these operations and invested $10.8 million in Libya's maritime infrastructure. There was a "direct causal link between Italy's cooperation activities with the Libyan coastguard and the exposure of people intercepted at sea to serious human rights violations," said Dunja Mijatović, Council of Europe's Commissioner for Human Rights.

Why is the ruling important?

UN agencies had acknowledged that Libya cannot be considered a "place of safety" for disembarking people rescued at sea due to proven human rights abuses at detention centres. Italy's Court of Cassation added weight to this warning with its ruling. However, rights groups note that Italy's far-right government led by Giorgia Meloni may double down on anti-immigration policies and obstruct the work of search and rescue NGOs. This would escalate the likelihood of death and detention for migrants.

THE GIST

On July 30, 2018, the ship Asso 28, picked up 101 migrants from a dinghy and returned them to the Libyan coastguard at the Tripoli port. A lower Italian court prosecuted the ship's captain in 2021, finding him guilty of violating international humanitarian and refugee laws.

The expanse of the Mediterranean Sea between Libya and Italy is among the most dangerous albeit oft-used passage for migrants from sub-Saharan Africa fleeing ethnic conflict, war and famine.

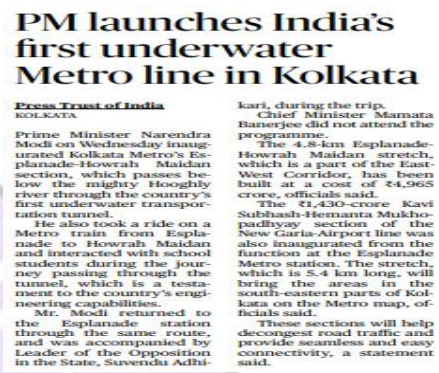
A UN Human Rights Council fact-finding mission last year said there were "reasonable grounds to believe that crimes against humanity have been committed against Libyans and migrants throughout Libya".

- **The Case**
  - **Background:** Libya is deemed unsafe for migrants due to prevalent human rights abuses, making it unlawful to forcibly return rescued migrants to its shores. Italy's highest court upheld this stance in a February ruling.
  - **Case Details:** The case involved the ship Asso 28, which rescued 101 migrants, including pregnant women and minors, from a dinghy in July 2018 and returned them to the Libyan coastguard. The ship's captain was prosecuted for violating international humanitarian and refugee laws, as per the principle of non-refoulement.
    - **Legalities of sea rescue**
  - **International Obligations:** According to international maritime law, shipmasters are obligated to assist individuals in danger at sea. Coastal states are also required to conduct search and rescue operations, coordinating with other nations when necessary. However, countries like Italy and Malta have been criticized for delaying arrivals and disregarding disembarkation requests.
    - **What's happening in Libya?**
  - **Human Rights Abuses:** Libya, plagued by war and militia rule since 2011, has seen widespread human rights violations, including torture and sexual slavery, especially in detention centers. Militias often profit from human trafficking, facilitated by cooperation with entities like the Libyan coastguard, funded and trained by Italy and the European Union.
  - **Italy's Involvement:** Italy's cooperation with the Libyan coastguard has been criticized for contributing to human rights violations, as highlighted by the Council of Europe's Commissioner for Human Rights. Despite acknowledging Libya's unsafe conditions, Italy has continued its cooperation with the Libyan authorities, exacerbating the plight of intercepted migrants.
    - **Importance of the ruling**
  - **Recognition of Unsafe Conditions:** The Court of Cassation's ruling reinforces the acknowledgment that Libya is not a safe place for disembarking rescued migrants, aligning with warnings from UN agencies. However, concerns persist that Italy's political stance may hinder rescue efforts and escalate risks for migrants, particularly under the current government's anti-immigration policies.

3. India's First Under-River Metro Tunnel
GS 3 (Infrastructure)

- **Why in News:** Prime Minister recently inaugurated a metro train service in Kolkata, marking the opening of India's first under-river metro tunnel.
- **About India's First Under-River Metro Tunnel:**
  - It is a part of **Kolkata Metro's** East-West Corridor.
  - It passes **under the Hooghly River** and forms part of section from Howrah Maidan to Esplanade.

- The **stretch also has the deepest metro station** in the country, the Howrah Maidan station, at 32 metres below ground level.



PM launches India's first underwater Metro line in Kolkata

Press Trust of India
KOLKATA

Prime Minister Narendra Modi on Wednesday inaugurated Kolkata Metro's Esplanade-Howrah Maidan section, which passes below the mighty Hooghly river through the country's first underwater transportation tunnel.

He also took a ride on a Metro train from Esplanade to Howrah Maidan and interacted with school students during the journey passing through the tunnel, which is a testament to the country's engineering capabilities.

Mr. Modi returned to the Esplanade station through the same route, and was accompanied by Leader of the Opposition in the State, Suvendu Adhikari, during the trip.

Chief Minister Mamata Banerjee did not attend the programme.

The 4.8-km Esplanade-Howrah Maidan stretch, which is a part of the East-West Corridor, has been built at a cost of ₹4,965 crore, officials said.

The ₹1,430-crore Kavi Subhash-Hemanta Mukhopadhyay section of the New Garia-Airport line was also inaugurated from the function at the Esplanade Metro station. The stretch, which is 5.4 km long, will bring the areas in the south-eastern parts of Kolkata on the Metro map, officials said.

These sections will help decongest road traffic and provide seamless and easy connectivity, a statement said.

- **Key Facts about River Hooghly:**
  - The **Hooghly River**, also known as the Bhagirathi-Hoogly and Kati-Ganga Rivers, is one of the significant rivers in West Bengal. It is a **distributary or** arm **of the Ganges River**.
  - **Course**:
    - It is **formed in Murshidabad**, where the Ganga splits into two parts, while the **part flowing through Bangladesh** is **called the Padma.**
    - The Hooghly River is silted up above Kolkata, and the river flows to the west and south to the estuary of Rupnarayan and then south and southwest to enter the Bay of Bengal through a 32-kilometer-wide estuary.
  - The Hooghly's **majority of water comes from the Farakka Feeder Canal** instead of natural water.
    - The **Farakka Barrage is a dam** that diverts water from the Ganges into a canal near the town of Tildanga in Malda district. This supplies the Hooghly with adequate water even in the dry season.
  - **Haldi, Ajay, Damodar and Rupnarayan** are the rivers that feed the lower reaches of the Hooghly.
  - The **important cities** near the Hoogli River are **Jiaganj, Azimganj, Murshidabad**, and Baharampur.

4. Importance of INS Jatayu and MH-60R Squadron Commissioning
GS 2 (Security)

Navy commissions *INS Jatayu*, MH-60R helicopter squadron

This will strengthen the Indian Navy's foothold in Lakshadweep islands, and strengthen India's surveillance posture in the strategically located islands and critical sea lanes of communication

Dinakar Peri
MINICOY, KOCHI

The Indian Navy on Wednesday commissioned *INS Jatayu* at Minicoy island, its second base in Lakshadweep after *INS Dweeprakshak* in Kavaratti.

Later, the Navy commissioned its first MH-60R multi-role helicopter squadron INAS 334 'Seahawks' at Kochi, a major capability boost for its rotary fleet and its anti-submarine warfare capabilities.

INS Jatayu is the beginning of a phased expansion plan to strengthen India's surveillance and security posture in the strategically located islands close to the Nine Degree channel and critical sea lanes of communication.

"This is very close to the Nine Degree channel, so this is the region [in] which lot of the maritime traffic flows both into and out of the Arabian Sea. So we hope to substantially improve our understanding and graph of the traffic that is flowing through it. So we will know who is operating here, who is passing through this area, what are they doing, what is their intent and so on. It will substantially improve our maritime domain awareness," Chief of Naval Staff Admiral R. Hari Kumar said in Minicoy.

"Now, by commissioning this establishment, we hope to improve facilities, improve capacities. There will be more units based here, the radar surveillance capability, ability to provide MDA – all that will increase substantially," Admiral Kumar said, adding, "In the Island of Minicoy, there are plans for improving the jetty infrastructure, which will help us berth larger vessels, as well improve connectivity, [and] improve response and ability."

INS Jatayu was commissioned at Minicoy island in the presence of Admiral Hari Kumar; Administrator of Lakshadweep, Praful K Patel; Vice-Admiral V. Srinivas, Flag Officer Commanding-in-Chief, Southern Naval Command; Vice-Admiral Sanjay J. Singh, Flag Officer Commanding-in-Chief, Western Naval Command. It will strengthen Indian Navy's foothold in the Lakshadweep islands while extending capacity building, operational reach and sustenance in the region, and will add impetus to overall development of the islands. In this regard, Admiral Kumar noted that that the Navy had responded with "alacrity", assuming an "assertive posture" in the west and north Arabian Sea, undertaking anti-drone and anti-piracy operations to safeguard all merchant traffic in the region.

Turning point: Water cannon salute being given to the MH-60R multi-role helicopters in Kochi on Wednesday. THULASI KAKKAT

Multi-role helicopters

The first MH-60R squadron of 48 officers and 170 men is commanded by Captain M. Abhisheik Ram, an experimental test pilot who has flown over 30 aircraft. The commissioning ceremony commenced with the reciting of an invocation, followed by a reading of the squadron's commissioning warrant by the Commanding Officer. Thereafter, the commissioning plaque was unveiled by the Naval chief. The ceremony was marked with a scintillating fly-past by a formation of Seahawks, and a traditional water cannon salute with four helicopters to mark the historic moment.

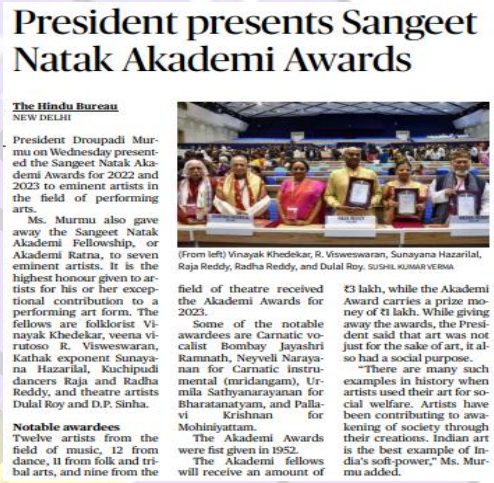
- **Why in News:** The recent commissioning of INS Jatayu at Minicoy islands marks a significant milestone for the Indian Navy, reinforcing its presence in the strategically vital Lakshadweep region. Concurrently, the commissioning of the first MH-60R multi-role helicopter squadron, INAS 334 'Seahawks', in Kochi signifies a substantial enhancement in the Navy's rotary fleet and anti-submarine warfare capabilities.
- **INS Jatayu: Strengthening Maritime Surveillance**
  - **Expansion Strategy:** INS Jatayu stands as a pivotal element in India's strategic expansion plan, aiming to fortify surveillance and security in the Lakshadweep islands. Positioned strategically near the Nine Degree channel and crucial sea lanes of communication, its commissioning heralds improved maritime domain awareness (MDA) and enhanced tracking of maritime traffic.
  - **Enhanced Capabilities:** With plans for infrastructure development including radar surveillance and jetty enhancements, INS Jatayu signifies a significant boost in facilities and capacities. The increased presence of naval units and radar surveillance capabilities will substantially bolster India's maritime security posture, fostering better understanding and monitoring of maritime activities in the region.
- **MH-60R Squadron: Advancing Rotary Fleet Capabilities**
  - **Operational Significance:** The commissioning of INAS 334 'Seahawks' marks a substantial advancement in India's rotary fleet capabilities. Led by Captain M. Abhisheik Ram, the squadron comprises highly skilled personnel poised to enhance anti-submarine warfare operations and overall operational reach in the region.
  - **Historic Moment:** The ceremony, graced by naval dignitaries, was a spectacle marked by a fly-past of Seahawks and a traditional water cannon salute, symbolizing the historic significance of this momentous occasion. The induction of MH-60R helicopters underscores India's commitment to modernizing its naval arsenal and safeguarding maritime interests effectively.
- **Implications for Regional Security and Development**
  - **Strategic Impetus:** The commissioning of INS Jatayu and the MH-60R squadron not only strengthens India's foothold in the Lakshadweep islands but also extends its operational reach and capacity-building efforts in the region.

The Navy's proactive stance in conducting anti-drone and anti-piracy operations underscores its commitment to safeguarding maritime trade and ensuring regional stability.

- **Developmental Agenda:** Beyond security concerns, these developments hold promise for the overall development of the islands. Improved infrastructure and connectivity initiatives will not only facilitate naval operations but also contribute to the socio-economic development of the region, aligning with India's broader strategic and developmental objectives.

5. Sangeet Natak Akademi Awards
GS 1 (Art and Culture)

- **Why in News:** President of India conferred Sangeet Natak Akademi Awards (AkademiPuraskar) for the years 2022 and 2023 to 91 eminent artists (two joint award).
- **More on News:**
  - The Akademi Awards are being conferred since 1952.
  - These honours not only symbolize the highest standard of excellence and achievement, but also recognize sustained individual work and contribution.
  - The honour of Akademi Fellow carries a purse money of Rs.3, 00, 000/- (Rupees three lakhs) while the Akademi Award carries a purse money of Rs.1,00,000/- (Rupees one lakh), besides a Tamrapatra and Angavastram.



President presents Sangeet Natak Akademi Awards

The Hindu Bureau
NEW DELHI

President Droupadi Murmu on Wednesday presented the Sangeet Natak Akademi Awards for 2022 and 2023 to eminent artists in the field of performing arts.

Ms. Murmu also gave away the Sangeet Natak Akademi Fellowship, or Akademi Ratna, to seven eminent artists. It is the highest honour given to artists for his or her exceptional contribution to a performing art form. The fellows are folklorist Vinayak Khedekar, veena virutoso R. Visweswaran, Kathak exponent Sunayana Hazarilal, Kuchipudi dancers Raja and Radha Reddy, and theatre artists Dulal Roy and D.P. Sinha.

Notable awardees

Twelve artists from the field of music, 12 from dance, 11 from folk and tribal arts, and nine from the field of theatre received the Akademi Awards for 2023.

Some of the notable awardees are Carnatic vocalist Bombay Jayashri Ramnath, Neyveli Narayanan for Carnatic instrumental (mridangam), Urmila Sathyanarayanan for Bharatanatyam, and Pallavi Krishnan for Mohiniyattam.

The Akademi Awards were fist given in 1952.

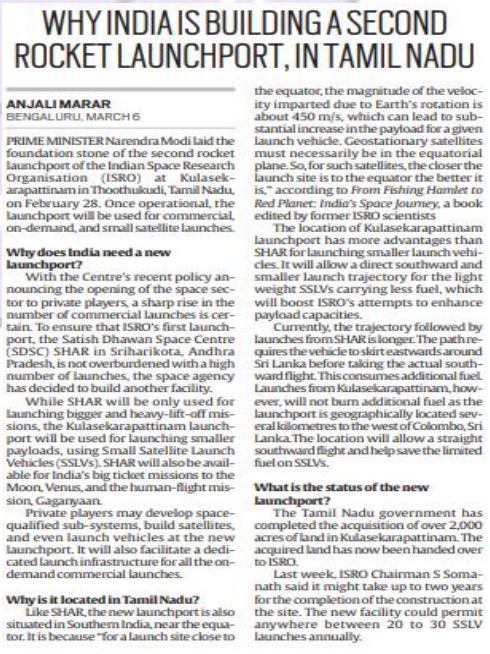
The Akademi fellows will receive an amount of ₹3 lakh, while the Akademi Award carries a prize money of ₹1 lakh. While giving away the awards, the President said that art was not just for the sake of art, it also had a social purpose.

"There are many such examples in history when artists used their art for social welfare. Artists have been contributing to awakening of society through their creations. Indian art is the best example of India's soft-power," Ms. Murmu added.

(From left) Vinayak Khedekar, R. Visweswaran, Sunayana Hazarilal, Raja Reddy, Radha Reddy, and Dulal Roy. SUSHIL KUMAR VERMA

6. Second rocket launchport of ISRO
GS 3 (Science and Tech)

- **Why in News:**
  - Recently, PM Modi laid the foundation stone of the second rocket launchport of the ISRO at Kulasekarapattinam.
  - It is situated at a geographically advantageous location in coastal Tamil Nadu's Thoothukudi district.
  - It will be extensively and exclusively used for commercial, on-demand, and small satellite launches in the future.
- **Need for a new launchport**
  - With the Union government's recent policy announcing the opening of the space sector to private players, a sharp rise in the number of commercial launches is expected.
  - To ensure that ISRO's first launchport, the **Satish Dhawan Space Centre (SDSC) SHAR in Sriharikota**, is not overburdened with a high number of launches, the space agency has decided to build another facility.
    - SHAR is situated along the east coast of Andhra Pradesh and is located 80 km off Chennai.
    - It currently provides launch infrastructure to all ISRO missions.
  - While SHAR will be only used for launching bigger and heavy-lift-off missions, the new launchport will be used to launch smaller payloads.
    - SHAR will also be available for India's big ticket missions to the Moon, Venus, and much touted human-flight mission, the Gaganyaan
  - Private players could develop space-qualified sub-systems, build satellites, and even launch vehicles using the new launchport.
  - It will also facilitate dedicated launch infrastructure for all the on-demand commercial launches.
- **Small Satellite Launch Vehicle (SSLV)**
  - **About**
    - SSLV is the new small satellite launch vehicle developed by ISRO to cater for the launch of small satellites.



WHY INDIA IS BUILDING A SECOND ROCKET LAUNCHPORT, IN TAMIL NADU

ANJALI MARAR
BENGALURU, MARCH 6

PRIME MINISTER Narendra Modi laid the foundation stone of the second rocket launchport of the Indian Space Research Organisation (ISRO) at Kulasekarapattinam in Thoothukudi, Tamil Nadu, on February 28. Once operational, the launchport will be used for commercial, on-demand, and small satellite launches.

Why does India need a new launchport?

With the Centre's recent policy announcing the opening of the space sector to private players, a sharp rise in the number of commercial launches is certain. To ensure that ISRO's first launchport, the Satish Dhawan Space Centre (SDSC) SHAR in Sriharikota, Andhra Pradesh, is not overburdened with a high number of launches, the space agency has decided to build another facility.

While SHAR will be only used for launching bigger and heavy-lift-off missions, the Kulasekarapattinam launchport will be used for launching smaller payloads, using Small Satellite Launch Vehicles (SSLVs). SHAR will also be available for India's big ticket missions to the Moon, Venus, and the human-flight mission, Gaganyaan.

Private players may develop space-qualified sub-systems, build satellites, and even launch vehicles at the new launchport. It will also facilitate a dedicated launch infrastructure for all the on-demand commercial launches.

Why is it located in Tamil Nadu?

Like SHAR, the new launchport is also situated in Southern India, near the equator. It is because "for a launch site close to the equator, the magnitude of the velocity imparted due to Earth's rotation is about 450 m/s, which can lead to substantial increase in the payload for a given launch vehicle. Geostationary satellites must necessarily be in the equatorial plane. So, for such satellites, the closer the launch site is to the equator the better it is," according to *From Fishing Hamlet to Red Planet: India's Space Journey*, a book edited by former ISRO scientists

The location of Kulasekarapattinam launchport has more advantages than SHAR for launching smaller launch vehicles. It will allow a direct southward and smaller launch trajectory for the light weight SSLVs carrying less fuel, which will boost ISRO's attempts to enhance payload capacities.

Currently, the trajectory followed by launches from SHAR is longer. The path requires the vehicle to skirt eastwards around Sri Lanka before taking the actual southward flight. This consumes additional fuel. Launches from Kulasekarapattinam, however, will not burn additional fuel as the launchport is geographically located several kilometres to the west of Colombo, Sri Lanka. The location will allow a straight southward flight and help save the limited fuel on SSLVs.

What is the status of the new launchport?

The Tamil Nadu government has completed the acquisition of over 2,000 acres of land in Kulasekarapattinam. The acquired land has now been handed over to ISRO.

Last week, ISRO Chairman S Somanath said it might take up to two years for the completion of the construction at the site. The new facility could permit anywhere between 20 to 30 SSLV launches annually.

- It has a three-stage launch vehicle, having a lift-off weight of about 120 tonnes and is 34 metres in length and 2 metres in diameter.
- SSLV is designed with a three-stage solid propulsion and a liquid propulsion stage, which is the terminal stage.

- **Uses**
  - The SSLV missions are useful to **launch small-sized satellites weighing anywhere between 10 to 500kg into the Low Earth Orbit**.
  - Going by their size and weight, these are typically referred to as mini, micro or nano satellites.
  - They are low on cost and intended satellite insertion into orbits takes a shorter flight time.
  - SSLV are best suited for commercial and on-demand launches.
  - Previously, satellite projects built by college students and private players involved in the space sector have benefitted from SSLV missions.
- **India's journey towards SSLV**
  - The first SSLV mission — SSLV-D1 — carrying two satellites, including EOS-02 and AzaadiSat, in August 2022, was a failure.
    - The insertion of the two satellites after their separation took place into a 356 km circular orbit instead of the intended elliptical orbit
  - In its second attempt with the SSLV-D2 in February 2023, ISRO tasted success.
  - The rocket inserted three satellites onboard into the intended 450 km circular orbit following a 15 minute flight.

- **Why is the new launch port located in Tamil Nadu?**
  - **Natural advantage to ISRO's future launches pertaining to SSLV**
    - The Kulasekarapattinam launchport provides a natural advantage to ISRO's future launches pertaining to the SSLV.
    - Allowing a direct southward and smaller launch trajectory for the light weight SSLVs carrying less fuel, the new facility will boost ISRO's attempts to enhance payload capacities.
  - **Currently launch from existing SHAR facility follow a longer trajectory**
    - Currently, the trajectory followed by all launches from SHAR are longer as they follow a path.
    - This requires the vehicle to skirt eastwards around Sri Lanka before taking the actual southward flight. This consumes additional fuel.
    - However, the same would not be required for future launches from Kulasekarapattinam.
    - This is because Kulasekarapattinam is geographically located several kilometers to the west of Colombo.
  - **Located near equator**
    - Both the launchports (SHAR and the new facility) are located on Southern India, near the equator.
    - For a launch site close to equator the magnitude of the velocity imparted due to Earth's rotation is about 450 m/s.
    - This can lead to substantial increase in the payload for a given launch vehicle.
    - Geostationary satellites must necessarily be in the equatorial plane. So, for such satellites, closer the launch site is to the equator the better it is.

DO NOT COPY

8th March, 2024

1. Centre extends Ujjwala subsidy
GS 2 (Governance)

Centre extends Ujjwala subsidy by another year

The Hindu Bureau
NEW DELHI

Weeks ahead of the Lok Sabha elections, the Union Cabinet on Thursday decided to extend the subsidy of ₹300 per LPG cylinder for up to 12 refills per year till the end of next financial year. About 10.27 crore beneficiaries under the Pradhan Mantri Ujjwala Yojana (PMUY) will be covered by the scheme, said Union Commerce Minister Piyush Goyal after the meeting of the Cabinet. The total expenditure for the continuation of the scheme will be ₹12,000 crore.

The Centre had started a targeted subsidy of ₹200 per cylinder for up to 12 refills per annum to the PMUY consumers in May 2022. In October 2023, the Centre increased the subsidy to ₹300 per cylinder for up to 12 refills per annum.

- **Why in News:** The Centre announced the extension of Rs 300 per LPG cylinder subsidy to poor women under the **Ujjwala Yojana** for the next fiscal starting April 1.
- **About the Scheme**
  - **Launched in:** 2016
  - To make **Liquified Petroleum Gas (LPG),** a clean cooking fuel, available to rural and deprived poor households, the government launched Pradhan Mantri Ujjwala Yojana (PMUY) to provide deposit-free LPG connections to adult women of poor households.
  - While the connection was provided for free, the beneficiaries had to purchase LPG refills at market price.
  - **Beneficiaries:** Adult women of poor households.

2. ISRO to provide Internet in 80 remote tribal villages
GS 2 (Governance)

Centre to rope in ISRO to provide Internet in 80 remote tribal villages

This collaboration will see the government set up V-SAT stations for tribal villages in Jharkhand, Madhya Pradesh, Odisha, Maharashtra that are geographically remote and have difficult terrain

Abhinay Lakshman
Jacob Koshy
NEW DELHI

The Tribal Affairs Ministry is planning to collaborate with the Indian Space Research Organisation (ISRO) to deploy V-SAT (very small aperture terminal) stations on a pilot basis for around 80 tribal villages in Jharkhand, Madhya Pradesh, Odisha, and Maharashtra to bring Internet services there, according to a proposal unveiled on Thursday at a Ministry event meant to brainstorm innovative projects for tribal development.

ISRO chief S. Somnath confirmed to *The Hindu* that they were going to collaborate with the Ministry on this project and that the two bodies would soon sign a memorandum of understanding to give pilot connectivity (services such as Internet, medical and educational connectivity) to these tribal-dominated villages.

This proposal was among the many that were tabled at Thursday's meeting, chaired by Tribal Affairs Minister Arjun Munda, on innovative projects for empowering tribal communities.

Union Minister Arjun Munda presiding over a meeting on projects for empowering tribal communities on Thursday. SPECIAL ARRANGEMENT

Various projects

In addition to the collaboration with the ISRO, proposals for projects with other eminent institutes such as the All India Institute of Medical Sciences (AIIMS) Delhi, Indian Institute of Technology (IIT) Delhi, Indian Institute of Management (IIM) Calcutta, and Indian Institute of Science (IISc) in Bengaluru were discussed.

The collaboration with the ISRO will see the government set up V-SAT stations for these 80 villages that are geographically remote and have difficult terrain, challenges that have kept them out of reach of connectivity for the longest time.

Officials at the Tribal Affairs Ministry said the pilot project would be monitored so that it could be scaled up to other similar tribal villages in other States as well, adding that the goal was also to help with e-governance in these remote areas. They added that the Ministry was in the process of identifying these 80 villages in these four States and soon the modalities of the project would be worked out.

Apart from this, the Ministry is partnering with the AIIMS to conduct advanced research on tribal health issues with special emphasis on sickle cell anemia and in organising training programmes for doctors and paramedical staff working in tribal areas. Plans are also on for setting up a Bhagwan Birsa Munda Chair of Tribal Health and Haematology at the AIIMS.

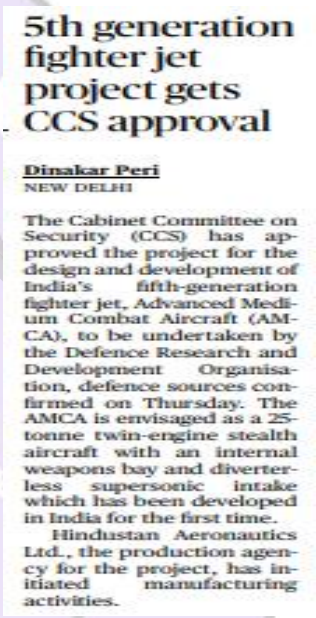
In addition, a proposal has been brought to set up a similar specialised department for appropriate technology and entrepreneurship in collaboration with the IIT, Delhi and the IIM, Kolkata.

One other proposal was also tabled to collaborate with the IISc for setting up a training facility which will offer courses on semiconductor to tribal students.

- **Why in News:** The **Ministry of Tribal Affairs** is planning to collaborate with the **Indian Space Research Organisation (ISRO)** to deploy **V-SAT stations** on a pilot basis for around 80 tribal villages in Jharkhand, Madhya Pradesh, Odisha, and Maharashtra to bring Internet services there.
- **E-Governance in India's remote regions**
  - In the remotest villages of India, the implementation of e-governance initiatives has emerged as a crucial necessity to **bridge the gap between rural communities and government services**.
  - The collaboration with ISRO will see the government set up **V-SAT (very small apperture terminal) stations** for these 80 villages that are geographically remote and have difficult terrain, challenges that have kept them out of reach of connectivity for the longest time.
  - This pilot project would be monitored so that it could be scaled up to other similar tribal villages in other States as well, adding the goal is also to help with e-governance in these remote areas.
- **E-Governance empowering remote villages**
  - **Challenges:** With limited access to traditional administrative facilities, such as government offices and banks, remote villages often face challenges in accessing essential services and information.
  - **Objective:** E-governance initiatives aim to address these challenges by leveraging digital technologies to provide efficient and accessible government services directly to the doorsteps of rural citizens.
  - Through the establishment of digital infrastructure, including **internet connectivity and digital service centers,** villagers can now access a range of services such as **applying for government schemes, obtaining certificates, and accessing information on entitlements and benefits.**

- This transformation has had a **significant impact on rural communities**, empowering them with **greater access to government services, enhancing transparency and accountability** in governance, and fostering socio-economic development in the remotest corners of the country.

3. 5th-gen indigenous fighter aircraft
GS 2 (Security)



5th generation fighter jet project gets CCS approval

Dinakar Peri
NEW DELHI

The Cabinet Committee on Security (CCS) has approved the project for the design and development of India's fifth-generation fighter jet, Advanced Medium Combat Aircraft (AMCA), to be undertaken by the Defence Research and Development Organisation, defence sources confirmed on Thursday. The AMCA is envisaged as a 25-tonne twin-engine stealth aircraft with an internal weapons bay and diverterless supersonic intake which has been developed in India for the first time.

Hindustan Aeronautics Ltd., the production agency for the project, has initiated manufacturing activities.

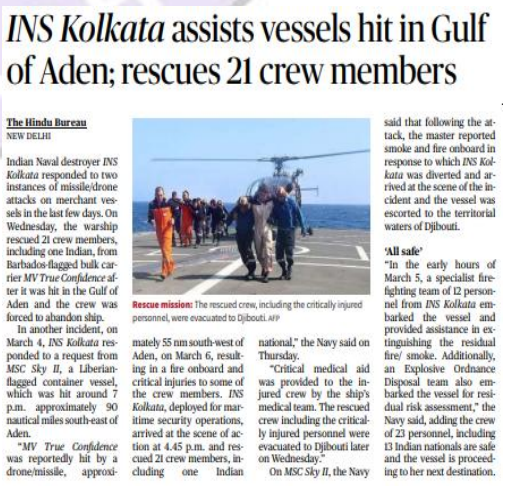
- **Why in News**: The Cabinet Committee on Security (CCS) has cleared the project to design and develop India's fifth-generation fighter jet **Advanced Medium Combat Aircraft (AMCA)**.
- **Key-takeaways of the proposal**

1. The approval is for development and production of **five prototypes** in the next five years.
2. The project involves designing and developing **twin-engine aircraft prototypes**.
3. Under the plan, five prototypes of the AMCA will jointly be built by the **Aeronautical Development Agency (ADA)** and **state-run Hindustan Aeronautics Limited (HAL)** with support from private industries.
4. The AMCA aims to elevate India into an **exclusive category of nations** that have successfully developed fifth-generation fighters.

- **About fifth-generation aircraft**
  - Fifth generation fighters are the most technologically advanced jets ever built.
  - Such platforms typically include **stealth, low-probability-of-intercept radar, agile airframes** with **super cruise performance, advanced avionics features, and highly integrated computer systems** capable of networking with other elements within the battlespace for situational awareness and **C3 (command, control and communications) capabilities.**
  - Globally there are four fifth-generation aircraft – **F-22 Raptor and F-35A Lightning-II** from the **USA; J-20** of **China** and **Su-57** from **Russia.** Turkey's 5th-Gen fighter called **Kaan** also made it

4. Red Sea
Recent events of importance

- **Why in News:** Indian Navy warship **INS Kolkata** rescued 21 crew members, from the **Barbados-flagged cargo vessel** which was reportedly hit by a missile in the **Gulf of Aden**.
- **More on News:**
  - The fresh incident comes amidst growing global concerns regarding attacks on commercial vessels in the Red Sea, particularly by Houthi militants.
  - The Red Sea is an inlet of the **Indian Ocean** between **Africa and Asia.**
  - The connection to the ocean is in the south through the **Bab el Mandeb** sound and the **Gulf of Aden.** In the north are the **Sinai Peninsula the Gulf of Aqaba, and the Gulf of Suez (leading to the Suez Canal).**



INS Kolkata assists vessels hit in Gulf of Aden; rescues 21 crew members

The Hindu Bureau
NEW DELHI

Indian Naval destroyer *INS Kolkata* responded to two instances of missile/drone attacks on merchant vessels in the last few days. On Wednesday, the warship rescued 21 crew members, including one Indian, from Barbados-flagged bulk carrier *MV True Confidence* after it was hit in the Gulf of Aden and the crew was forced to abandon ship.

In another incident, on March 4, *INS Kolkata* responded to a request from *MSC Sky II*, a Liberian-flagged container vessel, which was hit around 7 p.m. approximately 90 nautical miles south-east of Aden.

"*MV True Confidence* was reportedly hit by a drone/missile, approximately 55 nm south-west of Aden, on March 6, resulting in a fire onboard and critical injuries to some of the crew members. *INS Kolkata*, deployed for maritime security operations, arrived at the scene of action at 4.45 p.m. and rescued 21 crew members, including one Indian national," the Navy said on Thursday.

"Critical medical aid was provided to the injured crew by the ship's medical team. The rescued crew including the critically injured personnel were evacuated to Djibouti later on Wednesday."

On *MSC Sky II*, the Navy said that following the attack, the master reported smoke and fire onboard in response to which *INS Kolkata* was diverted and arrived at the scene of the incident and the vessel was escorted to the territorial waters of Djibouti.

Rescue mission: The rescued crew, including the critically injured personnel, were evacuated to Djibouti. AFP

'All safe'

"In the early hours of March 5, a specialist firefighting team of 12 personnel from *INS Kolkata* embarked the vessel and provided assistance in extinguishing the residual fire/ smoke. Additionally, an Explosive Ordnance Disposal team also embarked the vessel for residual risk assessment," the Navy said, adding the crew of 23 personnel, including 13 Indian nationals are safe and the vessel is proceeding to her next destination.

5. RBI, Bank Indonesia to use local currencies
GS 3 (Economy)

RBI, Bank Indonesia to use local currencies for two-way deals

The Hindu Bureau

- **Why in News:** The **Reserve Bank of India (RBI) and the Bank Indonesia (BI)** signed a Memorandum of Understanding (MoU) for establishing a framework to promote the use of **local currencies** — the Indian Rupee (INR) and the Indonesian Rupiah (IDR) — for **cross-border transactions.**

- **Key Highlights**

i. This framework would enable exporters and importers to invoice and pay in their respective domestic currencies, which in turn would enable the development of an INR-IDR foreign exchange market.
ii. Use of local currencies would optimise costs and settlement time for transactions.
iii. The MoU covers all current account transactions, permissible capital account transactions, and any other economic and financial transactions as agreed upon by both countries.

6. Cabinet Clears Rs 10k Cr Plan to Set Up Computing Capacity
GS 2 (Governance)

- **Why in News:**

a) The Union Cabinet approved the IndiaAI Mission with an outlay of Rs 10,372 crore for the next five years.
b) Last year, the Indian PM had announced the Mission and said its aim was to establish the computing powers of AI within the country.

Cabinet approves ₹10,372 cr. AI corpus

The Hindu Bureau
NEW DELHI

The Union Cabinet on Thursday approved a ₹10,371.92 crore corpus to fund Artificial Intelligence computing infrastructure and start-ups in the AI space. This corpus would provide viability gap funding, subsidise projects that may face steeper costs for setting up datacentres and other such facilities.

It will also contribute to application development for government use.

The corpus is the Centre's largest direct investment in AI, even as efforts to bring more semiconductor fabrication, design and assembly facilities are underway.

The corpus will be disbursed through the India AI Mission launched last year. "In the Artificial Intelligence area, the progress and solutions from India will be strengthened," Union Commerce and Industries Minister Piyush Goyal said announcing the corpus. "Graphics Processor Units will be made in Public-Private Partnership (PPP) mode," Mr. Goyal added.

Piyush Goyal

- **What is India's AI Mission?**

A. The PM of India at the **Global Partnership on Artificial Intelligence (GPAI) Summit 2023** (New Delhi) announced that India will launch an artificial intelligence (AI) mission.
B. Under the India AI Mission [to be implemented by the **'IndiaAI' Independent Business Division** (IBD) under Digital India Corporation (DIC)], the Ministry of Electronics and IT (**MeitY**) will look –

i. **To establish a computing capacity** of more than 10,000 graphics processing units (GPUs) and
ii. **To help develop foundational models** trained on datasets covering major Indian languages for priority sectors like **healthcare, agriculture, and governance**.

C. **AI Curation Units (ACUs)** will also be developed in 50-line ministries and **AI marketplace will be designed** to offer AI as a service and pre-trained models to those working on AI applications.
D. The implementation of this AI compute infrastructure will be done through a **public-private partnership model** with 50% viability gap funding.
E. Of the total outlay (of Rs 10,372 crore), Rs 4,564 crore has been earmarked for building computing infrastructure.

- **7 Key Features of IndiaAI Mission:**

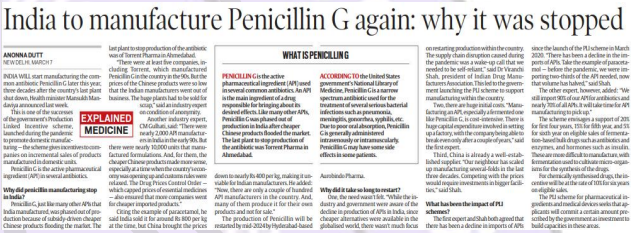
  - **IndiaAI Compute Capacity:** This pillar will build a high-end scalable AI computing ecosystem to cater to the increasing demands from India's rapidly expanding AI start-ups and research ecosystem.
  - **IndiaAI Innovation Centre:** The Centre will undertake the development and deployment of indigenous Large Multimodal Models (LMMs) and domain-specific foundational models in critical sectors.
  - **IndiaAI Datasets Platform:** This will streamline access to quality non-personal datasets for AI Innovation.
  - **IndiaAI Application Development Initiative:** This will promote AI applications in critical sectors for the problem statements sourced from Central Ministries, State Departments, etc.
  - **IndiaAI FutureSkills:** It is conceptualised to mitigate barriers to entry into AI programmes and will increase AI courses in undergraduate, Masters level, and Ph.D. programmes.
  - **IndiaAI Startup Financing:** This pillar is conceptualised to support and accelerate deep-tech AI startups and provide them with streamlined access to funding to enable futuristic AI projects.
  - **Safe & Trusted AI:** This pillar will enable the implementation of responsible AI projects including the development of indigenous tools and frameworks.

- **Significance of India AI Mission:**

- The IndiaAI Mission will further the vision of **Making AI in India and Making AI Work** for India.
- The IndiaAI Mission seeks to showcase to the international community the positive applications of the revolutionary technology for societal benefit, thereby **elevating India's global competitiveness.**
- It will establish a comprehensive ecosystem **catalysing AI innovation through strategic programmes and partnerships across the public and private sectors**.
- It will drive forward creativity and enhance internal capabilities, safeguarding **India's technological autonomy**.
- Additionally, it aims to **generate employment opportunities** that require advanced skills, tapping into the country's demographic advantage.

7. Revival of domestic production with PLI Scheme
GS 2 (Governance)

- **Why in News:** India is set to start manufacturing the common antibiotic **Penicillin G** later this year, three decades after the country's last plant shut down. This revival is one of the successes of the **Production Linked Incentive scheme** launched during the pandemic to promote domestic manufacturing — the scheme gives incentives to companies on incremental sales.


India to manufacture Penicillin G again: why it was stopped

ANONNA DUTT
NEW DELHI, MARCH 7

INDIA WILL start manufacturing the common antibiotic Penicillin G later this year, three decades after the country's last plant shut down, Health minister Mansukh Mandaviya announced last week.

This is one of the successes of the government's Production Linked Incentive scheme, launched during the pandemic to promote domestic manufacturing — the scheme gives incentives to companies on incremental sales of products manufactured in domestic units.

Penicillin G is the active pharmaceutical ingredient (API) in several antibiotics.

Why did penicillin manufacturing stop in India?

Penicillin G, just like many other APIs that India manufactured, was phased out of production because of subsidy-driven cheaper Chinese products flooding the market. The last plant to stop production of the antibiotic was of Torrent Pharma in Ahmedabad.

EXPLAINED MEDICINE

There were at least five companies, including Torrent, which manufactured Penicillin G in the country in the 90s. But the prices of the Chinese products were so low that the Indian manufacturers went out of business. The huge plants had to be sold for scrap," said an industry expert on condition of anonymity.

Another industry expert, CM Gulhati, said: "There were nearly 2,000 API manufacturers in India in the early 90s. But there were nearly 10,000 units that manufactured formulations. And, for them, the cheaper Chinese products made more sense, especially at a time when the country's economy was opening up and customs rules were relaxed. The Drug Prices Control Order — which capped prices of essential medicines — also ensured that more companies went for cheaper imported products."

Citing the example of paracetamol, he said India sold it for around Rs 800 per kg at the time, but China brought the prices down to nearly Rs 400 per kg, making it unviable for Indian manufacturers. He added: "Now, there are only a couple of hundred API manufacturers in the country. And, many of them produce it for their own products and not for sale."

The production of Penicillin will be restarted by mid-2024 by Hyderabad-based Aurobindo Pharma.

Why did it take so long to restart?

One, the need wasn't felt. "While the industry and government were aware of the decline in production of APIs in India, since cheaper alternatives were available in the globalised world, there wasn't much focus on restarting production within the country. The supply-chain disruption caused during the pandemic was a wake-up call that we needed to be self-reliant," said Dr Vranchi Shah, president of Indian Drug Manufacturers Association. This led to the government launching the PLI scheme to support manufacturing within the country.

Two, there are huge initial costs. "Manufacturing an API, especially a fermented one like Penicillin G, is cost-intensive. There is huge capital expenditure involved in setting up a factory, with the company being able to break even only after a couple of years," said the first expert.

Third, China is already a well-established supplier. "Our neighbour has scaled up manufacturing several-fold in the last three decades. Competing with the prices would require investments in bigger facilities," said Shah.

What has been the impact of PLI schemes?

The first expert and Shah both agreed that there has been a decline in imports of APIs since the launch of the PLI scheme in March 2020. "There has been a decline in the imports of APIs. Take the example of paracetamol — before the pandemic, we were importing two-thirds of the API needed, now that volume has halved," said Shah.

The other expert, however, added: "We still import 90% of our APIs for antibiotics and nearly 70% of all APIs. It will take time for API manufacturing to pick up."

The scheme envisages a support of 20% for first four years, 15% for fifth year, and 5% for sixth year on eligible sales of fermentation-based bulk drugs such as antibiotics and enzymes, and hormones such as insulin. These are more difficult to manufacture, with fermentation used to cultivate micro-organisms for the synthesis of the drugs.

For chemically synthesised drugs, the incentive will be at the rate of 10% for six years on eligible sales.

The PLI scheme for pharmaceutical ingredients and medical devices seeks that applicants will commit a certain amount prescribed by the government as investment to build capacities in these areas.

WHAT IS PENICILLIN

PENICILLIN G is the active pharmaceutical ingredient (API) used in several common antibiotics. An API is the main ingredient of a drug responsible for bringing about its desired effects. Like many other APIs, Penicillin G was phased out of production in India after cheaper Chinese products flooded the market. The last plant to stop production of the antibiotic was Torrent Pharma in Ahmedabad.

ACCORDING TO the United States government's National Library of Medicine, Penicillin G is a narrow spectrum antibiotic used for the treatment of several serious bacterial infections such as pneumonia, meningitis, gonorrhea, syphilis, etc. Due to poor oral absorption, Penicillin G is generally administered intravenously or intramuscularly. Penicillin G may have some side effects in some patients.

- **The issue of market flooding :**

i. Penicillin G is the active **pharmaceutical ingredient (API)** used in manufacturing several common
ii. Penicillin G, just like many other APIs that India manufactured, was phased out of production because of **subsidy-driven cheaper** Chinese products flooding the market.

- **Role of PLI Scheme for the economy**

i. Production Linked Incentive scheme (PLI) has become a crucial part of the vision of making India a $ 5 trillion economy. In the post-pandemic scenario, PLI is proving to be a huge catalyst in creating 'AatmaNirbhar Bharat'.
ii. The scheme currently targets 14 sectors of strategic and economic importance for India's economic growth.
iii. The 14 sectors are: **(i) Mobile Manufacturing and Specified Electronic Components, (ii) Critical Key Starting Materials/Drug Intermediaries & Active Pharmaceutical Ingredients, (iii) Manufacturing of Medical Devices (iv) Automobiles and Auto Components, (v) Pharmaceuticals Drugs, (vi) Specialty Steel, (vii) Telecom & Networking Products, (viii) Electronic/Technology Products, (ix) White Goods (ACs and LEDs), (x) Food Products, (xi) Textile Products: MMF segment and technical textiles, (xii) High efficiency solar PV modules, (xiii) Advanced Chemistry Cell (ACC) Battery, and (xiv) Drones and Drone Components.**

❖ The purpose of the PLI Schemes is to :

i. attract investments in key sectors and cutting-edge technology
ii. ensure efficiency and bring economies of size and scale in the manufacturing sector
iii. make Indian companies and manufacturers globally competitive

➢ These schemes have the potential of significantly boosting production, employment and economic growth over the next five years or so.

8. Kerala working towards prevention of man-animal conflict
GS 2 (Governance)

WHY KERALA DECLARED MAN-ANIMAL CONFLICT A STATE-SPECIFIC DISASTER

SHAJU PHILIP
THIRUVANANTHAPURAM, MARCH 7

AMID REPEATED deaths from animal attacks and rising anger over them, Kerala has declared man-animal conflict as a state-specific disaster, becoming the first state in the country to do so. Here is a look at what the decision means, and how it would change the way the government is addressing the issue.

What changes

Man-animal conflict is the responsibility of the forest department, which acts as per the Wild Life Protection Act. Once the issue is declared a state-specific disaster, the onus of handling it will be on the disaster management authority, which, governed by the Disaster Management Act, can take quicker and more decisive action.

At the state level, the Chief Minister is the chairman of the authority, and officials of several departments, including the forest department, are stakeholders. In the districts, the district disaster management authority is headed by the district collector, and the DFO is a member of the body.

Once an issue is declared a state-specific disaster or a national disaster, the disaster management authority can take quick decisions and actions overriding all other norms, including the power to directly intervene in their capacity as the chairman of the district disaster body.

Why the change

In the past few weeks, everytime a life has been lost to man-animal conflict, there has been a mounting chorus to translocate/capture/kill the animals responsible.

At present, the chief wildlife warden — there is only one such post in the state — is the only authority to take a call on a wild animal wreaking havoc in human settlement. Also, to the past, there have been cases where the decision to translocate, for instance, a tusker in Wayanad, has been put to the test in court.

Once the issue is under the disaster management authority, it can take actions overriding other norms, including those under the Wild Life Protection Act, as per section 71 of the Disaster Management Act, no court [except the Supreme Court or a High Court] shall have jurisdiction to entertain any suit or proceeding in respect of any order made by relevant authorities in pursuance of any power conferred by this Act. Section 72 of the Act says that the provisions of this Act will have an overriding effect on the provisions of any law in force in case of a disaster has been declared.

Other such disasters

In 2015, Odisha had declared snakebite a state-specific disaster.

In 2020, Kerala declared Covid as a state specific disaster. Besides, heat wave in Odisha, which has been declared so in 2016, the phenomenon of soil piping in 2017, and lightning and coastal erosion in 2015.

Recently, there have been several cases of elephants killing humans in Kerala. Archive

- **Why in News:** In the wake of recurring incidents of loss of lives in human settlements due to elephant attacks, Kerala has come up with long, short-term measures to prevent man-animal conflict. Also, the Kerala cabinet declared instances of **man-animal conflict** as a **state-specific disaster.** Declaration of the man-animal conflict as a state specific disaster will give more power to the district

collectors to address the menace.

- **The pressing issue of human-animal conflict**

a) In contemporary Kerala, particularly in the district of Wayanad, human-animal conflict is a pressing issue shaped by the intricate interplay of agrarian transformation and forest conservation efforts.

b) As capitalist settler agriculture expands into forested areas, encroaching upon wildlife habitats, conflicts between humans and animals intensify.

c) This conflict reflects a historical narrative of **ecological modernity**, where state-led and globalizing conservation initiatives intersect with agrarian changes, creating **complex dynamics of coexistence and competition** between human livelihoods and wildlife survival.

- **States attempt to prevent the menace Measures**
  - **Long-term Measures:**

i. **Smart elephant fence**: A smart elephant fence to prevent marauding wild elephants from reaching human habitations and reduce the instances of man-animal conflict in Wayanad.

ii. **Improvement of wildlife habitats: Eradication of invasive plants** such as **senna,** eco-restoration activities by removing **eucalyptus and acacia plantations**, supporting the regeneration of natural vegetation, improvement of wildlife habitats, and charging fees for entry of private vehicles into the forest area will also be explored.

  - **Short-term Measures**

i. **Coordination**: The meetings of the inter-State coordination committee, the setting up of a Command Control Centre in Wayanad, and steps for strengthening the early warning system to alert people about the possible presence of wild animals in human habitations.

ii. **Deployment of drones for surveillance**, clearing compensation to victims of wild animal attacks, setting up of a new forest station, and closure of ecotourism destinations in the forest till the issue of man-animal conflict is reduced are also being implemented, the State informed the court.

- **Impact**

➢ The measures reflects the state's proactive approach to addressing this pressing issue. Through these initiatives, the state aims to improve early warning systems and response mechanisms.

➢ These efforts demonstrate a holistic approach to managing conflict and ensuring the safety of both communities and wildlife.

9. India-ASEAN FTA review
GS 2 (International Relations)

- **Why in News:** India is negotiating with the ten-member ASEAN for greater market access for its goods, more flexibility in determining origin of products through product-specific rules and redressal of non-tariff barriers. This comes as part of the **India-ASEAN FTA review** initiated by New Delhi to address its **growing trade deficit** with the bloc.

India-Asean FTA review: Thailand flags rules of origin

RAVI DUTTA MISHRA
NEW DELHI, MARCH 7

AFTER PUSHING back against India's food security programme at the recently concluded WTO meet, Thailand is learnt to have objected to a proposal to notify implementation of ASEAN-wide rules of origin under free trade agreements (FTAs) for guarding against misuse of benefits, a government official said.

Thailand's objection was flagged during the ongoing India-Asean FTA review where India is trying to boost exports to Association of Southeast Asian Nations countries. The India-ASEAN trade deficit has ballooned to $43.57 billion in favour of Asean countries, growing sharply by over 40 per cent compared to $25.75 billion in FY22.

Trade experts said the India-Asean trade gap has been rising as several multinational companies are increasing investments in Asean nations as part of their China-plus-one policy. Moreover, India's production linked incentive schemes have also increased demand for intermediate products sourced from Asean countries.

Thailand's objection also comes in the backdrop of growing Chinese influence. Beijing became the largest source of FDI for Thailand during the last calendar year. Beijing and Bangkok have also expanded defence cooperation in recent years.

"Our trade deficit has gone up with Asean countries. India had sought the review of the India-Asean FTA and we are looking for better market access and they are also looking to fast track trade facilitation, because of CAROTAR – Customs (Administration of Rules of Origin under Trade Agreements) Rules, which has also been affected. Thailand has especially objected during the review meeting," said a government official, requesting anonymity.

"They are also looking to increase coverage of tariff elimination. And we are also looking for liberal product-specific rules (PSRs) in electronics, chemicals and textiles. Besides, we are looking to streamline non-tariff barriers that have been a concern for our exporters," the official said.

The CAROTAR, in these circumstances in which goods imported from a member, that have components or inputs from a non-member, are still eligible for preferential tariff treatment. PSR rules are negotiated to simplify the use of FTA as India's utilisation rate of the Asean FTA has remained weak over the years.

The China-plus-one strategies of MNCs, and the rise of local MNCs in recent years, including by some Chinese firms which are also increasing their investments in Asean countries, are already seeing a rise in the manufacturing and export capacities in Asean," said a report by V S Seshadri, former Indian Foreign Service officer and Joint Secretary for WTO matters in the Ministry of Commerce and Industry.

The report for thinktank Delhi Policy Group said India's high tariffs have resulted in greater advantage to Asean countries and wider trade deficit.

TRADE TALKS

- India is looking for better market access and Asean countries are seeking to fast-track trade facilitation
- Asean nations, including Thailand, see their exports being hit by the 'Customs (Administration of Rules of Origin under Trade Agreements) Rules'
- Thailand's objection to CAROTAR, however, also comes amid growing Chinese influence

- **Objective behind India's demand**
  - India had been urging the ASEAN for a **review of the FTA** as its trade deficit with the region ballooned since the trade pact was implemented in January 2010.
  - The India-ASEAN FTA, formally known as the **ASEAN-India Trade in Goods Agreement (AITGA),** has resulted in **disproportionate gains for the ASEAN countries.**
- **India's solutions**

- Seeking **product-specific rules (PSRs)** in the **rules of origin (ROO)** determination is one solution being pursued by India for greater exports.
- ROO are the criteria to determine the origin of a product and establish if it qualifies for duty cuts under a FTA.
- PSRs can be introduced in the ROO chapter for relaxing rules for certain items where meeting the prescribed ROO is difficult.
- India is also looking for tariff cuts in items such as **chemicals, metals and alloys, machinery, plastic and rubber, textiles, leather and gems and jewellery**.

- **ASEAN's demands**
  - ASEAN too wants its own set of PSRs for items such as electronics, chemicals and textiles.
  - Moreover, the ASEAN (especially Thailand) is unhappy with the **Customs (Administration of Rules of Origin under Trade Agreements) Rules, 2020 (CAROTAR, 2020)** rules introduced in India which aims to supplement the operational certification procedures related to implementing the ROO as prescribed under the respective trade agreement.
- **Data**
  - In 2022-23, India exported goods worth $44 billion to the region while its imports were valued at $87.57 billion.
  - Trade deficit in 2022-23 was $43.75 billion compared to $7.5 billion during the implementation of the agreement.

DO NOT COPY

9th March, 2024

1. Enhancing Naval Capabilities: INS Jatayu and Karwar Naval Base Expansion
GS 2 (Security)

- **Why in News:** Defence Ministry has planned a slew of facilities at INS Jatayu, the Indian Navy's newest base being established on Minicoy Island in Lakshadweep. In addition to INS Jatayu, new infrastructure and facilities were inaugurated at the Karwar naval base in Karnataka by Defence Minister

Backed by BrahMos, Navy's Minicoy base to keep watch over Arabian Sea

Dinakar Peri
MINICOY/KOCHI

Radars, jetties, airfield and BrahMos supersonic cruise missiles – the Indian Navy's newest base being established on Minicoy Island in Lakshadweep, *INS Jatayu*, will have all these and many more. The upgrade is part of a long-term capability development plan which officials and experts say will shore up India's security footprint on the islands located very close to critical Sea Lanes of Communication (SLOC).

This is especially significant as Chinese naval footprint, which includes 'research vessels', has seen massive expansion in the Indian Ocean. Minicoy is also just a few hundred miles from the Maldives.

In addition to *INS Jatayu*, new infrastructure and facilities were inaugurated at Karwar naval base in Karnataka by Defence Minister Rajnath Singh on Tuesday. These include two major piers and seven residential towers comprising 320 houses for officers and civilian defence personnel as well as 149 single officers' accommodation.

"New radar facilities at Minicoy will augment surveillance and coastal batteries of extended range BrahMos supersonic cruise missiles with a range of around 450 km will give huge flexibility in responding to threats," officials in the know said.

"As we commission *[INS] Jatayu*, it is crucial to recognise the pressing need for heightened surveillance amidst the prevailing geopolitical developments," Navy Chief Admiral R. Hari Kumar said. "*INS Baaz* to the east in Andamans and now, *INS Jatayu* in the west at Minicoy, will serve as the eyes and ears of the Navy," he stated.

"*Jatayu* will be the 'watch-keeper' for Bharat at the gateway of Arabian Sea," said Vice-Admiral Shekhar Sinha, former Western Naval Commander, noting its proximity to the busy Nine Degree Channel, the approximately 200-km wide area between Minicoy and Kalpeni/Suheli Par islands of Lakshadweep. Situated at the tip of India's Exclusive Economic Zone (EEZ), it also serves as a deterrent against any future adversarial presence, making *Jatayu* a "formidable static aircraft carrier".

Navy Chief Admiral R. Hari Kumar and Lakshadweep Administrator Praful Khoda Patel at the commissioning of INS Jatayu. PTI

Karwar naval base

The Phase I construction of Karwar base under Project Seabird, which was completed in 2011, was designed to accommodate 10 ships. The Cabinet Committee on Security has since granted approval for Phase IIA of Project Seabird which will see the base expanded for berthing of 32 ships and submarines, along with 23 yard-craft and include piers, providing a berthing space of more than 6 km.

"The centrepiece of Phase IIA works is an iconic Covered Dry Berth, standing at a height of 75 metres, taller than the Qutub Minar in Delhi," according to the Navy.

- **Strategic Significance of INS Jatayu**
  - **Strategic Upgrade**: INS Jatayu, the Indian Navy's latest base on Minicoy Island in Lakshadweep, is poised to undergo significant enhancements to bolster India's security posture in the Indian Ocean region. Equipped with radars, jetties, an airfield, and BrahMos supersonic cruise missiles, INS Jatayu will serve as a crucial surveillance outpost overlooking the Arabian Sea.
  - **Geopolitical Context**: The establishment of INS Jatayu assumes paramount importance amidst expanding Chinese naval activities in the Indian Ocean. Positioned strategically close to critical Sea Lanes of Communication (SLOC) and the Maldives, Minicoy Island emerges as a pivotal node in India's maritime security framework.
- **Operational Capabilities and Surveillance**
  - **Technological Arsenal**: The integration of advanced radar systems and BrahMos supersonic cruise missiles at INS Jatayu will significantly augment India's surveillance capabilities, enhancing maritime domain awareness and responsiveness to potential threats. Additionally, the deployment of extended-range BrahMos missiles offers flexibility in deterring adversarial actions.
  - **Strategic Vision**: Navy Chief Admiral R. Hari Kumar underscores the imperative of heightened surveillance amidst evolving geopolitical dynamics, emphasizing the pivotal role of INS Jatayu in safeguarding India's maritime interests. Positioned strategically at the tip of India's Exclusive Economic Zone (EEZ), INS Jatayu serves as a formidable deterrent against adversarial incursions.
- **Infrastructure Development and Economic Implications**
  - **Strategic Infrastructure**: The expansion of Karwar naval base under Project Seabird represents a monumental leap in India's naval infrastructure development. Phase IIA of the project aims to accommodate a substantial fleet of ships and submarines, accompanied by comprehensive logistical support and residential facilities.
  - **Economic Stimulus**: The ambitious expansion of Karwar naval base is poised to inject vitality into the local economy, with an estimated 50,000 individuals expected to reside in the naval facilities upon full operationalization. Additionally, the development of ancillary facilities such as greenfield naval air stations and civil enclaves augurs well for regional economic growth.
- **Geopolitical Implications and Global Trade Dynamics**
  - **Strategic Imperatives**: The evolving security landscape in the Red Sea and Gulf of Aden underscores the strategic significance of naval bases such as INS Jatayu and Karwar. With over 90% of India's trade flowing through the sea, securing critical maritime routes assumes paramount importance in safeguarding national interests.

- **Global Trade Dynamics**: The proliferation of drone and missile attacks on commercial shipping underscores the vulnerability of global trade routes. India's concerted efforts to fortify its naval capabilities serve not only to protect its own trade interests but also contribute to the stability and security of global maritime commerce.

2. Revamping the PM-Surya Ghar Muft Bijli Yojna: A Shift in Strategy
GS 2 (Governance)

- **Why in News:** The Indian government's initiative to promote rooftop solar installations under the PM-Surya Ghar Muft Bijli Yojna (Prime Minister's Rooftop Solar: Free Electricity Scheme) comes against the backdrop of escalating concerns over climate change and the urgent need to transition towards cleaner energy sources.

Centre tweaks PM solar 'free electricity' scheme

Jacob Koshy
NEW DELHI

The Union government has tweaked the new ₹75,000-crore PM Surya Ghar Muft Bijli Yojana (rooftop solar: free electricity scheme). From an initial plan to fully subsidise the installation of 1 kW-3 kW solar systems in one crore households via tie-ups with renewable energy service companies, the scheme will now only contribute up to 60% of the costs, *The Hindu* has learnt.

Households interested in availing the scheme's benefits will have to fork out the balance amount and pay a minimum of ₹20,000 depending on the power capacity of the installed system though this could be defrayed by a low-interest, collateral-free loan.

Only houses with a suitable roof and an existing connection to the grid will be eligible for the scheme and consumers still have to pay for all the net power supplied and consumed via the grid. "The free component in this, is in the sense, that it will reduce your electricity bill. You will get a payback and that can range from three to seven years. Whatever capital cost [is invested by consumer] will be recovered in three to five years and after that it could mean even income," Bhupinder Bhalla, Secretary, Ministry of New and Renewable Energy, the nodal body coordinating the scheme, told *The Hindu* on Friday.

Through a system of net-metering, any solar power produced in a household and unused will flow back into the grid and will be offset in the household's electricity bill. Depending on consumption patterns, this could even mean consumers earning money, though the general experience, the world over, shows a reduction in bills.

Power Minister R.K. Singh had explained the financing of the scheme differently in an interaction with reporters on February 3.

He had said that public sector units, affiliated to the Power Ministry, would be reaching out to "eligible" households and installing the rooftop solar systems for free.

"Sixty per cent of the cost of installation will be subsidised by the Centre. For the rest, [a Central] Public Sector Enterprise will take a loan [from a bank] and will repay from the cost of electricity [used by the household] over and above the 300 units. You as a householder pay nothing," he had said.

Currently, a rooftop solar system in India costs nearly ₹50,000 per kW.

Finance Minister Nirmala Sitharaman in her Budget Speech had first mentioned the scheme envisaged to generate up to 300 units of free electricity every month.

Mr. Bhalla clarified that the while there would be an "option" for having service companies provide solar installations, the "focus" of the scheme had shifted towards consumers taking loans and getting installations.

"The major difference from previous versions of the scheme is a doubling of the subsidy on rooftop solar (from an earlier ₹14,500 per kW) and an anticipated improvement in service delivery. "We have learnt from past mistakes. There are 4,300 vendors and a convenient system for a household to apply online and get it installed," reckoned Mr. Bhalla. "Unlike in the past you don't have to run around to get an installation."

As the scheme is now envisaged, 12 public sector banks will offer a collateral free loan (1% above the current prevailing RBI repo rate, now 6.5%) to anyone with a viable roof and grid connectivity and wanting to install a rooftop system. A 3 kW-hour system can generate up to 300 units a month, depending on available sunshine and for this a maximum subsidy of up to ₹78,000 will be available.

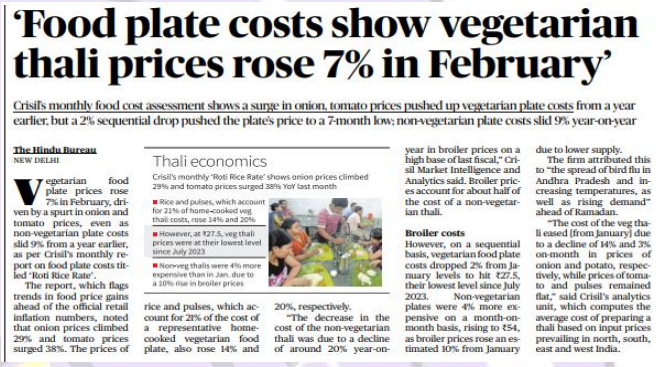
Currently a rooftop solar system costs about ₹50,000 per kW. A householder can either pay the balance or take a loan. A vendor will appraise the site and then install the system along with an inverter and a smart meter that can switch between grid and solar supply. Operation and maintenance costs up to five years will be factored into the cost.

"We already have 40 lakh registrations and some installations are already under way in Gujarat. We expect to reach the target of one crore houses in three years," he added.

- **Scheme Modifications**
  - **Revised Subsidy Model**: The ?75,000-crore PM-Surya Ghar Muft Bijli Yojna, initially intended to fully subsidize the installation of 1-3 KW solar systems in one crore households, has undergone significant alterations. The scheme now offers a subsidy covering up to 60% of the installation costs, requiring participating households to contribute the remaining amount.
  - **Financial Implications**: Households availing the scheme's benefits will be required to make a minimum contribution, with the balance amount covered by low-interest, collateral-free loans. This strategic shift aims to foster greater consumer involvement and financial responsibility while ensuring the sustainability of the scheme.
- **Operational Framework**
  - **Net-Metering Mechanism**: Through a system of net-metering, surplus solar power generated by households can be fed back into the grid, offsetting their electricity bills. This innovative approach not only encourages renewable energy adoption but also offers the potential for households to earn income through excess energy production.
  - **Enhanced Service Delivery**: The revamped scheme emphasizes streamlined service delivery, leveraging digital platforms for seamless application processes and installation procedures. By minimizing bureaucratic hurdles, the scheme aims to expedite the deployment of rooftop solar systems across eligible households.
- **Financing Mechanism and Subsidy Structure**
  - **Collateral-Free Loans**: Twelve public sector banks are set to offer collateral-free loans to eligible households seeking to install rooftop solar systems. With an interest rate marginally above the prevailing RBI repo rate, this financing mechanism aims to make solar adoption financially accessible to a wider demographic.
  - **Doubling of Subsidy**: The scheme witnesses a substantial increase in rooftop solar subsidy rates, doubling the previous subsidy amount per kilowatt. This enhanced financial support is poised to incentivize greater uptake of rooftop solar installations, thereby accelerating India's transition towards renewable energy.
- **Projected Impact and Future Prospects**
  - **Scale-Up Strategy**: The revised scheme targets the installation of rooftop solar systems in one crore households over the next three years, representing a significant scaling up of India's rooftop solar capacity. By expanding the reach of renewable energy infrastructure, the scheme holds the potential to substantially reduce carbon emissions and mitigate environmental impact.

- **Boosting Domestic Manufacturing**: By stipulating that only solar panels manufactured by the Indian industry are eligible for subsidies, the scheme aims to bolster domestic manufacturing capacity. This strategic emphasis on indigenous production aligns with broader objectives of promoting self-reliance and sustainability in the renewable energy sector.

3. Vegetarian Food Price Trends
GS 3 (Economy)



'Food plate costs show vegetarian thali prices rose 7% in February'

Crisil's monthly food cost assessment shows a surge in onion, tomato prices pushed up vegetarian plate costs from a year earlier, but a 2% sequential drop pushed the plate's price to a 7-month low; non-vegetarian plate costs slid 9% year-on-year

The Hindu Bureau
NEW DELHI

Vegetarian food plate prices rose 7% in February, driven by a spurt in onion and tomato prices, even as non-vegetarian plate costs slid 9% from a year earlier, as per Crisil's monthly report on food plate costs titled 'Roti Rice Rate'.

The report, which flags trends in food price gains ahead of the official retail inflation numbers, noted that onion prices climbed 29% and tomato prices surged 38%. The prices of rice and pulses, which account for 21% of the cost of a representative home-cooked vegetarian food plate, also rose 14% and 20%, respectively.

"The decrease in the cost of the non-vegetarian thali was due to a decline of around 20% year-on-year in broiler prices on a high base of last fiscal," Crisil Market Intelligence and Analytics said. Broiler prices account for about half of the cost of a non-vegetarian thali.

Broiler costs

However, on a sequential basis, vegetarian food plate costs dropped 2% from January levels to hit ₹27.5, their lowest level since July 2023. Non-vegetarian plates were 4% more expensive on a month-on-month basis, rising to ₹54, as broiler prices rose an estimated 10% from January due to lower supply.

The firm attributed this to "the spread of bird flu in Andhra Pradesh and increasing temperatures, as well as rising demand" ahead of Ramadan.

"The cost of the veg thali eased [from January] due to a decline of 14% and 3% on-month in prices of onion and potato, respectively, while prices of tomato and pulses remained flat," said Crisil's analytics unit, which computes the average cost of preparing a thali based on input prices prevailing in north, south, east and west India.

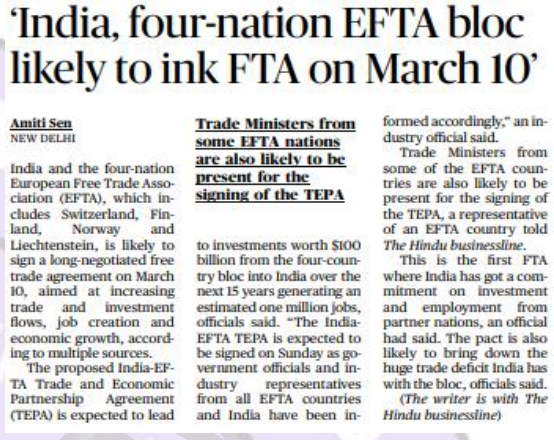
Thali economics

Crisil's monthly 'Roti Rice Rate' shows onion prices climbed 29% and tomato prices surged 38% YoY last month

- Rice and pulses, which account for 21% of home-cooked veg thali costs, rose 14% and 20%
- However, at ₹27.5, veg thali prices were at their lowest level since July 2023
- Non-veg thalis were 4% more expensive than in Jan. due to a 10% rise in broiler prices

- **Why in News:** Crisil's monthly food cost assessment shows a surge in onion, tomato prices pushed up vegetarian plate costs from a year earlier, but a 2% sequential drop pushed the plate's price to a 7-month low; non-vegetarian plate costs slid 9% year-on-year
- **Inflation Trends**
  - **Price Spikes in Vegetarian Food Items**: In February, vegetarian food prices experienced a notable surge, with a 7% increase. This rise was primarily driven by significant spikes in onion and tomato prices.
  - **Rise in Essential Commodities**: Notably, onion prices soared by 29%, while tomato prices saw an even sharper increase of 38%. Additionally, staple items such as rice and pulses, which collectively constitute 21% of the cost of a typical vegetarian meal, also witnessed significant upticks of 14% and 20%, respectively.
- **Factors Influencing Price Changes**
  - **Market Dynamics**: The decrease in the cost of non-vegetarian meals, in contrast, can be attributed to a decline of approximately 20% in broiler prices compared to the previous fiscal year. Broiler prices play a significant role, constituting about half of the cost of a non-vegetarian meal.
  - **Seasonal and Regional Influences**: The sequential fluctuations in food plate costs highlight the impact of seasonal and regional factors. While vegetarian plate costs decreased by 2% from January levels, non-vegetarian plate costs saw a 4% increase. This disparity can be linked to factors such as lower broiler supply and the spread of bird flu in Andhra Pradesh, alongside rising demand ahead of Ramadan.
- **Analysis and Outlook**
  - **Cost Mitigation Efforts**: Despite the overall increase in food prices, there are instances of relief. For instance, the cost of the vegetarian meal eased from January levels due to declines in onion and potato prices. However, the prices of tomatoes and pulses remained relatively stable during this period.
    - **Implications for Household Budgets**: The Crisil report's insights into the average cost of preparing a meal at home offer valuable insights for households across different regions of India. Understanding these trends can aid consumers in managing their budgets effectively amidst fluctuating food prices.

4. India-EFTA Free Trade Agreement: A Strategic Partnership
GS 2 (International Relations)



'India, four-nation EFTA bloc likely to ink FTA on March 10'

Amiti Sen
NEW DELHI

India and the four-nation European Free Trade Association (EFTA), which includes Switzerland, Finland, Norway and Liechtenstein, is likely to sign a long-negotiated free trade agreement on March 10, aimed at increasing trade and investment flows, job creation and economic growth, according to multiple sources.

The proposed India-EFTA Trade and Economic Partnership Agreement (TEPA) is expected to lead to investments worth $100 billion from the four-country bloc into India over the next 15 years generating an estimated one million jobs, officials said. "The India-EFTA TEPA is expected to be signed on Sunday as government officials and industry representatives from all EFTA countries and India have been informed accordingly," an industry official said.

Trade Ministers from some EFTA nations are also likely to be present for the signing of the TEPA

Trade Ministers from some of the EFTA countries are also likely to be present for the signing of the TEPA, a representative of an EFTA country told *The Hindu businessline*.

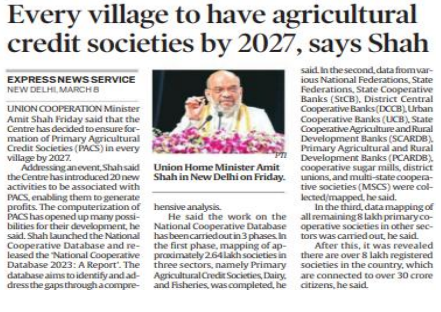
This is the first FTA where India has got a commitment on investment and employment from partner nations, an official had said. The pact is also likely to bring down the huge trade deficit India has with the bloc, officials said.

(The writer is with The Hindu businessline)

- **Why in News:** India and the four-nation European Free Trade Association (EFTA), which includes Switzerland, Norway and Liechtesnstein, is likely to sigh a long-negotiated free trade agreement aimed at increasing trade and investment flows, job creation and economic growth.

- **Economic Impact**
  - **Scope of the Agreement**: India and the European Free Trade Association (EFTA) countries, comprising Switzerland, Finland, Norway, and Liechtenstein, are poised to sign a significant bilateral free trade agreement on March 10. The pact, known as the India-EFTA Trade and Economic Partnership Agreement (TEPA), aims to enhance trade and investment flows, spur job creation, and foster economic growth.
  - **Projected Investments**: The TEPA is anticipated to facilitate investments amounting to $100 billion from the EFTA bloc into India over the next 15 years. This infusion of capital is expected to generate approximately one million jobs, contributing significantly to India's economic landscape.
- **Trade Dynamics and Deficit Mitigation**
  - **Addressing Trade Imbalances**: The trade pact holds promise in addressing the substantial trade deficit that India currently experiences with the EFTA bloc. In 2023, India's exports to EFTA amounted to $1.87 billion, primarily comprising chemicals, pharmaceuticals, and apparel. In contrast, imports from EFTA totalled $20.45 billion, dominated by pearls, precious metals, and coins.
  - **Boosting Export Opportunities**: By fostering greater market access and facilitating trade in goods and services, the TEPA is expected to bolster India's export potential to EFTA countries, thereby narrowing the trade deficit over time.
- **Strategic Implications**
  - **Signal for Future Engagements**: The successful conclusion of negotiations and the imminent signing of the India-EFTA TEPA signal India's commitment to fostering mutually beneficial trade relationships. Furthermore, it serves as a positive precedent for ongoing FTA negotiations with other key partners, including the European Union and the United Kingdom.
  - **Sectoral Focus and Investment Prospects**: The TEPA lays the groundwork for collaborative ventures across various sectors, including pharmaceuticals, chemicals, food processing, and engineering products. Notably, this agreement marks India's first FTA wherein commitments on investment and employment have been secured from partner nations, promising significant opportunities for economic collaboration and growth.

5. Primary Agricultural Credit Societies
GS 2 (Governance)



Every village to have agricultural credit societies by 2027, says Shah

EXPRESS NEWS SERVICE
NEW DELHI, MARCH 8

UNION COOPERATION Minister Amit Shah Friday said that the Centre has decided to ensure formation of Primary Agricultural Credit Societies (PACS) in every village by 2027.

Addressing an event, Shah said the Centre has introduced 20 new activities to be associated with PACS, enabling them to generate profits. The computerization of PACS has opened up many possibilities for their development, he said. Shah launched the National Cooperative Database and released the 'National Cooperative Database 2023: A Report'. The database aims to identify and address the gaps through a comprehensive analysis.

Union Home Minister Amit Shah in New Delhi on Friday.

He said the work on the National Cooperative Database has been carried out in 3 phases. In the first phase, mapping of approximately 2.64 lakh societies in three sectors, namely Primary Agricultural Credit Societies, Dairy, and Fisheries, was completed, he said. In the second, data from various National Federations, State Federations, State Cooperative Banks (StCB), District Central Cooperative Banks (DCCB), Urban Cooperative Banks (UCB), State Cooperative Agriculture and Rural Development Banks (SCARDB), Primary Agricultural and Rural Development Banks (PCARDB), cooperative sugar mills, district unions, and multi-state cooperative societies (MSCS) were collected/mapped, he said.

In the third, data mapping of all remaining 8 lakh primary cooperative societies in other sectors was carried out, he said.

After this, it was revealed there are over 8 lakh registered societies in the country, which are connected to over 30 crore citizens, he said.

- **Why in News:**

- Union Cooperation Minister Amit Shah recently said that the Centre has decided to ensure formation of Primary Agricultural Credit Societies (PACS) in every village by 2027.
- Addressing an event, he said the **Centre has introduced 20 new activities to be associated with PACS**, enabling them to generate profits.

- The computerization of PACS has opened up many possibilities for their development, he said.
- He launched the National Cooperative Database and released the '**National Cooperative Database 2023: A Report**'.
  - The database aims to identify and address the gaps through a comprehensive analysis.
- He said the work on the National Cooperative Database has been carried out in 3 phases.
  - In the first phase, mapping of approximately 2.64 lakh societies in three sectors, namely Primary Agricultural Credit Societies, Dairy, and Fisheries, was completed, he said.
  - In the second, data from various National Federations, State Federations, State Cooperative Banks (StCB), District Central Cooperative Banks (DCCB), etc. were collected/mapped.
  - In the third, **data mapping of all remaining 8 lakh primary cooperative societies in other sectors was carried out**, he said.
- After this, it was revealed there are over 8 lakh registered societies in the country, which are connected to over 30 crore citizens, he said.

- **What is a Primary Agricultural Credit Society (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.
    - Credit from the SCBs is transferred to the **District Central Cooperative Banks (DCCBs)**, that operate at the district level.
    - The DCCBs work with PACS, which deal directly with farmers.
  - Since these are cooperative bodies, individual farmers are members of the PACS, and office-bearers are elected from within them. A village can have multiple PACS.
  - PACSs **provide short-term, and medium-term agricultural loans to the farmers for the various agricultural and farming activities**.
- **Number of PACS in India:**
  - The first PACS was formed in **1904**.
  - Currently, there are more than 1,00,000 PACS in the country with a huge member base of more than 13 crore farmers.
  - However, **only 63,000 of them are functional**.
- **Why Are PACS Attractive?**
  - The attraction of the PACS lies in the **last mile connectivity they offer**.
  - For farmers, timely access to capital is necessary at the start of their agricultural activities.
  - PACS have the capacity to **extend credit with minimal paperwork within a short time**.
    - With other scheduled commercial banks, farmers have often complained of tedious paperwork and red tape.
  - For farmers, PACS provide strength in numbers, as most of the paperwork is taken care of by the office-bearer of the PACS.
  - In the case of scheduled commercial banks, farmers have to individually meet the requirement and often have to take the help of agents to get their loans sanctioned.
- **Challenges Faced by PACS:**
  - Since PACS are cooperative bodies, **political compulsions often trump financial discipline**, and the recovery of loans is hit.
  - Many committees have pointed out various issues plaguing the cooperative system such as;
    - Lack of active participation by the members,
    - Lack of professionalism,
    - Absence of corporate governance,
    - Bureaucratisation,
    - Ageing and unenthusiastic employees.

6. Linking Aadhaar with voter ID
GS 2 (Governance)

- **Why in News:**

a) The Election Commission of India has asked the Union government to change the Representation of the People Act, 1950, and voter registration forms.

b) It wants to remove the requirement for voters to **give reasons** if they choose not to link their Aadhaar number with their voter ID card.

- The EC has proposed amending the RP Act, 1950 to remove the requirement of a "sufficient cause" for not providing Aadhaar.

AADHAAR AND VOTER ID: WHY THE EC WANTS TO AMEND ELECTION LAWS

DAMINI NATH
NEW DELHI, MARCH 8

THE ELECTION Commission of India (ECI) recently approached the Centre proposing amendments to The Representation of the People Act, 1950, and voter enrolment forms, to delete the provision that compels a voter to provide reasons for her decision not to seed her Aadhaar number with the voter ID. The proposal, however, is learned to have been turned down by the Union Law Ministry.

The development comes as a recent petition in the Supreme Court highlighted that the forms for registering electors do not make it clear that it is voluntary for an elector to link her Aadhaar with voter ID.

When did the ECI decide to link Aadhaar with Voter IDs?

In February 2015, then Chief Election Commissioner H S Brahma announced that the ECI would start a drive to link Aadhaar with the electoral roll database from the following month. The aim of the drive was to remove bogus or duplicate entries from the electoral roll. Brahma clarified that the exercise would be voluntary.

The drive, however, was stopped after the Supreme Court, in August 2015, ruled that Aadhaar could only be used for government schemes for distribution of foodgrains, etc.

What has been the ECI's stand since?

In 2018, the apex court upheld the constitutionality of Aadhaar and said the government could restrict the right to privacy if there is a specific law, and if it is proportional to a state aim. The following year, the ECI again proposed the linking of Aadhaar with the electoral roll, asking the government to amend election laws to enable the collection of Aadhaar details. The government then brought The Election Laws (Amendment) Bill, 2021 to enable the linking of Aadhaar with Voter IDs.

Thereafter, the ECI re-started the collection of Aadhaar numbers from July 2022 on a voluntary basis. A new form — Form 6B — was introduced for existing electors to give their Aadhaar number and Form 6 for new registrations was also amended.

What was the latest petition in the SC?

A Telangana Congress leader, G Niranjan, moved the Supreme Court last year, seeking directions to the ECI and the government to make amendments to election laws to give an option to those who did not want to link their Aadhaar with their Voter ID.

Form 6B gives only two options — either provide the Aadhaar number or say one doesn't possess Aadhaar. This forces those who do not want to give their Aadhaar number into making a false declaration.

What did the ECI propose, and what was the government's stand?

The ECI in a letter to the Law Ministry in December proposed amending The RP Act, 1950 to remove the requirement of a "sufficient cause" for not providing Aadhaar. It also asked the government to amend the registration forms that did not give an option to the individual who has Aadhaar, but chooses not to furnish it.

The ECI proposed amending the form's two options, of either giving Aadhaar or saying you don't have one, to a single line saying "Aadhaar Number (Optional)". The government, however, is believed to have rejected the amendment, saying clarifications from the ECI would be enough.

➢ It also asked to amend the registration forms that did not give an option to the individual who has an Aadhaar but chooses not to furnish it.

- **Representation of People Act**
  - The Parliament passed two laws to provide a legal framework for the conduct of elections:
    - The Representation of the People Act, 1950,
    - The Representation of the People Act, 1951
  - The 1950 Act provides for
    - allocation of seats and delimitation of constituencies for elections,
    - qualifications of voters,
    - preparation of electoral rolls.
  - The 1951 Act regulates the actual conduct of elections and by-elections. It provides for the conduct of elections and offences and disputes related to elections.
    - It also deals with the registration of political parties, the qualifications and disqualifications for membership of the Houses.
- **Previous attempt to link voter card and Aadhaar number**
  - The EC had in 2015 taken up linking of voter card and Aadhaar number as part of its **National Electoral Roll Purification and Authentication Programme**.
    - The aim of the drive was to remove bogus or duplicate entries from the electoral roll.
    - Around 32 crore Aadhaar numbers were seeded at that time.
    - However, this initiative was halted by the Supreme Court in August 2015 via its famous protection of privacy judgement in the Puttaswamy case.
    - This Puttaswamy case had challenged the validity of Aadhar scheme and Aadhar Act, 2016".
    - In August 2015, the Supreme Court passed an interim order in this case.
    - The order prohibited Aadhaar from being used for any purpose other than the state-facilitated distribution of food grain and cooking fuel such as kerosene and LPG.
  - In 2019, the **EC again proposed linking Aadhaar with the electoral roll**, asking the government to amend the election laws to enable collecting of Aadhaar details
    - The government then brought the Election Laws (Amendment) Bill, 2021, which was passed by Parliament in December 2021, to enable the linking of Aadhaar and Voter IDs.
    - Under the Act, the **EC re-started the collection of Aadhaar numbers from July 2022 on a voluntary basis.**
    - **A new Form, Form 6B, was introduced** for existing electors to give their Aadhaar number and the form for new registrations was amended as well.
  - It was again challenged in Supreme Court.
    - The Form 6B gave only two options — **either provide the Aadhaar number or say one does not possess an Aadhaar.**
    - This would force those who did not want to give their Aadhaar number into making a false declaration.
    - The petition sought directions to the Election Commission and the government to make amendments so those who don't want to link their Aadhaar and Voter ID have that option.
    - As a result, EC told the court in September that it would make the clarificatory changes required.
- **Broad reasons in support of the linkage**
  - Improving the accuracy of the electoral rolls, by weeding out duplication and misrepresentation in electoral rolls;
  - Assistance in the ECI's plans to implement advanced mechanisms such as electronic and internet-based voting;
  - Giving 'remote' voting rights to domestic migrants; and
  - To facilitate proxy voting which may require Aadhaar backing for voter verification.

11th March, 2024

1. India signs $100bn FTA with 4 European nations

GS 2 (International Relations)

India signs free trade pact with 4 European countries

Suhasini Haidar
NEW DELHI

India signed a free trade agreement (FTA) with four European countries – Iceland, Liechtenstein, Norway, and Switzerland – on Sunday, with a goal of reaching $100 billion in investments in India and one million jobs within 15 years.

The Trade and Economic Partnership Agreement (TEPA) marks the second such full-fledged FTA signed after India's agreement with the United Arab Emirates, and will see considerable tariff reduction, increase in market access, and simplification of customs procedures.

The EFTA (European Free Trade Association) countries, which are separate from the European Union, said that for the first time, the FTA also included a chapter on commitments to human rights and sustainable development. The agreement will come into force after ratification by the EFTA states, expected possibly by the end of the year.

'Unique achievement'

Touting the clauses on investment as a unique achievement, Commerce Minister Piyush Goyal said it was "for the first time in the history of the world that we are inking an FTA with a binding commitment to invest $100 billion in India from EFTA countries". However, EFTA Ministers clarified that the commitment was in fact a "goal" for both sides, based on the current levels of investment, pegged at about $10.7 billion, the GDP predictions, and the estimated value of the TEPA.

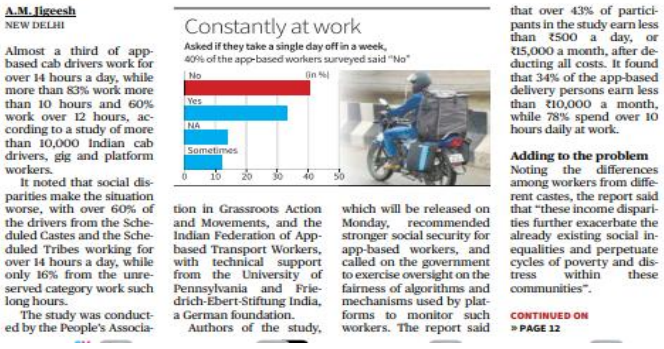
Landmark pact: The signing ceremony of the India-EFTA Trade and Economic Partnership Agreement in New Delhi on Sunday. ANI/PIB

CONTINUED ON » PAGE 12

- **Why in News:** India has signed a free trade agreement (FTA) with a group of four European countries that are not members of the European Union.
- **Significance of the deal for India**
  - **Investment opportunity:** The deal with the European Free Trade Association (EFTA) will see investments in India of USD 100bn (£77.8bn). The investments do not cover foreign portfolio investment.
  - **Major range of investment:** Under this deal, India will lift most import tariffs on industrial goods from the four countries in return for investments over 15 years. The investments are expected to be made across a range of industries, including pharmaceuticals, machinery and manufacturing.
  - **Better market access:** The agreement enhances market access and simplifies customs procedures making it easier for Indian and EFTA businesses to expand their operations in the respective markets.
  - **Boost to Make in India**: The agreement will give a boost to Make in India and provide opportunities to young & talented workforce. The FTA will provide a window to Indian exporters to access large European and global markets.
  - **A show for UK:** The announcement comes as the UK and India have been holding negotiations over an FTA for the last two years. In the last two years, India has signed trade deals with Australia and the United Arab Emirates.
- **Major Take-aways**
  - For the first ever time in the history of FTAs, a legal commitment is being made about promoting target-oriented investment and creation of jobs.
  - EFTA is offering2% of its tariff lines which covers 99.6% of India's exports. The EFTA's market access offer covers 100% of non-agri products and tariff concession on Processed Agricultural Products (PAP).
  - India is offering7% of its tariff lines which covers 95.3% of EFTA exports of which more than 80% import is Gold. The effective duty on Gold remains untouched.
  - Sensitivity related to PLI in sectors such as pharma, medical devices & processed food etc. have been taken while extending offers. Sectors such as dairy, soya, coal and sensitive agricultural products are kept in exclusion list.
- **EFTA**
  - EFTA is an inter-governmental organization set up in 1960 for the promotion of free trade and economic integration for the benefit of its four Member States.
  - The EFTA is made up of Norway, Switzerland, Iceland and Liechtenstein.
  - EFTA is one important economic block out of the three (other two - EU &UK) in Europe. Among EFTA countries, Switzerland is the largest trading partner of India followed by Norway.

2. Gig workers are suffering: study

GS 2 (Social Issues)



Gig workers suffer from lack of social security, regulations: study

A.M. Jigeesh
NEW DELHI

Almost a third of app-based cab drivers work for over 14 hours a day, while more than 83% work more than 10 hours and 60% work over 12 hours, according to a study of more than 10,000 Indian cab drivers, gig and platform workers.

It noted that social disparities make the situation worse, with over 60% of the drivers from the Scheduled Castes and the Scheduled Tribes working for over 14 hours a day, while only 16% from the unreserved category work such long hours.

The study was conducted by the People's Association in Grassroots Action and Movements, and the Indian Federation of App-based Transport Workers, with technical support from the University of Pennsylvania and Friedrich-Ebert-Stiftung India, a German foundation.

Authors of the study, which will be released on Monday, recommended stronger social security for app-based workers, and called on the government to exercise oversight on the fairness of algorithms and mechanisms used by platforms to monitor such workers. The report said that over 43% of participants in the study earn less than ₹500 a day, or ₹15,000 a month, after deducting all costs. It found that 34% of the app-based delivery persons earn less than ₹10,000 a month, while 78% spend over 10 hours daily at work.

Adding to the problem

Noting the differences among workers from different castes, the report said that "these income disparities further exacerbate the already existing social inequalities and perpetuate cycles of poverty and distress within these communities".

CONTINUED ON » PAGE 12

Constantly at work

Asked if they take a single day off in a week, 40% of the app-based workers surveyed said "No"

- **Why in News:** A recent study of app-based workers shows they work long hours for low pay, with no social security, creating a loop of issues for them.
- **Scope of the problem**
  - **Overburdened with work**: Almost a third of app-based cab drivers work for over 14 hours a day, while more than 83% work more than 10 hours and 60% work over 12 hours.
  - **Social disparities:** Over 60% of the drivers from Scheduled Castes and Tribes working for over 14

hours a day, while only 16% from the unreserved category work such long hours.

- **Income disparities:** There exists income disparities and these income disparities further exacerbate the already existing social inequalities and perpetuate cycles of poverty and distress within these communities.
- **Risks:** Due to the demanding work hours, the drivers are physically exhausted, and exposed to an increased risk of road traffic accidents, especially due to the '10-minute delivery at the doorstep' policy of certain e-commerce platforms.
- **Additional stress:** The lack of social and job security creates additional stress and leads to potential health issues.

- **Rules in developed economies**
  - **UK Supreme Court:** In 2021, in a landmark judgment, the UK Supreme Court classified Uber drivers as 'workers' under the UK Employment Rights Act 1996, thus entitling them to various benefits like paid holidays and minimum wages.
  - Dutch High Courtalso handed down a similar ruling, stating that the legal relationship between Uber and the drivers meets all the characteristics of an employment contract, making them entitled to workers' rights under local labour laws.
  - The Superior Court of Californiastruck down a 2020 ballot measure known as Proposition 22 that excluded gig workers from labour laws by declaring them 'independent contractors'
  - Germany's Temporary Employment Actprovides for equal pay and equal treatment of gig workers.
- **Required measures**
  - There is need of stronger social security for app-based workers.
  - The government needs to exercise oversight on the fairness of algorithms and mechanisms used by platforms to monitor such workers.

3. New Toll Collection System
GS 2 (Governance)

- **Why in News:** The government plans to implement a new highway toll collection system based on the global navigation satellite system.
- **What is the new proposed highway tolling system?**
  - The global navigation satellite system uses a large constellation of satellites to provide more accurate location and navigation information to users globally as compared to the GPS alone.
  - The new system's implementation will involve an On-Board Unit (OBU), or a tracking device, fitted inside a vehicle whose location can be mapped using
  - The co-ordinates of the entire length of the country's national highways will have to be logged with the help of digital image processing, and software will be used to assign the toll rate on a particular highway, calculate the toll amount for a vehicle as per the distance travelled by it and then deduct it from a wallet linked to the OBU.
  - The system will additionally have gantries, or arches mounted with CCTV cameras, at various points on a highway for enforcement purposes.
  - These will capture an image of the vehicle's high security registration plate and cross verify if a road user is trying to trick the system by either removing the tracking device or travelling without an OBU onboard.

Introducing a new toll collection system

How will the recently proposed highway tolling system work? Will it be based on the U.S's Global Positioning System? Will it be mandatory for all vehicles to fit an on-board unit device? What about the FASTags collection system?

EXPLAINER

Jagriti Chandra

The story so far:

Road Transport and Highways Minister Nitin Gadkari said in Parliament in February that the government plans to implement a new highway toll collection system based on the global navigation satellite system before the model code of conduct for the 2024 election kicks in.

What is the new proposed highway tolling system?

The global navigation satellite system is a term used to refer to any satellite-based navigation system, including the United States' Global Positioning System (GPS). It uses a large constellation of satellites to provide more accurate location and navigation information to users globally as compared to the GPS alone.

An official of the Ministry of Road Transport and Highways explained that its implementation will involve an On-Board Unit (OBU), or a tracking device, fitted inside a vehicle whose location can be mapped using GAGAN, the Indian satellite navigation system with an approximate accuracy of 10 metres. The co-ordinates of the entire length of the country's national highways will have to be logged with the help of digital image processing, and software will be used to assign the toll rate on a particular highway, calculate the toll amount for a vehicle as per the distance travelled by it and then deduct it from a wallet linked to the OBU. The system will additionally have gantries, or arches mounted with CCTV cameras, at various points on a highway for enforcement purposes. These will capture an image of the vehicle's high security registration plate and cross verify if a road user is trying to trick the system by either removing the tracking device or travelling without an OBU onboard.

The Ministry official further explained that the aim of the technology is to provide users the benefit of paying toll only for the actual distance travelled on a highway, or pay-as-you-use. The government also hopes that it will eventually allow barrier-free movement.

What are some of the challenges?

One of the major challenges posed by this technology is that of recovering the toll amount if a road user fails to clear his payment after completing a journey on a highway, for instance, if the digital wallet linked with the OBU is empty.

Because there are no barriers involved that can stop a non-compliant vehicle, there are other issues such as when a vehicle travels on a highway without an OBU device linked or the OBU device is deliberately switched off to avoid payment or if a car's OBU is installed on a truck to pay less toll. Gantry-mounted Automatic Number-Plate Recognition (ANPR)-based systems for capturing violations have to be set up on highways across India. However, no such infrastructure exists in the country today.

Further, the success of an ANPR system depends on the quality of the licence plates, which are currently limited to a few cities and States. The government will also have to amend the National Highways Fee (Determination of Rates and Collection) Rules in order to provide for the recovery of unpaid toll, define offences as well as require the necessity of an OBU in vehicles.

How does it safeguard privacy?

In response to a question on how the government plans to safeguard privacy of vehicle users, the Ministry official said that firstly, it had decided to use the GAGAN satellite system and not GPS, which is owned by the U.S., to ensure data security within the country. The official added that although the concept was still a work in progress, the Digital Personal Data Protection Act, 2023 passed in Parliament last year will address privacy concerns. The law had received flak from civil society for the widening of exemptions granted to government agencies that may facilitate increased state surveillance.

Will FASTags be discontinued?

The new tolling system will co-exist with the FASTag-based toll collection as the government has not yet taken a decision on whether OBUs will be made mandatory for all vehicles or only for new vehicles. Minister Gadkari has been speaking about implementing satellite-based toll collection since 2020, even though radio frequency identification based FASTags for toll collection was rolled out from 2016 and made mandatory only from February 16, 2021. Over the years a robust compliance has been achieved. By December 2023, 98.9% of vehicles passing through toll fee plazas at national highways were FASTag compliant. Toll collection increased 1.5 times from ₹27,942 crore in 2016-2017 to ₹27,744 crore in 2020-2021 at National Highway fee plazas due to a multitude of factors, which included rising number of vehicles as well as revision in tolls and adoption of FASTags. However, officials say that the global navigation satellite system involves lower operational cost as compared to FASTags due to absence of toll plazas and less number of entities in the toll collection process.

THE GIST

Road Transport and Highways Minister Nitin Gadkari said in Parliament last week that the government plans to implement a new highway toll collection system based on the global navigation satellite system.

Its implementation will involve an On-Board Unit (OBU), or a tracking device, fitted inside a vehicle whose location can be mapped using GAGAN, the Indian satellite navigation system with an approximate accuracy of 10 metres.

The new tolling system will co-exist with the FASTag-based toll collection as the government has not yet taken a decision on whether OBUs will be made mandatory for all vehicles or only for new vehicles.

A complete overhaul: Toll collection on the Bengaluru-Mysuru Expressway in 2023. FILE PHOTO

- **GPS Aided GEO Augmented Navigation (GAGAN)**
  - It is a Satellite Based Augmentation System (SBAS) implemented jointly with Airport Authority of India (AAI).
  - The main objectives of GAGAN are to provide Satellite-based Navigation services with accuracy and integrity required for civil aviation applications and to provide better Air Traffic Management over Indian Airspace.

4. Madiga member in Scheduled Caste panel
GS 2 (Governance)

- **Why in News:** The Union government has chosen to constitute the most-recent National Commission for Scheduled Castes (NCSC) by ensuring the presence of at least one member from the Madiga community, one of the most populous Scheduled Caste communities in Telangana and Andhra Pradesh.

- **Who are the Madigas?**
  - The Madiga community is a Telugu caste, mainly living in the southern states of Telangana, Andhra Pradesh, and Karnataka. However, Madigas also live in Tamil Nadu, Maharashtra and Odisha.
  - The community has historically worked in handicraft, leatherwork, tannery, and agriculture.
  - The Indian government categorises the community within the SC category.
  - There are various sub-castes within Madigas.
  - As per the 2011 census, the Madiga community in the undivided Andhra Pradesh (before the creation of Telangana in 2014) constituted more than 48 per cent of the SC population.

Centre ensures place for Madiga member in Scheduled Caste panel

Abhinay Lakshman
NEW DELHI

With the Lok Sabha election around the corner, the Centre has nominated 10 to be chosen to constitute the National Commission for Scheduled Castes (NCSC) by ensuring the presence of at least one member from the Madiga community, which has a large presence in Telangana and Andhra Pradesh.

The Ministry of Social Justice notified the appointees of their new positions through a letter on Saturday. Bhagwan Lal Sahni, ex-Rajya Sabha MP, has been appointed the next NCSC Chairperson, while Vadepally Ramchander of Peddapalli district in Telangana and Love Kush Kumar of Bijnor district in Uttar Pradesh have been appointed its members.

Mr. Ramchander's appointment comes soon after the government formed an internal committee for sub-categorisation of Scheduled Castes to reserve seats for the most backward of the Madiga community in the two States.

The Madiga community has argued that despite being among the most populous of the SCs, it is routinely crowded out of benefits and reservation by the relatively dominant

The Madiga community has argued that it is routinely crowded out of benefits

Mala community.

After Prime Minister Narendra Modi promised to look into the issue during the campaign for 2014 polls, the government constituted a committee to look into the sub-categorisation demand for the benefit of all such communities that found themselves to be the most backward among the SC list.

While the Supreme court is yet to decide on whether SC quotas can be sub-categorised, the committee is looking into ways of targeting benefits towards this section of the Scheduled Castes.

Mr. Ramchander has previously been the district president of the BJP in Peddapalli and has also worked with the Sangh Parivar.

The new appointments to the NCSC come after the terms of member Anju Bala and Acting Chairperson Arun Halder came to an end in February. In July last year, the erstwhile Chairperson Rekha Sharma-Arya, Vijay Sampla had quit citing personal reasons.

5. Indias Zero Food Children

GS 2 (Health)

- **Why in News:**In a study conducted to assess the number of children aged six-23 months who have not consumed any food over a 24-hour period, India has disturbingly ranked high. With 19.3 per cent of children classified as 'zero-food,' India ranked third globally, following west African countries Guinea (21.8 per cent) and Mali (20.5 per cent).
- **Scope of the problem**
  - India has by far the highest number of 'zero-food' children at 6.7 million (67,00,000), accounting for almost half of all 'zero-food children' across 92 countries in the survey.
  - The problem of such extreme food deprivation is severe among children in U.P.
  - The states of Uttar Pradesh (28.4%), Bihar (14.2%), Maharashtra (7.1%), Rajasthan (6.5%), and Madhya Pradesh (6%) account for nearly two-thirds of the total zero-food children in India.

Report turns spotlight on India's 'zero-food children'

A recent study had ranked India as having the third-highest percentage of children who had not eaten any food for 24 hours; experts say rapid urbanisation is fuelling malnutrition in country

Mayank Kumar
LUCKNOW

Sunita Gautam, a 26-year-old domestic help, wonders if she will be able to provide her 11-month-old boy the nutrition he requires. "My child is mainly dependent on breastmilk. At times, I give him porridge, but that too not every day as he takes time to eat and is more habituated to breastmilk. I have a very busy daily routine. If I don't earn money, how can I provide a better life for my child?" Ms. Gautam, who works in Lucknow's Vishal Khand area, asked.

Ms. Gautam's baby is likely to be one of the millions of "zero-food children" aged six months to 23 months in Uttar Pradesh. These infants have not eaten any food of substantial calorific content – semi-solid, solid,soft, or mushy food, infant formula or fresh milk – for 24 hours.

A study published recently in the peer-reviewed *JAMA Network Open* journal found the prevalence of zero-food children in India at 19.3%, drawing attention to extreme food deprivation among children. The study ranks India as having the third-highest percentage of zero-food children, above only Guinea (21.8%) and Mali (20.5%). In terms of numbers, India has the highest number of zero-food children at more than six million.

Another study published in 2023 in *eClinical Medicine*, part of the noted *Lancet Discovery Science*, found that Uttar Pradesh alone accounts for 28.4% of zero-food children in India.

"The States of Uttar Pradesh (28.4%), Bihar (14.2%), Maharashtra (7.1%), Rajasthan (6.5%), and Madhya Pradesh (6%) account for nearly two-thirds of the total zero-food children in India," the report said.

"My husband is an alcoholic. He spends most of his time at home but I cannot trust him to feed the child. He may harm the child as it takes time to feed him [the baby]," Ms. Gautam said.

Shalini Singh, a public health specialist, argues that alongside poverty and marginalisation in economic backgrounds, it is rapid urbanisation and nuclearised families that have contributed to such a large number of "zero food children" in India's most populous State.

She said lack of awareness about the nutritional needs of children, and misconceptions, also contribute to the numbers.

"Women from underprivileged economic backgrounds work to sustain their families, resulting in their having insufficient time to complement breastfeeding for children above six months of age. With rapid industrialisation, nuclear families have grown in both urban and rural areas, so there is no one to invest the time and energy required to feed a child, apart from the mother," she said, adding that lack of awareness about nutritional needs of children, and social misconceptions, also contribute to the likely numbers.

Uttar Pradesh's urban population is approximately 23%, according to the 2011 Census and had grown by more than 25% in 2011 when compared with 2001, signifying a large number of poor moving towards urban centres in search of a livelihood.

Rapid urbanisation and nuclearised families have contributed to large number of 'zero-food children' in Uttar Pradesh. FILE PHOTO

- **Root cause of the issue**
  - Alongside poverty and marginalisation in economic backgrounds, it's rapid urbanisation and nuclearised families that have contributed to such a large number of 'zero food children' in the India's most populous State.
  - Women from underprivileged economic backgrounds work to sustain their families, resulting in their having insufficient time to complement breastfeeding for children above six months of age
  - Most women are not aware of the government's schemes (e.g.,- Poshan Abhiyan targeting holistic development and adequate nutrition for children, pregnant women and mothers, and primarily focused on children in the 0-6 years age group)
  - There is need to introduce solid or semisolid foods to a child's diet -- as breastfeeding alone is not sufficient to provide children with nutrition, which, in turn might hinder their growth and development.
- **Share of food**
  - According to the Food and Agricultural Organization (FAO), the share of other food contributing to calorific requirements should be about 50% for children aged nine to 11 months (that is, 300 out of 700 Kcal/day), while the share of breastmilk should be greater than other food for children aged six-eight months (that is, 400 out of 600 Kcal/day).

6. India's golden langur

GS 3 (Environment)

- **Why in News:** There are an estimated 7,396 golden langurs in India, the latest survey of the primate has revealed.
- **About**
  - Gee's golden langur (Trachypithecus geei), also known as simply the golden langur, is an Old World monkeyfound in a small region of Western Assam, India and in the neighboring foothills of the Black Mountains of Bhutan.

- Adult males have a cream to golden coat with darker flanks while the females and juveniles are lighter.
- It has a black face and a long tail up to 50 cm (19.69 in) in length.
- It lives in high trees and has a herbivorous diet of ripe and unripe fruits, mature and young leaves, seeds, buds and flowers.
- The average group size is eight individuals, with a ratio of several females to each adult male.
- The entire distribution range of the species covers the Manas Biosphere Reserve and all fragmented forests in the western part of Assam.
- The previous population estimation in 2008-09, recorded 6,000 golden langurs in India.

7,396 golden langurs in India, reveals survey

Rahul Karmakar
GUWAHATI

There are an estimated 7,396 golden langurs in India, the latest survey of the primate has revealed. The comprehensive population estimation of the endangered primate was carried out in two phases by the Primate Research Centre NE India (PRCNE), Assam Forest Department, Bodoland Territorial Council, Salim Ali Centre for Ornithology and Natural History (SACON), and Conservation Himalayas.

The entire distribution range of the golden langur (*Trachypithecus geei*) covers the Manas Biosphere Reserve and all fragmented forests in the western part of Assam.

In the first phase during March-April 2020, the survey covered the western part of the Manas Biosphere Reserve, including Ripu Reserved Forest – a major part of it was recently upgraded to Raimona National Park – Chirang Reserve Forest, Manas Reserve Forest, and Manas National Park up to the western bank of the Manas River.

Nature's charm: The previous population estimation in 2008-09 recorded 6,000 golden langurs in India. ANI

The second phase during the same months in 2021 focused on fragmented forest habitats of golden langurs in the Bongaigaon, Kokrajhar, and Dhubri districts of western Assam. The block count method was applied for the first time to assess the abundance, spatial distribution, and densities of the golden langur populations.

"This method is considered to be relatively simple, cost-effective, and robust for arboreal and small group-living primates such as the golden langur," H.N. Kumara, the principal scientist of SACON, said.

The golden langur habitat was demarcated into 51 counting blocks, each overlaid with 50-hectare grid cells. Ten teams, each comprising one or two trained enumerators and three to four forest staff, surveyed the blocks.

"We observed 7,720 individuals of golden langurs in 706 unique groups and 31 lone males or floating males. Estimating minimum population size, we found there to be 7,396 individuals in 707 groups, inclusive of bisexual and male bands, along with 31 lone males," Jihosuo Biswas, the lead primatologist at PRCNE, said. He supervised the survey.

"The population of golden langurs is divided into two major sub-populations. The northern extended population, which encompasses the western part of the Manas Biosphere Reserve, extending from the Sankosh River to the Manas river up to the India-Bhutan border along the northern side of National Highway 27 and State Highway 2," Dr. Biswas explained.

The northern population of the primate with the golden sheen was estimated at 5,566 in 534 groups and 23 lone males. The population of the southern fragments was estimated at 1,830 langurs in 173 groups and eight lone males.

'Unstable situation'

While the Ripu Reserve Forest was home to the most (2,847) northern population golden langurs, Kokrajhar district's Chakrashila Wildlife Sanctuary had 838 individuals, the most in the southern fragmented range of the primate.

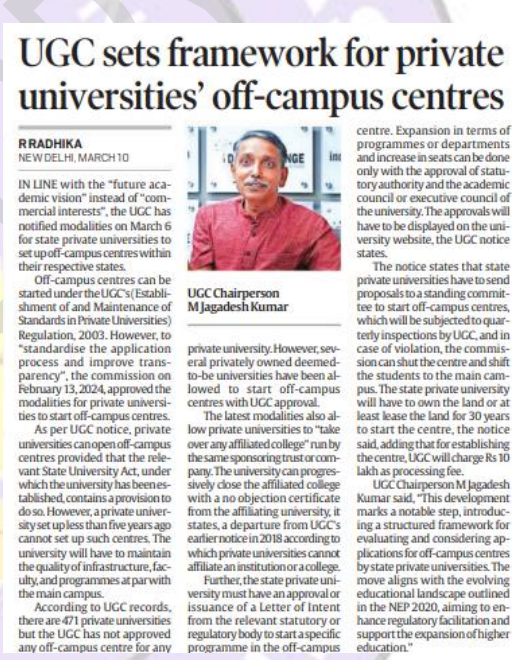
The previous population estimation in 2008-09, also conducted under the supervision of Dr. Biswas, recorded 6,000 golden langurs in India. Each group then had has average of 9.24 individuals, which was 1,45 individuals less than the average group recorded in the latest survey.

On the flip side, the survey report underlined an unstable situation in the fragmented habitats of the golden langurs, particularly due to the absence of non-breeding all-male bands. The primatologists involved in the survey highlighted the need for corridor linkage among the fragmented habitats through plantations and canopy bridges to offset potential threats the primates face from anthropogenic interactions.

7. UGC's New Framework for Private Universities

GS 2 (Governance)

- **Why in News:** In line with the future academic vision instead of "commercial interests", the UGC has notified modalities for state private universities.
- **About University Grants Commission (UGC):**
  - The University Grants Commission of India is a statutory body under the provisions of UGC Act, 1956.
  - It is responsible for coordination, determination and maintenance of standards of higher education.
  - It provides recognition to universities in India, and disburses funds to such recognized universities and college.
  - **Nodal Ministry:** Department of Higher Education, Ministry of Education
- **Mandate of UGC:**
  - Promoting and coordinating university education.
  - Determining and maintaining standards of teaching, examination and research in universities.
  - Framing regulations on minimum standards of education.
  - Monitoring developments in the field of collegiate and university education; disbursing grants to the universities and colleges.
  - Serving as a vital link between the Union and State governments and institutions of higher learning.
  - Advising the Central and State governments on the measures necessary for the improvement of university education.
- **News Summary:**
  - The University Grants Commission recently allowed private universities to establish their off-campus centres and announced rules for the same.
  - The country's private universities were not allowed to open off-campus centres so far in other states.
  - In a meeting held on March 5, UGC decided to allow state's private universities to open off-campus centres in any state in the country if they met the following criteria:
  - A minimum of five years of establishment and operations and
  - Accreditation from the National Assessment and Accreditation Council (NAAC).
  - However, it will not be required to have an A or a B grade in NAAC rankings.
  - The private university that wants to establish off-campus centres will have to meet the minimum staff, infrastructure and financial requirements set by the commission.
  - The universities will have to provide approvals from the statutory and regulatory bodies.
  - The universities will have to assure they will provide infrastructure, faculty and courses being offered at the main campus to the students in their off-campus centres.
  - The universities will have to pay Rs 10 lakh as establishment fees to UGC.
  - The commission will have the right to carry out inspections and take punitive measures against the university in cases of irregularities and complaints.



UGC sets framework for private universities' off-campus centres

RRADHIKA
NEW DELHI, MARCH 10

IN LINE with the "future academic vision" instead of "commercial interests", the UGC has notified modalities on March 6 for state private universities to set up off-campus centres within their respective states.

Off-campus centres can be started under the UGC's (Establishment of and Maintenance of Standards in Private Universities) Regulation, 2003. However, to "standardise the application process and improve transparency", the commission on February 13, 2024, approved the modalities for private universities to start off-campus centres.

As per UGC notice, private universities can open off-campus centres provided that the relevant State University Act, under which the university has been established, contains a provision to do so. However, a private university set up less than five years ago cannot set up such centres. The university will have to maintain the quality of infrastructure, faculty, and programmes at par with the main campus.

According to UGC records, there are 471 private universities but the UGC has not approved any off-campus centre for any private university. However, several privately owned deemed-to-be universities have been allowed to start off-campus centres with UGC approval.

UGC Chairperson M Jagadesh Kumar

The latest modalities also allow private universities to "take over any affiliated college" run by the same sponsoring trust or company. The university can progressively close the affiliated college with a no objection certificate from the affiliating university, it states, a departure from UGC's earlier notice in 2018 according to which private universities cannot affiliate an institution or a college.

Further, the state private university must have an approval or issuance of a Letter of Intent from the relevant statutory or regulatory body to start a specific programme in the off-campus centre. Expansion in terms of programmes or departments and increase in seats can be done only with the approval of statutory authority and the academic council or executive council of the university. The approvals will have to be displayed on the university website, the UGC notice states.

The notice states that state private universities have to send proposals to a standing committee to start off-campus centres, which will be subjected to quarterly inspections by UGC, and in case of violation, the commission can shut the centre and shift the students to the main campus. The state private university will have to own the land or at least lease the land for 30 years to start the centre, the notice said, adding that for establishing the centre, UGC will charge Rs 10 lakh as processing fee.

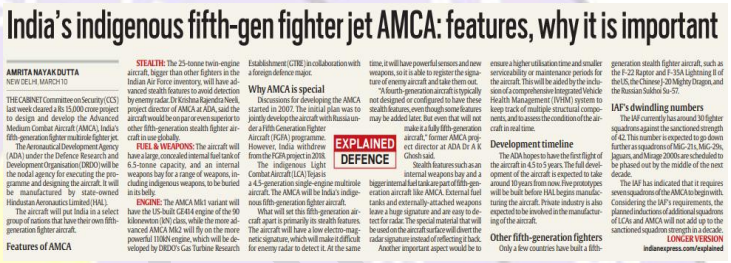
UGC Chairperson M Jagadesh Kumar said, "This development marks a notable step, introducing a structured framework for evaluating and considering applications for off-campus centres by state private universities. The move aligns with the evolving educational landscape outlined in the NEP 2020, aiming to enhance regulatory facilitation and support the expansion of higher education."

- The UGC may also order closure of a university's off-campus center if it breaches any of the regulations.
- In such cases, the university will have to facilitate shifting students to their main campus.

- **Conclusion:**
  - Academic experts said that this decision may prove beneficial for students as they will get more options to choose from.
  - However, it also means that the 16 government-run universities in the state will face more competition.
  - More students may shift to these centres, leaving a large number of approved seats in the public universities vacant every year.

8. India's indigenous fifth-gen fighter jet Advanced Medium Combat Aircraft

GS 3 (Science and Tech)


India's indigenous fifth-gen fighter jet AMCA: features, why it is important

AMRITA NAYAK DUTTA
NEW DELHI, MARCH 10

THE CABINET Committee on Security (CCS) last week cleared a Rs 15,000 crore project to design and develop the Advanced Medium Combat Aircraft (AMCA), India's fifth-generation multirole fighter jet.

The Aeronautical Development Agency (ADA) under the Defence Research and Development Organisation (DRDO) will be the nodal agency for executing the programme and designing the aircraft. It will be manufactured by state-owned Hindustan Aeronautics Limited (HAL).

The aircraft will put India in a select group of nations that have their own fifth-generation fighter aircraft.

Features of AMCA

STEALTH: The 25-tonne twin-engine aircraft, bigger than other fighters in the Indian Air Force inventory, will have advanced stealth features to avoid detection by enemy radar. Dr Krishna Rajendra Neeli, project director of AMCA at ADA, said the aircraft would be on par or even superior to other fifth-generation stealth fighter aircraft in use globally.

FUEL & WEAPONS: The aircraft will have a large, concealed internal fuel tank of 6.5-tonne capacity, and an internal weapons bay for a range of weapons, including indigenous weapons, to be buried in its belly.

ENGINE: The AMCA Mk1 variant will have the US-built GE414 engine of the 90 kilonewton (kN) class, while the more advanced AMCA Mk2 will fly on the more powerful 110kN engine, which will be developed by DRDO's Gas Turbine Research Establishment (GTRE) in collaboration with a foreign defence major.

Why AMCA is special

Discussions for developing the AMCA started in 2007. The initial plan was to jointly develop the aircraft with Russia under a Fifth Generation Fighter Aircraft (FGFA) programme. However, India withdrew from the FGFA project in 2018.

The indigenous Light Combat Aircraft (LCA) Tejas is a 4.5-generation single-engine multirole aircraft. The AMCA will be India's indigenous fifth-generation fighter aircraft.

What will set this fifth-generation aircraft apart is primarily its stealth features. The aircraft will have a low electro-magnetic signature, which will make it difficult for enemy radar to detect it. At the same time, it will have powerful sensors and new weapons, so it is able to register the signature of enemy aircraft and take them out.

"A fourth-generation aircraft is typically not designed or configured to have these stealth features, even though some features may be added later. But even that will not make it a fully fifth-generation aircraft," former AMCA project director at ADA Dr A K Ghosh said.

EXPLAINED DEFENCE

Stealth features such as an internal weapons bay and a bigger internal fuel tank are part of fifth-generation aircraft like AMCA. External fuel tanks and externally-attached weapons leave a huge signature and are easy to detect for radar. The special material that will be used on the aircraft surface will divert the radar signature instead of reflecting it back.

Another important aspect would be to ensure a higher utilisation time and smaller serviceability or maintenance periods for the aircraft. This will be aided by the induction of a comprehensive Integrated Vehicle Health Management (IVHM) system to keep track of multiple structural components, and to assess the condition of the aircraft in real time.

Development timeline

The ADA hopes to have the first flight of the aircraft in 4.5 to 5 years. The full development of the aircraft is expected to take around 10 years from now. Five prototypes will be built before HAL begins manufacturing the aircraft. Private industry is also expected to be involved in the manufacturing of the aircraft.

Other fifth-generation fighters

Only a few countries have built a fifth-generation stealth fighter aircraft, such as the F-22 Raptor and F-35A Lightning II of the US, the Chinese J-20 Mighty Dragon, and the Russian Sukhoi Su-57.

IAF's dwindling numbers

The IAF currently has around 30 fighter squadrons against the sanctioned strength of 42. This number is expected to go down further as squadrons of MiG-21s, MiG-29s, Jaguars, and Mirage 2000s are scheduled to be phased out by the middle of the next decade.

The IAF has indicated that it requires seven squadrons of the AMCA to begin with. Considering the IAF's requirements, the planned inductions of additional squadrons of LCAs and AMCA will not add up to the sanctioned squadron strength in a decade.

LONGER VERSION
indianexpress.com/explained

- **Why in News:** The Cabinet Committee on Security (CCS) has cleared a Rs 15,000 crore project to design and develop the Advanced Medium Combat Aircraft (AMCA), India's fifth-generation multirole fighter jet.
- **Cabinet Committee on Security (CCS)**
  - About
    - CCS is a cabinet committee of the GoI that acts as the apex body when it comes to the appointments of the officials in the national security bodies.
    - It also makes all the important decisions on defence policy and expenditure and, generally, all matters of India's security.
    - The Committee is chaired by the Prime Minister of India.
    - **Other Members**
      - Union Minister of Defence
      - Union Minister of Home Affairs
      - Union Minister of Finance and Corporate Affairs
      - Union Minister of External Affairs
  - **Functions**
    - It deals with all the issues related to the defence, national security of India and law & order of our country.
    - It discusses different initiatives to enhance the national security of India
    - It also deals with policy matters of foreign affairs which may have a bearing on internal or external security implications, including cases relating to agreements with other countries on security-related issues.
- **Fifth-generation fighter jets**
  - These are designed to carry out a range of missions, such as air-to-air combat and ground attack
  - They have plain surfaces, specially shaped exhaust nozzles, and engines located in the plane's body to hide heat signatures
  - They also have special radars to detect the aircraft's own radar emissions
  - Only a few countries have built a fifth-generation stealth fighter aircraft
  - The list of the aircraft currently in service includes the F-22 Raptor and F-35A Lightning II of the US, the Chinese J-20 Mighty Dragon, and the Russian Sukhoi Su-57.
- **Advanced Medium Combat Aircraft (AMCA)**
  - **About**
    - AMCA is India's fifth-generation fighter multirole fighter jet.
    - This aircraft will be bigger than other fighters in the Indian Air Force inventory.
    - The aircraft will put India in a select group of nations that have their own fifth-generation fighter aircraft.
  - **Organisations involved**
    - The Aeronautical Development Agency (ADA) under the DRDO will be the nodal agency for executing the programme and designing the aircraft.
    - It will be manufactured by state-owned Hindustan Aeronautics Limited (HAL).
  - **Features**
    - **Stealth:** The 25-tonne twin-engine aircraft will have advanced stealth features to avoid detection by enemy radar.
    - **Fuel & Weapons:** The aircraft will have a large, concealed internal fuel tank of 6.5-tonne capacity, and an internal weapons bay for a range of weapons, including indigenous weapons, to be buried in its belly.

- **Engine:** The AMCA Mk1 variant will have the US-built GE414 engine of the 90 kilonewton (kN) class.
- The more advanced AMCA Mk2 will fly on the more powerful 110kN engine.
- This will be developed indigenously by DRDO's Gas Turbine Research Establishment (GTRE) in collaboration with a foreign defence major.

- **Significance of Advanced Medium Combat Aircraft (AMCA)**
  - AMCA will be India's indigenous fifth-generation fighter aircraft
  - The indigenous Light Combat Aircraft (LCA) Tejas is a 4.5-generation single-engine multirole aircraft.
  - **Advance stealth feature**
    - What will set this aircraft apart from the existing fourth-generation is primarily its stealth features. The aircraft will have a low electro-magnetic signature, which will make it difficult for enemy radar to detected it.
    - Higher utilisation time and smaller serviceability or maintenance periods
    - This will be aided by the inclusion of a comprehensive Integrated Vehicle Health Management (IVHM) system to keep track of multiple structural components, and to assess the condition of the aircraft in real-time.

- **IAF's dwindling numbers**
  - IAF currently has around 30 fighter squadrons against the sanctioned strength of 42.
  - This number is expected to go down further as squadrons of MiG-21s, MiG-29s, Jaguars, and Mirage 2000s are scheduled to be phased out by the middle of the next decade.
  - IAF has indicated that it requires seven squadrons of the AMCA to begin with.

DO NOT COPY

12th March, 2024

1. Mission Divyastra

GS 3 (Science and Tech)

- **Why in News:** In a major technological leap for India's nuclear deterrent, the Defence Research and Development Organisation (DRDO) conducted India's first successful flight test of the indigenously developed Agni-V missile.
- **Key Highlights**
  - The flight test was named Mission Divyastra.
  - The weapon is equipped Multiple Independently Targetable Re-entry Vehicle (MIRV) technology.
- **About Agni-5 missiles**
  - Agni Vis a **nuclear-capable intercontinental ballistic missile.**
  - It has a range of up to **5,000 km.**
  - It is road-mobile and can be transported by a truck and launched via a canister.
  - This system is also equipped with indigenous Avionics systems and high-accuracy sensor packages that ensure that the re-entry vehicles reach the target points with the desired accuracy.
  - With its range, it can bring almost the entire Asia including the northernmost part of China as well as some regions in Europe under its striking range.
  - It will greatly enhance India's national security — d**elivering multiple warheads to different targets with precision.**
  - The country has already deployed the Agni 1 to 4 missiles — with ranges from 700 km to 3,500 km.
- **MIRV technology**
  - The technology that goes into putting multiple warheads on a single rocket or missile is known as "**multiple independently targetable re-entry vehicle"** (MIRV) technology.
  - It involves launching a s**ingle missile carrying 4-6 warheads**, each of which can be programmed to strike a separate target, several hundred kilometres apart.
  - **Launching a MIRV-tipped missile** – say an Agni-IV or Agni-V – offers several tactical and strategic advantages. It provides more target options to the attacker.
  - Meanwhile, the defender is forced to defend all of them simultaneously, with its anti-missile defences possibly being overwhelmed.

Test flight of Agni-5 with MIRV successful

Dinakar Peri
NEW DELHI

Prime Minister Narendra Modi on Monday announced the successful test-firing of Agni-5 ballistic missile with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology by the Defence Research and Development Organisation (DRDO) under Mission Divyastra.

The flight test was carried out from Dr. A.P.J. Abdul Kalam Island in Odisha. This is considered a major technological breakthrough.

"Proud of our DRDO scientists for Mission Divyastra, the first flight test of indigenously developed Agni-5 missile with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology," Mr. Modi posted on X.

The MIRV technology means a single missile can carry multiple warheads. It will ensure that a single missile can deploy multiple warheads at different locations, government sources said.

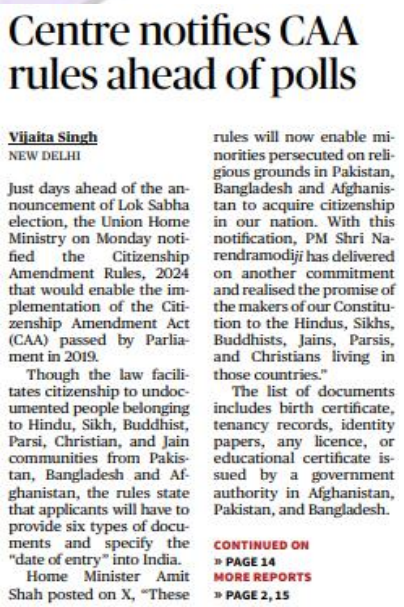
The test flight of Agni-5. ANI

CONTINUED ON » PAGE 14

2. Citizenship Amendment Act (CAA)

GS 2 (Governance)

- **Why in News:** The Ministry of Home Affairs notified the implementation of the Citizenship Amendment Act (CAA), facilitating citizenship for undocumented non-Muslim migrants from Pakistan, Bangladesh, and Afghanistan, passed by Parliament in December 2019.
- **Impact of CAA**
  - **Citizenship:** CAA was introduced to benefit the six minorities from the neighbouring countries of Pakistan, Afghanistan and Bangladesh. The citizens of India will not be impacted by the CAA.
  - **Preservation:** The objectives of the CAA are centred around removing legal barriers that impede the resettlement and attainment of Indian citizenship for migrants, thereby preserving their cultural, linguistic, and social identity.
  - **Economic benefits:** Furthermore, the legislation aims to ensure economic, commercial, freedom of movement, and property acquisition rights for these migrants.
- **Why only these three countries?** The CAA deals with religious persecution in three neighboring countries where the Constitution provides for a specific state



Centre notifies CAA rules ahead of polls

Vijaita Singh
NEW DELHI

Just days ahead of the announcement of Lok Sabha election, the Union Home Ministry on Monday notified the Citizenship Amendment Rules, 2024 that would enable the implementation of the Citizenship Amendment Act (CAA) passed by Parliament in 2019.

Though the law facilitates citizenship to undocumented people belonging to Hindu, Sikh, Buddhist, Parsi, Christian, and Jain communities from Pakistan, Bangladesh and Afghanistan, the rules state that applicants will have to provide six types of documents and specify the "date of entry" into India.

Home Minister Amit Shah posted on X, "These rules will now enable minorities persecuted on religious grounds in Pakistan, Bangladesh and Afghanistan to acquire citizenship in our nation. With this notification, PM Shri Narendramodiji has delivered on another commitment and realised the promise of the makers of our Constitution to the Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians living in those countries."

The list of documents includes birth certificate, tenancy records, identity papers, any licence, or educational certificate issued by a government authority in Afghanistan, Pakistan, and Bangladesh.

CONTINUED ON » PAGE 14
MORE REPORTS » PAGE 2, 15

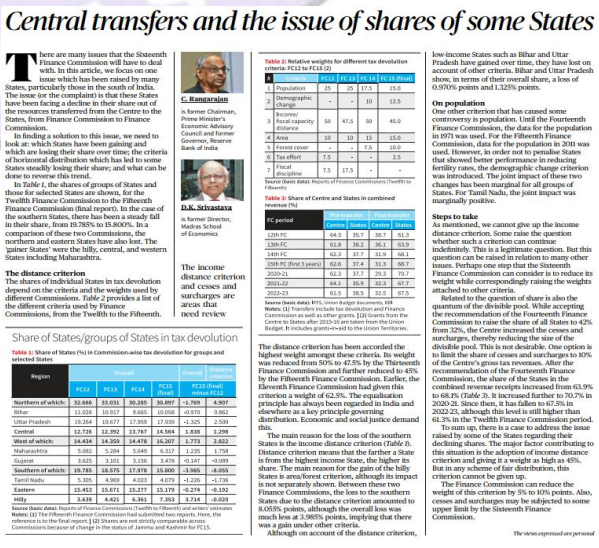
religion. Followers of other religions have been persecuted in these three countries.

- **Concerns vs Significance**
  - **Concerns**
    - **Discrimination against Muslims:** Critics argue that the CAA discriminates against Muslims. However, Muslims are not included in CAA as they are not in minority in the specified countries.
    - **Potential Impact on NPR and NRC:** There are apprehensions about the potential implications of the CAA on the National Population Register (NPR) and the proposed National Register of Citizens (NRC).
  - **Significance:** The Centre has defended the CAA on several grounds:
    - **Historical Obligation:** India bears a historical responsibility and moral obligation to provide refuge to persecuted minorities from Afghanistan, Pakistan, and Bangladesh.
    - **Humanitarian Grounds:** The CAA is framed as a humanitarian response to the plight of religious minorities who have endured persecution in the neighboring countries.
    - **Protection of Religious Minorities:** The primary aim of the CAA is to offer legal protection and a pathway to citizenship for religious minorities.
  - **Connection with NRC**
    - The National Register of Citizens (NRC) has only thus far been introduced in Assam, a region battling challenges due to illegal immigration. The aim is two-pronged: to expunge unauthorised entries and act as a deterrent against prospective migrations.
    - CAA has no link with NRC.
- **About CAA**
  - The legislation **grants citizenship to six minorities (Hindu, Sikh, Buddhist, Jain, Parsi, and Christian) fleeing religious persecution from Pakistan, Afghanistan, and Bangladesh.**
  - The citizenship will be granted to those who entered India from these countries on or before December 31, 2014.
  - CAA is an amendment to the Citizenship Act of 1955. According to CAA, the migrants will be granted fast track Indian citizenship in six years.
  - The amendment also relaxed the residence requirement for naturalization of these migrants from eleven years to five. This deviates from the previous norm of a 12-year residency requirement for naturalisation.
  - **Eligibility for Citizenship under Section 6B:**
    - Individuals of Indian origin.
    - Individuals married to Indian citizens.
    - Minor children of Indian citizens.
    - Individuals whose parents are registered Indian citizens.
    - Individuals or their parents who were citizens of Independent India.
    - Individuals registered as Overseas Citizen of India Cardholders.

3. Central transfers — arresting the decline in shares of some States

GS 2 (Governance)

- **Why in News:**
  - The Sixteenth Finance Commission's deliberations have drawn attention due to concerns raised by several states, particularly those in southern India, regarding a perceived decline in their share of resources transferred from the Centre.
  - This issue revolves around the criteria used for horizontal distribution, with states like Tamil Nadu, Kerala, and Karnataka expressing dissatisfaction over their diminishing allocation over successive Finance Commission periods.



Central transfers and the issue of shares of some States

There are many issues that the Sixteenth Finance Commission will have to deal with. In this article, we focus on one issue which has been raised by many States, particularly those in the south of India. The issue (or the complaint) is that these States have been facing a decline in their share out of the resources transferred from the Centre to the States, from Finance Commission to Finance Commission.

In finding a solution to this issue, we need to look at: which States have been gaining and which are losing their share over time; the criteria of horizontal distribution which has led to some States steadily losing their share; and what can be done to reverse this trend.

In *Table 1*, the shares of groups of States and those for selected States are shown, for the Twelfth Finance Commission to the Fifteenth Finance Commission (final report). In the case of the southern States, there has been a steady fall in their share, from 19.785% to 15.800%. In a comparison of these two Commissions, the northern and eastern States have also lost. The 'gainer States' were the hilly, central, and western States including Maharashtra.

The distance criterion

The shares of individual States in tax devolution depend on the criteria and the weights used by different Commissions. *Table 2* provides a list of the different criteria used by Finance Commissions, from the Twelfth to the Fifteenth.

C. Rangarajan is former Chairman, Prime Minister's Economic Advisory Council and former Governor, Reserve Bank of India

D.K. Srivastava is former Director, Madras School of Economics

The income distance criterion and cesses and surcharges are areas that need review

Share of States/groups of States in tax devolution

Table 1: Share of States (%) in Commission-wise tax devolution for groups and selected States

Region	Overall				Change	
	FC12	FC13	FC14	FC15 (final)	FC15 (final) minus FC12	
Northern of which:	32.666	33.031	30.285	30.897	-1.769	4.907
Bihar	11.028	10.917	9.665	10.058	-0.970	0.962
Uttar Pradesh	19.264	19.677	17.959	17.939	-1.325	2.509
Central	12.726	12.392	13.767	14.564	1.838	1.298
West of which:	14.434	14.359	14.478	16.207	1.773	2.822
Maharashtra	5.082	5.284	5.649	6.317	1.235	1.758
Gujarat	3.625	3.101	3.156	3.478	-0.147	-0.089
Southern of which:	19.785	18.575	17.978	15.800	-3.985	-8.055
Tamil Nadu	5.305	4.969	4.023	4.079	-1.226	-1.736
Eastern	15.453	15.671	15.277	15.179	-0.274	-0.192
Hilly	3.639	4.421	6.361	7.353	3.714	-0.020

Source (basic data): Reports of Finance Commissions (Twelfth to Fifteenth) and writers' estimates

Notes: (1) The Fifteenth Finance Commission had submitted two reports. Here, the reference is to the final report. | (2) Shares are not strictly comparable across Commissions because of change in the status of Jammu and Kashmir for FC15.

Table 2: Relative weights for different tax devolution criteria: FC12 to FC15 (2)

	Criterion	FC12	FC13	FC14	FC15 (final)
1	Population	25	25	17.5	15.0
2	Demographic change	-	-	10	12.5
3	Income/ fiscal capacity distance	50	47.5	50	45.0
4	Area	10	10	15	15.0
5	Forest cover	-	-	7.5	10.0
6	Tax effort	7.5	-	-	2.5
7	Fiscal discipline	7.5	17.5	-	-

Source (basic data): Reports of Finance Commissions (Twelfth to Fifteenth)

Table 3: Share of Centre and States in combined revenue (%)

FC period	Pre-transfer		Post-transfer	
	Centre	States	Centre	States
12th FC	64.3	35.7	38.7	61.3
13th FC	61.8	38.2	36.1	63.9
14th FC	62.3	37.7	31.9	68.1
15th FC (first 3 years)	62.6	37.4	31.3	68.7
2020-21	62.3	37.7	29.3	70.7
2021-22	64.1	35.9	32.3	67.7
2022-23	61.5	38.5	32.5	67.5

Source (basic data): RFS, Union Budget documents, RIA

Notes: (1) Transfers include tax devolution and Finance Commission as well as other grants. (2) Grants from the Centre to States after 2015-16 are taken from the Union Budget. It includes grants-in-aid to the Union Territories.

The distance criterion has been accorded the highest weight amongst these criteria. Its weight was reduced from 50% to 47.5% by the Thirteenth Finance Commission and further reduced to 45% by the Fifteenth Finance Commission. Earlier, the Eleventh Finance Commission had given this criterion a weight of 62.5%. The equalisation principle has always been regarded in India and elsewhere as a key principle governing distribution. Economic and social justice demand this.

The main reason for the loss of the southern States is the income distance criterion (*Table 1*). Distance criterion means that the farther a State is from the highest income State, the higher its share. The main reason for the gain of the hilly States is area/forest criterion, although its impact is not separately shown. Between these two Finance Commissions, the loss to the southern States due to the distance criterion amounted to 8.055% points, although the overall loss was much less at 3.985% points, implying that there was a gain under other criteria.

Although on account of the distance criterion, low-income States such as Bihar and Uttar Pradesh have gained over time, they have lost on account of other criteria. Bihar and Uttar Pradesh show, in terms of their overall share, a loss of 0.970% points and 1.325% points.

On population

One other criterion that has caused some controversy is population. Until the Fourteenth Finance Commission, the data for the population in 1971 was used. For the Fifteenth Finance Commission, data for the population in 2011 was used. However, in order not to penalise States that showed better performance in reducing fertility rates, the demographic change criterion was introduced. The joint impact of these two changes has been marginal for all groups of States. For Tamil Nadu, the joint impact was marginally positive.

Steps to take

As mentioned, we cannot give up the income distance criterion. Some raise the question whether such a criterion can continue indefinitely. This is a legitimate question. But this question can be raised in relation to many other issues. Perhaps one step that the Sixteenth Finance Commission can consider is to reduce its weight while correspondingly raising the weights attached to other criteria.

Related to the question of share is also the quantum of the divisible pool. While accepting the recommendation of the Fourteenth Finance Commission to raise the share of all States to 42% from 32%, the Centre increased the cesses and surcharges, thereby reducing the size of the divisible pool. This is not desirable. One option is to limit the share of cesses and surcharges to 10% of the Centre's gross tax revenues. After the recommendation of the Fourteenth Finance Commission, the share of the States in the combined revenue receipts increased from 62.9% to 68.1% (*Table 3*). It increased further to 70.7% in 2020-21. Since then, it has fallen to 67.5% in 2022-23, although this level is still higher than 61.3% in the Twelfth Finance Commission period.

To sum up, there is a case to address the issue raised by some of the States regarding their declining shares. The major factor contributing to this situation is the adoption of income distance criterion and giving it a weight as high as 45%. But in any scheme of fair distribution, this criterion cannot be given up.

The Finance Commission can reduce the weight of this criterion by 5% to 10% points. Also, cesses and surcharges may be subjected to some upper limit by the Sixteenth Finance Commission.

The views expressed are personal

- **Impact of Income Distance Criterion:**
  - **Declining Share for Southern States:** Analysis reveals a steady decrease in the share of southern states, from 19.785% to 15.800%, attributed largely to the income distance criterion applied by successive Finance Commissions.
  - **Gain for Other Regions:** In contrast, hilly, central, and western states, including Maharashtra, have seen an increase in their share, highlighting regional disparities in resource allocation.

- **Weight Reduction of Distance Criterion:** The weight of the distance criterion, which assigns higher shares to states further from the highest income state, has been progressively reduced from 62.5% to 45%, impacting states differently based on their income levels and geographic location.

- **Concerns over Population Criterion and Divisible Pool:**
  - **Controversy Surrounding Population Criterion:** The use of 2011 population data, replacing the earlier 1971 data, has raised concerns, mitigated by the introduction of the demographic change criterion. However, the joint impact remains marginal for most states.
  - **Divisible Pool Reduction:** While states' share was increased to 42% following the Fourteenth Finance Commission's recommendation, the Centre's decision to raise cesses and surcharges has diminished the size of the divisible pool, posing challenges for equitable resource distribution.
  - **Recommendations for Fair Distribution:** Suggestions include reducing the weight of the income distance criterion by 5% to 10% and imposing an upper limit on cesses and surcharges by the Sixteenth Finance Commission, aiming to address states' concerns over declining shares while maintaining principles of fairness and equity.

4. A tribe in the Western Ghats in need of a lifeline

GS 2 (Social Issues)

- **Why in News:**
  - The plight of forest-dwelling tribes in Karnataka's Western Ghats, exemplified by Makuta village, has brought attention to the challenges faced by marginalized communities in securing livelihoods and addressing emerging social issues.
  - Despite recent land rights acquisition under the Forest Rights Act, tribal communities like the Phani Yerava tribe continue to grapple with changing livelihood patterns and the prevalence of alcohol addiction, highlighting the need for targeted interventions and support from policymakers.

A tribe in the Western Ghats in need of a lifeline

In Karnataka's section of the Western Ghats, lies Makuta village, under Betoli gram panchayat of Virajpet *taluka* in Kodagu district. More specifically, the village falls under the Makuta Aranya Valaya which is in the vicinity of the Kerti reserved forest. This area is in the Talacauvery sub-cluster, identified as one of the 10 World Heritage Sites in Karnataka and is a region of dense tropical evergreen forests that have remained undisturbed to a large extent.

The village has a Girijan colony inhabited by the 'Phani Yerava' tribe. In 2021, with the help of two local people including a Muslim gram panchayat member, all the 19 Yerava households here were able to successfully claim their 'land' in the forest, under the Forest Rights Act. In a joint survey conducted by the Forest, Revenue and Social Welfare Departments, officials found that the Yeravas reside on 135 acres of forest land, right from the time of their ancestors.

When asked about the importance of acquiring forest rights, the tribals did not appear to be very enthusiastic because their dependence on the forest exclusively for their livelihood has been reducing over some time.

The reason they gave was that they found going into the forest to collect minor forest produce to be a tiresome job. Besides, selling the produce was no longer lucrative given the volatile market and also rampant exploitation by middlemen. This bitter experience led them to believe that for the same effort, they would get better wages if they worked as labour. Hence, working as daily labour (casual or agriculture) is now the primary occupation of these forest dwellers. The majority of them prefer to go to Kasaragod in Kerala State which is less than 10 kilometres from their habitation, as they are comfortable speaking Malayalam.

Madhusudan Bandi

is a faculty member with the Gujarat Institute of Development Research, Ahmedabad, Gujarat

Issues such as alcohol abuse that are threatening to overwhelm the 'Phani Yerava' tribals in Karnataka need to be on the policy radar

Nevertheless, along with fuelwood and honey, the other minor forest produce they collect includes *dhoopa* (*Vateria indica*) incense, and *shekakai* (soap pod). The quantity collected depends on the availability of the produce in the forest as well as the need to procure them. However, most of those who gather forest produce said that the amount they collected was most often for their own consumption. There is no stockpiling.

The scourge of addiction

However, there is an issue that is a cause for worry. When this writer-researcher visited them to understand their socio-economic status after the implementation of the Forest Rights Act, almost the entire community was found to be in an intoxicated state due to alcohol abuse. According to non-tribal locals and others in the area, they picked the habit in the city seeing other labourers doing the same in the evenings after returning home to unwind after the pain from the day's hard work. Not surprisingly, the tribals in the village were not in a position to recall how they got into this. Even adolescent children have taken to this vice. This has affected children's attendance in schools too. Intoxication has slowly turned the community's life into one of a miserable existence. As a result, the community is found to be uninformed about happenings in the external world around them. Given this development, important documents such as ration cards, Aadhar cards, voter identity cards, or even government documents such as rights given under the Forest Rights Act have to be kept in the safe custody of trustworthy non-tribal members.

Officials from the Department of Social Welfare working in this area have also been concerned about this issue because they find the state of the habitants to be 'disheartening'. A case worker, who expressed deep empathy for them, said that efforts are being made to conduct a de-addiction drive. In another habitation in Nerugalale gram panchayat in Somwarpet *taluka* in the same district, a headman of the 'Yerava' tribe expressed sadness that a number of his relatives had lost their lives due to addiction. He cited this as the cause behind the population in his hamlet reducing to half. He hoped that good sense would prevail and that the tribals would lead a vice-free life.

It was the same story, but with varying degrees, in every tribal village that this writer-researcher visited in the Western Ghats region in Karnataka during the study (this article is drawn from a larger research study titled "Tribals, Forest Rights and Heritage Conservation: A Study of Western Ghats in Karnataka", sponsored by the Indian Council of Social Science Research, New Delhi).

Non-government organisation activists and government officials working in the jurisdiction of the villages have said that such issues do not get enough attention in the policy matters in the State – a view also expressed by the leaders of some local tribal communities such as the Hasaru, Gowdalu, and Jenu Kurubas. According to them, only a few communities which are numerically dominant among the Scheduled Tribes have been gaining benefits over recent years, in every walk of life. They expressed the wish that the government should consider these kinds of social issues seriously and take steps that are in the best interest of those groups. It is only then, they believe, that existential concerns such as addictions haunting forest dwellers can be addressed effectively.

- **Struggles for Livelihood:**
  - **Ancestral Land Rights:** The Phani Yerava tribe in Makuta village secured land rights under the Forest Rights Act, asserting their ancestral claims to forest land spanning generations.
  - **Declining Dependence on Forest Resources:** Despite land rights acquisition, the tribe's reliance on forest resources has diminished over time due to changing market dynamics and exploitation by middlemen.
  - **Shift to Wage Labor:** Many tribe members now opt for wage labor, preferring to work as daily laborers in neighboring states like Kerala, where employment opportunities offer better returns than collecting minor forest produce.
- **Emerging Social Challenges:**
  - **Prevalence of Alcohol Addiction:** Makuta village and surrounding areas face the scourge of alcohol addiction, affecting community well-being and hindering children's education.
  - **Lack of Awareness and Support:** Despite the severity of social issues like substance abuse, forest-dwelling communities often receive inadequate attention and support from policymakers.
  - **Call for Government Intervention:** Local leaders and activists advocate for greater government intervention and targeted support to address emerging social challenges and enhance the well-being of marginalized tribal communities.

5. Why did the SC Reject SBI's Plea for More Time to Provide Details?

Recent events of importance

- **Why in News:** The Supreme Court dismissed a plea by the State Bank of India (SBI) to extend the deadline for providing details of electoral bonds purchased anonymously and their encashment by political parties to June 30, 2024. A five-judge Bench (headed by the CJI) gave the bank 24 hours to provide the details to the Election Commission of India (ECI).
- **Background of the Issue:**
  - The petition was filed in the aftermath of the SC's verdict striking down the electoral bonds scheme (EBS), where the Court had directed the SBI to furnish details of the bonds to the ECI by March 6, 2024.

Why did the top Court reject SBI's plea?

What were the reasons given by the State Bank of India to the Supreme Court on why it could not furnish the relevant details pertaining to electoral bonds to the Election Commission of India? What was the contempt plea filed against the public sector bank?

- These details were to include the date of purchase of each bond, the name of the purchaser of the bond and the denomination of the bond purchased.
- The ECI was subsequently ordered to publish all such information shared by the SBI on its official website by March 13, 2024.
- The court was also hearing a contempt plea filed by NGOs (ADR and Common Cause) against the SBI Chairman.
- The plea contends that the bank was deliberately trying to ensure that details were not disclosed to the public before the Lok Sabha elections due in April-May.
- Analysis reveals that the BJP was the scheme's greatest beneficiary.

- **Why did SBI Seek more Time to Comply?**
  - The bank said that the information and documents were scattered across its various branches and decoding them was a **"time-consuming exercise."**
  - The data related to the issuance of the bond and data related to the redemption of the bond were recorded **"in two different silos."**
  - This was done to ensure that donors' anonymity was protected.
  - The Court was also informed that donor information was kept in a sealed cover at the selected branches and thereafter deposited in the organisation's main branch in Mumbai.
  - It can thus be noted that both sets of information were being stored independently of each other.
  - Thus, to re-match them would be a task requiring a significant amount of effort.
  - **The SBI added that -**
    - While some details such as the number of bonds issued are stored digitally,
    - Others such as the names of the purchasers and KYC documentation are stored physically in its various branches to "achieve the object of the scheme."
- **What did the Contempt Plea Stipulate?**
  - All electoral bond-related work was overseen by a specific team of the SBI called the **Transaction Banking Unit (TBU)** to ensure that the government can access crucial information on a short notice.
  - The petitioners claimed that the SBI maintains a secret number-based record of donors who buy bonds and the political parties to which they donate.
  - Additionally, each electoral bond also possessed a unique number making it easier to trace it.
  - A simple query on the database can generate a report in a particular format which does not require any manual verification.
  - The petitioners pointed out that the SBI had enough manpower to retrieve the information within the stipulated deadline.
  - Even the EBS makes it mandatory to disclose information furnished by a buyer when demanded by a competent court.
- **What did the Top Court Say?**
  - The CJI pointed out that the judgement had not asked the bank to "match" information to ascertain who contributed to which parties and only wanted a "plain disclosure".
  - He asserted that the SBI in its own application said that such information was "readily available".
  - The Bench stated that it did not wish to initiate contempt proceedings against the SBI, but it was putting the bank on notice and would take action if the SBI failed to comply.

6. India 'One of the Worst Autocracies': V-Dem Report on Democracy

Recent events of importance

Liberal democracy has declined significantly in India: report

The Hindu Bureau
NEW DELHI

India, which was downgraded to the status of an "electoral autocracy" in 2018, has declined even further on multiple metrics to emerge as "one of the worst autocratisers", according to the "Democracy Report 2024" released by the Gothenburg-based V-Dem Institute.

The report categorises countries into four regime types based on their score in the Liberal Democratic Index (LDI): Liberal Democracy, Electoral Autocracy, and Closed Autocracy. "India, with 18% of the world's population, accounts for about half of the population living in autocratising countries," the report said.

Noting that almost all components of democracy were getting worse in more countries than they were getting better, the report singled out freedom of expression, clean elections, and freedom of association/civil society as the three worst affected components of democracy in autocratising countries.

The report details how BJP used various laws to silence critics. REUTERS

South and Central Asia regressed significantly, with the level of "liberal democracy" enjoyed by the average Indian now "down to levels last seen in 1975...when Indira Gandhi declared a state of emergency in India". As per the V-Dem classification, a liberal democracy is one where, in addition to the requirements of electoral democracy such as regular free and fair elections, mechanisms for judicial independence and constraints on executive overreach are robust, alongside rigorous protection of civil liberties and equality before law.

"The Modi-led government also continues to suppress the freedom of religion rights. Intimidation of political opponents and people protesting government policies, and silencing of dissent in academia are now prevalent," the report noted.

With regard to India, the report said that a third consecutive term for the BJP and Mr. Modi "could lead to further autocratisation given the already substantial democratic decline under Modi's leadership and the enduring crackdown on minority rights and civil society".

V-Dem's Democracy Report is a collaborative project involving 4,200 scholars from 180 countries, and is based on 31 million datasets that cover 202 countries from 1789 to 2023.

- **Why in News:** V-Dem Institute has the 'Democracy Report 2024' that tracks democratic freedoms worldwide.
- **About V-Dem:**
  - The V-Dem Institute (Varieties of Democracy was founded by Staffan Lindberg in 2014. Staffan Lindberg is a Swedish political

scientist.

- The V-Dem institute **studies the qualities of government.**
- The headquarters of the project is based at the department of political science, University of Gothenburg, Sweden.
- The V-Dem Institute publishes a number of high-profile datasets that describe qualities of different governments, annually published and publicly available for free.
- These datasets are a popular dataset among political scientists, due to information on hundreds of indicator variables describing all aspects of government.

- **About Democracy Report:**
  - The V-Dem Institute publishes the Democracy Report that describes the state of democracy in the world, with a focus on democratization and autocratization.
  - **The report classifies countries into four regime types based on their score in the Liberal Democratic Index (LDI):**
    - **Liberal Democracy, Electoral Democracy, Electoral Autocracy, and Closed Autocracy.**
  - The LDI captures both liberal (individual and minority rights) and electoral aspects (free and fair elections) of a democracy.
  - It is based on 71 indicators that make up the Liberal Component Index (LCI) and the Electoral Democracy Index (EDI).
  - The LCI measures aspects such as protection of individual liberties and legislative constraints on the executive.
  - The EDI considers indicators that guarantee free and fair elections such as freedom of expression and freedom of association.
  - **Apart from these, the LDI also uses:**
    - Egalitarian Component Index (to what extent different social groups are equal),
    - Participatory Component Index (health of citizen groups, civil society organisations),
    - Deliberative Component Index (whether political decisions are taken through public reasoning focused on common good or through emotional appeals, solidarity attachments, coercion).
  - The Democracy Report is published annually in March.
- **Key Findings of the Democracy Report 2024:**
  - The Democracy Report 2024 is a collaborative project involving 4,200 scholars from 180 countries, and is based on 31 million datasets that cover 202 countries from 1789 to 2023.
- **Overall Findings:**
  - In 2023, 42 countries (home to 35% of the world's population) were undergoing autocratization.
  - 71% of the world's population — 5.7 billion people — live in autocracies, an increase from 48% ten years ago.
  - The level of democracy enjoyed by the "average person in the world is down to 1985-levels", the report said.
  - The sharpest decline occurring in Eastern Europe, and South and Central Asia.
  - The report singled out freedom of expression, clean elections, and freedom of association/civil society as the three worst affected components of democracy in autocratising countries.
  - In a separate section on the 60 countries that go to the polls in 2024, the report observed that more than half of these (31) were in periods of democratic decline.
- **With respect to India:**
  - India, which was downgraded to the status of an electoral autocracy in 2018, has declined even further on multiple metrics to emerge as "one of the worst autocratizers".
  - As per the report, level of liberal democracy enjoyed by the average Indian now "down to levels last seen in 1975….when Indira Gandhi declared a state of emergency in India".
  - As per the V-Dem classification, a liberal democracy is one where, in addition to the requirements of electoral democracy such as regular free and fair elections, mechanisms for judicial independence and constraints on executive overreach are robust, alongside rigorous protection of civil liberties and equality before law.
  - In an electoral autocracy — the category India falls into — multiparty elections coexist with insufficient levels of basic requisites such as freedom of expression and free and fair elections.

13th March, 2024

1. Intra-group caste variances, equality and the Court's gaze
GS 2 (Governance)

- **Why in News:**
  - The upcoming judgment by a seven-judge Bench of the Supreme Court of India in the case of State of Punjab vs Davinder Singh is poised to address a crucial legal question regarding affirmative action and reservations under the Constitution.
  - The issue revolves around whether State governments have the authority to make sub-classifications within the Scheduled Castes (SC) and Scheduled Tribes (ST) categories in recruitment to public employment, raising concerns about encroachment on Parliament's exclusive domain.

Intra-group caste variances, equality and the Court's gaze

Soon, a seven-judge Bench of the Supreme Court of India will deliver its judgment in *State of Punjab vs Davinder Singh*, on a question of law that carries with it enormous significance for the future of affirmative action and reservations under the Constitution. Can State governments make a sub-classification within the proportion prescribed to Scheduled Castes and Scheduled Tribes in recruitment to public employment? In other words, by making a special allowance for certain groups that are more backward than others, are regional units encroaching on a domain that remains within Parliament's exclusive preserve?

Studies and data have shown that although they have been bracketed into two homogenous categories, as Scheduled Castes (SC) and Scheduled Tribes (STs), within the groups there are differing levels of development; and some castes are more discriminated against than others. In redressing this position, should State governments not be afforded the power to recognise intra-group variances? The judgment in *Davinder Singh* will seek to answer this. And, in doing so, it might well serve to provide much needed clarity to an area of law that has long required mending.

A circular in Punjab in 1975

The issues at stake in the case emanate out of a circular notified by the Government of Punjab in 1975. The circular stipulated that out of the total seats reserved for SCs in the State, 50% of the vacancies would be offered to Balmikis and Mazhabi Sikhs. The other half would be open to all the remaining groups within the SC category. In July 2006, the Punjab and Haryana High Court struck down this notification, following a judgment of the Supreme Court, in 2004 in *E.V. Chinnaiah vs State of Andhra Pradesh*.

In *Chinnaiah*, a five-judge Bench quashed the Andhra Pradesh Scheduled Castes (Rationalisation of Reservations) Act, 2000, on the ground that it offended Article 341 of the Constitution. This provision allows the President of India to notify a list of SCs for each State, and stipulates that the list can only be modified by Parliament.

The Andhra Pradesh law sought to carve four distinct categories out of the President's list and granted to each category a separate quota based on its *inter se* backwardness. The Court found that the State government had no power to tinker with the list because it was clear on a bare reading of Article 341 that such authority vested only with Parliament. The judgment also pointed to B.R. Ambedkar's speech in defence of the presidential list, in which he had warned that if

Sabrith Parthasarathy is an advocate practising at the Madras High Court

The case of State of Punjab vs Davinder Singh highlights the point that within SCs and STs, there are differing levels of development, with some castes more discriminated against than others

State governments were allowed to amend the list, we ran the risk of the exercise partaking purely political considerations.

Even though its 1975 circular was struck down, the Government of Punjab remained persistent. It enacted a new law, i.e., the Punjab Scheduled Castes and Backward Classes (Reservation in Services) Act, 2006, which once again provided first preference to Balmikis and Mazhabi Sikhs. The High Court declared this law too to be unconstitutional. But in August 2020, sitting on appeal over the decision, the Supreme Court doubted the correctness of its earlier verdict in *Chinnaiah*, prompting the creation of a seven-judge Bench and a fresh hearing on the issues raised.

In questioning the extant view, the Supreme Court cited its judgment in *Indra Sawhney vs Union of India*, which arose out of the Mandal Commission's report. There, a nine-judge Bench had held that sub-classifications within socially and educationally backward classes (OBCs) for services under the government was permissible. The majority endorsed Justice Chinnappa Reddy's judgment in *K.C. Vasanth Kumar & Another vs State Of Karnataka* (1985). In it, he had ruled that while the propriety of making sub-classifications might depend on the facts of each case, "we do not see why on principle there cannot be a classification into backward classes and more backward classes, if both classes are not merely a little behind, but far far behind the most advanced classes. In fact such a classification would be necessary to help the more backward classes; otherwise those of the backward classes who might be a little more advanced than the more backward classes might walk away with all the seats, just as, if reservation was confined to the more backward classes and no reservation was made to the slightly more advanced backward classes, the most advanced classes would walk away with all the seats available for the general category leaving none for the backward classes."

Equality and castes

Beyond this, at the root of the matter is the Constitution's collective commitment to equality. Contained in Articles 14 to 16, which can be read together as a code, is a promise of substantive equality. This guarantee recognises that individuals, throughout India's history, have been discriminated against based on their caste. Therefore, our constitutional vision demands that we be mindful of group interests in striving to ensure equal treatment. Under this model, reservations must be seen not as a measure in conflict with – and in exception to – the basic notion of equality, but, instead, as a means to furthering and entrenching that goal.

Indeed, since its judgment in *State Of Kerala & Anr vs N.M. Thomas & Ors* (1975), the Supreme Court has, at least in theory, appeared to acknowledge that governments not only possess the power to make reservations – and correct historical wrongs – but also have a positive duty to ensure substantive equality. Viewed thus, if the Government of Punjab were to find on the basis of its studies – and it certainly has in this case – that its existing measures of reservation have not adequately reached Balmikis and Mazhabi Sikhs, then it is constitutionally obligated to ensure that these measures are corrected.

If Article 341 is seen as constituting a bar against sub-classification, then that prohibition would run athwart the Constitution's equality code. In any case, even on a plain reading, Article 341 does not impose such a prohibition. It merely prescribes State governments from including or excluding castes from the President's list of SCs. Where States provide special measures to certain castes that are within this list, they do not act to include or exclude other castes from the list. Those castes will continue to be entitled to the State's general provisions of reservation.

On sub-classification

In the case of the Punjab law, it decidedly does not modify the President's list. It merely accounts for *inter se* backwardness within that list by providing for a greater degree of preference to Balmikis and Mazhabi Sikhs. This sub-classification is also in keeping with the Constitution's time-honoured theory that reasonable classifications are permissible to ensure that equality is achieved.

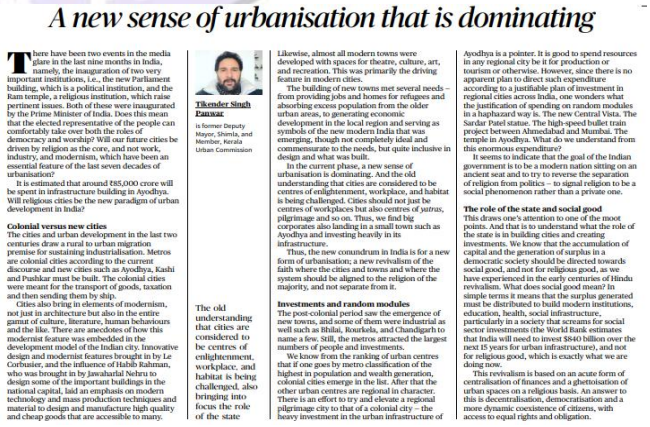
Once we see the list of SCs and STs not as homogenous categories, but as comprising different castes with differing levels of development, a sub-classification will have to be judged on its own merits. That is, the Court will only have to examine whether Balmikis and Mazhabi Sikhs are intelligibly differentiable from other castes within the President's list, and whether the grant of preferential treatment to them – and the extent of such grant – bears a rational nexus with the law's larger objective of ensuring fair treatment.

It is time the Supreme Court takes seriously what it recognised in *N.M. Thomas* – that governments have both a power to make reservations and a duty to ensure that the constitutional dream of equality is achieved. To that end, any authority vested in the States to provide for special measures in those castes within SCs and STs who are most discriminated against must be seen as a way of making real the idea of equal opportunity.

- **Constitutional Principles and Equality:**
  - **Equality:** The core of the dispute revolves around the constitutional commitment to equality enshrined in Articles 14 to 16, which guarantee substantive equality and recognition of historical caste-based discrimination.
  - **Rectification of historical injustices:** The principle of substantive equality requires proactive measures to rectify historical injustices, including reservations for marginalized groups, as affirmed by the Supreme Court in previous cases like State Of Kerala vs N.M. Thomas.
  - **Conflict:** Any prohibition on sub-classification within SCs and STs, purportedly imposed by Article 341, would conflict with the broader constitutional mandate of achieving equality and rectifying historical injustices.
- **Implications and Legal Analysis:**
  - **Determination:** The upcoming Supreme Court judgment will determine whether sub-classifications within SCs and STs are constitutionally permissible, considering their necessity in addressing intra-group variances and ensuring effective affirmative action.
  - Legality of the Punjab law's sub-classification hinges on whether it modifies the President's list of SCs, as delineated in Article 341, or merely accounts for inter se backwardness within the existing list.
  - **Far-reaching implications:** The Court's decision will have far-reaching implications for the interpretation of constitutional provisions on reservations and the balance between state autonomy and parliamentary authority in matters of affirmative action.

2. A new sense of urbanisation that is dominating
GS 3 (Infrastructure)

- **Why in News:**
  - The recent inauguration of the new Parliament building and the Ram temple has sparked discussions regarding the intersection of politics and religion in urban development. These events raise questions about the role of elected representatives in both democratic governance and religious affairs, as well as the future trajectory of urbanization in India.



A new sense of urbanisation that is dominating

There have been two events in the media glare in the last nine months in India, namely, the inauguration of two very important institutions, i.e., the new Parliament building, which is a political institution, and the Ram temple, a religious institution, which raise pertinent issues. Both of those were inaugurated by the Prime Minister of India. Does this mean that the elected representative of the people can comfortably take over both the roles of democracy and worship? Will our future cities be driven by religion as the core, and not work, industry, and modernism, which have been an essential feature of the last seven decades of urbanisation?

It is estimated that around ₹85,000 crore will be spent in infrastructure building in Ayodhya. Will religious cities be the new paradigm of urban development in India?

Colonial versus new cities

The cities and urban development in the last two centuries draw a rural to urban migration premise for sustaining industrialisation. Metros are colonial cities according to the current discourse and new cities such as Ayodhya, Kashi and Pushkar must be built. The colonial cities were meant for the transport of goods, taxation and then sending them by ship.

Cities also bring in elements of modernism, not just in architecture but also in the entire gamut of culture, literature, human behaviours and the like. There are anecdotes of how this modernist feature was embedded in the development model of the Indian city. Innovative design and modernist features brought in by Le Corbusier, and the influence of Habib Rahman, who was brought in by Jawaharlal Nehru to design some of the important buildings in the national capital, laid an emphasis on modern technology and mass production techniques and material to design and manufacture high quality and cheap goods that are accessible to many.

Tikender Singh Panwar is former Deputy Mayor, Shimla, and Member, Kerala Urban Commission

The old understanding that cities are considered to be centres of enlightenment, workplace, and habitat is being challenged, also bringing into focus the role of the state

Likewise, almost all modern towns were developed with spaces for theatre, culture, art, and recreation. This was primarily the driving feature in modern cities.

The building of new towns met several needs – from providing jobs and homes for refugees and absorbing excess population from the older urban areas, to generating economic development in the local region and serving as symbols of the new modern India that was emerging, though not completely ideal and commensurate to the needs, but quite inclusive in design and what was built.

In the current phase, a new sense of urbanisation is dominating. And the old understanding that cities are considered to be centres of enlightenment, workplace, and habitat is being challenged. Cities should not just be centres of workplaces but also centres of *yatras*, pilgrimage and so on. Thus, we find big corporates also landing in a small town such as Ayodhya and investing heavily in its infrastructure.

Thus, the new conundrum in India is for a new form of urbanisation; a new revivalism of the faith where the cities and towns and where the system should be aligned to the religion of the majority, and not separate from it.

Investments and random modules

The post-colonial period saw the emergence of new towns, and some of them were industrial as well such as Bhilai, Rourkela, and Chandigarh to name a few. Still, the metros attracted the largest numbers of people and investments.

We know from the ranking of urban centres that if one goes by metro classification of the highest in population and wealth generation, colonial cities emerge in the list. After that the other urban centres are regional in character. There is an effort to try and elevate a regional pilgrimage city to that of a colonial city – the heavy investment in the urban infrastructure of Ayodhya is a pointer. It is good to spend resources in any regional city be it for production or tourism or otherwise. However, since there is no apparent plan to direct such expenditure according to a justifiable plan of investment in regional cities across India, one wonders what the justification of spending on random modules in a haphazard way is. The new Central Vista. The Sardar Patel statue. The high-speed bullet train project between Ahmedabad and Mumbai. The temple in Ayodhya. What do we understand from this enormous expenditure?

It seems to indicate that the goal of the Indian government is to be a modern nation sitting on an ancient seat and to try to reverse the separation of religion from politics – to signal religion to be a social phenomenon rather than a private one.

The role of the state and social good

This draws one's attention to one of the moot points. And that is to understand what the role of the state is in building cities and creating investments. We know that the accumulation of capital and the generation of surplus in a democratic society should be directed towards social good, and not for religious good, as we have experienced in the early centuries of Hindu revivalism. What does social good mean? In simple terms it means that the surplus generated must be distributed to build modern institutions, education, health, social infrastructure, particularly in a society that screams for social sector investments (the World Bank estimates that India will need to invest $840 billion over the next 15 years for urban infrastructure), and not for religious good, which is exactly what we are doing now.

This revivalism is based on an acute form of centralisation of finances and a ghettoisation of urban spaces on a religious basis. An answer to this is decentralisation, democratisation and a more dynamic coexistence of citizens, with access to equal rights and obligation.

- **Colonial Legacy and New Paradigms of Urban Development:**
  - The historical trajectory of urban development in India has been shaped by colonial legacies, with metropolitan cities serving as centers of industrialization and economic activity.
  - **Modernism:** Modern cities have traditionally been characterized by elements of modernism, including innovative design, technological advancements, and cultural vibrancy.
    - Emergence of new religious cities signals a paradigm shift in urban development, where religious identity takes precedence over industrialization and modernization.

- **Investments and Random Modules:**
  - Post-colonial urbanization in India witnessed the emergence of industrial towns alongside metropolitan centers, yet metros continue to attract the largest share of population and investments. However, recent efforts aim to elevate regional pilgrimage cities like Ayodhya to the status of colonial cities through substantial infrastructure investments.
  - While investing in regional cities is commendable for promoting production and tourism, the lack of a coherent national strategy raises concerns about haphazard expenditure.
  - The emphasis on monumental projects and religious infrastructure suggests a deliberate attempt to merge religion with politics, signaling a departure from the secular ideals enshrined in India's constitution.
- **The Role of the State and Social Good:**
  - Urban development should prioritize social welfare and equitable distribution of resources, investing in modern institutions, education, healthcare, and social infrastructure.
  - Addressing this trend requires a shift towards decentralization, democratization, and dynamic coexistence, ensuring equal rights and opportunities for all citizens. Rather than promoting religious exclusivity, urban planning should strive for inclusivity and social cohesion, fostering a diverse and vibrant urban landscape.
- **Priorities:** As India grapples with the challenges of rapid urbanization and socio-economic disparities, the role of the state in promoting social welfare and equitable urban development becomes paramount. Policymakers must prioritize investments that benefit all citizens, irrespective of religious affiliations, to build a more inclusive and sustainable urban future.

3. Nuclear Power and Waste

GS 3 (Environment)

- **Why in News:** India recently reached a significant milestone in its nuclear program by loading the core of its prototype fast breeder reactor (PFBR), advancing towards stage II of its three-stage nuclear program, aimed at achieving energy independence through the utilization of thorium reserves. However, the large-scale use of nuclear power is accompanied by a difficult problem: waste management.

How is nuclear waste generated?

Why is the spent fuel from nuclear power plants dangerous? How can they be stored safely with minimum human contact? How are countries with major nuclear power programmes storing nuclear waste? Does India have nuclear waste reprocessing plants?

EXPLAINER

Vasudevan Mukunth

THE GIST

- **Production of Nuclear Waste & Handling**
  - Nuclear waste is produced when atoms in a fission reactor absorb neutrons, resulting in the creation of radioactive elements that cannot undergo further fission. This waste, also known as spent fuel, contains radioactive fission products and elements formed through the conversion of uranium.
  - It is hot and highly radioactive, and needs to be kept underwater for up to a few decades. Once it has cooled, it can be transferred to dry casks for longer-term storage.
  - All countries with longstanding nuclear power programmes have accumulated a considerable inventory of spent fuel. For example, the U.S. had 69,682 tonnes (as of 2015), Canada 54,000 tonnes (2016), and Russia 21,362 tonnes (2014).
  - **Issues associated with nuclear waste**
    - **Danger for health**: These waste materials can remain radioactive and dangerous to human health for thousands of years.
    - **Two of the world ' s biggest nuclear accidents** – the Fukushima nuclear disaster (2011) and the Chernobyl disaster (1986) – were responsible for the release of a significant amount of radioactive isotopes into the atmosphere, which created huge consequences for people and the environment.
    - **Costly maintenance:** Radioactive wastes are subject to special regulations that govern their handling, transportation, storage, and disposal to protect human health and the environment. The maintenance of these sites can be extremely costly and it requires a large amount of manpower.

4. LCA Tejas

GS 2 (Security)

- **Why in News:** A Tejas aircraft of the Indian Air Force crashed near Jaisalmer, minutes after taking part in a tri-services exercise. This marks the first crash of the light combat aircraft (LCA) Tejas, which IAF began inducting in July 2016.

Tejas aircraft crashes in Jaisalmer, first since maiden flight in 2001

The Hindu Bureau
NEW DELHI

A Tejas light combat aircraft (LCA) of the Indian Air Force (IAF) crashed at Jaisalmer during an operational training sortie on Tuesday. This is the first crash of the indigenous jet since its maiden flight on January 4, 2001.

"The pilot ejected safely. A Court of Inquiry has been constituted to find out the cause of the accident," the IAF said in a post on social media. The incident took place as the tri-Service fire power demonstration exercise Bharat Shakti was under way at Pokhran.

The IAF currently operates two LCA squadrons and is set to add the third squadron shortly.

On the overall project cost, the government had informed Parliament in March 2020 that ₹9,063.96 crore had been spent on the LCA.

The government had originally sanctioned ₹2,188 crore for the Full Scale Engineering Development (FSED) Phase-I programme to design and develop two technology demonstrators in April 1993, and ₹5,777.56 crore for FSED Phase-II programme. The objectives of Phase-II were fabrication of three prototypes vehicles (PVs), establishment of production facility at Hindustan Aeronautics Ltd. for production of eight aircraft per year, and manufacturing and delivery of eight limited-series production aircraft, the government had informed Parliament.

The maiden flight of the first technology demonstrator took place on January 04, 2001. It was christened the Tejas in 2003.

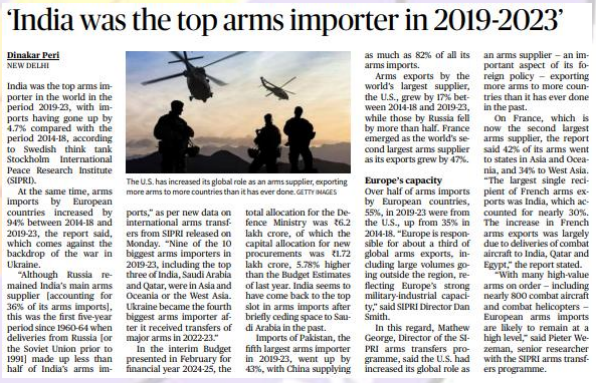
The LCA achieved initial operation clearance in December 2013 and the final operational clearance in February 2019.

- **What is Tejas Mk-1?**
  - The Tejas Mk-1 is light supersonic multirole jet, capable of doing multiple missions including-
    - air-defence (air-to-air)
    - intelligence, surveillance and reconnaissance (ISR)
    - air-interdiction (striking enemy targets deep into enemy territory)
    - maritime strike and reconnaissance missions
  - The jet carries, an Israeli laser designating pod, multi-mode radar, helmet mounted display system and self-protection suite.
  - The Indian Air Force currently operates 40 Tejas MK-1 aircraft and it has 83 Tejas MK-1A fighters on order in a deal worth over ? 46,000 crore.
- **LCA Program**
  - The Light Combat Aircraft (LCA) program was started in the early 1980s, with the Government of India (GoI) establishing the project in 1983 to replace Mig-21 fighters.
  - The first prototype took its first flight in January 2001.

5. India remains world's top arms importer: SIPRI report

GS 3 (Economy)

- **Why in News:** India continues to be the world's top arms importer, according to a new report by the Stockholm International Peace Research Institute (SIPRI).



'India was the top arms importer in 2019-2023'

Dinakar Peri
NEW DELHI

India was the top arms importer in the world in the period 2019-23, with imports having gone up by 4.7% compared with the period 2014-18, according to Swedish think tank Stockholm International Peace Research Institute (SIPRI).

At the same time, arms imports by European countries increased by 94% between 2014-18 and 2019-23, the report said, which comes against the backdrop of the war in Ukraine.

"Although Russia remained India's main arms supplier [accounting for 36% of its arms imports], this was the first five-year period since 1960-64 when deliveries from Russia [or the Soviet Union prior to 1991] made up less than half of India's arms imports," as per new data on international arms transfers from SIPRI released on Monday. "Nine of the 10 biggest arms importers in 2019-23, including the top three of India, Saudi Arabia and Qatar, were in Asia and Oceania or the West Asia. Ukraine became the fourth biggest arms importer after it received transfers of major arms in 2022-23."

In the interim Budget presented in February for financial year 2024-25, the total allocation for the Defence Ministry was ₹6.2 lakh crore, of which the capital allocation for new procurements was ₹1.72 lakh crore, 5.78% higher than the Budget Estimates of last year. India seems to have come back to the top slot in arms imports after briefly ceding space to Saudi Arabia in the past.

Imports of Pakistan, the fifth largest arms importer in 2019-23, went up by 43%, with China supplying as much as 82% of all its arms imports.

Arms exports by the world's largest supplier, the U.S., grew by 17% between 2014-18 and 2019-23, while those by Russia fell by more than half. France emerged as the world's second largest arms supplier as its exports grew by 47%.

Europe's capacity

Over half of arms imports by European countries, 55%, in 2019-23 were from the U.S., up from 35% in 2014-18. "Europe is responsible for about a third of global arms exports, including large volumes going outside the region, reflecting Europe's strong military-industrial capacity," said SIPRI Director Dan Smith.

In this regard, Mathew George, Director of the SIPRI arms transfers programme, said the U.S. had increased its global role as an arms supplier – an important aspect of its foreign policy – exporting more arms to more countries than it has ever done in the past.

On France, which is now the second largest arms supplier, the report said 42% of its arms went to states in Asia and Oceania, and 34% to West Asia. "The largest single recipient of French arms exports was India, which accounted for nearly 30%. The increase in French arms exports was largely due to deliveries of combat aircraft to India, Qatar and Egypt," the report stated.

"With many high-value arms on order – including nearly 800 combat aircraft and combat helicopters – European arms imports are likely to remain at a high level," said Pieter Wezeman, senior researcher with the SIPRI arms transfers programme.

The U.S. has increased its global role as an arms supplier, exporting more arms to more countries than it has ever done. GETTY IMAGES

- **Key-highlights of the Report**
  - The period between 2014 and 2018 was the first five-year stretch in 50 years (since 1960-1964) when deliveries from Russia or the erstwhile Soviet Union (prior to 1991) made up less than half of India's arms imports.
  - India was the world's top arms importer. Its arms imports increased by 4.7 per cent between 2014 – 18 and 2019 – 23. Although Russia remained India's main arms supplier (accounting for 36 per cent of its arms imports), this was the first five-year period since 1960 – 64 when deliveries from Russia (or the Soviet Union prior to 1991) made up less than half of India's arms imports.
  - The increase in French arms exports was largely due to deliveries of combat aircraft to India, Qatar and Egypt. India was the largest single recipient of French arms exports, accounting for nearly 30 percent in the period 2019-2023.
  - France's overall arms exports increased by 47 percent between 2014 – 2018 and 2019 – 2023. This is the first time that the country became the second-biggest arms exporter after the US and just ahead of Russia.
  - The Indian Air Force operates 36 Rafale fighter jets customised in accordance its needs, which were procured after a Euro 7.87 billion deal the two countries signed in September 2016.
  - Furthermore, India is in talks for 26 Rafale Marine jets to be procured for the Navy's aircraft carrier INS Vikrant.
  - Pakistan significantly increased its arms imports by 43 percent. Pakistan was the fifth largest arms importer in 2019-23 and China became even more dominant as its main supplier, providing 82 percent of its arms imports.
  - For the first time in 25 years, the US has become the largest supplier to Asia and Oceania.

6. Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024

GS 2 (Governance)

Govt. issues marketing code for pharmaceutical firms

The Hindu Bureau
NEW DELHI

The Department of Pharmaceuticals issued the Uniform Code for Pharmaceutical Marketing Practices (UCPMP), 2024 on Tuesday, specifying the rules for the use of the words "safe" and "new" for drugs, and stated that medical representatives must not employ any inducement or subterfuge to gain an interview, and that they must not pay, under any guise, for access to a healthcare professional.

Engagement of the pharmaceutical industry with healthcare professionals for Continuing Medical Education (CME) should only be allowed through a well-defined, transparent, and verifiable set of guidelines, and conduct of such events in foreign locations is prohibited by the uniform code.

Gifting prohibited

Companies or their representatives should not pay cash or monetary grants to any healthcare professional or their family members (both immediate and extended) under any pretext.

Gifting is prohibited by any pharmaceutical company or its agent, that is, distributors, wholesalers, retailers, and so on.

Additionally, no pecuniary advantage or benefit in kind may be offered, supplied or promised to any person qualified to prescribe or supply drugs by any pharmaceutical company or its agent.

The UCPMP is to be circulated for strict compliance, it said.

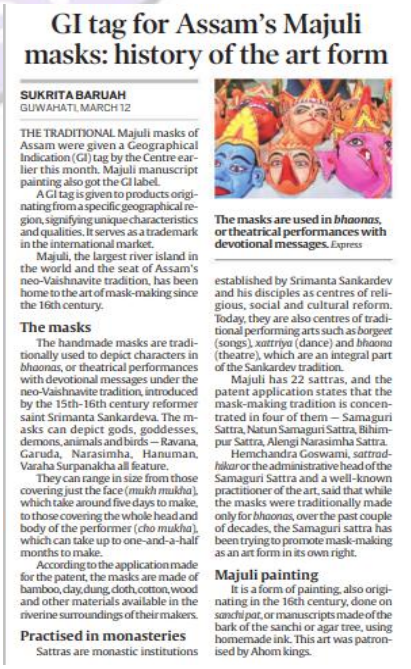
On drugs, the UCPMP states that promotion of a drug must be consistent with the terms of its marketing approval, and a drug must not be promoted prior to the receipt of its marketing approval from the competent authority.

"Claims for the usefulness of a drug must be based on up-to-date evaluation of all available evidence. The word 'safe' must not be used without qualification, and it must not be stated categorically that a medicine has no side effects, toxic hazards, or risk of addiction. The word 'new' must not be used to describe any drug which has been generally available, or any therapeutic intervention which has been generally promoted in India for more than a year," the latest rules state.

- **Why in News:** The Central Government recently rolled out a Uniform Code for Pharmaceutical Marketing Practices (UCPMP) for pharmaceutical companies.
- **About UCPMP 2024:**
  - It has been implemented to control unethical practices in the pharma industry.
  - The updated guidelines include drug endorsement, promotion, ethical conduct for medical representatives, and maintaining relationships with healthcare professionals.
- **Important Provisions:**
  - It prohibits pharma companies from offering gifts and travel facilities to healthcare professionals or their family members.
  - The UCPMP mandates that **medical representatives must not employ any inducement or subterfuge to gain an interview, and they must not pay, under any guise, for access to a healthcare professional.**
  - It also holds companies responsible for the actions of the medical representatives.
  - It also **bans the supply of free samples to those who are not qualified to prescribe such a product.**
  - Each pharma company also needs to maintain details such as product name, doctor name, the number of samples given, date of supply of free samples to healthcare practitioners, etc., and the monetary value of samples so distributed should not exceed two percent of the company's domestic sales per year.
  - All pharmaceutical associations must constitute an Ethics Committee for Pharmaceutical Marketing Practices (ECPMP), set up a dedicated UCPMP portal on their website, and take further necessary steps towards the implementation of this Code.
  - It also lists in detail how the drug should be promoted, both in texts and in the audio-visual market.
  - The information about drugs must be balanced, up-to-date, and verifiable, and must not mislead either directly or by implication.
  - The pharma companies should not make claims and comparisons of their drug's usefulness, and the word "safe" must not be used without qualification.
  - **The word "new" must not be used to describe any drug which has been generally available or any therapeutic intervention which has been generally promoted in India for more than a year.**
  - The responsibility for adherence to the code rests with the Chief Executive Officer of pharmaceutical companies.
  - It also detailed the penalties for violating the code and how complaints will be handled.
  - Any violations of the code will be addressed by the ECPMP, ensuring accountability and oversight.

7. GI tag for Majuli masks of Assam

GS 1 (Art and Culture)



GI tag for Assam's Majuli masks: history of the art form

SUKRITA BARUAH
GUWAHATI, MARCH 12

THE TRADITIONAL Majuli masks of Assam were given a Geographical Indication (GI) tag by the Centre earlier this month. Majuli manuscript painting also got the GI label.

A GI tag is given to products originating from a specific geographical region, signifying unique characteristics and qualities. It serves as a trademark in the international market.

Majuli, the largest river island in the world and the seat of Assam's neo-Vaishnavite tradition, has been home to the art of mask-making since the 16th century.

The masks

The handmade masks are traditionally used to depict characters in *bhaonas*, or theatrical performances with devotional messages under the neo-Vaishnavite tradition, introduced by the 15th-16th century reformer saint Srimanta Sankardeva. The masks can depict gods, goddesses, demons, animals and birds — Ravana, Garuda, Narasimha, Hanuman, Varaha Surpanakha all feature.

They can range in size from those covering just the face (*mukh mukha*), which take around five days to make, to those covering the whole head and body of the performer (*cho mukha*), which can take up to one-and-a-half months to make.

According to the application made for the patent, the masks are made of bamboo, clay, dung, cloth, cotton, wood and other materials available in the riverine surroundings of their makers.

Practised in monasteries

Sattras are monastic institutions established by Srimanta Sankardev and his disciples as centres of religious, social and cultural reform. Today, they are also centres of traditional performing arts such as *borgeet* (songs), *xattriya* (dance) and *bhaona* (theatre), which are an integral part of the Sankardev tradition.

Majuli has 22 sattras, and the patent application states that the mask-making tradition is concentrated in four of them — Samaguri Sattra, Natun Samaguri Sattra, Bihimpur Sattra, Alengi Narasimha Sattra.

Hemchandra Goswami, *sattradhikar* or the administrative head of the Samaguri Sattra and a well-known practitioner of the art, said that while the masks were traditionally made only for *bhaonas*, over the past couple of decades, the Samaguri sattra has been trying to promote mask-making as an art form in its own right.

Majuli painting

It is a form of painting, also originating in the 16th century, done on *sanchi pat*, or manuscripts made of the bark of the sanchi or agar tree, using homemade ink. This art was patronised by Ahom kings.

The masks are used in *bhaonas*, or theatrical performances with devotional messages. *Express*

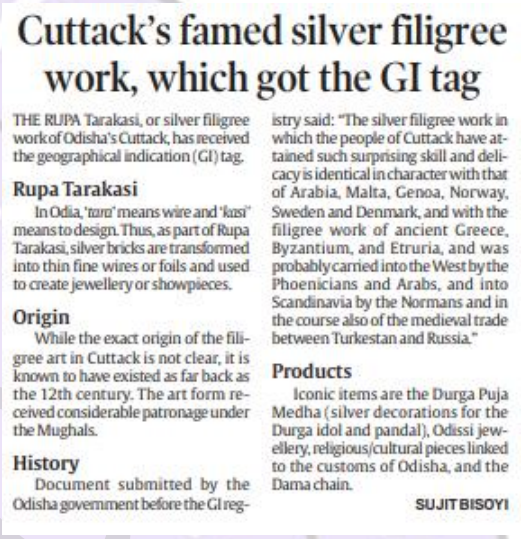
- **Why in News:**The traditional Majuli masks in Assam were given a Geographical Indication (GI) tag by the Centre. Majuli manuscript painting also got the GI label.
- **About Majuli Masks**
  - **Majuli, the largest river island in the world** and the seat of Assam's neo-Vaishnavite tradition, has been home to the art of mask-making since the 16th century.
  - Today, many of its traditional practitioners are working to take the art out of their traditional place in sattras, or monasteries, and give them a new, contemporary life.
  - The handmade masks are traditionally used to depict characters in bhaonas, or theatrical performances with devotional messages under the neo-Vaishnavite tradition, introduced by the 15th-16th century reformer saint Srimanta Sankardeva.
  - **The masks can depict gods, goddesses, demons, animals and birds** — Ravana, Garuda, Narasimha, Hanuman, Varaha Surpanakha all feature among the masks.
  - They can range in size from those covering just the face (mukh mukha),

which take around five days to make, to those covering the whole head and body of the performer (cho mukha), which can take up to one-and-a-half months to make.

8. Rupa Tarakasi

GS 1 (Art and Culture)

- **Why in News:** Rupa Tarakasi, the silver filigree work of Cuttack in Odisha. This handicraft has recently received the geographical indication (GI) tag.
- **More on news:**
  - Tarakasi is one of Odisha's most stunning handicrafts. The **word "tara" in Odia means wire, while "kasi" means design.**
  - This handicraft **involves cutting silver bricks into thin wires or foils to create jewellery and showpieces.**
  - Tarakasi ornaments are perfect for any occasion, but the wide range of artefacts available, including floral and animal shapes, boxes and containers, tiny boats, and figurines, can also be used for interior decoration or as gifts.
  - The delicate silver wires are beaten and shaped into various objects, from jewellery and ornaments to intricate items such as peacocks, boxes, and even the Sun deity riding his chariot pulled by seven horses.
  - Tarakasi craftsmen have even decorated idols of the goddess Durga with their exquisite workmanship.



Cuttack's famed silver filigree work, which got the GI tag

THE RUPA Tarakasi, or silver filigree work of Odisha's Cuttack, has received the geographical indication (GI) tag.

Rupa Tarakasi

In Odia, 'tara' means wire and 'kasi' means to design. Thus, as part of Rupa Tarakasi, silver bricks are transformed into thin fine wires or foils and used to create jewellery or showpieces.

Origin

While the exact origin of the filigree art in Cuttack is not clear, it is known to have existed as far back as the 12th century. The art form received considerable patronage under the Mughals.

History

Document submitted by the Odisha government before the GI registry said: "The silver filigree work in which the people of Cuttack have attained such surprising skill and delicacy is identical in character with that of Arabia, Malta, Genoa, Norway, Sweden and Denmark, and with the filigree work of ancient Greece, Byzantium, and Etruria, and was probably carried into the West by the Phoenicians and Arabs, and into Scandinavia by the Normans and in the course also of the medieval trade between Turkestan and Russia."

Products

Iconic items are the Durga Puja Medha (silver decorations for the Durga idol and pandal), Odissi jewellery, religious/cultural pieces linked to the customs of Odisha, and the Dama chain.

SUJIT BISOYI

9. Sabarmati Ashram

GS 1 (Modern History)

- **Why in News:** PM Modi launched the redevelopment of Sabarmati Ashram.
- **About the Ashram**
  - The Sabarmati Ashram (also known as Harijan Ashram) was home to Mohandas Gandhi and Kasturba from 1917 until 1930.
  - It served as one of the main centres of the Indian freedom struggle.
  - Originally called the Satyagraha Ashram, reflecting the movement toward passive resistance launched by the Mahatma, the Ashram became home to the ideology that set India free.
  - Sabarmati Ashram named for the river on which it sits, was created with a dual mission.
  - On the 12 March 1930, Gandhi launched the famous Dandi march 241 miles from the Ashram in protest of the British Salt Law.

In Sabarmati Ashram redevelopment plan, stress on Gandhian ethos

LEENA MISRA
AHMEDABAD, MARCH 12

ON TUESDAY, the 94th anniversary of the Dandi March that began from the Sabarmati Ashram, Prime Minister Narendra Modi performed Ashram Bhoomi Vandana, a symbolic laying of the foundation stone, and unveiled the masterplan of the Rs 1,200-crore Gandhi Ashram Memorial and Precinct Development Project. Modi also inaugurated the redeveloped Kocharab ashram in Ahmedabad.

Masterplan

The masterplan, prepared by Ahmedabad-based Bimal Patel's HCP Design, Planning, and Management Pvt Ltd, aims to restore, conserve, and rebuild about half of the 63 structures in the original ashram that was spread over 120 acres by the Sabarmati river on Ahmedabad's outskirts.

Sabarmati Ashram as it exists today covers only 5 acres, and is managed by the Sabarmati Ashram Preservation and Memorial Trust (SAPMT). The new memorial will be spread over 55 acres, and the entire precincts will cover 322 acres.

According to the masterplan, 20 buildings will be conserved — including Hriday Kunj, where Gandhi and Kasturba lived, the Gandhi Memorial Museum designed by Charles Correa that opened in 1963, Vinoba-Mira Kutir, where Vinoba Bhave stayed, and the Juna Rasodu (Old Kitchen). Thirteen buildings, including two gaushalas, Sardar Vallabhbhai Patel's office, and Dus Ordi (Ten Rooms), will be restored, and three buildings are proposed to be rebuilt.

Importance of Gandhi Ashram

Gandhi set up two settlements in South Africa, where he lived from 1893 to 1914, and three in India, where he arrived in January 1915. The settlements were "places of continuous experiment and search", Neelkanth Chhaya, a former professor at CEPT University, wrote in the book Gandhi's Places: An Architectural Documentation.

Gandhi set up the first ashram in Ahmedabad in Kocharab in 1915. It was an "already built space, rented for use by the ashram and was therefore not according to Gandhi's own ideas of how such a place should be designed and built", Chhaya wrote. Thus, in 1917, he founded the Sabarmati Ashram. The Sabarmati Ashram is seen as the most important in Gandhi's life and work. It was a space that Gandhi designed himself, and built using local material. He spent the most time here.

PM Narendra Modi at the Sabarmati Ashram on Tuesday. PTI

Apart from the Dandi March, he also launched the Champaran Satyagraha (1917), the Ahmedabad mills strike and Kheda Satyagraha (1918), the Khadi movement (1918), the Rowlatt Act and Khilafat Movements (1919), and the Non-Cooperation movement (1920) while living here.

Redevelopment project

The redevelopment and restoration plan is based on a 1949 satellite image of the ashram, and a 200-page concept note prepared by the SAPMT based on the ashram's documented accounts, brochures, and "a study of the visitors' books of the last ten years to understand what people want from this space", a source associated with the project said.

The ashram has been maintaining a visitors' book since 1963 — eminent visitors include Queen Elizabeth (1961), the Dalai Lama (1984-85), South Africa's former President Nelson Mandela (1995), and former US President Bill Clinton (2001).

According to the masterplan, the redeveloped memorial and precincts will have a new orientation centre, a scholars' residency, a parking area, a water harvesting pond, souvenir shops, two exhibition areas, a cafeteria, a workshop area, and a grand entrance plaza.

The existing buildings will tell the story of the ashram, host exhibitions and galleries on Gandhi's works in India and abroad, describe his movements and yatras, and have information about his daily routine, important events of his life, and his engagement with children and the youth. There will also be a feature on the "principal ashramites" from 1917 to 1951, and a gallery of women leaders. One of the buildings will house charkhas and khadi production centres.

EXPLAINED HERITAGE

At least 265 of the 283 residents of the ashram premises, called ashramvasis, have been evacuated and compensated for the project.

Ashram Road, one of Ahmedabad's oldest commercial arteries, will be closed from where the Gandhi Ashram begins in order to consolidate the areas that are now on the two sides of the road into one contiguous space. This is likely to happen in phases beginning March 12, and an alternative road will be opened to commuters.

Maintaining ethos, simplicity

When the project was announced in 2021, concerns were raised that it would turn the Ashram into a "Gandhi theme park". The Gujarat government had assured the Ashram trustees at the time that there would be no "sarkarikaran" (governmentalisation) of the Ashram.

The SAPMT's concept note, prepared in consultation with other Gandhian institutions, emphasised that simplicity, one of the values that Gandhi practised and cherished, should be maintained, and that no fees should be charged either from visitors, or from resident research scholars. The note also said that "no red carpet" should be laid out for VVIP visitors to the Ashram, a source said.

The Gujarat government has said that "utmost care will be taken to retain [the Ashram's] timeless essence while refashioning it with a new outlook, keeping in mind the sacrosanct goal of abiding by the Ashram's original architectural simplicity and essence." The rejuvenation project would be taken forward with "utmost sensitivity and respect to the fact that the Ashram's existence goes beyond the idea of mere physical space", it has said.

10. Public Health Foundation of India surpasses Harvard

Recent events of importance

- **Why in News:** In the first global rankings for schools of public health, the Public Health Foundation of India (PHFI) has secured an impressive second place, surpassing Harvard.
- **Significance of Public Health in today's times**
  - **Development & security:** Public health is pivotal to national development and global security. The ranking reflect the increasing importance of public health research in non-high-income countries.
  - **Contributes to economic and social development:** Public health is important today because it addresses the health challenges and opportunities that affect the well-being of people and societies.
  - **Empowerment:** Not only it responds to emerging and global health

GLOBAL RANKINGS FOR SCHOOLS OF PUBLIC HEALTH

Public Health Foundation of India is ranked No 2 on global list

ANURADHA MASCARENHAS
PUNE, MARCH 12

IN THE first global rankings for schools of public health, the Public Health Foundation of India (PHFI) has secured an impressive second place, surpassing Harvard.

The leading five institutions in the list include the London School of Hygiene and Tropical Medicine, the Public Health Foundation of India (PHFI), Harvard T.H. Chan School of Public Health, the Swiss School of Public Health (SSPH+) and the Johns Hopkins Bloomberg School of Public Health.

The rankings are part of a report titled 'A New Model for Ranking Schools of Public Health: The Public Health Academic Ranking' published in the International Journal of Public Health.

"As there is no ranking designed for schools of public health, this project aimed to create one. To our knowledge, the PHAR is the first international bibliometric university ranking system designed for academic public health," lead author Adeline Dugerdil, Margaret Chan (who has served two terms as director-general of World Health Organization) and others said.

The project was funded by the Institute of Global Health, University of Geneva. The authors of the report said that given the importance of public health, the common use of rankings in the academic world, and the demand for a valid ranking system, a ranking for schools of public health was designed and tested.

"Although two of the top five schools were from the US, the top 10 included institutions from four continents. The presence of schools from India, Thailand, South Africa and Singapore is notable and may reflect the increasing importance of public health research in non-high-income countries," the report said.

Professor K Srinath Reddy, honorary distinguished professor and goodwill ambassador of PHFI for public health partnerships, told *The Indian Express* that this recognition was gratifying.

"Public health is pivotal to national development and global security. PHFI has established six institutes in different regions of India to promote multidisciplinary education and research which can inform and assist multi-sectoral policies and programmes for protecting people's health. It has aimed to be locally relevant, nationally impactful, and globally respected. This recognition is gratifying since it shows we have been on the right path. It is yet another vindication of the respect the world has for Indian science," Reddy said.

Reddy is a former president of PHFI and headed the Department of Cardiology at All India Institute of Medical Sciences.

"It is interesting that this school (Public Health Foundation of India) ranks exceptionally well not because of the 'productivity' criterion (as might have been felt given the network bringing together numerous schools in the same country) but thanks to the 'quality' criterion, which are all at the maximum," the report states.

Dr Vikram Patel, Chair, Department of Global Health and Social Medicine, Harvard Medical School, told *The Indian Express* that this was a proud day for Indian science. "Rarely has any Indian institution been ranked so high globally. This feat is even more remarkable considering that PHFI was stripped of its FCRA licence in 2017."

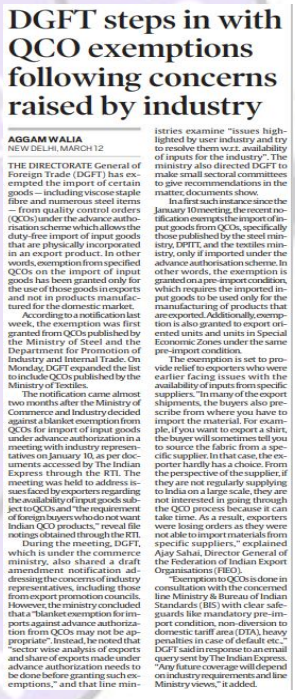
threats, it empowers individuals and communities.

- **Role of Public Health Foundation of India (PHFI)**
  - **Protecting the system:** PHFI has established six institutes in different regions of India to promote multidisciplinary education and research which can inform and assist multi-sectoral policies and programmes for protecting people's health.
  - **Treating relevancy:** It has aimed to be locally relevant, nationally impactful, and globally respected.
  - **More focus on quality:** PHFI has ranked exceptionally well not because of the 'productivity' criterion but thanks to the 'quality' criterion, which are all at the maximum.
- **The Report**
  - Report title: The ranking was part of a report 'A New Model for Ranking Schools of Public Health: The Public Health Academic Ranking'.
  - The leading five institutions in the list include the London School of Hygiene and Tropical Medicine, the Public Health Foundation of India (PHFI), Harvard T.H. Chan School of Public Health, the Swiss School of Public Health (SSPH+) and the Johns Hopkins Bloomberg School of Public Health.

11. Directorate General of Foreign Trade

GS 3 (Economy)

- **Why in News:**The Directorate General of Foreign Trade (DGFT) has granted an exemption to the import of certain goods from quality control orders (QCOs) under the advance authorisation scheme.



DGFT steps in with QCO exemptions following concerns raised by industry

ANGAM WALIA
NEW DELHI, MARCH 12

THE DIRECTORATE General of Foreign Trade (DGFT) has exempted the import of certain goods — including viscose staple fibre and numerous steel items — from quality control orders (QCOs) under the advance authorisation scheme which allows the duty-free import of input goods that are physically incorporated in an export product. In other words, exemption from specified QCOs on the import of input goods has been granted only for the use of those goods in exports and not in products manufactured for the domestic market.

According to a notification last week, the exemption was first granted from QCOs published by the Ministry of Steel and the Department for Promotion of Industry and Internal Trade. On Monday, DGFT expanded the list to include QCOs published by the Ministry of Textiles.

The notification came almost two months after the Ministry of Commerce and Industry decided against a blanket exemption from QCOs for import of input goods under advance authorization in a meeting with industry representatives on January 10, as per documents accessed by The Indian Express through the RTI. The meeting was held to address issues faced by exporters regarding the availability of input goods subject to QCOs and "the requirement of foreign buyers who do not want Indian QCO products," reveal file notings obtained through the RTI.

During the meeting, DGFT, which is under the commerce ministry, also shared a draft amendment notification addressing the concerns of industry representatives, including those from export promotion councils. However, the ministry concluded that a "blanket exemption for imports against advance authorization from QCOs may not be appropriate". Instead, he noted that "sector wise analysis of exports and share of exports made under advance authorization needs to be done before granting such exemptions," and that line ministries examine "issues highlighted by user industry and try to resolve them w.r.t. availability of inputs for the industry". The ministry also directed DGFT to make small sectoral committees to give recommendations in the matter, documents show.

In a first such instance since the January 10 meeting, the recent notification exempts the import of input goods from QCOs, specifically those published by the steel ministry, DPITT, and the textiles ministry, only if imported under the advance authorisation scheme. In other words, the exemption is granted on a pre-import condition, which requires the imported input goods to be used only for the manufacturing of products that are exported. Additionally, exemption is also granted to export oriented units and units in Special Economic Zones under the same pre-import condition.

The exemption is set to provide relief to exporters who were earlier facing issues with the availability of inputs from specific suppliers. "In many of the export shipments, the buyers also prescribe from where you have to import the material. For example, if you want to export a shirt, the buyer will sometimes tell you to source the fabric from a specific supplier. In that case, the exporter hardly has a choice. From the perspective of the supplier, if they are not regularly supplying to India on a large scale, they are not interested in going through the QCO process because it can take time. As a result, exporters were losing orders as they were not able to import materials from specific suppliers," explained Ajay Sahai, Director General of the Federation of Indian Export Organisations (FIEO).

"Exemption to QCOs is done in consultation with the concerned line Ministry & Bureau of Indian Standards (BIS) with clear safeguards like mandatory pre-import condition, non-diversion to domestic tariff area (DTA), heavy penalties in case of default etc.," DGFT said in response to an email query sent by The Indian Express. "Any future coverage will depend on industry requirements and line Ministry views," it added.

- **About Directorate General of Foreign Trade:**
  - It is a government organization in India r**esponsible for the formulation of exim guidelines and principles for Indian importers and Indian exporters of the country.**
  - Before 1991, DGFT was known as the Chief Controller of Imports & Exports (CCI&E). It is an attached office of the Ministry of Commerce and Industry and is headed by Director General of Foreign Trade.
  - It has been assigned the role of "facilitator". It is responsible for implementing the Foreign Trade Policy or Exim Policy with the main objective of promoting Indian exports.
  - The DGFT also issues scrips/authorization to exporters and monitors their corresponding obligations through a network of 24 regional offices.
  - **Functions:**
    - To **implement the Exim Policy or Foreign Trade Policy of India** by introducing various schemes and guidelines through its network of dgft regional offices thought-out the country.
    - To **Grant Exporter Importer Code Number** to Indian Exporter and Importers. IEC Number is a unique 10 digit code required by the traders or manufacturers for the purpose of import and export in India.
    - It p**ermits or regulate Transit of Goods from India or to countries** adjacent to India in accordance with the bilateral treaties between India and other countries.
    - To p**romote trade with neighboring countries.**
    - To grant the p**ermission of free export in Export Policy Schedule 2.**
    - Setting standard input-output norms is also controlled by the DGFT.
    - **Headquarter:** New Delhi

12. Water Crisis in Bengaluru

Recent events of importance

- **Why in News:** India's third-most populous city is facing the worst potable water crisis in its nearly 500-year history.
- **Factors related to Water Crisis**
  - There are several factors contributing to the water problem in Bengaluru, such as insufficient precipitation, diminishing groundwater levels, poor planning of infrastructure, and the impact of water tanker operations.
  - The situation is further exacerbated by insufficient rainfall and the proliferation of unscientifically drilled borewells.

- The rapid de-notification of lands reserved for green cover, wetlands, urban forests and river courses is also one of the major factor.

- **Impact of urbanisation (unplanned)**
  - Only uncertain rains and changing climatic conditions cannot be blamed for the water crisis in Bengaluru, population explosion, unplanned urbanisation, unfriendly industrial and agricultural policies have also resulted in this problem.
  - Unplanned urbanisation leads to haphazard growth, altering the local ecology, hydrology and environment.
  - The consequences of unplanned urbanisation are enhanced pollution levels and a lack of adequate infrastructure and basic amenities.
  - This is evident in Bangalore with severe scarcity of water, frequent flooding, enhanced pollution levels, uncongenial buildings, mismanagement of solid and liquid wastes.

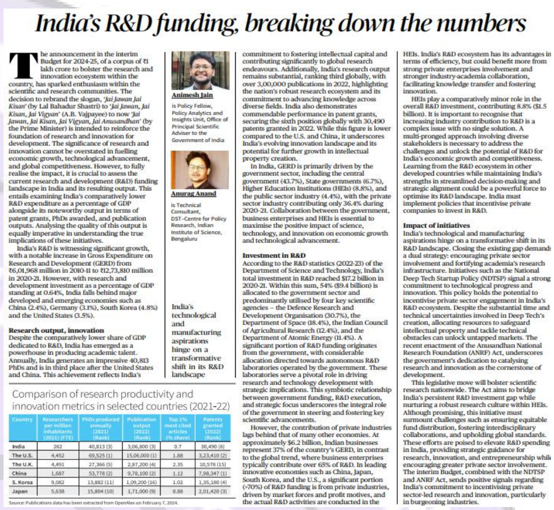
NEELOFER IAS SERVICE CLASSES *UPSC AND KPSC WITH KPSC* JAMMU AND KASHMIR DO NOT COPY

14th March, 2024

1. India's R&D funding, breaking down the numbers

GS 3 (Science and Tech)

- **Why in News:** The announcement in the interim Budget for 2024-25 of a substantial corpus aimed at enhancing the research and innovation ecosystem in India has generated optimism within the scientific and research communities. This move, coupled with the rebranding of the slogan 'Jai Jawan Jai Kisan' to 'Jai Jawan, Jai Kisan, Jai Vigyan, Jai Anusandhan' underscores the government's commitment to prioritize research and innovation for national development.



India's R&D funding, breaking down the numbers

The announcement in the interim Budget for 2024-25, of a corpus of ₹1 lakh crore to bolster the research and innovation ecosystem within the country, has sparked enthusiasm within the scientific and research communities. The decision to rebrand the slogan, 'Jai Jawan Jai Kisan' (by Lal Bahadur Shastri) to 'Jai Jawan, Jai Kisan, Jai Vigyan' (A.B. Vajpayee) to now 'Jai Jawan, Jai Kisan, Jai Vigyan, Jai Anusandhan' (by the Prime Minister) is intended to reinforce the foundation of research and innovation for development. The significance of research and innovation cannot be overstated in fuelling economic growth, technological advancement, and global competitiveness. However, to fully realise the impact, it is crucial to assess the current research and development (R&D) funding landscape in India and its resulting output. This entails examining India's comparatively lower R&D expenditure as a percentage of GDP alongside its noteworthy output in terms of patent grants, PhDs awarded, and publication outputs. Analysing the quality of this output is equally imperative in understanding the true implications of these initiatives.

India's R&D is witnessing significant growth, with a notable increase in Gross Expenditure on Research and Development (GERD) from ₹6,01,968 million in 2010-11 to ₹12,73,810 million in 2020-21. However, with research and development investment as a percentage of GDP standing at 0.64%, India falls behind major developed and emerging economies such as China (2.4%), Germany (3.1%), South Korea (4.8%) and the United States (3.5%).

Research output, innovation

Despite the comparatively lower share of GDP dedicated to R&D, India has emerged as a powerhouse in producing academic talent. Annually, India generates an impressive 40,813 PhDs and is in third place after the United States and China. This achievement reflects India's commitment to fostering intellectual capital and contributing significantly to global research endeavours. Additionally, India's research output remains substantial, ranking third globally, with over 3,00,000 publications in 2022, highlighting the nation's robust research ecosystem and its commitment to advancing knowledge across diverse fields. India also demonstrates commendable performance in patent grants, securing the sixth position globally with 30,490 patents granted in 2022. While this figure is lower compared to the U.S. and China, it underscores India's evolving innovation landscape and its potential for further growth in intellectual property creation.

In India, GERD is primarily driven by the government sector, including the central government (43.7%), State governments (6.7%), Higher Education Institutions (HEIs) (8.8%), and the public sector industry (4.4%), with the private sector industry contributing only 36.4% during 2020-21. Collaboration between the government, business enterprises and HEIs is essential to maximise the positive impact of science, technology, and innovation on economic growth and technological advancement.

Investment in R&D

According to the R&D statistics (2022-23) of the Department of Science and Technology, India's total investment in R&D reached $17.2 billion in 2020-21. Within this sum, 54% ($9.4 billion) is allocated to the government sector and predominantly utilised by four key scientific agencies – the Defence Research and Development Organisation (30.7%), the Department of Space (18.4%), the Indian Council of Agricultural Research (12.4%), and the Department of Atomic Energy (11.4%). A significant portion of R&D funding originates from the government, with considerable allocation directed towards autonomous R&D laboratories operated by the government. These laboratories serve a pivotal role in driving research and technology development with strategic implications. This symbiotic relationship between government funding, R&D execution, and strategic focus underscores the integral role of the government in steering and fostering key scientific advancements.

However, the contribution of private industries lags behind that of many other economies. At approximately $6.2 billion, Indian businesses represent 37% of the country's GERD, in contrast to the global trend, where business enterprises typically contribute over 65% of R&D. In leading innovative economies such as China, Japan, South Korea, and the U.S., a significant portion (>70%) of R&D funding is from private industries, driven by market forces and profit motives, and the actual R&D activities are conducted in the HEIs. India's R&D ecosystem has its advantages in terms of efficiency, but could benefit more from strong private enterprises involvement and stronger industry-academia collaboration, facilitating knowledge transfer and fostering innovation.

HEIs play a comparatively minor role in the overall R&D investment, contributing 8.8% ($1.5 billion). It is important to recognise that increasing industry contribution to R&D is a complex issue with no single solution. A multi-pronged approach involving diverse stakeholders is necessary to address the challenges and unlock the potential of R&D for India's economic growth and competitiveness. Learning from the R&D ecosystem in other developed countries while maintaining India's strengths in streamlined decision-making and strategic alignment could be a powerful force to optimise its R&D landscape. India must implement policies that incentivise private companies to invest in R&D.

Impact of initiatives

India's technological and manufacturing aspirations hinge on a transformative shift in its R&D landscape. Closing the existing gap demands a dual strategy: encouraging private sector involvement and fortifying academia's research infrastructure. Initiatives such as the National Deep Tech Startup Policy (NDTSP) signal a strong commitment to technological progress and innovation. This policy holds the potential to incentivise private sector engagement in India's R&D ecosystem. Despite the substantial time and technical uncertainties involved in Deep Tech's creation, allocating resources to safeguard intellectual property and tackle technical obstacles can unlock untapped markets. The recent enactment of the Anusandhan National Research Foundation (ANRF) Act, underscores the government's dedication to catalysing research and innovation as the cornerstone of development.

This legislative move will bolster scientific research nationwide. The Act aims to bridge India's persistent R&D investment gap while nurturing a robust research culture within HEIs. Although promising, this initiative must surmount challenges such as ensuring equitable fund distribution, fostering interdisciplinary collaborations, and upholding global standards. These efforts are poised to elevate R&D spending in India, providing strategic guidance for research, innovation, and entrepreneurship while encouraging greater private sector involvement. The interim Budget, combined with the NDTSP and ANRF Act, sends positive signals regarding India's commitment to incentivising private sector-led research and innovation, particularly in burgeoning industries.

Animesh Jain is Policy Fellow, Policy Analytics and Insights Unit, Office of Principal Scientific Adviser to the Government of India

Anurag Anand is Technical Consultant, DST-Centre for Policy Research, Indian Institute of Science, Bengaluru

India's technological and manufacturing aspirations hinge on a transformative shift in its R&D landscape

Comparison of research productivity and innovation metrics in selected countries (2021-22)

Country	Researchers per million inhabitants (2021) (FTE)	PhDs produced annually (2021) (Rank)	Publication output (2022) (Rank)	Top 1% most cited articles (% share)	Patents granted (2022) (Rank)
India	262	40,813 (3)	3,06,800 (3)	0.7	30,490 (6)
The U.S.	4,452	69,525 (1)	15,06,000 (1)	1.88	3,23,410 (2)
The U.K.	4,491	27,366 (5)	2,87,200 (4)	2.35	10,578 (15)
China	1,687	53,778 (2)	9,78,100 (2)	1.12	7,98,347 (1)
S. Korea	9,082	13,882 (11)	1,09,200 (16)	1.02	1,35,180 (4)
Japan	5,638	15,804 (10)	1,71,000 (9)	0.88	2,01,420 (3)

Source: Publications data has been extracted from OpenAlex on February 7, 2024.

- **Investment in R&D:**
  - **Increase in GERD:** India has witnessed a notable increase in Gross Expenditure on Research and Development (GERD) over the past decade, reaching Rs 12,73,810 million in 2020-21.
  - **Low:** However, despite this growth, India's R&D expenditure as a percentage of GDP remains relatively low compared to major economies like China, Germany, and the United States.
  - The bulk of India's R&D investment originates from the government sector, with significant allocations directed towards key scientific agencies such as the Defence Research and Development Organisation (DRDO) and the Department of Space.
  - **Significant output:** Despite India's lower R&D expenditure as a percentage of GDP, the country has emerged as a significant producer of academic talent and research output.
  - **Higher rank:** Annually, India produces a substantial number of PhDs, ranking third globally after the United States and China.
  - **Good performance:** Additionally, India demonstrates commendable performance in terms of research publications and patent grants, highlighting its robust research ecosystem and potential for further growth in innovation and intellectual property creation.

2. On judges and bureaucrats joining politics

GS 2 (Governance)

- **Why in News:** Recently a Calcutta High Court judge and a senior IPS officer in West Bengal resigned from their posts and joined political parties. This has brought up concerns about whether it's right for constitutional authorities and government officials to join political parties after they leave their jobs.

On judges and bureaucrats joining politics

What are the restrictions on judges and senior government officials with respect to their employment when it comes to other posts within the government or in the private sphere? Can a former judge join a political party and contest elections?

EXPLAINER

Rangarajan. R

The story so far:

Recently a Calcutta High Court judge and a senior IPS officer in West Bengal resigned from their posts and joined political parties. This has once again raised questions of propriety about independent constitutional authorities and other senior government officials joining political parties after demitting office.

What are constitutional restrictions?

The Constitution works on the principle of checks and balance between various organs. The executive is accountable to the legislature. An independent judiciary keeps a check on both these branches of the State. There are also other independent bodies like the Election Commission, Public Service Commission, Comptroller and Auditor General (CAG) who are required to perform their constitutional duties without any interference from the government. The independence of these institutions is ensured through guaranteeing fixed tenure, financial independence, stringent removal procedure and restrictions after demitting office. A judge of a Supreme Court after ceasing to hold office cannot appear as a lawyer before any court or authority in India. A judge of a High Court has similar restrictions except for appearance before the Supreme Court or other High Courts. The CAG and the chairman/members of the Public Service Commission cannot take up any other employment with Central or State governments after demitting office. These restrictions are laid down to avoid favouritism, during the period of holding such positions, towards the government in power with an intent of securing any post-retirement benefit.

What about political posts?

There are no restrictions when it comes to joining political parties, contesting elections or being nominated to certain posts. There are notable instances of persons who held independent constitutional posts and later went on to join politics or were nominated to various posts. There have been two Supreme Court judges in 1967 and 1983, who resigned from their posts to contest the presidential and parliamentary elections from Assam, respectively. Another Supreme Court judge joined a political party in Tamil Nadu and contested elections five years after his retirement in 1999. A former Chief Election Commissioner became a Rajya Sabha member and Minister in 2004, three years after his retirement. Recently, a retired Chief Justice of India was nominated to the Rajya Sabha in 2020 within four months of his retirement.

There have also been occasions where retired CAG and judges have been appointed as Governors of States. Numerous bureaucrats have also joined political parties and contested elections after resigning from service or soon after their retirement.

What are the recommendations?

The Election Commission had in 2012 recommended to the Union government to provide for a cooling-off period for top bureaucrats after their retirement before they could join political parties and contest elections. However, the Government had rejected this recommendation based on the opinion of the Attorney General that this may not be in line with constitutional provisions and democratic values. The Supreme Court had dismissed a writ petition in May 2022 that sought a direction from the top court to the legislature to frame a law imposing a cooling-off period for retired bureaucrats before joining politics. The court observed that it is for the legislature to determine whether a cooling-off period is required for bureaucrats before they join politics after retirement.

Is a cooling-off period desirable?

One of the essential features of a democracy is every citizen's right to contest elections. The Attorney General while providing his opinion against the 2012 recommendation of Election Commission had said that maintenance of independence and neutrality will be relevant during the period a person is in service. There are rules at present which restrict a senior bureaucrat from joining a private job for at least one year after he or she retires from government service. The Attorney General had opined that such restriction for commercial employment is based on intelligible differentia to avoid conflicts of interest. However, such a restriction against officials contesting polls may not be a valid classification and would not be in harmony with democratic principles in the Constitution.

While the opinion of Attorney General is based on sound legal principle, it is equally imperative to remember the famous judicial quote that 'justice should not only be done but should also be seen to be done'. This applies equally to judges, independent constitutional authorities and senior bureaucrats. It is an indispensable trait while discharging their official functions. Extending this principle even after they demit office will have a salutary effect. This may be achieved by prescribing a cooling-off period of say at least two years for joining political parties or being nominated to political posts by the government. This will instil confidence in the public at large and negate any allegation of quid pro quo.

Rangarajan. R is a former IAS officer and author of 'Polity Simplified'. He trains civil-service aspirants at 'Officers IAS Academy'. Views expressed are personal.

Necessary safeguards: Former Calcutta High Court judge Justice Abhijit Gangopadhyay joins the Bharatiya Janata Party (BJP) in Kolkata on March 7. ANI

THE GIST

A judge of a Supreme Court after ceasing to hold office cannot appear as a lawyer before any court or authority in India. The CAG and the chairman/members of the Public Service Commission cannot take up any other employment with Central or State governments after demitting office.

There are no restrictions when it comes to joining political parties, contesting elections or being nominated to certain posts.

The Election Commission had in 2012 recommended to the Union government to provide for a cooling-off period for top bureaucrats after their retirement before they could join political parties and contest elections.

- **Constitutional restrictions**
  - The Constitution works on the principle of checks and balance between various organs. The executive is accountable to the legislature.
  - An independent judiciary keeps a check on both these branches of the State.
  - There are also other independent bodies like the Election Commission, Public Service Commission, CAG who are required to perform their constitutional duties without any interference from the government.
  - The independence of these institutions is ensured through guaranteeing fixed tenure, financial independence, stringent removal procedure and restrictions after demitting office.
- **Existing constitutional restrictions**
  - A judge of a Supreme Court after ceasing to hold office cannot appear as a lawyer before any court or authority in India.
  - A judge of a High Court has similar restrictions except for appearance before the Supreme Court or other High Courts.

- The CAG and the chairman/members of the Public Service Commission cannot take up any other employment with Central or State governments after demitting office.
- These restrictions are laid down to avoid favouritism, during the period of holding such positions, towards the government in power with an intent of securing any post-retirement benefit.

- **Restrictions on gaining political posts**
  - No such restrictions
  - There are no restrictions when it comes to joining political parties, contesting elections or being nominated to certain posts.
  - There are notable instances of persons who held independent constitutional posts and later went on to join politics or were nominated to various posts.
  - **Examples**
    - There have been two Supreme Court judges in 1967 and 1983, who resigned from their posts to contest the presidential and parliamentary elections from Assam, respectively.
    - Another Supreme Court judge joined a political party in Tamil Nadu and contested elections five years after his retirement in 1999.
    - A former Chief Election Commissioner became a Rajya Sabha member and Minister in 2004, three years after his retirement.
    - Recently, a retired Chief Justice of India was nominated to the Rajya Sabha in 2020 within four months of his retirement.
    - There have also been occasions where retired CAG and judges have been appointed as Governors of States.
  - Numerous bureaucrats have also joined political parties and contested elections after resigning from service or soon after their retirement.
- **Various recommendations and cooling off period**
  - The Election Commission (EC) had in 2012 recommended to the Union government to provide for a cooling-off period for top bureaucrats after their retirement before they could join political parties and contest elections.
  - However, the Government had rejected this recommendation based on the opinion of the Attorney General that this may not be in line with constitutional provisions and democratic values.
  - The Supreme Court had dismissed a writ petition in May 2022 that sought a direction from the top court to the legislature to frame a law imposing a cooling-off period for retired bureaucrats before joining politics.
  - The court observed that it is for the legislature to determine whether a cooling-off period is required for bureaucrats before they join politics after retirement.
- **Arguments against the colling off period**
  - One of the essential features of a democracy is every citizen's right to contest elections.
  - The Attorney General while providing his opinion against the 2012 recommendation of EC had said that maintenance of independence and neutrality will be relevant during the period a person is in service.
  - There are rules at present which restrict a senior bureaucrat from joining a private job for at least one year after he or she retires from government service.
  - Such restriction for commercial employment is based on intelligible differentia to avoid conflicts of interest.
  - However, such a restriction against officials contesting polls may not be a valid classification and would not be in harmony with democratic principles in the Constitution.
- **Conclusion**
  - Justice should not only be done but should also be seen to be done. This applies equally to judges, independent constitutional authorities and senior bureaucrats. Extending this principle even after they demit office will have a salutary effect. This may be achieved by prescribing a cooling-off period for joining political parties or being nominated to political posts by the government. This will instil confidence in the public at large and negate any allegation of quid pro quo.

3. How did Indians End Up in the Russia-Ukraine War

GS 2 (International Relations)

- **Why in News:**
  - The deaths of two Indian nationals in the ongoing Russia-Ukraine war illustrate the plight of dozens of Indians trapped on the front lines after being duped into working with the Russian military.
  - Also, recent CBI raids found a human trafficking network

How did Indians end up in the Russia-Ukraine war?

What did the CBI uncover with respect to the illegal recruitment of Indian youth to the Russian military?

Sumedha

The story so far:

The deaths of two Indian nationals in the ongoing Russia-Ukraine war and the recent raids by the Central Bureau of Investigation (CBI) which uncovered a human trafficking network recruiting Indians as "security helpers" and other personnel for the Russian military have sparked widespread concern. This has highlighted the plight of dozens of Indians stuck on the frontlines of the Russia-Ukraine war after they were deceived into working with the Russian military under false pretences.

What happened?

The presence of Indians in combat roles on the Russian side, first surfaced in February this year. In a series of reports, *The Hindu* brought attention to the situation, stating that some Indian nationals, initially hired as "army security helpers," were compelled to fight against their will after their passports and documents were seized.

One of the men, a resident of Uttar Pradesh, told the daily that he went to Russia with the help of an agent in November last year after he was assured that there would be no deployment in the war zone. However, he was sent to the frontline in January after some basic training in handling weapons. "We were categorically told that we would not be sent to the battlefield and promised ₹1.95 lakh salary and ₹50,000 additional bonus per month. Except for the ₹50,000 bonus for two months, I have not received any money," he said. The U.P. resident claimed that he tried to contact the Indian Embassy in Moscow but all his pleas went in vain. In the subsequent days, more Indian citizens and their families came forward to seek the government's intervention. A group of seven Indians from Punjab and Haryana released a set of videos, claiming that they arrived in Russia on tourist visas but were forced to join the Russian Army as "helpers" after being detained.

An Indian-origin Russian official associated with the Russian Ministry of Defence told *The Hindu* that approximately 100 Indians were recruited at the Moscow recruitment centre in the past year. However, the actual number of Indians hired could be higher, since there are several recruitment centres across Russia. The official said all recruits had to sign a contract to join as "army security helpers." He added that the contract requires a minimum of one year of service and prohibits signees to leave or exit before six months of service.

How did the agents con people?

A multi-State human trafficking network busted by the CBI in a crackdown on visa recruiters in seven cities across India last week revealed how Indian youths were allegedly pushed into the war zone by consultancy firms on the pretext of a better life and livelihood with the Russian military as security guards and helpers, as well as higher education. So far, the probe agency has found 35 instances of people sent to Russia and listed at least 17 consultancy companies spread across India who were involved in the trafficking.

As per the CBI, the "organised network" lured Indian youth through social media and local agents, offering them highly paid jobs and lucrative employment opportunities in Russia. A number of students were reportedly tricked into enrolling in dubious private universities by agents promising low fees and visa extensions. Once the aspirants reached Russia, the local agents seized their passports and forced them to join the armed forces, the CBI said. At least two Indians with the Russian military have lost their lives in the fighting so far.

What has the government said?

The Indian government is in talks with the Russian authorities about the early release of Indian citizens who were duped into working with the Russian military. "We are doing our best to locate them. We are in touch with the Russian authorities so that they can be released and discharged early," MEA spokesperson Randhir Jaiswal said at a regular media briefing last week. "We remain committed to the early release of our nationals serving as support staff with the Russian Army and their eventual return home," the spokesperson added. Noting the findings of the CBI raids, the MEA appealed to Indian nationals not to be "swayed" by offers made by agents for support jobs with the Russian Army.

THE GIST

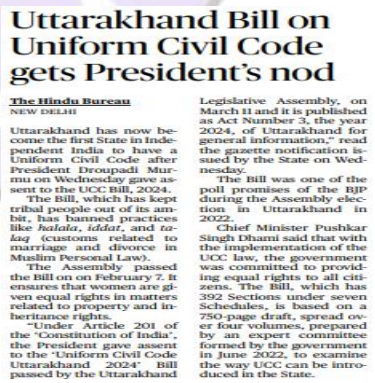
- The deaths of two Indian nationals in the ongoing Russia-Ukraine war and the recent raids by the Central Bureau of Investigation (CBI) which uncovered a human trafficking network recruiting Indians as "security helpers" and visa extensions. Once the aspirants reached Russia, the local agents seized their passports and forced them to join
- As per the CBI, the "organised network" lured Indian youth through social media and local agents, offering them paid jobs and lucrative employment opportunities in Russia.
- The Indian government is in talks with the Russian authorities about the early release of Indian citizens who were duped into working with the Russian military.

recruiting Indians as security helpers and other personnels for the Russian military, have sparked widespread concern.

- **What Happened with Indians in Russia?**
  - A series of reports brought attention to the situation that some Indian nationals, initially hired as army security helpers, were compelled to fight against their will after their passports and documents were seized.
  - According to a resident of Uttar Pradesh, he went to Russia with the help of an agent in November last year.
  - They were assured that they would not be sent to the battlefield and offered a monthly pay of ₹1.95 lakh with an additional ₹50,000 incentive.
  - However, they were sent to the frontline in January (2024) after some basic training in handling weapons.
  - An Indian-origin Russian official associated with the Russian Ministry of Defence told that approx. 100 Indians were recruited at the Moscow recruitment centre in the past year.
  - However, the actual number of Indians hired could be higher, since there are several recruitment centres across Russia.
- **How did the Agents Deceive People?**
  - A multi-State human trafficking network busted by the CBI in a crackdown on visa recruiters in seven cities across India revealed how Indian youths were allegedly pushed into the war zone by consultancy firms.
  - The Indian youths were duped on the pretext of a better life and livelihood with the Russian military as security guards and helpers, as well as higher education.
  - As per the CBI, the "organised network" lured Indian youth through social media and local agents, offering them highly paid jobs and lucrative employment opportunities in Russia.
  - A number of students were reportedly tricked into enrolling in dubious private universities by agents promising low fees and visa extensions.
  - Once the aspirants reached Russia, the local agents seized their passports and forced them to join the armed forces.
- **What has the Indian Government Said?**
  - The Ministry of External Affairs (MEA) has issued warnings (last month) to Indian citizens about the dangers of being recruited for support roles in the Russian army.
  - The Indian government is in talks with the Russian authorities about the early release of Indian citizens who were duped into working with the Russian military.
  - Noting the findings of the Central Bureau of Investigation (CBI) raids, the MEA appealed to Indian nationals not to be swayed by offers made by agents for support jobs with the Russian Army.

4. Uttarakhand UCC bill gets President nod

GS 2 (Governance)



Uttarakhand Bill on Uniform Civil Code gets President's nod

The Hindu Bureau
NEW DELHI

Uttarakhand has now become the first State in Independent India to have a Uniform Civil Code after President Droupadi Murmu on Wednesday gave assent to the UCC Bill, 2024.

The Bill, which has kept tribal people out of its ambit, has banned practices like *halala*, *iddat*, and *talaq* (customs related to marriage and divorce in Muslim Personal Law).

The Assembly passed the Bill on on February 7. It ensures that women are given equal rights in matters related to property and inheritance rights.

"Under Article 201 of the 'Constitution of India', the President gave assent to the 'Uniform Civil Code Uttarakhand 2024' Bill passed by the Uttarakhand Legislative Assembly, on March 11 and it is published as Act Number 3, the year 2024, of Uttarakhand for general information," read the gazette notification issued by the State on Wednesday.

The Bill was one of the poll promises of the BJP during the Assembly election in Uttarakhand in 2022.

Chief Minister Pushkar Singh Dhami said that with the implementation of the UCC law, the government was committed to providing equal rights to all citizens. The Bill, which has 392 Sections under seven Schedules, is based on a 750-page draft, spread over four volumes, prepared by an expert committee formed by the government in June 2022, to examine the way UCC can be introduced in the State.

- **Why in News:** The President gave her assent to the Uniform Civil Code, Uttarakhand 2024 under Article 201 of the Constitution of India.
- **More on News:**
- Uttarakhand is the first state in the country after Independence to adopt the UCC.
- The Bill, which has kept tribals out of its ambit, has a complete ban on practices like halala, iddat, and talaq (customs related to marriage and divorce in Muslim Personal Law).
- The UCC Bill also made it mandatory to register marriage and divorce, failing which the couple concerned will be deprived of the benefits of all government facilities.
- In case of divorce or domestic dispute between husband and wife, the custody of the child up to 5 years of age will remain with the mother.
- UCC will give equal rights to all citizens.

5. Pobitora Wildlife Sanctuary

GS 3 (Environment)

SC stops Assam govt. move to de-notify rhino habitat

The Forest Department issued the notification in 1998 without consulting the Cabinet or Revenue Department, says State; court says it won't stand in the way of protecting rights of forest dwellers

The Hindu Bureau
NEW DELHI

The Supreme Court on Wednesday froze the Assam government's move to withdraw an almost 26-year-old notification constituting the Pobitora wildlife sanctuary, which hosts one of the largest rhino populations in the country.

The Assam government had established a committee to redraw the boundary of the Pobitora Wildlife Sanctuary.

- **Why in News:**The Supreme Court froze the Assam government's move to withdraw a nearly 26-year-old notification constituting the Pobitora wildlife sanctuary, which hosts one of the largest rhino populations in the country. The Assam government had established a committee to redraw the boundary of the Pobitora Wildlife Sanctuary.
- **More on News:**

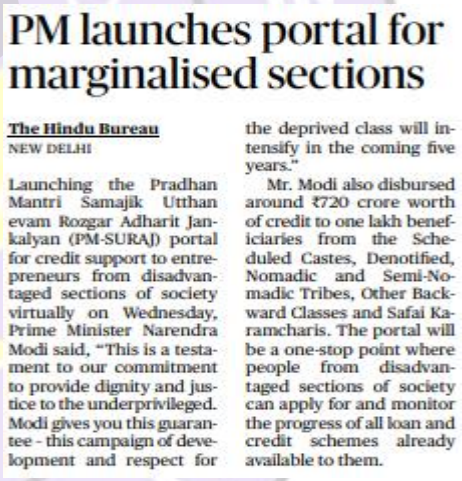
- Covering an area of 38.81 sq km, the Pobitora Wildlife Sanctuary was notified by the Assam forest department in March 1998.
- According to a census carried out in 2022, the sanctuary has a population of 107 rhinos, which is the highest density of the species in the world.

- **Rhinos**
  - There are **five species and 11 subspecies of rhino**. White, Black, Indian, Javan, and Sumatran make up the five species of rhino in the world.
  - White and black rhinoceros are native to Africa.
  - **Indian, Javan and Sumatran can be found in India and Asia.**
  - **Habitat:** The animal is primarily found in the Himalayan foothills — India and Nepal.
- **Conservation Status**
  - The IUCN lists the one-horned rhino, also known as the Indian rhinoceros, as vulnerable.
  - Rhinoceros are listed in **Schedule 1** of the Wildlife (Protection) Act, 1972, as endangered animals.
  - The Wildlife Protection Act, 1972 allows for destruction of wildlife parts (including rhino horn) under Section 39 (3).
  - There is an international ban on trade of rhino horns under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

6. PM-SURAJ Portal

GS 2 (Governance)

- **Why in News:**Prime Minister Narendra Modi inaugurated the 'Pradhan Mantri Samajik Utthan and Rozgar Adharit Jankalyan' (PM-SURAJ) national portal.
- **What is PM-SURAJ Portal?**
  - The PM-SURAJ portal s**ymbolizes the ministry's dedication to placing the underprivileged at the forefront of development initiatives.**
  - The PM-SURAJ national portal will **extend credit support to eligible individuals across the nation**, with assistance channelled through banks, NBFC-MFIs, and other relevant organisations.
  - PM-SURAJ will help in **providing financial assistance directly to beneficiaries**, eliminating middlemen and commissions.
  - Furthermore, Ayushman health cards and personal protective equipment (PPE) kits were distributed by the ministry to sewer and septic tank workers (Safai Mitras) under the National Action for Mechanized Sanitation Ecosystem (NAMASTE).



PM launches portal for marginalised sections

The Hindu Bureau
NEW DELHI

Launching the Pradhan Mantri Samajik Utthan evam Rozgar Adharit Jankalyan (PM-SURAJ) portal for credit support to entrepreneurs from disadvantaged sections of society virtually on Wednesday, Prime Minister Narendra Modi said, "This is a testament to our commitment to provide dignity and justice to the underprivileged. Modi gives you this guarantee - this campaign of development and respect for the deprived class will intensify in the coming five years."

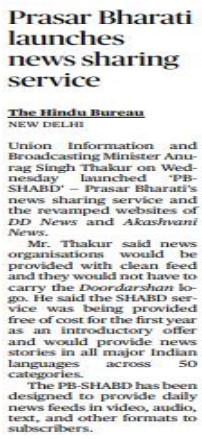
Mr. Modi also disbursed around ₹720 crore worth of credit to one lakh beneficiaries from the Scheduled Castes, Denotified, Nomadic and Semi-Nomadic Tribes, Other Backward Classes and Safai Karamcharis. The portal will be a one-stop point where people from disadvantaged sections of society can apply for and monitor the progress of all loan and credit schemes already available to them.

- **Ayushman health card**
  - The Ayushman health card is a **form of identification issued under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), a government-sponsored health insurance scheme in India.**
  - It provides beneficiaries with access to cashless and paperless healthcare services at empaneled hospitals.
  - The card contains essential information about the beneficiary, including their unique identification number and details of covered healthcare services.

7. PB-SHABD Platform

GS 2 (Governance)

- **Why in News:** Union Minister of Information and Broadcasting launched PB-SHABD, a news sharing service from Prasar Bharati.
- **About PB-SHABD:**
  - **Prasar Bharti - Shared Audio Visuals for Broadcast and Dissemination** (PB-SHABD) platform has been d**esigned to provide daily news feeds in video, audio, text, photo and other formats to the subscribers from media landscape.**
  - It is powered by the vast network of Prasar Bharati reporters, correspondents and stringers, the service would bring you the latest news from different parts of the country.
  - It will be a **single point source of news content for all organizations.** SHABD service is being offered free of cost for the first year as an introductory offer and will provide news stories in all major Indian languages across fifty categories.
  - The shared feeds can be used for customized storytelling across different platforms. As an



Prasar Bharati launches news sharing service

The Hindu Bureau
NEW DELHI

Union Information and Broadcasting Minister Anurag Singh Thakur on Wednesday launched 'PB-SHABD' — Prasar Bharati's news sharing service and the revamped websites of *DD News* and *Akashvani News*.

Mr. Thakur said news organisations would be provided with clean feed and they would not have to carry the *Doordarshan* logo. He said the SHABD service was being provided free of cost for the first year as an introductory offer and would provide news stories in all major Indian languages across 50 categories.

The PB-SHABD has been designed to provide daily news feeds in video, audio, text, and other formats to subscribers.

introductory offer, the services would be available free of cost and help the smaller newspapers, TV channels and digital portals immensely.

- **What is Prasar Bharti?**
  - It is the **Public Service Broadcaster** of the country.
  - It is a **statutory autonomous body** established in 1997 under the Prasar Bharati Act.
  - **Objective:** To conduct public broadcasting services intended to inform and entertain the public.
  - It comprises the **Doordarshan Television Network and All India Radio**, which were earlier media units of the Ministry of Information and Broadcasting.
  - **Headquarter:** New Delhi

8. Ease e-commerce for MSME exports

GS 3 (Economy)

'Ease e-commerce for MSME exports'

Govt. must simplify merchandise trade processes, establish a single national trade portal for approvals and compliances in order to help spur exports by smaller players, Niti Aayog and Foundation for Economic Development recommend in report

The Hindu Bureau
NEW DELHI

The government must make it easier for smaller firms to export their goods via e-commerce platforms, simplify merchandise trade processes and establish a single national trade portal for all approvals and compliances, the Niti Aayog recommended in a report on boosting exports from Micro, Small and Medium Enterprises (MSMEs).

While China exported $200 billion worth of goods through e-commerce in 2022, India exported only $2 billion, and a key reason for this gap is the cumbersome compliance process associated with exports, especially when it comes to payment reconciliation, which is particularly challenging for new or small exporters, the public policy think tank noted in the report.

Stressing that e-commerce resolves market access issues that are a significant obstacle hindering MSME exports, the Foundation for Economic Development, which authored the report, said it was essential to create a distinction between 'Exporter on Record' and 'Seller on Record', introduce annual financial reconciliation process for e-commerce exporters and exempt import duties on rejects that come back as returns.

'Unreliable' data

While MSMEs are said to account for 38.4% of India's manufacturing output and contribute 45% of exports, the report's authors reckoned that MSME export numbers were "almost certainly inflated" and needed to be more accurately measured. The current estimates were "likely unreliable" as they relied on an outdated list of reserved sectors for MSMEs, they wrote.

MSMEs can compete in export markets in sectors like handicrafts, handloom textiles, ayurveda and herbal supplements, leather goods, imitation jewellery and wooden products, which have global demand of more than $340 billion.

Unclog the pipe

Government must make it easier for smaller firms to export their goods through e-commerce platforms, moots Niti Aayog

- While China exported $200 billion of goods via e-commerce in 2022, India shipped only $2 billion
- Key reason for this gap is cumbersome compliance process tied to exports, especially for payment reconciliation
- Think tank moots exempting import duties on rejects that come back as returns

- **Why in News:** Niti Aayog has called for easing of access to export finance and a concerted push to boost e-commerce exports to realise the potential of the country's micro, small, and medium enterprises (MSMEs).
- **Significance of MSME**
  - The Micro, Small and Medium Enterprises (MSMEs) sector plays an important role in the growth of the Indian economy. The share of MSME Gross Value Added (GVA) in All India Gross Domestic Product (GDP) is around 30%.
  - In developing countries like India, where majority of the population resides in the rural areas, these MSMEs are crucial - socially and economically.
  - Because, these enterprises are wide dispersed across rural areas, they are extremely important for rural economic development.
  - Further, these enterprises play a key role as a place for entrepreneurship and business skill development, especially in rural areas due to their easy accessibility.
- **Issues faced by MSMEs (highlighted by NITI Aayog)**
  - **Constant obstacles:** The Aayog said small firms have encountered difficulties in tapping into export markets due to the inherent obstacles posed by economies of scale.
  - **Cumbersome compliance process:** It proves more challenging for small enterprises to enter foreign markets, adhere to compliance requirements, achieve cost-effective production, and efficiently manage logistics for clients.
  - Lack of access to finance is regularly seen as a key bottleneck for MSMEs.
  - India has not been able to tap into e-commerce to work around market access barriers, unlike China. In 2022, China's e-commerce exports by MSMEs were worth $200 billion, which is 100 times that of exports by Indian MSMEs.
- **Measures to catalyse a radical transformation of MSME**
  - **Seamless Process:** There is need of modifying the business environment to facilitate seamless exports through e-commerce platforms, coupled with addressing essential ease-of-doing-business factors.
  - **Green Channel:** As part of six key recommendations, Niti Aayog called for "green channel" clearances of MSME e-commerce exporters.
  - **Better access:** For better access to finance, there is need of promotion of Export Credit Guarantee can help improve working capital availability for MSMEs.
- **Schemes for MSMEs**
  - The Ministry of Micro, Small and Medium Enterprises implements various schemes for the growth and development of MSME sector and training and market assistance to MSMEs. The schemes/programmes inter alia include
    - Prime Minister's Employment Generation Programme (PMEGP)
    - Credit Guarantee Scheme for Micro and Small Enterprises (CGTMSE)
    - Micro and Small Enterprises-Cluster Development Programme (MSE-CDP)
    - Entrepreneurship Skill Development Programme (ESDP)
    - Procurement and Marketing Support Scheme (PMS)
    - National SC/ST Hub (NSSH)

9. World's first AI Law

GS 2 (International events of importance)

GLOBAL SIGNPOST FOR OTHER GOVTS GRAPPLING WITH HOW TO REGULATE FAST-DEVELOPING TECH.

European lawmakers give final approval to world's first AI law

ASSOCIATED PRESS
LONDON, MARCH 13

EUROPEAN UNION lawmakers gave final approval to the bloc's artificial intelligence law Wednesday, putting the world-leading rules on track to take effect later this year.

The European Parliament voted overwhelmingly in favor of the Artificial Intelligence Act, five years after they were first proposed. The AI Act is expected to act as a global signpost for other governments grappling with how to regulate the fast-developing tech.

"The AI Act has nudged the future of AI in a human-centric direction, in a direction where humans are in control of the technology and where it helps us leverage new discoveries, economic growth, societal progress and unlock human potential," said Dragos Tudorache, a Romanian lawmaker who was a co-leader of the Parliament negotiations.

Big tech companies generally have supported the need to regulate AI while lobbying to ensure any rules work in their favour. OpenAI CEO Sam Altman caused a minor stir last year when he suggested the ChatGPT maker could pull out of Europe if it can't comply with the AI Act — before backtracking to say there were no plans to leave.

Like many EU regulations, the AI Act was initially intended to act as consumer safety legislation, taking a "risk-based approach" to products or services that use AI.

The vast majority of AI systems are expected to be low risk, such as content recommendation systems or spam filters. Companies can choose to follow voluntary requirements and codes of conduct.

High-risk uses of AI, such as in medical devices or critical infrastructure like water or electrical networks, face requirements like using high-quality data and providing clear information to users.

Some AI uses are banned because they're deemed to pose an unacceptable risk, like social scoring systems that govern how people behave, some types of predictive policing and emotion recognition systems in school and workplaces. Other banned uses include police scanning faces in public using AI-powered remote "biometric identification" systems, except for serious crimes like kidnapping or terrorism.

The law's early drafts focused on AI systems carrying out narrowly limited tasks, like scanning resumes and job applications. The astonishing rise of general purpose AI models, exemplified by OpenAI's ChatGPT, sent EU policymakers scrambling to keep up. They added provisions for so-called generative AI models, the technology underpinning AI chatbot systems that can produce unique and seemingly life-like responses, images and more.

Developers of general purpose AI models — from European start-ups to OpenAI and Google — will have to provide a detailed summary of the text, pictures, video and other data on the internet that is used to train the systems, as well as follow EU copyright law.

AI-generated deepfake pictures, video or audio of existing people, places or events must be labeled as artificially manipulated. There's extra scrutiny for the biggest and most powerful AI models that pose "systemic risks," which include OpenAI's GPT4 — its most advanced system — and Google's Gemini.

Brussels first suggested AI regulations in 2019, taking a familiar global role in ratcheting up scrutiny of emerging industries, while other governments scramble to keep up. The Act is expected to officially become law by May or June, after a few final formalities.

THE RISKIER THE MORE SCRUTINISED

BANNED USES:
- Social scoring systems that govern how people behave.
- Predictive policing, emotion recognition systems in schools, workplaces.
- Police scanning faces in public using remote 'biometric identification' but with exceptions.

ON GENERATIVE PLATFORMS
- General purpose AI models will provide detailed summary of the media and data on the internet used.
- AI-generated deepfake pictures, video or audio of existing people, places or events must be labeled.

EXTRA SCRUTINY FOR MOST POWERFUL
- There's extra scrutiny for the biggest and most powerful AI models that pose 'systemic risks,' which include OpenAI's GPT4 — its most advanced system — and Google's Gemini.

- **Why in News:** European Union lawmakers gave final approval to a landmark law governing artificial intelligence (AI) to limit its use in businesses and organizations in Europe for everything from health care decisions to policing.
- **Need of AI Act**
  - The rapid rise in AIhas created many opportunities globally. However, these rapid changes also raise profound concerns.
  - Concerns related to AI: Privacy, Transparency, Accountability, Job Disruption, Safety, Inequality, Manipulation and Disinformation, Human Dignity and Autonomy, Cultural and Social Impact, Environmental Impact.
  - The AI Act can make AI trust worthy.
- **Objectives of the EU AI Act**
  - The Act is the w**orld's first major set of regulatory ground rules to govern the mediatized AI at the forefront of tech investment.**
  - The main idea of the law is to regulate AI based on its capacity to cause harm to society. The higher the risk, the stricter the rules.
  - The first-of-its-kind law **imposes blanket-bans** some "unacceptable" uses of the technology while enacting stiff guardrails for other applications deemed "high-risk."
  - **Areas of high-risk:** Critical infrastructure, education and vocational training, employment, essential services such as healthcare or banking, as well as law enforcement, migration and border management, justice, and democratic processes.
  - The EU AI Act outlaws social scoring systems powered by AI and any biometric-based tools used to guess a person's race, political leanings or sexual orientation.
  - It also bans the use of AI to interpret the emotions of people in schools and workplaces, as well as some types of automated profiling intended to predict a person's likelihood of committing future crimes.
  - The law further **outlines a separate category of 'high-risk' uses of AI,** particularly for education, hiring and access to government services, and imposes a separate set of transparency and other obligations on them.
  - It also **requires all AI-generated deepfakes to be clearly labelled**, targeting concerns about manipulated media that could lead to disinformation and election meddling.
- **EU's Landmark AI Law and the "Brussels Effect"**
  - **Impact on India: T**he final approval could have significant implications for India, particularly in terms of global regulatory standards and market access.
  - The **"Brussels Effect" phenomenon**, whereby **EU regulations become de facto global standards**, may compel multinational companies operating in India to comply with the EU AI Act in order to access the lucrative EU market.
  - This could prompt India to consider aligning its own AI regulations with the EU standards to maintain competitiveness and facilitate international trade.
  - **Regulatory Void in India's Surveillance Systems:** India's current deployment of surveillance systems, including facial recognition technology, lacks adequate regulatory oversight, raising concerns about potential privacy violations and discriminatory practices.
  - While India has historically pursued independent legislative efforts, it has drawn inspiration from international regulations like the GDPR.
  - The EU's AI Act may serve as a benchmark for India as it navigates the development of its own regulatory framework for emerging technologies, including AI and surveillance systems.

10. Devin, world's first AI software engineer

GS 3 (Science and Tech)

THE 'FIRST AUTONOMOUS' AI SOFTWARE ENGINEER: MEET DEVIN

SILICON JOSE
NEW DELHI, MARCH 13

US-BASED applied AI lab, Cognition, has announced the launch of what it calls the world's first AI software engineer. The makers say that the AI agent, named Devin, has successfully cleared practical tests and interviews held by leading AI companies. On Upwork, an US-based freelancing platform, Devin has...

- **Why in News:** A US-based AI lab, Cognition, has announced the launch of what it calls the world's first fully autonomous AI software engineer, named Devin.
- **More on News:**
  - The **new AI assistant could change the way code is written and the way apps are deployed.**
  - Devin, which according to the start-up, is "a tireless, skilled teammate," is

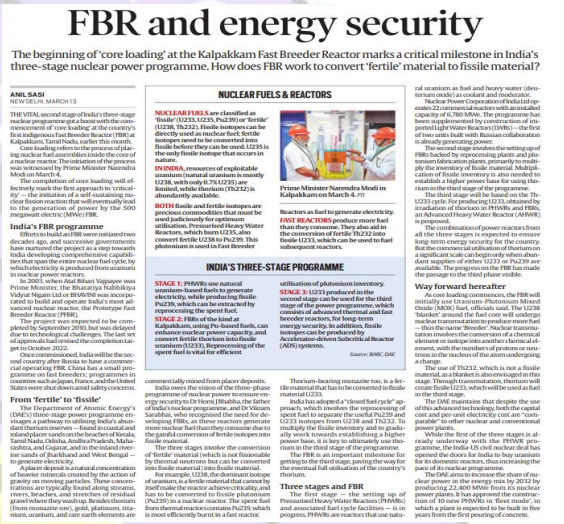
trained to perform a number of tasks, including building and deploying apps and finding and fixing bugs in codebases.

- Besides this, the AI chatbot can recall relevant context at every step, learn over time, and fix mistakes.
- Devin is equipped with common developer tools including the shell, code editor, and a browser, and it can perform tasks independently.
- Devin is a software development assistant in the vein of Copilot, which was built by GitHub, Microsoft, and OpenAI.

11. India's First Indigenous Fast Breeder Reactor begins 'Core Loading'

GS 3 (Science and Tech)

- **Why in the News :** The vital second stage of India's three-stage nuclear programme got a boost with the commencement of 'core loading' at the country's first indigenous Fast Breeder Reactor (FBR) at Kalpakkam, Tamil Nadu, earlier this month.



FBR and energy security

The beginning of 'core loading' at the Kalpakkam Fast Breeder Reactor marks a critical milestone in India's three-stage nuclear power programme. How does FBR work to convert 'fertile' material to fissile material?

ANIL SASI
NEW DELHI, MARCH 13

THE VITAL second stage of India's three-stage nuclear programme got a boost with the commencement of 'core loading' at the country's first indigenous Fast Breeder Reactor (FBR) at Kalpakkam, Tamil Nadu, earlier this month.

Core loading refers to the process of placing nuclear fuel assemblies inside the core of a nuclear reactor. The initiation of the process was witnessed by Prime Minister Narendra Modi on March 6.

The completion of core loading will effectively mark the first approach to 'criticality' — the initiation of a self-sustaining nuclear fission reaction that will eventually lead to the generation of power by the 500 megawatt electric (MWe) FBR.

India's FBR programme

Efforts to build an FBR were initiated two decades ago, and successive governments have nurtured the project as a step towards India developing comprehensive capabilities that span the entire nuclear fuel cycle, by which electricity is produced from uranium in nuclear power reactors.

In 2003, when Atal Bihari Vajpayee was Prime Minister, the Bharatiya Nabhikiya Vidyut Nigam Ltd or BHAVINI was incorporated to build and operate India's most advanced nuclear reactor, the Prototype fast Breeder Reactor (PFBR).

The project was expected to be completed by September 2010, but was delayed due to technological challenges. The last set of approvals had crossed the completion target in October 2022.

Once commissioned, India will be the second country after Russia to have a commercial operating FBR. China has a small programme on fast breeders; programmes in countries such as Japan, France, and the United States were shut down amid safety concerns.

From 'fertile' to 'fissile'

The Department of Atomic Energy's (DAE's) three-stage power programme envisages a pathway to utilising India's abundant thorium reserves — found in coastal and inland placer sands on the beaches of Kerala, Tamil Nadu, Odisha, Andhra Pradesh, Maharashtra, Gujarat, and in the inland riverbasins of Jharkhand and West Bengal — to generate electricity.

A placer deposit is a natural concentration of heavier minerals created by the action of gravity on moving particles. These concentrations are typically found along streams, rivers, beaches, and stretches of residual gravel where they wash up. Besides thorium (from monazite ore), gold, platinum, titanium, uranium, and rare earth elements are commercially mined from placer deposits.

India owes the vision of the three-phase programme of nuclear power to ensure energy security to Dr Homi J Bhabha, the father of India's nuclear programme, and Dr Vikram Sarabhai, who recognised the need for developing FBRs, as these reactors generate more nuclear fuel than they consume due to the gainful conversion of fertile isotopes into fissile material.

The first two stages involve the conversion of 'fertile' material (which is not fissionable by thermal neutrons but can be converted into fissile material) into fissile material.

For example, U238, the dominant isotope of uranium, is a fertile material that cannot by itself make the reactor achieve criticality, and has to be converted to fissile plutonium (Pu239) in a nuclear reactor. The spent fuel from thermal reactors contains Pu239, which is most efficiently burnt in a fast reactor.

Thorium-bearing monazite too, is a fertile material that has to be converted to fissile material U233.

India has adopted a "closed fuel cycle" approach, which involves the reprocessing of spent fuel to separate the useful Pu239 and U233 isotopes from U238 and Th232. To multiply the fissile inventory and to gradually work towards establishing a higher power base, it is key to ultimately use thorium in the third stage of the programme.

The FBR is an important milestone for getting to the third stage, paving the way for the eventual full utilisation of the country's thorium.

Three stages and FBR

The first stage — the setting up of Pressurised Heavy Water Reactors (PHWRs) and associated fuel cycle facilities — is in progress. PHWRs are reactors that use natural uranium as fuel and heavy water (deuterium oxide) as coolant and moderator.

Nuclear Power Corporation of India Ltd operates 22 commercial reactors with an installed capacity of 6,780 MWe. The programme has been supplemented by construction of imported Light Water Reactors (LWRs) — the first of two units built with Russian collaboration is already generating power.

The second stage involves the setting up of FBRs backed by reprocessing plants and plutonium fabrication plants, primarily to multiply the fissile inventory. The optimum application of fissile inventory is also needed to establish a higher power base for using thorium in the third stage of the programme.

The third stage will be based on the Th-U233 cycle. For producing U233, obtained by irradiation of thorium in PHWRs and FBRs, an Advanced Heavy Water Reactor (AHWR) is proposed.

The combination of power reactors from all the three stages is expected to ensure long-term energy security for the country. But the commercial utilisation of thorium on a significant scale can begin only when abundant supplies of either U233 or Pu239 are available. The progress on the FBR has made the passage to the third phase visible.

Way forward hereafter

As core loading commences, the FBR will initially use Uranium-Plutonium Mixed Oxide (MOX) fuel. Later, a 'blanket' of Th232 'blanket' around the fuel core will undergo nuclear transmutation to produce more fuel — thus the name 'Breeder'. Nuclear transmutation involves the conversion of a chemical element or isotope into another chemical element, with the numbers of protons or neutrons in the nucleus of the atom undergoing a change.

The use of Th232, which is not a fissile material, as a blanket is also envisaged in this stage. Through transmutation, thorium will create fissile U233, which will be used as fuel in the third stage.

The DAE maintains that despite the use of this advanced technology, both the capital cost and per-unit electricity cost are "comparable" to other nuclear and conventional power plants.

While the first of the three stages is already underway with the PHWR programme, the second and third technological hurdles for India to tap its domestic reactors, thus increasing the pace of its nuclear programme.

The DAE aims to increase the share of nuclear power in the energy mix by 2032 by producing 22,400 MWe from its nuclear power plants. It has approved the construction of 10 new PHWRs in 'fleet mode', in which a plant is expected to be built in five years from the first pouring of concrete.

NUCLEAR FUELS & REACTORS

NUCLEAR FUELS are classified as 'fissile' (U233, U235, Pu239) or 'fertile' (U238, Th232). Fissile isotopes can be directly used as nuclear fuel; fertile isotopes need to be converted into fissile before they can be used. U235 is the only fissile isotope that occurs in nature.

IN INDIA, resources of exploitable uranium (natural uranium is mostly U238, with only 0.7% U235), are limited, while thorium (Th232) is abundantly available.

BOTH fissile and fertile isotopes are precious commodities that must be used judiciously for optimum utilisation. Pressurised Heavy Water Reactors, which burn U235, also convert fertile U238 to Pu239. This plutonium is used in Fast Breeder Reactors as fuel to generate electricity.

FAST REACTORS produce more fuel than they consume. They also aid in the conversion of fertile Th232 into fissile U233, which can be used to fuel subsequent reactors.

Prime Minister Narendra Modi in Kalpakkam on March 4. PTI

INDIA'S THREE-STAGE PROGRAMME

STAGE 1: PHWRs use natural uranium-based fuels to generate electricity, while producing fissile Pu239, which can be extracted by reprocessing the spent fuel.

STAGE 2: FBRs of the kind at Kalpakkam, using Pu-based fuels, can enhance nuclear power capacity, and convert fertile thorium into fissile uranium (U233). Reprocessing of the spent fuel is vital for efficient utilisation of plutonium inventory.

STAGE 3: U233 produced in the second stage can be used for the third stage of the power programme, which consists of advanced thermal and fast breeder reactors, for long-term energy security. In addition, fissile isotopes can be produced by Accelerator-driven Subcritical Reactor (ADS) systems.

Source: BARC, DAE

- **Capacity of PFBR in Tamil Nadu**
  - India's prototype fast breeder reactor (PFBR) in Tamil Nadu has a capacity of 500 Megawatt electric (MWe).
  - It was designed by the Indira Gandhi Centre for Atomic Research and constructed by BHAVINI.
  - Short for Bharatiya Nabhikiya Vidyut Nigam Limited, BHAVINI was established in 2003 to build and operate the PFBR.
- **Significance**
  - PFBR is considered a precursor to future fast breeder reactors (FBRs).
  - After the core loading is completed, the Kalpakkam PFBR reactor will undergo the first approach to criticality, leading to power generation.
  - Once it becomes operational, India will be only the second country after Russia to have a commercial operating fast breeder reactor.
  - The latest development symbolises India's entry into the crucial second stage of the country's three-stage nuclear programme.
- **India's 3-Stage Nuclear Programme:**
  - India's three-stage nuclear power programme was **formulated by Dr Homi Bhabha to secure the country's long term energy independence.**
  - The ultimate **focus of the programme is on enabling the thorium reserves of India to be utilised in meeting the country's energy requirements.**
  - Thorium is particularly attractive for India, as India has only around 1–2% of the global uranium reserves, but one of the largest shares of global thorium reserves at about 25% of the world's known thorium reserves.
  - Thorium is found in the monazite sands of coastal regions of South India.
  - Dr Homi Bhabha, therefore, devised a three-stage nuclear power programme to make the most of India's limited uranium reserves and abundant thorium reserves.
  - **Each stage of the programme has fuel cycle linkages.**
  - This means that spent fuel from one stage is reprocessed to obtain fuel for the next stage — there is little to no wastage.
  - Ultimately, the goal is to generate nuclear power while ensuring long-term energy security.
  - **3-Stages of India's Nuclear Programme:**

- **Pressurised heavy water reactors (PHWRs) using natural uranium as fuel:**
  - The first stage involves using natural uranium in PHWRs to multiply domestically available fissile resources.
  - Natural uranium consists of 0.7 per cent Uranium-235, which undergoes fission to release energy.
  - The remaining 99.3 per cent is Uranium-238, which is not fissile but can be converted into the fissile element Plutonium-239 in a nuclear reactor.
- **FBRs using plutonium as fuel:**
  - In the second stage, plutonium from the spent fuel of PHWRs is used in FBRs, such as the one at Kalpakkam which saw the initiation of core loading on 4 March.
  - FBRs are fuelled by a mixed oxide of Uranium-238 and Plutonium-239, which is recovered by reprocessing the spent fuel from the first stage.
  - In FBRs, Plutonium-239 undergoes fission, producing energy and more Plutonium-239 through the transmutation of Uranium-238.
  - This process allows FBRs to produce energy and additional fuel, which is why they are termed "breeders." **FBRs generate more fuel than they consume.**
  - Over time, a stockpile of plutonium can be built up by introducing Uranium-238 into the reactor.
- **Advanced reactors using Uranium-233 as fuel in a thorium-uranium cycle:**
  - Once enough nuclear capacity is built, the third stage will involve using thorium, which will be converted into Uranium-233 in FBRs.
  - Thorium-232, which is abundant in India, is not fissile. Therefore, it needs to be converted into a fissile material, Uranium-233, through transmutation in an FBR.
  - Significant commercial use of thorium can only begin when there are abundant supplies of either Uranium-233 or plutonium.
  - The conversion from thorium to uranium is planned to be achieved in the second stage of the programme, which involves the commercial operation of FBRs.
  - When Will India Achieve 3 Stages of the Nuclear Programme?
  - The third stage, utilising thorium as an energy source, is expected to be reached in a few decades.
  - To prepare for the use of thorium in the third stage of the programme, efforts are currently underway to develop and demonstrate the necessary technology.
  - This is being done so that a mature technology for thorium utilisation will be ready in time.
  - The Bhabha Atomic Research Centre is developing a 300 MWe advanced heavy water reactor (AHWR).
  - The AHWR is an innovative concept that serves as a bridge between the first and third stages of the nuclear programme.
  - It aims to advance thorium utilisation without going through the second stage.

- **Significance of Nuclear Energy Generated through 3-Stage Programme:**
  - Just like with uranium, generating electricity from thorium produces no greenhouse gases, making it a clean energy source.
  - **Thorium reactors are also more cost-effective than conventional reactors.**
  - Nobel laureate Carlo Rubbia estimates that a tonne of thorium could produce as much energy as 200 tonnes of uranium or 4 million tonnes of coal. As a result, far less nuclear waste is generated.
  - Importantly, the **waste from thorium reactors contains no isotopes** with a half-life beyond 35 years, significantly reducing the required storage time.
  - Harnessing thorium for India's energy needs presents many economic opportunities.
  - The availability of affordable electricity could drive a transition away from gas, petrol, and diesel for cooking and transportation.
  - Additionally, nuclear energy could alleviate the pressure on the railways by reducing the need to transport millions of tons of coal, potentially reducing the necessity for service expansion.
  - The three-stage nuclear programme is expected to make India completely self-sufficient in nuclear energy.

15th March, 2024

1. Panel recommends Simultaneous Elections

GS 2 (Governance)

Panel recommends simultaneous polls

Backing the proposal: Former President Ram Nath Kovind presents the report to President Droupadi Murmu on Thursday. ANI

Sandeep Phukan
NEW DELHI

The high-level committee headed by former President Ram Nath Kovind has recommended simultaneous elections to the Lok Sabha and State Assemblies as the first step, and holding municipal and panchayat polls within 100 days of the general election in the next phase.

The committee on Thursday submitted its report, running into more than 18,000 pages, to President Droupadi Murmu. The report that is put in the public domain, however, is a 321-page one.

The 22nd Law Commission, which is examining the simultaneous polls issue, is also expected to submit its report to the Law Ministry anytime now and recommend the same from the 2029 general election cycle.

The Kovind panel report will not have any bearing on the upcoming Lok Sabha election.

CONTINUED ON » PAGE 14
CONG. SLAMS REPORT » PAGE 15

- **Why in News:** The Ram Nath Kovind-led panel submitted its report on the feasibility of implementing 'one nation, one poll'. In its report, the committee recommends that elections of the Lok Sabha and the State Legislative Assemblies take place simultaneously.
- **Focus of the Report & recommendation**
  - The key focus of the report is the establishment of a unified electoral roll for conducting elections at various levels of governance, including the Lok Sabha, state assemblies, municipalities, and panchayats.
  - The committee recommends that the Government develop a legally tenable mechanism to restore the cycle of simultaneous elections. **It further recommends-**
    - In the first step, **simultaneous elections to the House of the People and the State Legislative Assemblies be held.**
    - In the second step, the elections to Municipalities and Panchayats will be synchronised with the House of the People (Lok Sabha) and State Legislative Assemblies in such a way that elections to Municipalities and Panchayats are held within a hundred days of the holding of elections of the House of the People and the State Legislative Assemblies.
    - Introduce Article 324A for simultaneous elections in local bodies, amend Article 325 for a single electoral roll and identity card.
    - There are also points in regard to actions that should be taken in cases such as a hung house, no-confidence motion, etc.
    - The committee also clarified in its report that the states do not need to ratify the constitutional amendment to hold simultaneous Lok Sabha and Assembly polls.
- **Effects of Synchronised elections**
  - **Pros**
    - **Economic gains:** Synchronised elections will lead to "higher economic growth, lower inflation, higher investments, and improved quality of expenditure".
    - **Eased burden:** It would also ease the burden on administrative and security forces, who otherwise are engaged multiple times in election duties.
    - **Increased turn out:** Simultaneous elections will increase voter turnout because it will be more easy for people to cast many ballots at once.
    - **Better governance:** Also, the government can focus more on governance rather than being in an election mode, which often hampers policy implementation.
  - **Cons**
    - **Synching issue:** The biggest challenge is to sync the terms of the various state legislative assemblies with those of Lok Sabha.
    - **Increased complexity:** There is also no clarity on dealing with situations like midterm polls or the President's rule in case any party fails to get the majority.
    - Regional political parties argue that having the two elections simultaneously would hamper their prospects because they won't be able to highlight local issues prominently.
- **Downside of Recurring elections**
  - **Loss of governance:** Recurring elections not just imply more monetary cost but also the loss of governance time as politicians focus their time on campaigning and bureaucrats remain occupied with election work as opposed to implementing policies and public projects.
  - **Cost on state:** The deployment of security forces away from their primary objective for electoral purposes also imposes further costs on the state.
  - **Affected policy-making:** Lastly, the model code of conduct, it is claimed, affects public policy-making.

2. Human Development Index

GS 3 (Development)

India 134th in global human development index: UNDP

The Hindu Bureau
NEW DELHI

India has moved up a rank on the global Human Development Index (HDI), according to the United Nations Development Programme (UNDP) report 'Breaking the gridlock: Reimagining cooperation in a polarised world', released on Wednesday.

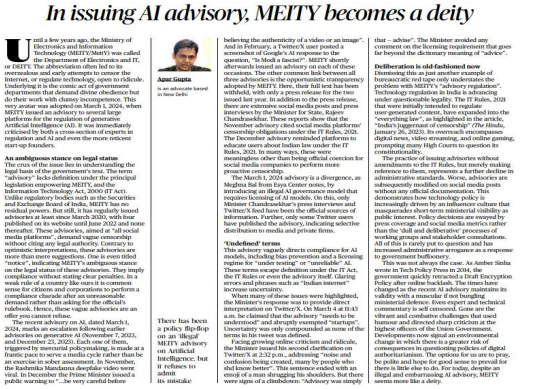
The report stated that while India ranked 135 in 2021, it had moved up to 134 in 2022. A total of 193 countries were ranked in 2022, and 191 countries in 2021.

India's southern neighbour Sri Lanka has been ranked much ahead at 78, while China is ranked 75, both categorised under the High Human Development category. India also ranks below Bhutan, which stands at 125, and Bangladesh, which is in the 129th position. Switzerland has been ranked number one.

- **Why in News:** India's Human Development Index (HDI) value in 2022 has increased to 0.644 from 0.633 in 2021, placing it 134th out of 193 countries, according to United Nations Development Programme's (UNDP's) latest report on human development.
- **Issues highlighted in the Report**
  - **Report Title:** 'Breaking the Gridlock: Reimagining Cooperation in a Polarized World'.It builds on the 2021 – 2022 Human Development Report findings that saw the global HDI value fall for the first time — two years in a row.
  - The report showed that the global HDI value fell for the first time in two years in a row.
  - This report also revealed that while rich countries achieved record human development, half of the poorest remain below their pre-crisis level of progress.
  - While HDI is projected to reach record highs in 2023 after declines in 2020 and 2021, there is a stark contrast in development levels between rich and poor nations.
  - The report points out that global inequalities have been compounded by substantial economic concentration – almost 40% of global trade in goods is concentrated in three or fewer countries.
  - The latest HDI assessment, however, presents a miserable picture of a world that, while recovering from the pandemic's shocks, is deeply divided and eclipsed by war.
- **India's Position & Room for Improvement**
  - **Important ranking:** Categorised as 'Very High', 'High', 'Medium' and 'Low Human Development', China and Sri Lanka, ranked at 75 and 78, respectively, in the High Human Development category compared to India, which stands at 134. India also ranks below Bhutan (125) and Bangladesh (129), despite all three being categorised under 'Medium Human Development'.
  - **Life expectancy:** In India, life expectancy rose from 67.2 to 67.7 years, expected years of schooling reached 12.6, which means that years of schooling increased to 6.57, and GNI per capita saw an increase from USD 6,542 to USD 6,951.
  - **India's Gender Inequality Index (GII):** However, India also has one of the largest gender gaps in the labour force participation rate—a 47.8 percentage points difference between women (28.3%) and men (76.1%).
  - The HDI value places India in the medium human development category.
  - India's improvement on the HDI is a positive development. However, it underscores the need for higher investment in social infrastructure rather than a preoccupation with headline GDP numbers.
- **About Human Development Index**
  - The United Nations Development Programme (UNDP) Human Development Index (HDI) report is an annual publication that assesses the development status of countries worldwide based on key indicators such as
  - life expectancy
  - education
  - income
  - The HDI is an index that provides a summary measure of a country's average achievements in these three dimensions of human development.

3. In issuing AI advisory, MEITY becomes a deity

GS 2 (Governance)


In issuing AI advisory, MEITY becomes a deity

Until a few years ago, the Ministry of Electronics and Information Technology (MEITY/MeitY) was called the Department of Electronics and IT, or DEITY. The abbreviation often led to its overzealous and early attempts to censor the Internet, or regulate technology, open to ridicule. Underlying it is the comic act of government departments that demand divine obedience but do their work with clumsy incompetence. This very avatar was adopted on March 1, 2024, when MEITY issued an advisory to several large platforms for the regulation of generative Artificial Intelligence (AI). It was immediately criticised by both a cross-section of experts in regulation and AI and even the more reticent start-up founders.

An ambiguous stance on legal status

The crux of the issue lies in understanding the legal basis of the government's text. The term "advisory" lacks definition under the principal legislation empowering MEITY, and the Information Technology Act, 2000 (IT Act). Unlike regulatory bodies such as the Securities and Exchange Board of India, MEITY has no residual powers. But still, it has regularly issued advisories at least since March 2020, with four published on its website until June 2022 and none thereafter. These advisories, aimed at "all social media platforms", demand vague censorship without citing any legal authority. Contrary to optimistic interpretations, these advisories are not "soft recommendations" but are instead "notice", indicating MEITY's ambiguous stance on the legal status of these advisories. They imply compliance without stating clear penalties. In a weak rule of a country like ours it is common sense for citizens and corporations to perform a compliance charade after an unreasonable demand rather than asking for the official's rulebook. Hence, these vague advisories are an offer you cannot refuse.

The recent advisory on AI, dated March 1, 2024, marks an escalation following earlier advisories on generative AI (November 7, 2023, and December 23, 2023). Each one of them, triggered by mercurial policymaking, is made at a frantic pace to solve a media crisis. In November, the primary issue was deepfakes. In November, the Rashmika Mandanna deepfake video went viral. In December the Prime Minister issued a public warning to "...be very careful before believing the authenticity of a video or an image". And in February, a Twitter/X user posted a screenshot of Google's AI response to the question, "Is Modi a fascist?". MEITY shortly afterwards issued an advisory on each of these occasions. The other common link between all three advisories is the opportunistic transparency adopted by MEITY. Here, their full text has been withheld, with only a press release for the two issued last year. In addition to the press release, there are extensive social media posts and press interviews by the Minister for State, Rajeev Chandrasekhar. These reports show that the November advisory cited social media platforms' censorship obligations under the IT Rules, 2021. The December advisory reminded platforms to comply with criminal law under the IT Rules, 2021. In many ways, these were the meaningless other than being official coercion for social media companies to perform more proactive censorship.

The March 1, 2024 advisory is a divergence, as Meghna Bal from Esya Center notes, by introducing an illegal AI governance model that requires licensing of AI models. On this, only Minister Chandrasekhar's press interviews and Twitter/X feed have been the official sources of information. Further, only some Twitter users have published the advisory, indicating selective distribution to media and private firms.

'Undefined' terms

This advisory vaguely directs compliance for AI models, including bias prevention and a licensing regime for "under-testing" or "unreliable" AI. These terms escape definition under the IT Act, the IT Rules or even the advisory itself. Glaring errors and phrases such as "Indian internet" increase uncertainty.

When many of these issues were highlighted, the Minister's response was to provide direct interpretation on Twitter/X. On March 4 at 11:43 a.m. he claimed that the advisory "needs to be understood" and abruptly exempted "startups". Uncertainty was only compounded as none of the terms in his tweet was defined.

Facing growing online criticism and ridicule, the Minister issued his second clarification on March 15 at 10:52 p.m., announcing that the confusion being "created, many by people who shd know better". This sentence ended with an emoji of a man shrugging his shoulders. But there were signs of a climbdown: "Advisory was simply that – advise". The Minister avoided any comment on the licensing requirement that goes far beyond the dictionary meaning of "advice".

Deliberation is old-fashioned now

Dismissing this as just another example of bureaucratic red tape only understates the problem with MEITY's "advisory regulation". Technology regulation in India is advancing under questionable legality. The IT Rules, 2021 that were initially intended to regulate user-generated content, have expanded into the "everything law", as highlighted in the article, "India's juggernaut of censorship" (*The Hindu*, January 26, 2023). Its overreach encompasses digital news, video streaming, and online gaming, prompting many High Courts to question its constitutionality.

The practice of issuing advisories without amendments to the IT Rules, but merely making reference to them, represents a further decline in administrative standards. Worse, advisories are subsequently modified on social media posts without any official documentation. This demonstrates how technology policy is increasingly driven by an influencer culture that masquerades short-term ministerial visibility as public interest. Policy decisions are swayed by press coverage and social media metrics rather than the 'dull and deliberative' processes of working groups and stakeholder consultations. All of this is rarely put to question and has increased administrative arrogance as a response to occasional backlash.

This was not always the case. As Amber Sinha wrote in Tech Policy Press in 2014, the government quickly retracted a Draft Encryption Policy after online backlash. The times have changed as the recent AI advisory maintains its validity with a muscular if not bungling ministerial defence. Even expert and technical commentary is self censored. Gone are the vibrant and combative challenges that used humour and directed sharp criticism at the highest officers of the Union Government. Developments now signal an environmental change in which there is a greater risk of consequences in questioning policies of digital governance than merely being seen as not to play, for public and hope, for good sense to prevail or there is little else to do. For today, despite its illegal and embarrassing AI advisory, MEITY seems more like a deity.

Amber Gupta is an advocate based in New Delhi

There has been a policy flip-flop on an 'illegal' MEITY advisory on Artificial Intelligence, but it refuses to admit its mistake

Securities and Exchange Board of India (SEBI), MEITY lacks clear residual powers under existing legislation, leading to uncertainty regarding the enforceability of its directives.
  - **Term Ambiguity**: The term "advisory" used by MEITY lacks a defined definition under the principal legislation empowering the ministry, further complicating the regulatory landscape and compliance expectations.
- **Escalation and Uncertainty in AI Regulation:**
  - **Regulatory Escalation:** MEITY's advisory on AI represents an escalation in regulatory efforts, introducing a governance model that mandates licensing for AI models.
  - **Undefined Terms:** However, the terms and requirements outlined in the advisory, such as "bias prevention" and "unreliable AI," remain undefined under existing legislation, contributing to confusion among stakeholders.
  - **Ministerial Response:** Ministerial responses on social media platforms further exacerbate uncertainty, with vague clarifications and exemptions issued without formal documentation or legal grounding, highlighting the challenges in navigating India's evolving regulatory environment.

4. CAA’s Legal Issues & Status of Judicial Proceedings

GS 2 (Governance)

CAA and status of judicial proceedings

- **Why in News:** Four years after the Parliament passed the Citizenship Amendment Act (CAA), 2019, the Ministry of Home Affairs (MHA) notified the rules to implement the law on March 11.
- **Background:**
  - The Citizenship Amendment Act, 2019 fast-tracks citizenship to undocumented immigrants from six non-Muslim communities from the neighboring Muslim countries of Pakistan, Afghanistan and Bangladesh.
  - The six non-Muslim communities are Hindu, Sikh, Buddhist, Parsi, Christian and Jain.
  - As per the rules of the Act, the applicants must provide certain documents and specify date of entry in India to be eligible for citizenship. The cutoff date for entry is December 31, 2014.
  - Although the Act was passed on December 11, 2019, and received assent from the President on December 12 of the same year, it could not be implemented since the rules were not framed.
  - The Act is under challenge before the Supreme Court, with several petitioners moving fresh pleas seeking a stay on the implementation of the rules.
- **Violation of Article 14 of the Constitution:**
  - Immediately after the passage of the Citizenship (Amendment) Bill, 2019, the Indian Union Muslim League (IUML) filed a petition in the Supreme Court challenging its constitutionality.
  - These petitions primarily challenge the law for violating Article 14 of the Constitution which guarantees all ‘persons’ (not only citizens) equality before the law and equal protection of law.
  - They also argue that making religion a qualifier for citizenship violates secularism, which is a basic feature of the Constitution.
  - The petitioners have contended that the special treatment given to the specific persecuted religious minorities from the three Muslim-majority neighboring countries does not constitute a reasonable classification under Article 14.
  - More so because groups like the Tamil Hindus in Sri Lanka, the Rohingyas in Myanmar and minority Muslim sects like the Hazaras in Afghanistan also face persecution but have been denied similar protection under this law.
  - The CAA has also been dubbed as a move to subvert the Assam Accord of 1985 that deems any person who cannot prove his ancestry beyond March 24, 1971, an alien and does not differentiate on grounds of religion.
  - The petitions, especially one by the All-Assam Students’ Union, contend that the law will further multiply the uncontrolled influx of illegal migrants from Bangladesh to Assam.
- **Central Government’s Response:**
  - The Centre in its affidavit before the Supreme Court said that it seeks to provide amnesty to specific communities from specified countries with a clear cut-off date.
  - It highlighted that the law does not in any manner affect the legal, democratic or secular rights of any Indian citizen.
  - The affidavit further stated that the narrowly tailored legislation was passed to tackle a specific problem, i.e., the persecution on the ground of religion in the light of the undisputable theocratic constitutional position in these specified countries.

- It added that in matters of foreign policy, citizenship, and economic policy among others, a wide latitude is available to the Parliament.

- **Judicial Status of the CAA:**
  - On December 18, 2019, a Bench comprising former Chief Justice of India (CJI) S.A. Bobde, Justices B.R. Gavai and Surya Kant refused to stay the operation of the law.
  - They instead suggested that the government publicise the actual intent of the Act so that there was no confusion among the public about its objectives and aims.
  - On October 6, 2022, a Bench comprising former CJI U.U. Lalit and Justices Ravindra Bhat and Hima Kohli passed an order stating that final hearings in the case would begin on December 6, 2022.
  - However, the case has not been listed since then.
  - As per the Supreme Court's website, the petitions are currently listed before a Bench headed by Justice Pankaj Mithal.
- **Relation with Section 6A of the Citizenship Act:**
  - The proceedings against the CAA are also dependent on the outcome of the challenge to Section 6A of the Citizenship Act, 1955.
  - The section was introduced in furtherance of a Memorandum of Settlement called the **"Assam Accord"** signed on August 15, 1985, between the Centre and the leaders of the Assam movement.
  - Section 6A determines who is a foreigner in Assam by establishing March 24, 1971, as the cut-off date for entry. Those entering the state after that would be considered **"illegal immigrants"**.
  - Those who came to the State on or after January 1, 1966, but before March 25, 1971, were to be declared as **"foreigners"** and would have all the rights and obligations of Indian citizens except for being included in electoral rolls for 10 years.
  - If March 24, 1971, is upheld as a valid cut-off date for entry into the State, then CAA can be held to be violative of the Assam Accord since it establishes a different timeline.

5. UK redefines extremism

GS 2 (International Relations)

- **Why in News:** Britain unveiled a new definition of extremism in response to an eruption of hate crimes against Jews and Muslims.

U.K. govt. releases new guidelines on extremism

Sriram Lakshman
LONDON

The U.K. government on Thursday unveiled a new and expanded definition of extremism and announced a policy banning government association and funding for designated organisations. The guidelines were criticised before they were formally unveiled, and the process has been mired in controversy after the names of some organisations on the new extremism list were leaked.

The U.K. saw a surge in anti-Semitic and Islamophobic activity and a rise in far-right violence since Hamas's October 7 attack in Israel and Israel's retaliatory attacks in Gaza.

'Work together'

With Britain heading towards a general election before January 2025, several politicians, including three former Conservative Home Secretaries, had issued a statement, warning Conservative and Labour lawmakers to work together on the issue and not use it for "short-term tactical advantage".

"The proposed definition will hold that extremism is the promotion or advancement of an ideology based on violence, hatred or intolerance that aims to negate or destroy the fundamental rights and freedoms of others, or undermine, overturn, or replace the U.K. system of liberal parliamentary democracy and democratic rights, or intentionally create a permissive environment for others to achieve these results," the U.K.'s Minister for communities, Michael Gove said in the House of Commons.

The new guidelines do not involve changes to criminal law, but seek to list organisations that continue not to be banned from having any association with or funding from the government. The government has set up a 'Counter-Extremism Centre of Excellence' to identify new entities of concern.

Mr. Gove listed a few of the Neo-Nazi and Islamist organisations under scrutiny, including the British National Socialist Movement, Patriotic Alternative, Cage, MEND and the Muslim Association of Britain, which he described as a U.K. affiliate of the Muslim Brotherhood. A legal inquiry has been constituted to look into how names got leaked to the press, as per Mr. Grove.

Among the critics of the government's new guidelines were the Archbishops of Canterbury and York who warned in a joint statement that the new rules could disproportionately impact Muslim communities and "drive us [Britons] apart".

"Islamism should never be confused with Islam," Mr. Gove said in the Commons on Thursday.

The U.K. saw a surge in anti-Semitic and Islamophobic activity since Hamas's October 7 attack in Israel. AP

Extreme right-wing group activity in the U.K. is a "growing worry" as is the targeting of Muslims and Jewish communities, he said.

Concerns about rules

Addressing concerns that the new rules could curb free speech, Mr. Gove said they would not apply to gender-critical campaigners, Individuals with conservative religious beliefs, environmental protest groups or " those exercising their proper right to free speech".

Opposition parties also continued to call on the Conservatives to part with £10 million in donations from their largest donor, Frank Hester, who had reportedly said in 2019 that MP Diane Abbott made him want to " hate all black women" and that "she should be shot". Mr. Hester had apologised for the comments.

On Thursday, Mr. Gove called his remarks "clearly racist and regrettable", but made no commitments about the funding, when asked if the remarks met his definition of extremism and if the Conservative Party would return the money or donate it to charity.

- **The new definition of 'Extremism'**
  - Extremism is the promotion or advancement of an ideology based on violence, hatred or intolerance that aims to:
    - negate or destroy the fundamental rights and freedoms of others; or
    - undermine, overturn or replace the UK's system of liberal parliamentary democracy and democratic rights; or
    - intentionally create a permissive environment for others to achieve the results in (1) or (2)
  - The types of behaviour below are indicative of the kind of promotion or advancement which may be relevant to the definition, and are an important guide to its application. The further context below is also an essential part of the definition.
- **Drivers of Extremism**
  - Religious/communal tension
  - Revenge and retaliation against perceived or real
  - discrimination/dis-affection/rights violations
  - Unemployment and economic despair and poor governance
  - Breakdown of social networks/social marginalisation
- **Threats from extremism**
  - The threat from extremism has been steadily growing for many years.
  - Extremism can lead to the radicalisation of individuals, deny people their full rights and opportunities, suppress freedom of expression, incite hatred, erode our democratic institutions, social capital and cohesion, and can lead to acts of terrorism.
  - Labelling a group extremist will make the public and other bodies shun them. The initiative is not about banning groups but making clear who the government should not engage with.

6. Maharashtra first state to buy land in Kashmir

Recent events of importance

- **Why in News:** Maharashtra is set to become the first Indian state to buy land in union territory Jammu and Kashmir in order to construct a tourist facility for the state's people.
- **The legal framework**
  - Before the abrogation of Article 370, only the permanent residents of Jammu and Kashmir could buy land in the erstwhile state. However, at that, the government could lease lands for up to 99 years to industries and people from outside.
  - This legal framework legal framework underwent significant changes following the abrogation, leading to new opportunities for land acquisition and development projects in the Union Territory.

Maharashtra to be first state to buy land in Kashmir to build its state bhawan

BASHAARAT MASOOD
SRINAGAR, MARCH 14

The facility for tourists and officials visitting the UP will come up on 2.5 acres of land at Ichgam, close to Srinagar airport

MAHARASHTRA IS set to become the first state to purchase land in Jammu and Kashmir to construct a facility for tourists and officials who visit the Union Territory.

The Maharashtra Bhawan – the first state bhawan in the Valley – will come up at central Kashmir's Budgam on the outskirts of Srinagar city. The Maharashtra cabinet sanctioned the purchase of the land on Wednesday.

The bhawan will come up on a plot of land measuring 2.5 acres at Ichgam, close to Srinagar airport.

The J&K government has approved the transfer of land to the state government, subject to a payment of Rs 8.16 crore.

"Sanction is accorded to the transfer of Shamlat Deh land measuring 20 kanal situated at estate Ichgam Budgam in favour of Maharashtra state... on payment of transfer value of Rs 8.16 crore, which is Rs 40.8 lakh per kanal, for construction of Maharashtra Bhawan," a Revenue department note states.

The process to purchase land and construct a tourist facility here was initiated after Maharashtra Chief Minister Eknath Shinde visited J&K and met Lt Governor Manoj Sinha in June last year.

The facility aims to offer comfortable accommodation and facilities for tourists and officials from Maharashtra.

In his budget speech, Maharashtra Deputy Chief Minister Ajit Pawar, who also holds the finance portfolio, had said the government is constructing two Maharashtra Bhawans in Srinagar and Ayodhya to "provide better and safer facilities to the tourists and devotees of the State at reasonable rates".

Pawar had said that the state government has allocated Rs 77 crore for constructing these two state guesthouse facilities.

Before the abrogation of Jammu and Kashmir's special status in August 2019, only permanent residents could buy land in the erstwhile state. The government, though, could lease land for longer periods – of up to 99 years – to industries and people from outside.

NEELOFER CONSULTANCY SERVICES *UPSC AND KPSC WITH NCSC* JAMMU AND KASHMIR DO NOT COPY

16th March, 2024

1. Indian Railways to create Multi-Modal Connectivity
GS 3 (Infrastructure)

- **Why in News:** The Indian Railways will create mega railway terminals with multi-modal connectivity in aspirational cities with population of more than 10 lakh across the country.
- **About the Programme**
  - The programme is part of the infrastructure being developed for Prime Minister Narendra Modi's **'Viksit Bharat'** initiative.
  - At present, the project will be implemented in cities with more than 10 lakh population
  - However, the project could also be extended to cities where sizeable population was expected.
- **Significance of multi-modal transit system**
  - A multi-modal transit system is a network that connects multiple public transport modes by making provision for transit hubs.
    - A transit hub is a junction where people and cargo can switch between multiple transport vehicles.
  - This eases the transportation effort while saving time and improving the speed of movement.
  - Transit hubs integrate transportation with allied passenger services such as ticketing, waiting areas, and canteens to assist in effective crowd management during transit.

Railways plans to develop multi-modal transport hubs

The terminals will come up in 'aspirational cities' with population of over 10 lakh as part of 'Viksit Bharat' initiative; officials told to enhance travel experience of passengers by improving cleanliness

S. Vijay Kumar
CHENNAI

The Indian Railways will create mega railway terminals with multi-modal connectivity in aspirational cities with a population of more than 10 lakh across the country.

The programme is part of the infrastructure being developed for Prime Minister Narendra Modi's 'Viksit Bharat' initiative.

According to official sources, the Railway Board has communicated to General Managers of all Zonal Railways that the project could also be extended to cities where a sizeable population was expected. Giving a list of cities with more than 10 lakh population, Shirish Kumar Sinha, Additional Member (Planning), called for suggestions to include new locations or stations.

'Enhancing experience'

The Railway Ministry has also taken up enhancement of passenger experience on a mission mode and warned that any laxity on the part of its senior officers will not be tolerated.

With the proliferation of Vande Bharat Express trains across the country, which are being projected as game changers, the Railway Board has taken up the task of enhancing the travel experience of passengers through improved cleanliness of coaches and properly maintained amenities on railway premises.

The principal chief mechanical engineers (PCMEs) of Zonal Railways have been instructed to closely monitor and ensure sustained housekeeping and maintenance activities and take necessary action on real-time basis.

Investigation needed

Videos and pictures of staff cleaning exteriors, toilets, fans, inaccessible areas, and so on developed confidence in the system. These efforts were required to be increased and sustained to achieve a quantum jump in cleanliness level and enhancement in the passenger experience.

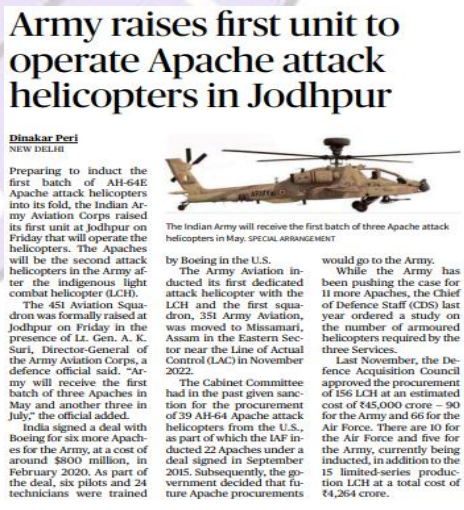
"While many divisions have been actively involved in this mission, a few are still to get into this important area of Rolling Stock Maintenance. I have been regularly emphasising this aspect during my interaction with PCMEs and no laxity is to be tolerated," Satish Kumar, member (Traction & Rolling Stock), Railway Board, said in an order recently.

Pointing out there had been a spate of cases relating to brake binding, brake block jamming, uncoupling of air hoses, and train parting, affecting the operation of passenger and freight trains, he urged the PCMEs to conduct a proper investigation into the incidents and implement remedial measures in consultation with the Research Designs and Standards Organisation.

Swachh focus: The principal chief mechanical engineers have been instructed to closely monitor housekeeping activities. AFP

2. Apache Attack Helicopter
GS 2 (Security)

- **Why in News:** The Indian Army raised its first squadron of Apache attack helicopters in Rajasthan's Jodhpur with the aim of supporting ground operations near the Pakistan border.
- **About Apache**
  - Developed by the US aviation giant Boeing, Apache choppers are known as the 'tanks in the air'.
  - They are advanced multi-mission helicopters with the latest technology and have come to be known the best attack helicopters in the world.
  - The **Army Aviation Corps**, which currently operates **utility helicopters** such as the **Dhruv and Chetak**, previously inducted the indigenously developed **Light Combat Helicopters (LCH)** Prachand at Assam's Missamari last year.
  - Notably, the IAF already operates a fleet of **22 Apache helicopters** which have been deployed on the **eastern and western fronts.**



Army raises first unit to operate Apache attack helicopters in Jodhpur

Dinakar Peri
NEW DELHI

Preparing to induct the first batch of AH-64E Apache attack helicopters into its fold, the Indian Army Aviation Corps raised its first unit at Jodhpur on Friday that will operate the helicopters. The Apaches will be the second attack helicopters in the Army after the indigenous light combat helicopter (LCH).

The 451 Aviation Squadron was formally raised at Jodhpur on Friday in the presence of Lt. Gen. A. K. Suri, Director-General of the Army Aviation Corps, a defence official said. "Army will receive the first batch of three Apaches in May and another three in July," the official added.

India signed a deal with Boeing for six more Apaches for the Army, at a cost of around $800 million, in February 2020. As part of the deal, six pilots and 24 technicians were trained by Boeing in the U.S.

The Army Aviation inducted its first dedicated attack helicopter with the LCH and the first squadron, 451 Army Aviation, was moved to Missamari, Assam in the Eastern Sector near the Line of Actual Control (LAC) in November 2022.

The Cabinet Committee had in the past given sanction for the procurement of 39 AH-64 Apache attack helicopters from the U.S., as part of which the IAF inducted 22 Apaches under a deal signed in September 2015. Subsequently, the government decided that future Apache procurements would go to the Army.

While the Army has been pushing the case for 11 more Apaches, the Chief of Defence Staff (CDS) last year ordered a study on the number of armoured helicopters required by the three Services.

Last November, the Defence Acquisition Council approved the procurement of 156 LCH at an estimated cost of ₹45,000 crore – 90 for the Army and 66 for the Air Force. There are 10 for the Air Force and five for the Army, currently being inducted, in addition to the 15 limited-series production LCH at a total cost of ₹4,264 crore.

The Indian Army will receive the first batch of three Apache attack helicopters in May. SPECIAL ARRANGEMENT

3. Anti-CAA protests in Assam and Tripura

Recent events of importance

Why anti-CAA protests confined to Assam, Tripura

SUKRITA BARUAH
GUWAHATI, MARCH 15

WITH THE recent notification of rules for the implementation of the CAA – the passage of which had rocked the Northeast in 2019 – there are loud voices of dissent against it, but this time only in Assam and Tripura.

This is because nearly all areas of the Northeast, barring large swathes of these two states, have effectively been exempted from the provisions of the CAA, which enables easing of citizenship to Hindu, Sikh, Buddhist, Jain, Parsi or Christian migrants from Pakistan, Bangladesh and Afghanistan, who entered India before December 31, 2014.

The Act states that this provision shall not apply to "tribal areas of Assam, Meghalaya, Mizoram or Tripura, as included in the Sixth Schedule of the Constitution, and the area covered under 'The Inner Line' notified under the Bengal Eastern Frontier Regulation, 1873".

EXPLAINED

Inner Line system

An Inner Line Permit (ILP) regime is operational in the four Northeastern states of Arunachal Pradesh, Nagaland, Mizoram and Manipur. The ILP is a special permit that residents of other parts of India need to apply for and receive, in order to enter and spend any duration of time in these states.

The Sixth Schedule

In the Northeast, the Sixth Schedule of the Constitution provides special powers to autonomous district councils (ADCs) in Assam, Meghalaya, Tripura and Mizoram, which have jurisdiction over specific tribal-majority areas, with the objective of ensuring development and boosting self-governance by tribal communities in those pockets. Of the seven sisters in the Northeast, Mizoram is already outside the CAA ambit as the ILP is operational there. Similarly, Tripura has the Tripura Tribal Areas Autonomous District Council.

Despite most of Meghalaya coming under the Sixth Schedule, some sections are against the implementation of the CAA in areas not under the Sixth Schedule.

Why are Assam and Tripura against CAA?

Anti-immigrant sentiment is strong in Assam and Tripura, which share long, porous borders with Bangladesh, and have had streams of refugees coming in from the neighbouring country. There is no record of these migrations; neither of the large-scale ones around the times of great upheavals – India's Independence and Partition in 1947, the creation of Bangladesh in 1971; nor of the steady trickle that has continued since then. Although some of these refugees/migrants are Muslim, a majority are believed to be Bengali-speaking Hindus.

With the Centre now professing to delink the CAA from the NRC, many in Assam feel the CAA undermines their main ideological and electoral plank. It is somewhat similar in Tripura.

- **Why in News:**
  - After the recent announcement of rules for the Citizenship (Amendment) Act or CAA, there are loud voices of dissent against it, but this time only in Assam and Tripura (The passage of CAA had caused unrest in the Northeast in 2019). The reason is that most parts of the Northeast, **except for large areas of Assam and Tripura**, have been **excluded** from the CAA.
  - However, the Act specifies that these provisions do not apply to: the tribal areas of Assam, Meghalaya, Mizoram, or Tripura as included in the **Sixth Schedule** of the Constitution, and the areas covered under **'The Inner Line'** notified under the Bengal Eastern Frontier Regulation, 1873.
- **Inner Line system**
  - **About**
    - An Inner Line Permit (ILP) regime is operational in the four Northeastern states of Arunachal Pradesh, Nagaland, **Mizoram** and Manipur.
    - ILP is a **special permit** that residents of other parts of India need to apply for and receive, in order to enter and spend any duration of time in these states
  - **Background**
    - The British introduced the Bengal Eastern Frontier Regulation 1873 for tribal hill areas, aiming to protect the indigenous population by preventing the settlement of other Indian nationals.
    - This system continued after Independence and was implemented in Arunachal Pradesh, Nagaland, and Mizoram.
    - **Manipur was included in January 2020** due to protests following the enactment of the CAA
- **Sixth Schedule**
  - **About**
    - **Sixth Schedule** gives tribal communities of NE states considerable autonomy within a larger administrative or political structure.
      - It was adopted **under Article 244 (2) of the Constitution**.
    - This schedule deals with the provisions for formation of autonomous administrative divisions within a state.
  - **Current status**
    - Sixth Schedule of Indian Constitution provides a list of ten tribal areas in Assam (3), Meghalaya (3), Tripura (1) and Mizoram (3).
    - Each of these tribal areas constitutes an autonomous district**. Each autonomous district has an Autonomous District Council (ADC).**
  - **Inclusion under sixth schedule**
    - Inclusion under this Schedule allows a region to create Autonomous District and Regional Councils (ADCs and ARCs) — elected bodies with the power to administrate tribal areas.
    - This would include the power to make laws on subjects such as forest management, agriculture, administration of villages and towns, inheritance, marriage, divorce and social customs.
    - The ADCs and ARCs may also:
      - constitute village councils or courts to decide disputes between parties from Scheduled Tribes, and
      - appoint officers to oversee the administration of the laws they enact.
    - In cases where the offences are punishable with death or more than five years of imprisonment, **the Governor of the state can confer upon the ADCs and ARCs the power to try them under the country's criminal and civil laws.**
    - The Schedule also gives ARCs and ADCs the power to
      - collect land revenue, impose taxes, regulate money lending & trading,
      - collect royalties from licences or leases for the extraction of minerals in their areas, and
      - Establish public facilities such as schools, markets, and roads.
- **ILP, Sixth schedule and CAA**
  - Of the seven sisters in the Northeast, **Mizoram** is already outside the CAA ambit as the ILP is operational there.
  - All of Meghalaya, barring a small part around Shillong, comes under three different ADCs — one each for the Khasi, Garo and Jaintia hills.
    - Despite most of Meghalaya coming under the Sixth Schedule, there is still some discontent among groups. These groups are **against the implementation** of the CAA in areas **not under the Sixth Schedule**.
    - Already, the Meghalaya government is pushing for the implementation of an ILP regime across the state, which would make the CAA redundant.

- Assam has three ADCs under the Sixth Schedule:
  - Bodoland Territorial Council that covers five districts;
  - North Cachar Hills Autonomous Council that covers one district; and
  - Karbi-Anglong Autonomous District Council that covers two districts.
- Similarly, Tripura has the Tripura Tribal Areas Autonomous District Council.

- **Why are Assam, Tripura against CAA?**
  - **Boundary with the Bangladesh and most of the region does not come under either the Sixth Schedule or the ILP regime**
    - Assam shares a 263-km border with Bangladesh while Tripura has a 856-km border with Bangladesh.
    - Most of the Assam and Tripura do not come under either the Sixth Schedule or the ILP regime.
    - And that is why there's unrest in these areas against the CAA.
  - **Strong anti-immigrant sentiment**
    - Both states have strong anti-immigrant feelings because they share long, open borders with Bangladesh.
    - Also, they have experienced a continuous flow of refugees from the neighbouring country since the days of East Pakistan.
    - There are **no official records of these migrations**, whether large-scale ones during significant events like India's Independence and Partition in 1947 or the creation of Bangladesh in 1971, nor of the ongoing smaller movements.
    - While **some** of these migrants are Muslim, **most** are believed to be Bengali-speaking Hindus.
  - **Worried over rising number of Bengali speakers**
    - CAA does not include Muslim refugees or migrants, focusing instead on legitimizing Hindu refugees.
    - This has angered Assamese ethno-nationalists and Tripuri tribals who are worried about the growing number of Bengali speakers.
  - **Separating CAA from NRC Raises Concerns**
    - The government is now saying that the CAA will not be connected to the National Register of Citizens (NRC)— to weed out illegal immigrants, which was originally conceived for, and only implemented in Assam, but remains stalled.
    - This change worries many in Assam because they feel the CAA undermines their main beliefs and political platform. Tripura faces similar concerns.

4. Navy rescues 17 crew from hijacked ship

Recent events of importance

Navy rescues hijacked Bangladesh-flagged ship

AMRITA NAYAK DUTTA
NEW DELHI, MARCH 15

AN INDIAN naval warship and a long-range maritime patrol aircraft assisted a Bangladeshi-flagged cargo vessel after it was hijacked in the Indian Ocean—the latest in a series of such operations by the Navy in the region.

As per the Navy, both responded to a piracy attack on MV Abdullah, a Bangladeshi-flagged vessel, while it was enroute from Mozambique to the United Arab Emirates.

The long-range maritime patrol aircraft was immediately deployed and on locating the merchant vessel on Tuesday evening, attempted to establish communication to ascertain the status of ship's crew members.

At the time, no response was received from the ship.

A warship which was mission-deployed in the region on maritime security operations was then diverted to the location and it intercepted the hijacked merchant vessel on Thursday morning.

An image released by the Navy of the hijacked ship, MV Abdullah. X/@indiannavy

"The safety of the MV's crew (all Bangladesh nationals) held hostage by the armed pirates was ascertained and the Indian Navy warship continued to maintain in close vicinity of the MV till its arrival in the territorial waters of Somalia," said a statement from the Navy.

The incident is the latest in a series of piracy incidents in the region. Last month and in January, the Navy had foiled a series of piracy incidents, rescuing several Iranian and Pakistani nationals who were part of the crew.

- **Why in News:** Indian naval warship INS Kolkata thwarted an attack by pirates, leading to the rescue of 17 crew members and surrender of 35 Somali raiders. The pirate ship involved was an erstwhile merchant vessel MV Ruen that was hijacked by Somali pirates in December 2023.
- **Maritime Piracy**
  - As per the Article 101 of the **UN Convention on the Law of the Sea (UNCLOS)**, maritime piracy is when people on a private boat or ship commit crimes like kidnapping, violence, or robbery for personal gain.
    - UNCLOS is an international treaty which was adopted and signed in 1982 in Montego Bay, Jamaica
    - It lays down a comprehensive regime of law & order in world's oceans and seas establishing rules governing all uses of the oceans and their resources.
  - This happens on the open sea and is targeted at another vessel or its people and property.
- **Threats posed by maritime piracy**
  - **Physical Harm, Kidnapping and Associated Humanitarian Concerns**:
    - Crew members and passengers may experience trauma and psychological distress as a result of piracy incidents
  - **Disruption of Trade** causing delays in the delivery of goods & impacting global trade.
  - **Economic Losses:** Businesses may suffer financial losses due to stolen cargo, **ransom payments, increased insurance premiums**, and the cost of implementing anti-piracy measures.
  - **Impact on Fishing Industry:** Pirates sometimes target fishing vessels, affecting the livelihoods of fishermen and the availability of seafood.
  - **Environmental Risks:** Pirates may engage in illegal activities, such as oil theft or dumping pollutants, posing environmental threats to marine ecosystems.
  - **Security Concerns** for coastal regions and international waters, requiring increased naval and maritime security efforts.
    - Piracy can be linked to broader security issues, such as terrorism and organized crime, creating challenges for international security.
- **Red Zone for Piracy**

- **Steps taken to combat maritime piracy**
  - **Global Initiative**
    - **UNCLOS**
    - **Operation Prosperity Guardian:** It is a multinational military operation that began in December 2023 to respond to Houthi attacks on shipping in the Red Sea.
    - **Convention for the Suppression of Unlawful Acts against the safety of Maritime Navigation (1988)**
    - **Combined Maritime Forces (CMF):** It is a partnership of 39 nations that work together to promote security, stability, and prosperity in international waters.
      - India is an associate member of the CMF
  - **Initiatives by India**
    - **Operational steps**
      - Indian govt has deployed naval ships with armed helicopters to patrol the piracy prone areas.
      - The Indian Navy commenced **anti-piracy patrols** in the Gulf of Aden and East Coast of Africa from October 2008.
      - In recent years, **task Groups comprising destroyers and frigates** have been deployed to undertake maritime security operations and render assistance to merchant vessels in case of any incident.
      - Also, aerial surveillance by long-range maritime patrol aircraft and Unmanned Aerial Vehicles (UAVs) has been enhanced to have a complete maritime domain awareness.
  - **India participates in the various multilateral fora that have been set up to combat piracy**
    - The **Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP)** is a government-to-government agreement that aims to enhance multilateral cooperation among 16 regional countries.
    - The **Regional Maritime Security Initiative (RMSI)** is a partnership between regional nations with varying capabilities and capacities.
  - **Institutions created by India**
    - The Navy's **Information Management and Analysis Centre (IMAC) and Information Fusion Centre for Indian Ocean Region** (IFC IOR) are institutions involved in maintaining maritime security.
    - Besides, Indian Navy also coordinates with Coast Guard to maintain enhanced surveillance within the Exclusive Economic Zone (EEZ).
  - **Legislative steps**
    - India enacted the **Maritime Anti-Piracy Act, 2022** to give effect to arrest and prosecute pirates and strengthen the fight against piracy.

      Also, the government's **SAGAR (Security and Growth For All in the Region) Doctrine** provides a framework for maritime co-operation in the Indian Ocean region.
- **Achievements of Indian Navy in fight against maritime piracy**
  - A total of 3,440 ships and over 25,000 seafarers have been safely escorted.
  - Nil piracy incidents have been reported in Palk Strait.
  - The **boundaries of the high-risk area** that covered much of the Arabian Sea during the height of Somali piracy (2009-12) were pushed back westward primarily due to the efforts of the Indian Navy.
    - High Risk Area reflects the area where the threat from piracy exists.
  - **Recent achievements**
    - The rescue of a Sri Lankan fishing trawler, Lorenzo Putha, in a coordinated action with the Sri Lankan and Seychelles navies on January 29

- The rescue of two Iranian flagged boats with Iranian and Pakistani crew by the Offshore Patrol Vessel INS Sumitra.
- In March 2024, it foiled a piracy attempt on an Iranian-flagged fishing vessel with a crew of 11 Iranian & 8 Pakistani nationals along the East coast of Somalia.

- **Conclusion**
  - Maritime piracy, driven by socio-economic, political, and environmental factors, remains a global threat despite efforts. Progress in reducing incidents via naval patrols and security measures is evident, yet challenges persist in poorly governed and economically unstable regions. Addressing piracy requires sustainable solutions and enhanced coordination among stakeholders.

5. Central Govt. Approves New EV Policy with Tax Relief
GS 2 (Governance)

- **Why in News:**
  - The Central Government has announced a new electric vehicle (EV) policy that will be coming with tax relief.
  - This is expected to provide a major boost to companies like **Tesla**, **Vinfast** that have plans to start operations in India.
- **Background:**
  - India has committed to achieving **net-zero emissions by 2070 at the 26th Conference of the Parties (COP26)** in November 2021.
  - This will require clear pathways to decarbonize high greenhouse gas (GHG) intensive sectors such as transport and energy.
  - To decarbonize transport, the **transition to clean mobility, led by electric vehicles (EVs), is paramount.**
  - India is on the cusp of an e-mobility revolution led by the two-wheeler (2W) and three-wheeler (3W) vehicle segments.
  - 2Ws account for 70-80% of all private vehicles, and 3Ws play a critical role for public transit, freight transport and last mile connectivity in citie

EV policy paves way for Tesla entry

Govt slashes import duty for certain EVs whose manufacturers invest at least ₹4,150 cr in India

ENS ECONOMIC BUREAU
NEW DELHI, MARCH 15

THE UNION government Friday slashed import duties for certain electric vehicles (EVs) whose manufacturers agree to invest at least ₹4,150 crore to set up facilities in India, paving the way for the entry of Tesla which has long demanded such a concession.

The new EV policy allows the import of some completely built-up (CBU) cars at a 15% import duty — much lower than the old rates of 60% or 100%.

Tesla in 2021 had asked central ministries to reduce import duties to 15-40% on fully assembled cars, depending on their price. The new policy, released Friday by the Ministry of Heavy Industries, effectively fulfils that demand.

Global EV manufacturers including Tesla had been seeking tariff concessions in return for building manufacturing plants in India.

As per the earlier policy, the customs duty on completely built-up cars was 60% or 100%, depending on engine size and whether the cost, insurance and freight (CIF) value was higher or lower than $40,000. If the car cost $40,000 or more, the duty was 100%, a cheaper car attracted 60% duty.

The new EV policy states: "EV passenger cars (e-4W) can initially be imported with a minimum CIF value of $35,000, at a duty rate of 15 per cent for a period of 5 years from the date of issuance of approval letter by Ministry of Heavy Industries."

But the government has also put a cap of 8,000 on the number of EVs that can be imported at the reduced rate. The carryover of unutilised annual import limits would be permitted, the policy read. In order to avail duty concessions, the EV policy has set the minimum investment limit for manufacturers at ₹4,150 crore.

"The manufacturing facility(ies) shall be made operational within a period of 3 years from the date of issuance of approval letter by MHI and achieve minimum Domestic value addition (DVA) of 25 per cent within the same period. The approved applicant will be required to achieve a minimum DVA of 50 per cent within a period of 5 years from the date of issuance of approval letter by MHI," read the new policy.

The government said that the scheme is intended to promote EV manufacturing in India, a sector that is expected to grow into a major category within the automobile sector in the coming years.

India is currently the world's third largest automobile market and one of the fastest growing automotive markets in the world. The current market size of the automotive sector is ₹12.5 lakh crore and the sector is expected to cross ₹24.9 lakh crore by 2030. The automotive sector contributes over 7.1% to India's GDP.

Officials said India has the opportunity to lead the global transition from the conventional internal combustion engine powertrain to a more efficient and decarbonised EV technology.

A Tesla 'gigafactory' in Germany. The company had been seeking tariff concessions to build a plant in India. Reuters file

- **EVs in India:**
  - Electric vehicle sales in India jumped 49.25 per cent year-on-year to more than15 lakh units in 2023, according to a data released by the Federation of Automobile Dealers' Association (FADA).
    - The EV industry had recorded a total sale of around 10 lakh units in 2022, as per the data.
  - The surge in sales can be attributed to increase in the availability of products in the market, high fuel prices, state subsidies and sops offered under the **FAME-II Initiative**.
- **About FAME-II Scheme:**
  - Launched in 2015, the Fame India scheme is an **incentive scheme that encourages the adoption of electric and hybrid vehicles**.
  - The full form of **FAME India** scheme is "Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India".
  - In 2019, the Central government approved Phase-II of FAME Scheme with an outlay of **10,000 Crore for a period of 3 years**.
    - Earlier this year, it was extended to March 31, 2024.
  - **Phase-II aims to generate demand by way of supporting 7000 e-Buses, 5 lakh e-3 Wheelers, 55,000 e-4 Wheeler Passenger Cars (including Strong Hybrid) and 10 lakh e-2 Wheelers.**
  - Nearly 2 lakh vehicles have been supported under the FAME-II scheme.
- **Other Measures taken by the Government to promote use of EVs:**
  - **Battery Swapping Policy**:
    - Battery swapping is an alternative which involves exchanging discharged batteries for charged ones and provides flexibility to charge them separately.
    - This de-links charging and battery usage and keeps the vehicle in operational mode with negligible downtime.
    - NITI Aayog, recently, released a draft battery swapping policy under which all metropolitan cities with a population above 40 lakh will be prioritised for development of battery swapping network under the first phase.
    - **Battery swapping is an alternative which involves exchanging discharged batteries for charged ones and provides flexibility to charge them separately.**
    - This de-links charging and battery usage and keeps the vehicle in operational mode with negligible downtime.
  - **Switching to an EV**:
    - Central/State governments provide an upfront subsidy that reduces the overall costs of electric vehicles.
  - **E-AMRIT Portal**:
    - The e-AMRIT portal offers various resources to help ease the migration to electric vehicles.
- **New EV Policy with Tax Relief**
  - The Government of India has approved a scheme to promote India as a manufacturing destination so that e-vehicles with the latest technology can be manufactured in the country.

- The policy is designed to attract investments in the e-vehicle space by reputed global EV manufacturers.
- This will provide Indian consumers with access to latest technology, boost the Make in India initiative, strengthen the EV ecosystem by promoting healthy competition among EV players.
- It will also lead to high volume of production, economies of scale, lower cost of production, reduce imports of crude Oil, lower trade deficit, reduce air pollution, particularly in cities, and will have a positive impact on health and environment.

- **Key Features of the Policy:**
  - Minimum Investment required: **Rs 4,150 Cr**;
  - No limit on maximum Investment;
  - **Timeline for manufacturing**:
    - 3 years for setting up manufacturing facilities in India, and to start commercial production of e-vehicles, and reach 50% domestic value addition (DVA) within 5 years at the maximum.
  - **Domestic value addition (DVA) during manufacturing**:
    - A localization level of 25% by the 3rd year and 50% by the 5th year will have to be achieved.
  - The **customs duty of 15%** (as applicable to CKD units) would be applicable for a period of 5 years
  - **Not more than 8,000 EVs per year** would be permissible for import under this scheme. The carryover of unutilized annual import limits would be permitted.
  - The Investment commitment made by the company will have to be backed up by a bank guarantee in lieu of the custom duty forgone.

6. Atmospheric Research Testbed (ART)
GS 3 (Science and Tech)

- **Why in News:** The first phase of India's **Atmospheric Research Testbed in Central India (ART-CI) was inaugurated** at Silkheda in Sehore district, located about 50 km northwest of Bhopal in Madhya Pradesh.

ATMOSPHERIC RESEARCH TESTBED

A facility to observe and study weather parameters linked to India's Monsoon Core Zone

ANJALI MARAR
BENGALURU, MARCH 15

THE FIRST phase of India's Atmospheric Research Testbed in Central India (ART-CI) was inaugurated on March 12 at Silkheda village in Madhya Pradesh's Sehore district. The 100-acre facility houses 25 high-end meteorological instruments for studying vital cloud processes associated with India's Monsoon Core Zone (MCZ).

What is the Atmospheric Research Testbed (ART)?

ART is an open-field, focused observational and analytical research programme. The facility aims to conduct ground-based observations of weather parameters like temperature and wind speeds, and on-site observations of the transient synoptic systems — like low-pressure areas and depressions forming in the Bay of Bengal — during the southwest monsoon season from June to September. Developed by the Ministry of Earth Sciences at a cost of Rs 125 crore, the Indian Institute of Tropical Meteorology (IITM), Pune, is in charge of its operations.

Why is the MCZ important?

Much of Indian agriculture is rain-fed, as is cultivation along the MCZ that spans the central India region from Gujarat to West Bengal. The southwest monsoon season accounts for 70% of the country's annual average rainfall (880mm). It is also when the majority of Kharif cultivation is undertaken. During this season, several rain-bearing atmospheric systems develop in the Bay of Bengal. Studies have correlated the all-India rainfall performance to the rainfall received over the central India region, highlighting its importance. Central India, therefore, acts as a natural laboratory for scientists and meteorologists to perform a hands-on study of Indian monsoons. They can record data and make observations about the allied systems, clouds, and other associated physical and atmospheric parameters. Silkheda falls directly in line with the path of major rain-bearing synoptic systems. Besides, this area is relatively free of pollutants, making it suitable for setting up sensitive, high-end meteorological instruments and observatories.

The Atmospheric Research Testbed is spread across 100 acres. MoES

What will ART do?

While the India Meteorological Department (IMD) issues a special rainfall forecast for the MCZ, there is still limited understanding about the role of these synoptic systems, their associated cloud physics, cloud properties, and their overall role in enhancing monsoon rainfall. Moreover, climate change is driving erratic rainfall patterns in places like India. With ART, scientists will be able to generate and obtain long-term observations on cloud microphysics, precipitation, convection, and land-surface properties, among a host of other parameters. This information will be assimilated and fed into the numerical weather models to enhance rainfall forecasts, ultimately helping farmers plan their activities better.

- **Significance of Atmospheric Research Testbed (ART)**
  - The ART is an **open-field, focused observational and analytical research programme** at Silkheda
  - The facility aims to conduct **ground-based observations of weather parameters** like **temperature, wind speeds**, etc. and **in-situ (on-site) observations** of the transient synoptic systems – like **low-pressure areas and depressions** that form in the Bay of Bengal – during the **southwest monsoon season** from June to September.
  - Studying these systems and their associated cloud parameters will be used to generate high volumes of data over a long period.
  - It can then be compared with the existing weather models so that improvements can be made to obtain **accurate rainfall predictions.**
- **Need of having an Atmospheric Research Testbed**
  - At present, 45% of **India's labour force is** employed in the agriculture sector. Much of Indian agriculture is **rain-fed**, as is cultivation along the **Monsoon Core Zone (MCZ),** which spans the central India region from Gujarat to West Bengal.
  - The **southwest monsoon season** accounts for 70 per cent of the country's annual average rainfall (880mm). Throughout India, the majority of **Kharif cultivation** is undertaken between July and August, which see an average monthly rainfall of 280.4mm and 254.9mm (1971–2020 average), respectively.
  - During this four-month-long season, several rain-bearing synoptic systems, namely the low pressures or depressions, develop in the Bay of Bengal. Inherently, these systems move westwards/northwestwards over to the Indian mainland and pass through the MCZ, causing bountiful rainfall.
  - Though IMD issues rainfall forecasts, there is still limited understanding about the role of these synoptic systems, their associated cloud physics, cloud properties and their overall role in enhancing the monsoon rainfall.

- **Reason for choosing Madhya Pradesh (Bhopal)**
  - The location Silkheda, falls directly in line with the path of **major rain-bearing synoptic systems**. This will facilitate direct monitoring and tracking.
  - Besides, the locality is pristine and free of anthropogenic and other pollutants, making it the best site in central India for setting up sensitive, high-end meteorological instruments and observatories for recording data.

7. AI, Elections, Disinformation
GS 2 (Social Issues)

AI, elections, disinformation

Amid the AI boom, there is concern worldwide over the ways in which the great tech disruptor can be used to put election disinformation on steroids — and the impact of this on society and democracy

ANIL SASI
NEW DELHI, MARCH 15

IN MARCH 2018, the Cambridge Analytica scandal brought into mainstream public discourse the impact of social media on electoral politics, and the possibility of manipulating the views of Facebook users using data mined from their private posts. To what extent have things changed in 2024?

The shadow of large language models looms over elections around the world, and stakeholders are aware that even one relatively successful deployment of an artificial intelligence (AI)-generated disinformation tool could impact both campaign narratives and election results very significantly.

Three-way trouble

AI can accelerate the production and diffusion of disinformation in broadly three ways, contributing to organised attempts to persuade people to vote in a certain way.

First, AI can magnify the scale of disinformation by thousands of times. Second, hyper-realistic deep fakes of pictures, audio, or video could influence voters powerfully before they can be possibly fact-checked. Third, and perhaps most importantly, by microtargeting.

AI can be used to inundate voters with highly personalised propaganda on a scale that could make the Cambridge Analytica scandal appear microscopic, as the persuasive ability of AI models would be far superior to the bots and automated social media accounts that are now baseline tools for spreading disinformation.

The risks are compounded by social media companies such as Facebook and Twitter significantly cutting their fact-checking and election integrity teams. While YouTube, TikTok and Facebook do require labelling of election-related advertisements generated with AI, that may not be a foolproof deterrent.

The new frontier

Asked if he was worried about AI's ability to spread disinformation, OpenAI chief executive Sam Altman said last year: "Right now, it's like troll farms trying to interfere with elections... They make one great meme and that spreads out... That'll continue to happen and it'll get better. But...what happens if an AI reads everything you've ever written online, every article, every tweet, everything, and then right at the exact moment, sends you one message customised for you? That really changes the way you think about the world... that's like a new kind of interference that just wasn't possible before AI."

That, really, is the new frontier.

Imminent danger

A new study published in PNAS Nexus predicts that disinformation campaigns will increasingly use generative AI to propagate election falsehoods. The research, which used "prior studies of cyber and automated algorithm attacks" to analyse, model, and format the proliferation of bad-actor AI activities online, predicts that AI will help spread toxic content across social media platforms on an almost-daily basis in 2024, "Controlling bad-actor-artificial intelligence activity at scale across online battlefields" (Neil F Johnson and others)

The fallout could potentially affect election results in more than 50 countries. The experience of last year's elections in Slovakia and Argentina is instructive in this regard. (See box)

The World Economic Forum's Global Risks Perception Survey, ranks misinformation and disinformation among the top 10 risks, with easy-to-use interfaces of large-scale AI models enabling a boom in false information and "synthetic" content — from sophisticated voice cloning to fake websites. The report also warned that disinformation in these elections could destabilise societies by discrediting and questioning the legitimacy of governments.

Potential displayed

Generative AI companies with the most popular visual tools prohibit users from creating "misleading" images. However, researchers with the British nonprofit Centre for Countering Digital Hate (CCDH), who tested four of the largest AI platforms — Midjourney, OpenAI's ChatGPT Plus, Stability.ai's DreamStudio, and Microsoft's Image Creator — succeeded in making deceptive election-related images more than 40% of the time.

The researchers were able to create fake images of Donald Trump being led away by police in handcuffs and Joe Biden in a hospital bed. According to a report by the BBC quoting a public database, users of Midjourney have created fake photos of Biden handing wads of cash to Israeli Prime Minister Benjamin Netanyahu, and Trump playing golf with Russian President Vladimir Putin.

Regulatory tightrope

The Indian government has asked digital platforms to provide technical and business process solutions to prevent and weed out misinformation that can harm society and democracy. Minister for IT and Communications Ashwini Vaishnaw has said that a legal framework against deepfakes and disinformation will be finalised after the elections.

Earlier this month, the IT Ministry had issued an advisory to companies such as Google and OpenAI, and to those running foundational models and wrappers, that their services should not generate responses that are illegal under Indian laws or "threaten the integrity of the electoral process". The advisory had faced a backlash from some generative AI space start-ups, including those invested in the ecosystem abroad, over fears of regulatory overreach that could throttle the fledgling industry.

Aravind Srinivas, founder of Perplexity AI, said the advisory was a "bad move by India", and Martin Casado, general partner at the US-based investment firm Andreessen Horowitz, described it as "anti-innovation".

While, the government clarified that the advisory was directed only towards "significant" platforms, and not startups, the episode underlines the need for regulators to tread with caution on the fine line between countering AI-linked misinformation and being seen as stifling AI-led innovation.

Fakes Around the World

ARGENTINA
Before the November 19, 2023 Argentina presidential election runoff, candidate Javier Milei posted a doctored image (above) of his rival Sergio Massa in Chinese communist military overalls. The allegedly AI-generated image got 3 mn views on X, a large number in a country of 46 mn. Milei is now Argentina's President.

INDIA
On January 21, 2024, the late M Karunanidhi 'told' a DMK youth wing meeting in Salem about the Centre's suppression of states' rights in an AI-generated video. Two days later, Karunanidhi, who died in 2018, appeared in another fake video (screengrab above) and praised Chief Minister MK Stalin and DMK leader T R Baalu.

SLOVAKIA
In September 2023, before a key election, an audio surfaced online in which a top candidate was heard saying that he had bought the votes of a minority group, and that he would tax beer if voted to power. AFP fact checkers concluded that the audio was AI-generated. The candidate was eventually defeated.

- **Why in News:** The shadow of large language models (LLMs) looms over elections around the world. The stakeholders are aware that even one relatively successful deployment of an AI-generated disinformation tool could impact both campaign narratives and election results very significantly.
- **Impact of Artificial Intelligence (AI) on Elections:**
  - In 2018, **the Cambridge Analytica scandal** brought into mainstream public discourse the impact of social media on electoral politics, and the possibility of manipulating the views of Facebook users using data mined from their private posts.
  - AI can accelerate the production and diffusion of disinformation **in broadly three ways**, contributing to organised attempts to persuade people to vote in a certain way.
    - **First**, AI can magnify the scale of disinformation by thousands of times.
    - **Second**, hyper-realistic deep fakes of pictures, audio, or video could influence voters powerfully before they can be possibly fact-checked.
    - **Third**, and perhaps most importantly, by microtargeting.
  - AI can be used **to inundate voters with highly personalised propaganda**, as the persuasive ability of AI models would be far superior to the bots and automated social media accounts.
  - **The risks are compounded by social media companies** such as Facebook and Twitter significantly cutting their fact-checking and election integrity teams.
    - While YouTube, TikTok and Facebook do require labelling of election-related advertisements generated with AI, that may not be a foolproof deterrent.
- **Imminent Dangers Posed by the AI on the Election Process:**
  - A new study predicts that AI will help **spread toxic content across social media platforms** on an almost-daily basis in 2024 and could potentially affect **election results in more than 50 countries.**
    - This could **destabilise societies** by discrediting and questioning the legitimacy of governments
  - The World Economic Forum's **Global Risks Perception Survey,** ranks misinformation and disinformation among the top 10 risks.
    - The easy-to-use interfaces of large-scale AI models **enable a boom in false information and "synthetic" content** - from sophisticated voice cloning to fake websites.
- **Recent Regulatory Steps by India to Curtail Misinformation by AI Models:**
  - **The Indian government** has asked digital platforms to provide technical and business process solutions to prevent and weed out misinformation that can harm society and democracy.
  - According to the Ministry of Electronics and Information Technology (MeitY), **a legal framework against deepfakes and disinformation will be finalised after the elections**.
  - Earlier this month, the MeitY had issued **an advisory to companies** such as Google and OpenAI, that their services should not generate responses that are illegal under Indian laws or threaten the integrity of the electoral process.
    - The advisory had faced a backlash from some generative AI space startups **over fears of regulatory overreach that could throttle the emerging industry.**
  - While the government stressed that the advisory was only meant at "significant" platforms and not startups, **the incident highlights the need for regulators to tread carefully on the narrow line** between –
    - Combating AI-linked misinformation and
    - Being perceived as restricting AI-led innovation.

18th March, 2024

1. Kerala to challenge Presidential Assent Withholding

Recent events of importance

Kerala to move SC on President withholding Bills

Move will open doors for debate on scope of judicial review of President's decisions; State to argue that Governor should not have referred Bills

K.S. Sudhi
KOCHI

Kerala will soon challenge before the Supreme Court the legality of President Droupadi Murmu withholding her assent to the Bills passed by the Kerala Legislature.

The President had withheld assent to Kerala University Laws (Amendment No. 2) Bill 2022, University Law Amendment Bill, 2022, and the University Law Amendment Bill, 2021 from the seven Bills that were referred to her in November 2023. However, she gave her assent to the Kerala Lok Ayukta (Amendment) Bill, 2022. The State is yet to hear about the fate of two other University Law (Amendment) Bills.

The unusual move of the Kerala government will open doors for a Constitutional debate on the scope of a judicial review of the decisions of the President of India. The State would contend that the legality of the President's decisions and the factors that influenced them can be judicially reviewed.

March 22

The State plans to bring up the issue before the Supreme Court on March 22 when the court considers its writ petition seeking to issue a directive to the Governor to act on the Bills passed by the State Legislature. Kerala would argue that the Governor should not have referred the Bills to the President as their subject matters were confined to the State List of the Constitution where the State has powers to legislate. None of the Bills were in conflict with any Central legislation.

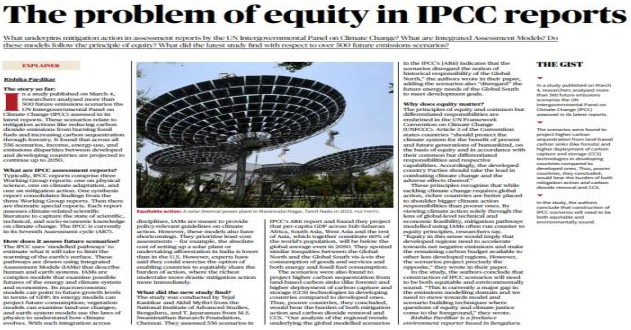
Also, the Bills did not belong to the special categories for which prior Presidential assent was required, sources pointed out. Kerala would also state that the Bills, which followed the Ordinances cleared by the Governor, should not have been sent for Presidential assent.

Kerala would argue that the Governor should not have referred the Bills to the President as their subject matters were confined to the State List of the Constitution where the State has powers to legislate.

- **Why in News:** Kerala will soon challenge the legality of **President Droupadi Murmu** withholding her assent for the Bills that were passed by the Kerala Legislature before the Supreme Court. The President had withheld assent to **Kerala University Laws Bill 2022, University Law Amendment Bill, 2022, and the University Law Amendment Bill, 2021** from the seven Bills that were referred to her.
- **Significance of the move**
  - The problem of delay in according assent to Bills passed by the legislature is a burning issue that confronts Indian polity.
  - The unusual move of the Kerala Government will open doors for a **Constitutional debate on the scope of a judicial review** of the decisions of the President of India.
  - The State would contend that the **legality of the President's decisions** and the factors that influenced it can be **judicially reviewed.**
  - The State plans to bring up the issue before the Supreme Court. The state would argue:
    - Governor should not have referred the Bills to the President as its subject matters were confined to the **State List** of the Constitution where the State has powers to legislate.
    - None of the Bills were in conflict with any Central legislation.
    - The Bills did not belong to the special categories for which prior Presidential assent was required, sources pointed out.
- **Impact of the Delay**
  - **Political implications:** The object of every legislation is **public good**, which is **defeated by delay**. Delay may also have political implications for the party in power in the State.
  - **Unfulfilled objectives:** By such delay, fulfilment of laudable objectives sought to be achieved by the legislation gets delayed or even be defeated.
  - **Affected Centre-State Relations:** The Union is not affected by such delay or inaction. It is the interests of the State that are jeopardized. Centre-State relations may also be adversely affected.

2. The problem of equity in IPCC reports

GS 3 (Environment)



The problem of equity in IPCC reports

What underpins mitigation action in assessment reports by the UN Intergovernmental Panel on Climate Change? What are Integrated Assessment Models? Do these models follow the principle of equity? What did the latest study find with respect to over 500 future emissions scenarios?

EXPLAINER

Rishika Pardikar

The story so far:

It is study published on March 4, researchers analysed more than 500 future emissions scenarios the UN Intergovernmental Panel on Climate Change (IPCC) assessed in its latest reports. These scenarios relate to mitigation actions like reducing carbon dioxide emissions by switching to cleaner fuels and transitioning to greener sources through forestry. It found that across all 556 scenarios, **income, energy-use, and emissions disparities** between developed and developing countries are projected to continue up to 2050.

What are IPCC assessment reports?

Typically, IPCC reports comprise three Working Group reports: one on physical science, one on impacts and adaptation, and one on mitigation actions. One synthesis report consolidates findings from the three Working Group reports. There are thematic special reports. Each report assesses climate-related scientific, technical, socio-economic, and socio-economic knowledge on climate change. The IPCC is currently in its Seventh Assessment cycle (AR7).

How does it assess future scenarios?

The IPCC uses 'modelled pathways' to estimate what it will take to limit the temperature rise to certain levels. These pathways are drawn using Integrated Assessment Models (IAMs) that describe how human societies operate. They are complex models that examine possible futures of the energy and climate system and economies. Its macroeconomic models can point to future growth levels in regions. Its land-use models can project future consumption; vegetation models can examine land-use changes; and its energy models look at the role of physics to understand how climate evolves. With such integration across disciplines, IAMs are meant to provide policy-relevant guidelines on climate action. However, these models also have shortcomings. They prioritise least-cost mitigation options, like the most feasible cost of setting up a solar plant or undertaking afforestation in India is lower than in Europe, and therefore, the models said they could exercise the option of enabling countries to equitably share the burden. They also believe the richest countries must undertake more drastic mitigation action more immediately.

What did the new study find?

The study authored by Sejal Patel, Jessica Kankiar and Akhil Mythri from the National Institute of Advanced Studies, Bengaluru, and Vaibhav Chaturvedi from the Swaminathan Research Foundation, Chennai. They assessed 556 scenarios in IPCC's AR6 report and found they project that per-capita GDP across Sub-Saharan Africa, South Asia, West Asia and the rest of Asia, which together constitute 66% of the world's population, will be 75% below the global average even in 2050. They spotted similar inequities between the Global North and Global South in terms of the consumption of goods and services and both energy and fossil fuel consumption. The scenarios also project that they will project higher carbon sequestration from land-based carbon sinks (like forests) and higher deployment of carbon capture and storage (CCS) technologies in developing countries than in developed countries. Thus, poorer countries, they concluded, would bear the burden of both mitigation action and carbon dioxide removal and CCS.

In the IPCC's [AR6] indicates that the scenarios disregard the notion of "common but differentiated" in the Global North," the authors wrote in their paper, adding the scenarios also "disregard" the principle of equity in the Global South to meet development goals.

Why does equity matter?

The principles of equity and common but differentiated responsibilities are enshrined in the UN Framework Convention on Climate Change (UNFCCC). These principles recognise that while tackling climate change requires global action, richer countries are better placed to shoulder bigger climate action responsibilities than poorer ones. By viewing climate action solely through the lens of cost-effectiveness and economic feasibility, mitigation pathways modelled using IAMs often run counter to equity principles, researchers say. "Equity in this sense would imply that developed countries must move faster towards net negative emissions and make the remaining carbon budget available to developing countries. Unfortunately, the scenarios project precisely the opposite," they wrote in their paper.

The study also found that almost all the projected IPCC scenarios will need to be both equitable and environmentally sound. "This is currently a major gap in the emissions modelling domain and we hope that researchers developing scenario-building techniques where questions of equity and climate justice are central," Ms. Patel told *The Hindu*.

Rishika Pardikar is a freelance environment reporter based in Bengaluru

THE GIST

In a study published on March 4, researchers analysed more than 500 future emissions scenarios the UN Intergovernmental Panel on Climate Change (IPCC) assessed in its latest reports.

The scenarios were found to project higher carbon sequestration from land-based carbon sinks and higher deployment of carbon capture and storage (CCS) technologies in developing countries than in developed ones. Thus, poorer countries, they concluded, would bear the burden of both mitigation action and carbon dioxide removal and CCS.

In the study, the authors conclude that modernisation of IPCC scenarios will need to be both equitable and environmentally sound.

- **Why in News:** In a recent study, researchers analysed more than 500 future emissions scenarios the UN Intergovernmental Panel on Climate Change (IPCC) assessed in its latest reports. The study found that across all 556 scenarios, **income, energy-use, and emissions disparities** between developed and developing countries are projected to continue up to 2050.
- **Significance of 'Equity'**
  - The principles of equity and common but differentiated responsibilities are enshrined in the **UN Framework Convention on Climate Change (UNFCCC).**
  - These principles recognise that w**hile tackling climate change requires global action, richer countries are better placed** to shoulder bigger climate action responsibilities than poorer ones.

- By viewing climate action solely through the lens of **global-level** technical and economic feasibility, mitigation pathways often run counter to **equity principles.**
- Equity in this sense would imply that **developed regions need to accelerate towards net negative emissions and make the remaining carbon budget available to other less developed regions.** However, the scenarios project precisely the
- Thus, the construction of IPCC scenarios will need to be both equitable and environmentally sound.

- **Equities in IPCC Report**
  - The study assessed 556 scenarios in **IPCC's AR6 report** and found they project that per-capita GDP across Sub-Saharan Africa, South Asia, West Asia and the rest of Asia, which together constitute 60% of the world's population, will be below the global average even in 2050.
  - They spotted similar **inequities** between the **Global North and the Global South** vis-a-vis the consumption of goods and services and both energy and fossil fuel consumption.
  - The scenarios were also found to project **higher carbon sequestration** from **land-based carbon sinks (like forests)** and higher deployment of **carbon capture and storage (CCS) technologies** in developing countries compared to developed ones.
  - Thus, poorer countries would bear the burden of both **mitigation action** and **carbon dioxide removal and CCS.**

3. Selection of Election Commissioners
GS (Elections)

- **Why in News:** The President has appointed Gyanesh Kumar and Sukhbir Singh Sandhu, both retired IAS officers, as Election Commissioners (ECs) to fill up two vacancies in the three-member Election Commission of India under the **Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023.**

How were the new Election Commissioners selected?

What does the law say on the appointment process? Why has the new Act been challenged?

K. Venkataramanan

The story so far: The President has appointed Gyanesh Kumar and Sukhbir Singh Sandhu, both retired IAS officers, as Election Commissioners (ECs) to fill up two vacancies in the three-member Election Commission of India. The two officials are the first to be appointed under the new law governing appointments to the constitutional body, the Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023.

How were the new ECs selected? In terms of the new law, the two ECs were selected by a three-member Selection Committee, comprising Prime Minister Narendra Modi, Union Home Minister Amit Shah, and the Leader of the Indian National Congress in the Lok Sabha, Adhir Ranjan Chowdhury, as leader of the largest party in the Opposition. They were chosen out of a shortlisted panel of six names. The shortlisting was done by a committee which, according to the Act, is headed by the Union Minister for Law and Justice and includes two officials of the rank of Secretary to the government.

What was the process before this? Article 324 of the Constitution vests the "superintendence, direction and control of elections" in an Election Commission. It also says the EC shall consist of the Chief Election Commissioner and such number of other Election Commissioners, if any, as the President may fix from time to time. This provision was subject to any law made in that behalf by Parliament. However, for nearly 40 years from the adoption of the Constitution, the EC only had a Chief Election Commissioner (CEC). It was not until October 1989 that it became a multi-member body. However, the appointment of two Election Commissioners was rescinded within a short time, that is on January 1, 1990.

A law was enacted in 1991 to fix the conditions of service of the CEC and the ECs, and amended in 1993. However, it did not provide for any appointment process. In the absence of any particular process being laid down by parliamentary law, the President has been appointing the CEC and ECs. The only known process is that the Law Ministry puts up a panel of names to the Prime Minister, who recommends the appointment of one of them as EC to the President. It had become a convention to appoint officials as ECs first and then, on the completion of the tenure of the CEC, the senior EC was elevated as CEC.

What did the SC rule on the process? In *Anoop Baranwal versus Union of India*, a five-member Constitution Bench ruled that it was the intention of the makers of the Constitution that the power to appoint the CEC and other ECs was not meant to be given exclusively to the executive and that the power was to be exercised "subject to any law made by Parliament". Noting that no such law was enacted since the inception of the Constitution, the court laid down an interim arrangement for the appointment. This was to operate until Parliament made its own law. The court said the appointments should be made by a three-member committee comprising the Prime Minister, the Leader of the Opposition in the Lok Sabha (or the leader of the party that is largest in the Opposition) and the Chief Justice of India. It was in response to this that Parliament enacted the 2023 Act, which received presidential assent and was notified late in December 2023.

What is the criticism against the Act? The foremost criticism from those who have challenged the new Act is that it has removed the CJI from the selection panel and has made a Union Minister a member instead. This gives the executive a two-one majority in the three-member committee. The government has argued that the Act does not really remove the CJI from the appointment process, as the inclusion of the CJI was only a stop-gap arrangement put in place until the enactment of a law. The Supreme Court has repeatedly rejected attempts to obtain a stay on the new Act. The petitioners have approached the court again against the appointment of the two ECs. Their primary argument is that the Act violates the main principle in the Constitution Bench judgment – the need to free the appointment process from the executive.

THE GIST

The President has appointed Gyanesh Kumar and Sukhbir Singh Sandhu, both retired IAS officers, as Election Commissioners (ECs) to fill up two vacancies in the three-member Election Commission of India.

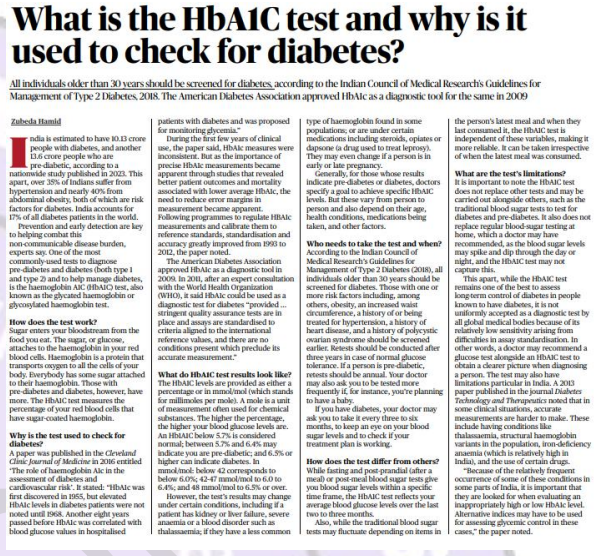
Article 324 of the Constitution vests the "superintendence, direction and control of elections" in an Election Commission.

In terms of the new law, the two ECs were selected by a three-member Selection Committee, comprising Prime Minister Narendra Modi, Union Home Minister Amit Shah, and the Leader of the Indian National Congress in the Lok Sabha, Adhir Ranjan Chowdhury, as leader of the largest party in the Opposition.

- **The new Selection Process**
  - The CEC and ECs are appointed by the **President of India**on the recommendation of a selection committee.
  - **Selection Committee**: In terms of the new law, the two ECs were selected by a **three-member Selection Committee**, comprising
    - **Prime Minister** (Narendra Modi)
    - **Union Home Minister** (Amit Shah)
    - **Leader of the largest party in the Opposition** (Adhir Ranjan Chowdhury)
  - **Eligibility criteria**: Eligibility for the posts includes holding (or having held) a post equivalent to the Secretary to the central government. The CEC and ECs must:
    - be persons of integrity,
    - have knowledge and experience in the management and conduct of elections, and
    - be or have been Secretary (or equivalent) to the government
  - **Term and reappointment**: Members of the Election Commission hold office for six years, or until they attain the age of 65 years, whichever is earlier.
    - Members of the Commission cannot be re-appointed. If an EC is appointed as a CEC, the overall period of the term may not be more than six years.

4. Diabetes in India
GS 2 (Health)

- **Why in News:** India accounts for 17% of all diabetes patients in the world. To combat this huge percentage of non-communicable disease burden requires prevention and early detection. One of the most commonly-used tests to diagnose pre-diabetes and diabetes, is the **haemoglobin A1C (HbA1C) test.**
- **About haemoglobin A1C (HbA1C) test**
  - Sugar enters bloodstream from the food. The sugar, or glucose, attaches to the **haemoglobin** in red blood cells.
  - **Haemoglobin** is a protein that transports oxygen to all the cells of the body.
  - Everybody has some sugar attached to their haemoglobin. Those with pre-diabetes and diabetes, however, have more.
  - The HbA1C test **measures the percentage** of red blood cells that have **sugar-coated, or glycated, haemoglobin.**



What is the HbA1C test and why is it used to check for diabetes?

All individuals older than 30 years should be screened for diabetes, according to the Indian Council of Medical Research's Guidelines for Management of Type 2 Diabetes, 2018. The American Diabetes Association approved HbA1c as a diagnostic tool for the same in 2009

Zubeda Hamid

India is estimated to have 10.13 crore people with diabetes, and another 13.6 crore people who are pre-diabetic, according to a nationwide study published in 2023. This apart, over 35% of Indians suffer from hypertension and nearly 40% from abdominal obesity, both of which are risk factors for diabetes. India accounts for 17% of all diabetes patients in the world.

Prevention and early detection are key to helping combat this non-communicable disease burden, experts say. One of the most commonly-used tests to diagnose pre-diabetes and diabetes, both type 1 and type 2) and to help manage diabetes, is the haemoglobin A1C (HbA1C) test, also known as the glycated haemoglobin or glycosylated haemoglobin test.

How does the test work?

Sugar enters your bloodstream from the food you eat. The sugar, or glucose, attaches to the haemoglobin in your red blood cells. Haemoglobin is a protein that transports oxygen to all the cells of your body. Everybody has some sugar attached to their haemoglobin. Those with pre-diabetes and diabetes, however, have more. The HbA1C test measures the percentage of your red blood cells that have sugar-coated haemoglobin.

Why is the test used to check for diabetes?

A paper was published in the *Cleveland Clinic Journal of Medicine* in 2016 entitled 'The role of haemoglobin A1c in the assessment of diabetes and cardiovascular risk'. It stated: "HbAlc was first discovered in 1955, but elevated HbAlc levels in diabetes patients were not noted until 1968. Another eight years passed before HbAlc was correlated with blood glucose values in hospitalised patients with diabetes and was proposed for monitoring glycemia."

During the first few years of clinical use, the paper said, HbAlc measures were inconsistent. But as the importance of precise HbAlc measurements became apparent through studies that revealed better patient outcomes and mortality associated with lower average HbAlc, the need to reduce error margins in measurement became apparent. Following programmes to regulate HbAlc measurements and calibrate them to reference standards, standardisation and accuracy greatly improved from 1993 to 2012, the paper noted.

The American Diabetes Association approved HbAlc as a diagnostic tool in 2009. In 2011, after an expert consultation with the World Health Organization (WHO), it said HbAlc could be used as a diagnostic test for diabetes "provided ... stringent quality assurance tests are in place and assays are standardised to criteria aligned to the international reference values, and there are no conditions present which preclude its accurate measurement."

What do HbAlC test results look like?

The HbAlC levels are provided as either a percentage or in mmol/mol (which stands for millimoles per mole). A mole is a unit of measurement often used for chemical substances. The higher the percentage, the higher your blood glucose levels are. An HbA1C below 5.7% is considered normal; between 5.7% and 6.4% may indicate you are pre-diabetic; and 6.5% or higher can indicate diabetes. In mmol/mol: below 42 corresponds to below 6.0%; 42-47 mmol/mol to 6.0 to 6.4%; and 48 mmol/mol to 6.5% or over.

However, the test's results may change under certain conditions, including if a patient has kidney or liver failure, severe anaemia or a blood disorder such as thalassaemia; if they have a less common type of haemoglobin found in some populations; or are under certain medications including steroids, opiates or dapsone (a drug used to treat leprosy). They may even change if a person is in early or late pregnancy.

Generally, for those whose results indicate pre-diabetes or diabetes, doctors specify a goal to achieve specific HbAlC levels. But these vary from person to person and also depend on their age, health conditions, medications being taken, and other factors.

Who needs to take the test and when?

According to the Indian Council of Medical Research's Guidelines for Management of Type 2 Diabetes (2018), all individuals older than 30 years should be screened for diabetes. Those with one or more risk factors including, among others, obesity, an increased waist circumference, a history of or being treated for hypertension, a history of heart disease, and a history of polycystic ovarian syndrome should be screened earlier. Retests should be conducted after three years in case of normal glucose tolerance. If a person is pre-diabetic, retests should be annual. Your doctor may also ask you to be tested more frequently if, for instance, you're planning to have a baby.

If you have diabetes, your doctor may ask you to take it every three to six months, to keep an eye on your blood sugar levels and to check if your treatment plan is working.

How does the test differ from others?

While fasting and post-prandial (after a meal) or post-meal blood sugar tests give you blood sugar levels within a specific time frame, the HbAlC test reflects your average blood glucose levels over the last two to three months.

Also, while the traditional blood sugar tests may fluctuate depending on items in the person's latest meal and when they last consumed it, the HbAlC test is independent of these variables, making it more reliable. It can be taken irrespective of when the latest meal was consumed.

What are the test's limitations?

It is important to note the HbAlC test does not replace other tests and may be carried out alongside others, such as the traditional blood sugar tests to test for diabetes and pre-diabetes. It also does not replace regular blood-sugar testing at home, which a doctor may have recommended, as the blood sugar levels may spike and dip through the day or night, and the HbAlC test may not capture this.

This apart, while the HbAlC test remains one of the best to assess long-term control of diabetes in people known to have diabetes, it is not uniformly accepted as a diagnostic test by all global medical bodies because of its relatively low sensitivity arising from difficulties in assay standardisation. In other words, a doctor may recommend a glucose test alongside an HbAlC test to obtain a clearer picture when diagnosing a person. The test may also have limitations particular in India. A 2013 paper published in the journal *Diabetes Technology and Therapeutics* noted that in some clinical situations, accurate measurements are harder to make. These include having conditions like thalassaemia, structural haemoglobin variants in the population, iron-deficiency anaemia (which is relatively high in India), and the use of certain drugs.

"Because of the relatively frequent occurrence of some of these conditions in some parts of India, it is important that they are looked for when evaluating an inappropriately high or low HbAlc level. Alternative indices may have to be used for assessing glycemic control in these cases," the paper noted.

5. Many Elections, AI's Dark Dimension
GS 3 (Science and Tech)

- **Why in News:**
  - **The exponential growth of Artificial Intelligence (AI)** has placed humanity at a pivotal juncture in its history.
  - The emergence of Generative AI (GAI) heralds **the prospect of Artificial General Intelligence (AGI),** which could potentially replicate human capabilities.
  - So, it is important to delve into **the transformative impact of AI on human existence, particularly focusing on electoral dynamics** and the broader societal implications.
- **The Electoral Landscape and Artificial Intelligence**
  - **A Significant Shift: AI as a Pivotal Factor**
    - The integration of AI into electoral processes marks **a significant paradigm shift in political landscapes worldwide.**
    - As nations prepare for elections, **the infusion of AI technologies introduces novel dynamics that necessitate a re-evaluation of traditional campaign strategies** and voter engagement tactics.
    - In the context of the 2024 elections, **including India's seven-phase general election, AI emerges as a pivotal factor shaping electoral outcomes.**
    - The deployment of Generative AI, with its capacity for dynamic simulations and mimicking real-world interactions, **introduces unprecedented opportunities and challenges for political actors and voters alike.**
  - **Utilisation of AI in Campaign Strategies and Voter Engagement**
    - Political parties and candidates are leveraging **AI-driven tools to analyse vast amounts of data, formulate targeted messaging, and optimize campaign strategies.**
    - AI-powered predictive analytics enable parties to identify swing voters, tailor messages to specific demographics, and allocate resources more efficiently.
    - Furthermore, **AI-driven sentiment analysis of social media feeds provides real-time insights into voter sentiments and emerging issues**, informing campaign messaging and response strategies.
    - Moreover, AI's influence extends beyond campaign strategies to voter engagement and mobilization efforts.
    - **Chatbots powered by AI algorithms facilitate personalised interactions with voters,** answering queries, disseminating information, and encouraging voter turnout.
- **Concerns Regarding AI's Impact on Electoral Integrity**
  - **The Rise of Deep Fakes**
    - However, the proliferation of AI in electoral landscapes raises concerns regarding its impact on democratic processes and electoral integrity.
    - **The rise of 'Deep Fake' technology, capable of generating hyper-realistic yet fabricated audio, video, and textual content, poses challenges** for identifying and countering misinformation and disinformation campaigns.

Many elections, AI's dark dimension

The rapid development of Artificial Intelligence (AI) models suggests that we are at an inflection point in the history of human progress. The speed with which the development of newer skills is taking place suggests that the day is not far off when Generative Artificial Intelligence (GAI) will transform into Artificial General Intelligence (AGI), which can mimic the capabilities of human beings. Such a situation could revolutionise our ideas about what to expect from machines. Breakthroughs in the AI domain will bring about a new chapter in human existence, including the way people react to both facts and falsehoods.

The potential of AI is already clear. Many such as Sam Altman of OpenAI in the United States, believe that it is the most important technology in history. AI protagonists further believe that AI is set to turbocharge, and dramatically improve, the standard of living of millions of human beings. It is, however, unclear, as of now, whether, as many Doomsday sayers aver, whether AI would undermine human values and that advanced AI could pose 'existential risks'.

AI and the electoral landscape

With the seven-phase general election in India having been announced, and to be held from April 19 to June 1, 2024, political parties and the electorate cannot, however, afford to ignore the AI dimension. This year, elections are also scheduled to be held (according to some reports) in as many as 50 other countries across the globe, apart from, and including, India, Mexico, the United Kingdom (by law, the last possible date for a general election is January 28, 2025) and the United States.

These elections are set to alter the fate of millions of people, and policymakers and the electorate need to ponder over the positive and negative impacts of this new technology. Rapid technological breakthroughs in AI (especially its latest manifestation, such as Generative AI, that provides dynamic simulations and mimics real world interactions) carry their own burdens. It may be too early to fully contemplate the possible impact of AGI– AI systems that simulate the capability of human beings – but all this is indicative of yet another dimension to electoral dynamics that cannot be ignored.

It may, hence, not be wrong to consider the elections of 2024 as a curtain-raiser to whether AI and its offerings (such as Generative AI) would prove to be a game changer. The world is by now aware that AI models such as ChatGPT, Gemini, Copilot are being employed in many fields, but 2024 would be a test case as to whether AI's newer models could alter electoral behaviours and verdicts as well. The good news, perhaps, is that those wishing to employ Generative AI to try and transform the electoral landscape do not have adequate time to fine-tune their AI models. It would, however, still be a mistake to underestimate the extent to which AI could impact the electoral landscape this time as well. What might not happen in 2024, may well happen in the next round of elections, both in India and worldwide.

M.K. Narayanan

is a former Director, Intelligence Bureau, a former National Security Adviser, a former Governor of West Bengal, and a former Executive Chairman of CyQuret Private Limited, a U.K.-U.S. cyber security joint venture

With a series of elections to be held across the world in 2024, the potential of AI to disrupt democracies cannot be dismissed

A recently published Pew Survey (if it can be treated as reliable) indicates that a majority of Indians support 'authoritarianism'. Those employing AI could well have a field day in such a milieu to further confuse the electorate. As it is, many people are already referring to the elections in 2024 worldwide as the 'Deep Fake Elections', created by AI software. Whether this is wholly true or not, the Deep Fake syndrome appears inevitable, given that each new election lends itself to newer and newer techniques of propaganda, all with the aim of confusing and confounding the electorate. From this, it is but a short step to the inevitability of Deep Fakes.

Tacking AI 'determinism'

AI technology makes it easier to enhance falsehoods and enlarge mistaken beliefs. Disinformation is hardly a new methodology or technology, and has been employed in successive elections previously. What is new is that sophisticated AI tools will be able to confuse the electorate to an extent not previously known or even envisaged. The use of AI models to produce reams of wrong information, apart from disinformation, accompanied by the creation of near realistic images of something that does not exist, will be a whole new experience. What can be said with some degree of certainty is that in 2024, the quality and quantity of disinformation is all set to overwhelm the electorate. What is more worrying is that the vast majority of such information would be incorrect. Hyper realistic Deep Fakes employed to sway voters, and micro targeting are set to scale new heights.

The potential of AI to disrupt democracies is, thus, very considerable. Simply being aware of the disruptive nature of AI and AI fakes is not enough. It may be necessary, for democracies in particular, to prevent such tactics from distorting the 'thought behaviour' of the electorate. AI deployed tactics will tend to make voters more mistrustful, and it is important to introduce checks and balances that would obviate efforts at AI 'determinism'. Notwithstanding all this, and while being mindful of the potential of AGI, panic is not warranted. There are many checks and balances available that could be employed to negate some of AI's more dangerous attributes.

The wide publicity given to a spate of recent inaccuracies associated with Google is a timely reminder that AI and AGI cannot be trusted in each and every circumstance. There has been public wrath worldwide over Google AI models, including in India, for their portrayal of persons and personalities in a malefic manner, mistakenly or otherwise. These reflect well the dangers of 'runaway' AI.

Inconsistencies and undependability still stalk many AI models and pose inherent dangers to society. As its potential and usage increases in geometric proportion, threat levels are bound to go up. As of now, even as the potential of AI remains very considerable, it tends to be undependable. More so, its 'mischief potential' cannot be ignored.

As nations increasingly depend on AI solutions for their problems, it is again important to recognise what many AI experts label as AI's 'hallucinations'. In simple terms, what these experts are implying is that 'hallucinations' make it hard to accept and endorse AI systems in many instances. What they further imply, specially in the case of AGI, is that it tends at times to make up things in order to solve new problems. These are often probabilistic in character and cannot be accepted *ipso facto* as accurate. The implication of all of this is that too much reliance on AI systems at this stage of development may be problematic. The stark reality, though, is that there is no backtracking from what AI or AGI promises, even if results are less dependable than one would like.

We cannot also afford to ignore other existential threats associated with AI. The dangers on this account pose an even greater threat than harm arising from bias in design and development. There are real concerns that AI systems, oftentimes, tend to develop certain inherent adversarial capabilities. Suitable concepts and ideas have not yet been developed to mitigate them, as of now. The main types of adversarial capabilities, overshadowing other inbuilt weaknesses are- 'poisoning' that typically degrades an AI model's ability to make relevant predictions; 'back dooring' that causes the model to produce inaccurate or harmful results; and even 'evasion' that entails resulting in a model misclassifying malicious or harmful inputs thus detracting from an AI model's ability to perform its appointed role. There are possibly other problems as well, but it may be too early to enumerate them with any degree of probability.

India's handling of AI

Elections apart, India being one of the most advanced countries in the digital arena, again needs to treat AI as an unproven entity. While AI brings benefits, the nation and its leaders should be fully aware of its disruptive potential. This is specially true of AGI, and they should act with due caution. India's lead in digital public goods could be both a benefit as well as a bane, given that while AGI provides many benefits, it can be malefic as well.

- **AI-generated deep fakes can deceive voters**, manipulate public opinion, and undermine trust in democratic institutions, thereby distorting electoral outcomes.
- **Influence on Public Discourse and Decision-making**
  - Furthermore, **the use of AI-driven algorithms in social media platforms for content curation and recommendation algorithms raises questions** about filter bubbles, echo chambers, and algorithmic bias.
  - **AI-powered algorithms may inadvertently amplify polarising content, reinforce preexisting biases, and contribute to the fragmentation of public discourse**, thereby influencing voter perceptions and decision-making processes.

- **Understanding AI Determinism, Challenges and Measures to Tackle It**
  - **Introduction to AI 'Determinism'**
    - As AI technology becomes increasingly pervasive in various aspects of society, including electoral landscapes, **addressing the phenomenon of AI 'determinism' becomes paramount**.
    - **'Determinism' in the context of AI refers to the propensity of AI-driven tactics to influence or determine human behaviour** and decision-making processes, often without individuals' awareness or consent.
  - **Challenges in Tackling AI 'Determinism'**
    - **One of the key challenges in tackling AI 'determinism' lies in mitigating the influence of AI-driven manipulation** on electoral dynamics
    - AI-powered algorithms can analyse vast amounts of data to predict and influence voter behaviour, shaping electoral outcomes in ways that may not align with democratic principles or the will of the electorate.
    - Therefore, **it is imperative to implement safeguards to prevent AI-driven tactics** from unduly influencing electoral processes and outcomes.
  - **Transparency and Accountability**
    - Transparency and accountability are critical components in addressing AI 'determinism.'
    - Electoral authorities and policymakers **must establish clear guidelines and regulations governing the use of AI in political campaigns** and voter engagement initiatives.
    - This includes requirements for disclosing the use of AI-driven algorithms, data sources, and methodologies employed in campaign strategies.
    - **By promoting transparency, stakeholders can enhance public awareness** and understanding of AI's role in electoral processes, enabling voters to make informed decisions.
  - **Prioritise to Protect Democratic Values**
    - Furthermore, efforts to combat AI 'determinism' should prioritise the protection of democratic values and the integrity of electoral systems.
    - **This involves implementing measures to detect and mitigate AI-driven manipulation, such as disinformation campaigns, deep fakes**, and algorithmic bias.
    - Collaborative approaches involving electoral authorities, technology companies, civil society organisations, and academic institutions are essential to develop robust tools and techniques for detecting and countering AI-driven threats to electoral integrity.
  - **Empower Voters through Literacy**
    - Promoting media literacy and digital literacy among the electorate is **another crucial strategy for tackling AI 'determinism.'**
    - By empowering voters with the skills and knowledge to critically evaluate information sources, discern fact from fiction, **and identify manipulation tactics, individuals can resist the influence of AI-driven propaganda and make informed voting decisions.**
    - **Educational initiatives, public awareness campaigns, and media literacy programs play a vital role in enhancing the resilience of the electorate** against AI-driven misinformation and manipulation.

- **Some Other Steps to Safeguard Electoral Integrity**
  - **Ethical Considerations in AI Governance**
    - Moreover, ethical considerations should guide the development and deployment of AI technologies in electoral contexts.
    - **Responsible AI governance frameworks should prioritise fairness, transparency, accountability, and respect for democratic principles.**
    - This includes conducting thorough risk assessments, ensuring algorithmic transparency and explainability, and establishing mechanisms for independent oversight and accountability.
  - **Employment of Proactive Measures**
    - Policymakers, electoral authorities, and civil society stakeholders **must adopt proactive measures to safeguard electoral integrity and democratic principles in the AI era.**
    - Robust regulatory frameworks, transparency requirements, and oversight mechanisms are essential to mitigate the risks of AI-driven manipulation and disinformation campaigns.
    - Additionally, **investments in digital literacy programs and media literacy initiatives** can empower voters to critically evaluate information sources, discern fact from fiction, and resist manipulation attempts.

- **Conclusion**
  - **The advent of AI represents a watershed moment in human history**, with profound implications for electoral landscapes and societal cohesion

- While AI promises unprecedented advancements, **vigilance is paramount to mitigate its disruptive potential and safeguard democratic principles.**
- As humanity navigates the AI frontier, **prudence and foresight must guide our trajectory towards a future shaped by ethical AI governance** and responsible innovation.

6. Nepal's continuing political turmoil and the task for India
GS 2 (International Relations)

- **Why in News:**
  - Nepal's Prime Minister Pushpa Kamal Dahal Prachanda won a vote of confidence in the 275-member lower house of Parliament recently.
  - Prachanda won his third trust vote in a bit more than a year. It happened after the Prime Minister ended his party's partnership with Sher Bahadur Deuba's Nepali Congress and formed a new alliance with K P Sharma Oli's Communist Party of Nepal (Unified Marxist-Leninist).

Amid Nepal's political turmoil, task for India

Prachanda must stabilise the economy, undertake reforms, crack down on corruption, and build infrastructure. India must step up cooperation in all these areas

SHUBHAJIT ROY

NEPAL'S PRIME Minister Pushpa Kamal Dahal Prachanda won a vote of confidence in the 275-member lower house of Parliament last week, securing the support of 157 of the 268 MPs who were present.

The trust vote, the third won by Prachanda in a little over a year, took place after the Prime Minister broke his party's alliance with the Nepali Congress led by Sher Bahadur Deuba, and forged a new alliance with K P Sharma Oli's Communist Party of Nepal (Unified Marxist-Leninist).

Under Nepal's constitution, the Prime Minister must seek a vote of confidence after an ally withdraws support to the ruling coalition. The Nepali Congress, with 89 MPs, is the largest party in Parliament, followed by Oli's CPN-UML (79) and Prachanda's CPN-MC (30).

Politics of convenience

Prachanda, 68, took oath for the third time on December 26, 2022 (he had been Prime Minister earlier in 2008-09 and 2016-17), and won 268 votes in the floor test of January 10, 2023 after receiving support from almost all parties, including both the Nepali Congress and the CPN-UML.

However, he had to seek a second vote on March 20, 2023 after CPN-UML and the monarchist Rashtriya Prajatantra Party withdrew support over Prachanda's backing for Ramchandra Paudel of the Nepali Congress to be President. Deuba supported Prachanda in the second trust vote, and the Nepali Congress joined the government.

On March 4 this year, Prachanda dumped Deuba and went back to Oli, which triggered the vote in Parliament.

Prachanda, who led Nepal's Maoist insurgency that caused 17,000 deaths between 1996 and 2006, has proven himself to be a consummate survivor in the years after he joined the mainstream. Even though support for him in Parliament has declined from 268 in January 2023 to 172 two months later to 157 now with only 32 votes from his own party, he has clung on to power — demonstrating a political flexibility that provoked Deuba to denounce him as "dhobi ko kuur [betrayer]".

Over the last decade, Prachanda, Deuba, and Oli have been the leading political actors in Nepal, which has had 13 governments since 2008, the year in which the country's 239-year-old monarchy was abolished and a republic was proclaimed.

View from New Delhi

The extraordinary political instability in Nepal is of concern to India, where Prachanda's moves are being watched with a mix of caution and admiration. However, while Prachanda retains significant goodwill in New Delhi, his now partner in government, Oli, does not.

EXPLAINED DIPLOMACY

The actions and statements by Oli in 2015 during the drafting of the Nepalese constitution, which led to protests and the infamous border blockade, had caused a fair bit of bitterness in South Block. Oli, who was Prime Minister then, portrayed India as the neighbourhood bully in his country.

Politicians in Nepal have often described the country as being "India-locked", meaning it needs India for access to ports — a fact of geography that Indian diplomats prefer to frame as being "India-open". New Delhi has sought to project itself as a benevolent "elder brother" to Nepal, as the former External Affairs Minister Sushma Swaraj put it, rather than a controlling and hectoring "big brother".

The Indian foreign policy establishment points out that India is Nepal's largest trade partner, with bilateral trade crossing $7 billion in FY 2019-20, and that India provides transit for almost all of Nepal's third country trade. Indian exports to Nepal have grown more than eight times over the past decade, while exports from Nepal have almost doubled. During the Covid-19 pandemic, India provided assistance of more than $7 million to Nepal, which included the supply of more than 23 tonnes of medicines and medical equipment, more than 9.5 million doses of vaccines, and a medical oxygen plant.

About 8 million Nepalese citizens live and work in India, and some 6 lakh Indians live in Nepal. Indians are about 30% of foreign tourists in Nepal. The bilateral remittance flow is estimated at $3 billion from Nepal to India, and $1 billion in the opposite direction. Cooperation in power, water, and infrastructure has been a major element of India's diplomatic toolkit with regard to Nepal.

India vs China, in Nepal

Nepal is sandwiched between the two Asian giants, and the Nepalese political leadership, including the country's former monarchs, has long sought to play the China card to manage the relationship with India. China has been pouring aid and investment in infrastructure to wean Kathmandu away from New Delhi. Nepalese imports from China almost tripled from Indian Rs 40.5 billion in 2013-14 to Rs 138.75 billion ($1.67 billion) in 2022-23.

With Oli, who has clear China leanings, back in government in Kathmandu, New Delhi would be keenly watching the expected efforts by Beijing to play a more active and influential role in Nepal's domestic affairs.

Some analysts in Nepal view India under the BJP as trying to nudge Nepal in the direction of a "Hindu state" — which has triggered some pushback in that country. In an editorial published last month, *The Kathmandu Post* wrote: "The competition [in Nepal] now seems to be for who can make a solid case for "Hindu Rashtra", even while trying hard not to sound too regressive. One such party that is touching on the idea of restoring Hindu Rashtra is the Nepali Congress… Second- and third-tier leaders are making a case for restoring Hindu Rashtra. That 'fringe' was at least 30 per cent in the last Congress Mahasamiti meeting in 2018. This time, around two dozen influential leaders…raised this issue at the central working committee."

According to the editorial, developments in India such as the consecration of the Ram Lalla temple in Ayodhya…has emboldened some Nepali leaders to ride on the rising popularity of the idea". However, the editorial said, "the political ideology of Hindutva, based on the idea of nativism and monoculturalism,…has no place in a democracy".

The political instability in Nepal has impacted the country's economy. Thousands of young Nepalis are heading abroad, mainly to the Middle East, South Korea, and Malaysia, in search of work. In 2022-23, about 7.7 lakh people got permits to go to foreign job destinations, and remittances sent by Nepalese expatriates has been a major source of both sustenance for many Nepalese families, and of foreign exchange for the country.

As he works with new partners in government, Prime Minister Prachanda has his task cut out: he must stabilise Nepal's economy, undertake reforms, crack down on corruption, and build infrastructure in the country. India needs to step up cooperation with Nepal in all these areas, and India's development and economic aid must remain open.

New Delhi's position on the politics and future of Nepal must remain nuanced and flexible, with the people of Nepal at its centre — it must ensure that China or its proxies do not get an opportunity to ride on suspicion or prejudice against India. More than an "elder brother", India should seek to be an equal partner for Nepal.

- **Political crisis in Nepal**
  - **Floor test of January 2023**
    - Prachanda took oath for the third time in December 2022 (he had been Prime Minister earlier in 2008-09 and 2016-17).
    - He won 268 votes in the floor test of January 2023 after receiving support from almost all parties, including both the Nepali Congress and the CPN-UML.
  - **Second floor test in March 2023**
    - Prachanda had to seek a second vote in March 2023 after CPN-UML and the monarchist Rashtriya Prajatantra Party withdrew support.
      - These parties withdrew support over Prachanda's backing for Ramchandra Paudel of the Nepali Congress to be President.
    - Nepali Congress supported the Prachanda government during this floor test.
  - **Third floor test in March 2024**
    - On March 4 this year, Prachanda dumped **Nepali Congress (led by Deuba)** and went back to **CPN-UML (led by K P Sharma Oli)**, which triggered the vote in Parliament.
  - **Nepal had seen 13 governments since 2008**
    - Nepal has had 13 governments since 2008, the year in which the country's 239-year-old monarchy was abolished and a republic was proclaimed.
    - Over the years, Prachanda, Deuba, and Oli have been the leading political actors in Nepal.
  - **Impact of political instability on Nepal**
    - The political instability in Nepal has impacted the country's economy.
    - Thousands of young Nepalis are heading abroad, mainly to the Middle East, South Korea, and Malaysia, in search of work.
    - In 2022-23, about 7.7 lakh people got permits to go to foreign job destinations.
- **India's stand**
  - **Cause of concern for India**
    - The extraordinary political instability in Nepal is of concern to India, where Prachanda's moves are being watched with a mix of caution and admiration.
    - However, while Prachanda retains significant goodwill in New Delhi, his now partner in government, Oli, does not
  - **Oli and India**
    - The actions and statements by Oli in 2015 had caused a fair bit of bitterness in India
      - During his tenure the Nepalese constitution was drafted, which led to protests and the infamous border blockade.
    - Oli, who was Prime Minister then, portrayed India as the neighbourhood bully in his country.
  - **Nepal being described as India-locked**
    - Politicians in Nepal have often described the country as being India-locked, meaning it needs India for access to ports.
- **Bilateral cooperation between India and Nepal**
  - **Bilateral trade between India and Nepal**
    - India is Nepal's largest trade partner, with bilateral trade crossing $7 billion in FY 2019-20.
    - India provides transit for almost all of Nepal's third country trade.

Indian exports to Nepal have grown more than eight times over the past decade, while exports from Nepal have almost doubled.

  - **Cooperation during Covid Pandemi**

- During the Covid-19 pandemic, India provided assistance of more than $7 million to Nepal.
- This included the supply of more than 23 tonnes of medicines and medical equipment, more than 9.5 million doses of vaccines, and a medical oxygen plant

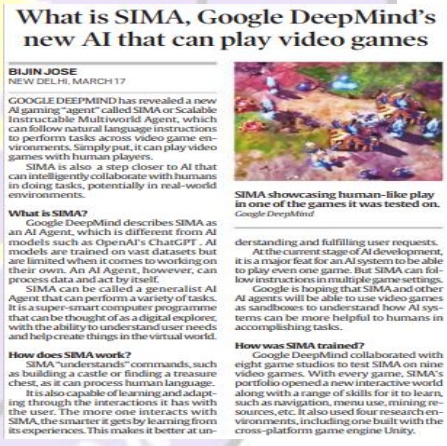
- **People to people contact and remittance**
  - About 8 million Nepalese citizens live and work in India, and some 6 lakh Indians live in Nepal. Indians are about 30% of foreign tourists in Nepal.
  - The bilateral remittance flow is estimated at $3 billion from Nepal to India, and $1 billion in the opposite direction.

- **India Vs China in Nepal**
  - **Use of Chinese card by Nepal**
    - Nepal is sandwiched between the two Asian giants.
    - The Nepalese political leadership, including the country's former monarchs, has long sought to play the China card to manage the relationship with India.
  - **China is pouring aids to wean Nepal away from India**
    - China has been pouring aid and investment in infrastructure to wean Kathmandu away from New Delhi.
    - Nepalese imports from China almost tripled from (Indian) Rs 49.5 billion in 2013-14 to Rs 138.75 billion ($1.67 billion) in 2022-23.
- **Conclusion**
  - New Delhi's position on the politics and future of Nepal must remain nuanced and flexible, with the people of Nepal at its centre. It must ensure that China or its proxies do not get an opportunity to ride on suspicion or prejudice against India.
  - More than an elder brother, India must take steps to make Nepal an equal partner.

7. SIMA

GS 3 (Science and Tech)

- **Why in News:** Google DeepMind revealed its latest AI gaming agent called SIMA which can follow natural language instructions to perform tasks across video game environments.
- **About SIMA:**
  - **Scalable Instructable Multiworld Agent** (SIMA) as **an AI Agent** which **can process data and take action themselves.** It can be called a generalist AI Agent that is capable of doing different kinds of tasks.
  - **Features**
    - It is like a **virtual buddy** who can understand and follow instructions in all sorts of virtual environments
    - It can accomplish tasks or solve challenges assigned to it. It "understands" commands as it has **been trained to process human language.**
    - One distinct feature of this AI Agent is that it is **capable of learning and adapting.**
    - SIMA does this through the interactions it has with the user. The more you interact with SIMA, the smarter it gets by learning from its experiences and improves over time. This makes it better at understanding and fulfilling user requests.
  - However, SIMA goes beyond that and can **follow instructions in a variety of game** This could potentially introduce more helpful AI agents for other environments.
  - These research marks the first time an agent has demonstrated it can understand a broad range of gaming worlds and follow natural-language instructions to carry out tasks within them, as a human might.



What is SIMA, Google DeepMind's new AI that can play video games

BIJIN JOSE
NEW DELHI, MARCH 17

GOOGLE DEEPMIND has revealed a new AI gaming "agent" called SIMA or Scalable Instructable Multiworld Agent, which can follow natural language instructions to perform tasks across video game environments. Simply put, it can play video games with human players.

SIMA is also a step closer to AI that can intelligently collaborate with humans in doing tasks, potentially in real-world environments.

What is SIMA?

Google DeepMind describes SIMA as an AI Agent, which is different from AI models such as OpenAI's ChatGPT . AI models are trained on vast datasets but are limited when it comes to working on their own. An AI Agent, however, can process data and act by itself.

SIMA can be called a generalist AI Agent that can perform a variety of tasks. It is a super-smart computer programme that can be thought of as a digital explorer, with the ability to understand user needs and help create things in the virtual world.

How does SIMA work?

SIMA "understands" commands, such as building a castle or finding a treasure chest, as it can process human language.

It is also capable of learning and adapting through the interactions it has with the user. The more one interacts with SIMA, the smarter it gets by learning from its experiences. This makes it better at understanding and fulfilling user requests.

SIMA showcasing human-like play in one of the games it was tested on. Google DeepMind

At the current stage of AI development, it is a major feat for an AI system to be able to play even one game. But SIMA can follow instructions in multiple settings.

Google is hoping that SIMA and other AI agents will be able to use video games as sandboxes to understand how AI systems can be more helpful to humans in accomplishing tasks.

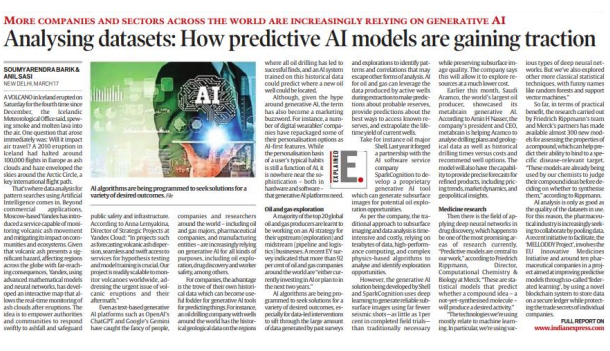
How was SIMA trained?

Google DeepMind collaborated with eight game studios to test SIMA on nine video games. With every game, SIMA's portfolio opened a new interactive world along with a range of skills for it to learn, such as navigation, menu use, mining resources, etc. It also used four research environments, including one built with the cross-platform game engine Unity.

8. Predictive AI: Its Use Cases and Benefits

GS 3 (Science and Tech)

- **Why in News:** Predictive AI emerges as a transformative force, reshaping how businesses analyse data, make decisions, and stay ahead in their respective industries.
- **What is Predictive AI?**
  - Predictive artificial intelligence (AI) refers to the use of machine learning to identify patterns in past events and make predictions about future events.
  - **Unlike conventional AI,** which predominantly focuses on analysing historical information, **Predictive AI operates on a visionary principle**: the ability to foresee and forecast future events.



MORE COMPANIES AND SECTORS ACROSS THE WORLD ARE INCREASINGLY RELYING ON GENERATIVE AI

Analysing datasets: How predictive AI models are gaining traction

SOUMYARENDRA BARIK & ANIL SASI
NEW DELHI, MARCH 17

A VOLCANO in Iceland erupted on Saturday for the fourth time since December, the Icelandic Meteorological Office said, spewing smoke and molten lava into the air. One question that arose immediately was: Will it impact air travel? A 2010 eruption in Iceland had halted around 100,000 flights in Europe as ash clouds and haze enveloped the skies around the Arctic Circle, a key international flight path.

That's where data analysis for pattern searches using Artificial Intelligence comes in. Beyond commercial applications, Moscow-based Yandex has introduced a service capable of monitoring volcanic ash movement and mitigating its impact on communities and ecosystems. Given that volcanic ash presents a significant hazard, affecting regions across the globe with far-reaching consequences, Yandex, using advanced mathematical models and neural networks, has developed an interactive map that allows the real-time monitoring of ash clouds after eruptions. The idea is to empower authorities and communities to respond swiftly to ashfall and safeguard public safety and infrastructure. According to Anna Lemyakina, Director of Strategic Projects at Yandex Cloud, "It projects such as forecasting volcanic ash dispersion, seamless and swift access to services for hypothesis testing and model retraining is crucial. Our project is readily scalable to monitor volcanoes worldwide, addressing the urgent issue of volcanic eruptions and their aftermath."

Even a text-based generative AI platforms such as OpenAI's ChatGPT and Google's Gemini have caught the fancy of people, companies and researchers around the world – including oil and gas majors, pharmaceutical companies, and manufacturing entities – are increasingly relying on generative AI for all kinds of purposes, including oil exploration, drug discovery and worker safety, among others.

For companies, the advantage is the trove of their own historical data which can become useful fodder for generative AI tools for predicting things. For instance, an oil drilling company with wells around the world has the historical geological data on the regions where all oil drilling has led to successful finds, and an AI system trained on this historical data could predict where a new oil well could be located.

Although, given the hype around generative AI, the term has also become a marketing buzzword. For instance, a number of digital wearables' companies have repackaged some of their personalisation options as AI-first features. While the personalisation basis of a user's typical habits is still a function of AI, it is nowhere near the sophistication – both in hardware and software – that generative AI platforms need.

AI algorithms are being programmed to seek solutions for a variety of desired outcomes. /123rf

Oil and gas exploration

A majority of the top 20 global oil and gas producers are learnt to be working on an AI strategy for their upstream exploration and midstream (pipeline and logistics) businesses. A recent EY survey indicated that more than 92 per cent of oil and gas companies around the world are "either currently investing in AI or plan to in the next two years."

AI algorithms are being programmed to seek solutions for a variety of desired outcomes, especially for data-led interventions to sift through the large amount of data generated by past surveys and explorations to identify patterns and correlations that may escape other forms of analysis. AI for oil and gas can leverage the data produced by active wells during extraction to make predictions about probable reserves, provide predictions about the best ways to access known reserves, and extrapolate the lifetime yield of current wells.

Take for instance oil major Shell. Last year it forged a partnership with the AI software service company SparkCognition to develop a proprietary generative AI tool which can generate subsurface images for potential oil exploration opportunities.

As per the company, the traditional approach to subsurface imaging and data analysis is time-intensive and costly, relying on terabytes of data, high-performance computing, and complex physics-based algorithms to analyse and identify exploration opportunities.

However, the generative AI solution being developed by Shell and SparkCognition uses deep learning to generate reliable subsurface images using far fewer seismic shots – as little as 1 per cent in completed field trials – than traditionally necessary while preserving subsurface image quality. The company says this will allow it to explore resources at a much lower cost.

Earlier this month, Saudi Aramco, the world's largest oil producer, showcased its metabrain generative AI. According to Amin H Nasser, the company's president and CEO, metabrain is helping Aramco to analyse drilling plans and geological data as well as historical drilling times versus costs and recommend well options. The model will also have the capability to provide precise forecasts for refined products, including pricing trends, market dynamics and geopolitical insights.

Medicine research

Then there is the field of applying deep neural networks in drug discovery, which happens to be one of the most promising areas of research currently. "Predictive models are central to our work," according to Friedrich Rippmann, Director, Computational Chemistry & Biology at Merck. "These are statistical models that predict whether a compound idea – a not-yet-synthesised molecule – will produce a desired activity."

"The technologies we're using mostly relate to machine learning. In particular, we're using various types of deep neural networks. But we've also explored other more classical statistical techniques, with funny names like random forests and support vector machines."

So far, in terms of practical benefit, the research carried out by Friedrich Rippmann's team and Merck's partners has made available almost 300 new models for assessing the properties of a compound, which can help predict their ability to bind to a specific disease-relevant target. "These models are already being used by our chemists to judge their compound ideas before deciding on whether to synthesise them," according to Rippmann.

AI analysis is only as good as the quality of the datasets in use. For this reason, the pharmaceutical industry is increasingly seeking to collaborate by pooling data. A recent initiative to facilitate, the MELLODDY Project', involves the EU Innovative Medicines Initiative and around ten pharmaceutical companies in a project aimed at improving predictive models through so-called 'federated learning', by using a novel blockchain system to store data on a secure ledger while protecting the trade secrets of individual companies.

FULL REPORT ON www.indianexpress.com

- At its essence, this cutting-edge technology **harnesses the power of advanced algorithms and machine learning models** to scrutinise vast datasets, identifying intricate patterns, correlations and trends that might elude human perception.
- **The key distinction lies in Predictive AI's capacity to go beyond mere data analysis.** It transforms data into a predictive asset, enabling organisations to –
  - Anticipate outcomes,
  - Anticipate market shifts, and
  - Make strategic decisions with unprecedented foresight.
- By learning from historical data and adapting to emerging patterns, Predictive AI becomes a **strategic ally**, guiding businesses through the complex terrain of uncertainty.

- **How does Predictive AI Work?**
  - **Big data:** In statistics more data generally results in more accurate analysis. Similarly, predictive AI requires access to vast quantities of data/ "big data".
  - **Machine learning (ML):** ML is a subset of AI and a method for training a computer program to identify data without human intervention.
    - In predictive AI, ML is applied to the vast data collections described earlier.
    - A predictive AI model can process huge data sets without human supervision.
  - **Identifying patterns:** Predictive AI learns to associate certain types of data or certain occurrences.
    - Predictive AI can look at hundreds or thousands of factors to identify patterns - which indicate events that can recur in the future.
- **Predictive AI vs. Generative AI:**
  - Predictive and generative AI **both use machine learning**, combined with access to lots of data, in order to produce their outputs.
  - However, **predictive AI uses machine learning to extrapolate the future**. Generative AI uses machine learning to create content.
  - **For example,** a predictive-AI model tells fishermen when a storm is coming. The generative-AI model writes a novel that imagines various interactions between weather and fishing voyages.
  - In a sense, generative AI is **similar** to predictive AI, as it **uses statistical analysis to "predict" which words and concepts belong together.**
  - **But the goals** for generative and predictive AI are different, the machine learning models they use are different, and the use cases are different.
- **Some Use Cases of Predictive AI:**
  - **Analysing the impact of an extreme weather event:**
    - A volcano in Iceland erupted (recently) for the 4th time since December, spewing smoke and molten lava into the air.
    - A 2010 eruption in Iceland had halted around 100,000 flights in Europe as ash clouds and haze enveloped the skies around the Arctic Circle.
    - Will it impact air travel this time? That's where data analysis for pattern searches using predictive AI comes in.
    - **Moscow-based Yandex** has developed an interactive map that allows the real-time monitoring of ash clouds after eruptions.
  - **Oil and gas exploration:**
    - For instance, an oil drilling company with wells around the world has the historical geological data on the regions where all oil drilling has led to successful finds.
    - A predictive AI system trained on this historical data could predict where a new oil well could be located.
    - Earlier this month, **Saudi Aramco**, the world's largest oil producer, showcased its **metabrain generative AI**.
    - Metabrain is helping Aramco to analyse drilling plans and geological data as well as historical drilling times versus costs and provide precise forecasts.
  - **Medicine research:**
    - The models of predictive AI could be used in drug discovery, which happens to be one of the most promising areas of research currently.
    - For this reason, the pharmaceutical industry is increasingly seeking to collaborate by pooling data.
    - A recent initiative to facilitate, the '**MELLODDY Project**', involves the EU Innovative Medicines Initiative and around ten pharmaceutical companies.

19th March, 2024

1. Multipurpose App SAKHI to assist Gaganyaan Crew
GS 3 (Science and Tech)

- **Why in News:** The **Vikram Sarabhai Space Centre (VSSC), the Indian Space Research Organisation (ISRO)**, has developed SAKHI, a **multi-purpose app** to help astronauts on the **Gaganyaan space flight mission.**

VSSC, ISRO develop multi-purpose app SAKHI to assist Gaganyaan crew

Tiki Rajwi
THIRUVANANTHAPURAM

The Vikram Sarabhai Space Centre (VSSC), the Indian Space Research Organisation (ISRO) facility at Thumba in Thiruvananthapuram, has developed a multi-purpose app that will help astronauts on the Gaganyaan space flight mission carry out a range of tasks such as looking up vital technical information or communicating with one another.

The Space-borne Assistant and Knowledge Hub for Crew Interaction (SAKHI) will, among other things, monitor the health of the astronauts, help them stay connected with Earth and even alert them about their dietary schedules. The space facility has successfully tested an engineering model of the custom-built, hand-held smart device featuring SAKHI.

- **What is SAKHI App?**
  - The **Space-borne Assistant and Knowledge Hub for Crew Interaction (SAKHI)** will help astronauts on the **Gaganyaan Human Spaceflight Mission** carry out a range of tasks such as looking up vital technical information or communicating with one another.
  - The app will, among other things, monitor the health of the astronauts, help them stay connected with Earth and even alert them about their dietary schedules.

2. Violence, homelessness, and women's mental health
GS 2 (Social Issues)

- **Why in News:** The **National Family Health Survey (NFHS-5)** reveals alarming rates of violence against women in India, highlighting its intersection with mental health conditions and homelessness.

Violence, homelessness, and women's mental health

The National Family Health Survey (NFHS-5) presents a sobering picture of the pervasive violence against women in India. Almost 30% of women between the ages of 18-49 years have experienced physical violence beginning at age 15; 6% reported sexual violence. Evidence indicates that violence and mental health conditions have a reciprocal, cause-and-effect relationship, and both factors significantly heighten the risk of homelessness. In the three decades of working with homeless women with mental health conditions at The Banyan, we have witnessed this recursive interaction between violence against women, homelessness, and mental health almost universally.

Findings of relevance

A survey of 146 women accessing outpatient services at The Banyan found that relational disruptions, often in the background of violence, predicted homelessness, even when women had accessed care for their mental health – a finding that is mirrored in other studies globally. Another qualitative research that examined user accounts of trauma drawn from women with histories of homelessness showed that descriptions of experiences relating to violence in social relationships, experience of alienation and shame, and poverty did not entirely match with the *Diagnostic and Statistical Manual of Mental Disorders* conceptualisations of trauma.

Qualitative interviews with several women living with mental health conditions detail their journeys into homelessness, not merely as a deficit in access to care but also as an escape and possible liberation from repeated cycles of unremitting violence – whether it was from a predatory father, a husband who controlled all aspects of life or an aunt who issued threats to sell into slavery to pay for meals. A recurrent theme that emerged was the impact of child sexual abuse and intimate partner violence on individual mental health and homelessness.

At age 5, Leela began understanding what it meant to be a child of a) homeless woman living with mental illness. Her mother, Jaya, fled an abusive family home with only Leela, leaving her older siblings behind. Desperate and hearing voices, Jaya contemplated ending their suffering by jumping from a train but was dissuaded by Leela, who did not fully understand her mother's motives but was consumed by an ominous feeling of desperation and crippling fear. Throughout their homelessness, the duo faced the arduous task of survival, finding food and safe spaces to rest every day. Jaya's deformed hand is a reminder of the violence they experienced on the streets.

Within a multifactorial matrix of structural barriers such as poverty and caste, violence and associated feelings of loss of agency feature prominently amongst reasons that precipitate an exit from typical relational bonds and conventional notions of home assumed to provide safety, a sense of community, and belongingness. Ellen Corrin's work offers a nuanced perspective on the phenomenon of social withdrawal in the context of schizophrenia that challenges reductionist views around the construction of negative symptoms. Instead of an overt focus on alignment with the social environment, her work shifts the emphasis to considering meanings and personal experiences behind behaviours often labelled as symptoms of the disorder, and situating mental illness and related symptoms within 'a life frame'. The same lens can be used to approach intersecting issues of women's mental health, homelessness, and violence.

An umbrella-like label

Historically, the label of madness has been used to discredit, subjugate, and silence women who are seen as demonstrating undesirable traits – intellectual curiosity, assertiveness, and autonomy. From the witch trials in the Middle Ages to the incarceration of women in asylums, resistance to oppression and refusal to comply with expected norms were labelled as missteps due to a deranged imagination. In contemporary patriarchal society, the social construct of womanhood continues to be carefully curated and enforced, confining women and their value within reproductive roles and docile submission to various forms of violence, routinely normalised and justified. Madness in this context then becomes not an individualised pathology but a response to the continued violence against women.

Some women describe their madness as resistance, as a defiant embrace of what is taboo for women, an opportunity to break free from coerced identities and assume new personas that transcend patriarchal norms. Others describe their madness as a solace in beliefs such as being the mother of 100 male children or transforming into a goddess with special powers by performing a complex ritual. In the process, some lay claim to an elevated sense of purpose and accruing cultural capital that society places significant value on and associates with improved status. While others may find escape in an idea or imagination to battle the shame, fear and devaluation. And, yet, some other women experience their madness as a journey inward, where voice hearing and altered perceptions become portals to alternate realities where they can engage in a spiritual interrogation of who they are without social constraints.

In contrast to these multifaceted descriptions of madness in the context of violence, the mainstream discourse on women's mental health is dominated by a narrow focus on higher prevalence rates of depression, anxiety or eating disorders, or mental health needs associated with the prescribed reproductive role such as postpartum depression. All these deserve attention but not in a manner that isolates these experiences from the larger narrative. Women's experiences of distress are often viewed through a reductionist biomedicine-dominated lens, neglecting the insidious impact of violence that women endure and absolving society of its complicity. Navigating mental health and social care systems that mirror these biases, in the background of poverty and caste-based marginalisation, takes a profound toll, elevating risks of homelessness. In our experience, women often encounter health systems that dismiss their lived experience, focusing largely on symptoms and diagnoses that are to be treated and eliminated. In contrast, our experience suggests that many of the manifestations of mental ill-health are embedded in the reality of adverse life events. In this context, investments cannot be confined to increasing proximal access to mental health care without collective action that can substantively address deep-rooted violence.

There is an urgent need, therefore, to develop comprehensive solutions based on a systematic unpacking of multiple factors and their interactions that perpetrate violence against women. Recognising and compensating women for their unpaid labour in household roles and creating the space for women to find supportive networks and alternate family structures outside of typical heteronormative relationships may offer security and refuge. Ensuring access to basic income, housing, and land ownership may offer economic independence and reduce vulnerability to homelessness. Embedding in the education environment, a curriculum that helps growing adolescents interrogate and challenge harmful gendered norms may help foster a generation that values egalitarian norms and rejects all forms of violence against women.

Biological scientist Robert Sapolsky contends that our inclinations, actions, and choices are not products of an autonomous, conscious process of free will but rather shaped by biological factors such as our genes, neural circuitry, and brain chemistry. His work emphasises the role of childhood adversity – abuse, neglect, and poverty – and the profound effects these have on the developing brain, underscoring the need for policies and interventions that reduce violence beginning in the formative years.

Adopt a multifaced approach

While the two-way relationship between homelessness and mental illness is recognised globally, we need to scrutinise the nuances more closely. Violence against women is one factor that may not receive enough attention in this context. Instead of addressing root causes rhetorically, we should examine the complex strands surrounding mental health. This journey requires opening up to new avenues, involving diverse professionals, innovative research, and meaningful involvement of those with lived experiences. Prioritising a range of robust responses can better address the plurality of needs, especially for high-priority groups such as homeless women. No single narrative makes for a complete response. Greater exploration of phenomena and their influence on mental health, the role of intersectionality, power asymmetries, and the use of feminist standpoint theory in advancing science and ways of knowing are needed. The absence of such a multifaceted approach represents the greatest lacuna.

Vandana Gopikumar
co-founder of The Banyan (a mental health service organisation) and The Banyan Academy of Leadership in Mental Health, is a critical social work practitioner and researcher

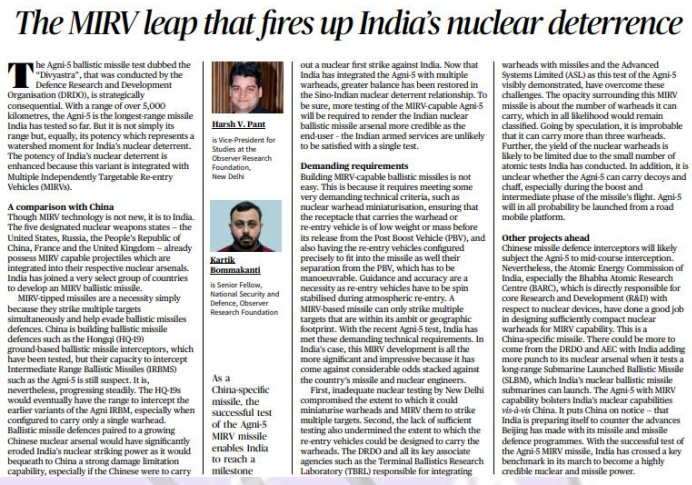
Lakshmi Narasimhan
with an independent research practice at TSI Consulting LLP, has been working with The Banyan and The Banyan Academy of Leadership in Mental Health since 2005

Many of the manifestations of mental ill-health appear to be embedded in the reality of adverse life events

- **Findings of Relevance:**
  - **Interplay of Violence, Mental Health, and Homelessness**: A significant proportion of women in India experience physical and sexual violence, with subsequent mental health conditions often leading to **homelessness**. Studies corroborate the complex relationship between violence against **women, mental health issues, and homelessness**.
  - **Personal Narratives and Impact**: The conditions of homelessness, often stems from traumatic experiences of violence within familial or intimate relationships. These narratives shed light on the profound impact of childhood trauma, intimate partner violence, and societal marginalization on individual mental health and housing stability.
  - **Madness as Resistance and Coping Mechanism**: Some women perceive their experiences of madness as a form of resistance against societal norms and violence, providing a means of escape or empowerment.
- **Comprehensive Solutions and Policy Implications:**
  - **Addressing Structural Barriers:** Solutions to combat violence against women necessitate a multifaceted approach, including recognition of unpaid labor, creation of supportive networks, and economic empowerment through access to basic income and housing.
  - **Educational Interventions**: Embedding gender-sensitive curriculum in education systems can challenge harmful gender norms and foster egalitarian values.
  - **Inclusive Research and Policy Development**: A holistic approach to addressing homelessness, mental health, and violence against women requires diverse perspectives, innovative research, and meaningful involvement of individuals with lived experiences.

3. The MIRV leap that fires up India's nuclear deterrence

GS 3 (Science and Tech)



The MIRV leap that fires up India's nuclear deterrence

The Agni-5 ballistic missile test dubbed the "Divyastra", that was conducted by the Defence Research and Development Organisation (DRDO), is strategically consequential. With a range of over 5,000 kilometres, the Agni-5 is the longest-range missile India has tested so far. But it is not simply its range but, equally, its potency which represents a watershed moment for India's nuclear deterrent. The potency of India's nuclear deterrent is enhanced because this variant is integrated with Multiple Independently Targetable Re-entry Vehicles (MIRVs).

A comparison with China

Though MIRV technology is not new, it is to India. The five designated nuclear weapons states – the United States, Russia, the People's Republic of China, France and the United Kingdom – already possess MIRV capable projectiles which are integrated into their respective nuclear arsenals. India has joined a very select group of countries to develop an MIRV ballistic missile.

MIRV-tipped missiles are a necessity simply because they strike multiple targets simultaneously and help evade ballistic missiles defences. China is building ballistic missile defences such as the Hongqi (HQ-9) ground-based ballistic missile interceptors, which have been tested, but their capacity to intercept Intermediate Range Ballistic Missiles (IRBMS) such as the Agni-5 is still suspect. It is, nevertheless, progressing steadily. The HQ-19s would eventually have the range to intercept the earlier variants of the Agni IRBM, especially when configured to carry only a single warhead. Ballistic missile defences paired to a growing Chinese nuclear arsenal would have significantly eroded India's nuclear striking power as it would bequeath to China a strong damage limitation capability, especially if the Chinese were to carry out a nuclear first strike against India. Now that India has integrated the Agni-5 with multiple warheads, greater balance has been restored in the Sino-Indian nuclear deterrent relationship. To be sure, more testing of the MIRV-capable Agni-5 will be required to render the Indian nuclear ballistic missile arsenal more credible as the end-user - the Indian armed services are unlikely to be satisfied with a single test.

Harsh V. Pant is Vice-President for Studies at the Observer Research Foundation, New Delhi

Kartik Bommakanti is Senior Fellow, National Security and Defence, Observer Research Foundation

As a China-specific missile, the successful test of the Agni-5 MIRV missile enables India to reach a milestone

Demanding requirements

Building MIRV-capable ballistic missiles is not easy. This is because it requires meeting some very demanding technical criteria, such as nuclear warhead miniaturisation, ensuring that the receptacle that carries the warhead or re-entry vehicle is of low weight or mass before its release from the Post Boost Vehicle (PBV), and also having the re-entry vehicles configured precisely to fit into the missile as well their separation from the PBV, which has to be manoeuvrable. Guidance and accuracy are a necessity as re-entry vehicles have to be spin stabilised during atmospheric re-entry. A MIRV-based missile can only strike multiple targets that are within its ambit or geographic footprint. With the recent Agni-5 test, India has met these demanding technical requirements. In India's case, this MIRV development is all the more significant and impressive because it has come against considerable odds stacked against the country's missile and nuclear engineers.

First, inadequate nuclear testing by New Delhi compromised the extent to which it could miniaturise warheads and MIRV them to strike multiple targets. Second, the lack of sufficient testing also undermined the extent to which the re-entry vehicles could be designed to carry the warheads. The DRDO and all its key associate agencies such as the Terminal Ballistics Research Laboratory (TBRL) responsible for integrating warheads with missiles and the Advanced Systems Limited (ASL) as this test of the Agni-5 visibly demonstrated, have overcome these challenges. The opacity surrounding this MIRV missile is about the number of warheads it can carry, which in all likelihood would remain classified. Going by speculation, it is improbable that it can carry more than three warheads. Further, the yield of the nuclear warheads is likely to be limited due to the small number of atomic tests India has conducted. In addition, it is unclear whether the Agni-5 can carry decoys and chaff, especially during the boost and intermediate phase of the missile's flight. Agni-5 will in all probability be launched from a road mobile platform.

Other projects ahead

Chinese missile defence interceptors will likely subject the Agni-5 to mid-course interception. Nevertheless, the Atomic Energy Commission of India, especially the Bhabha Atomic Research Centre (BARC), which is directly responsible for core Research and Development (R&D) with respect to nuclear devices, have done a good job in designing sufficiently compact nuclear warheads for MIRV capability. This is a China-specific missile. There could be more to come from the DRDO and AEC with India adding more punch to its nuclear arsenal when it tests a long-range Submarine Launched Ballistic Missile (SLBM), which India's nuclear ballistic missile submarines can launch. The Agni-5 with MIRV capability bolsters India's nuclear capabilities *vis-à-vis* China. It puts China on notice – that India is preparing itself to counter the advances Beijing has made with its missile and missile defence programmes. With the successful test of the Agni-5 MIRV missile, India has crossed a key benchmark in its march to become a highly credible nuclear and missile power.

- **Why in News:** The Defence Research and Development Organisation (DRDO) conducted a successful test of the Agni-5 ballistic missile, equipped with **Multiple Independently Targetable Re-entry Vehicles (MIRVs),** marking a significant development in India's nuclear deterrent capabilities.
- **Strategic Significance of Agni-5 MIRV Test:**
  - **Enhanced Nuclear Deterrent**: The Agni-5 missile, with integrated **MIRVs**, represents a significant **advancement in India's nuclear deterrent**. MIRVs allow for multiple warheads to be delivered simultaneously, increasing the potency and effectiveness of India's nuclear arsenal.
  - **Comparison with China:** India's development of MIRV technology places it among a select group of nations possessing such capabilities. China has invested in ballistic missile defense systems, but India's MIRV-equipped Agni-5 provides a counterbalance by enhancing India's nuclear striking power and resilience against potential missile defenses.
  - **Technical Challenges and Achievements**: Developing MIRV-capable ballistic missiles entails meeting demanding technical criteria, including warhead miniaturization, precise re-entry vehicle configuration, and guidance accuracy
- **Implications and Future Prospects:**
  - **Strategic Deterrence against China:** The successful test of Agni-5 MIRV missile signals India's readiness to counter China's advancements in missile and missile defense capabilities.
  - **Continued Advancements**: India's success opens avenues for further advancements in its nuclear arsenal, including the testing **of long-range Submarine Launched Ballistic Missiles (SLBMs).**
  - **Regional Security Dynamics**: The **Agni-5 MIRV test** underscores India's commitment to maintaining regional stability and safeguarding its national security interests.

4. Missing Spring Season

GS 3 (Environment)

Spring season 'disappearing' in many States, shows study

Analysis of records since 1970 reveals increased warming between Dec. and Feb. across country; at 2.3 degrees Celsius, Manipur records the biggest jump in temperature in the winter months

Jacob Koshy NEW DELHI

Indian States have been gradually registering a withdrawal of spring, a period of relatively benign weather between the winter of January and the scorching summer of April, a 50-year analysis of meteorological records suggests.

Researchers from the agency Climate Trends calculated the monthly average temperature for 33 States and Union Territories from 1970 to the present. This was the period during which the impact of global warming has been empirically observed and for which consistent data exist. For each State or Union Territory, the rate of warming for each month was compared with each three-month meteorological season. For instance, December, January, and February are considered the winter months in meteorological terminology.

Significant trend

Every region analysed had a "net warming" during winter. Manipur had the biggest change since 1970 (2.3 degrees Celsius), while Delhi had the smallest (0.2 degree Celsius). "Winter is the fastest warming season for 42 out of the 34 States and territories considered. This is second only to autumn, which was the fastest warming season in 13 regions," the analysts noted.

There were significant differences in the pattern of temperature changes during the winter. The southern part of the country had "strong" warming in December and January. Sikkim (2.4 degrees Celsius) and Manipur (2.1 degrees Celsius) had the largest changes in temperature in December and January, respectively. The northern part of the country had weaker warming and even cooling during December and January. Delhi had the lowest rates during this period (-0.2 degree Celsius in December, -0.8 degree Celsius in January), and among the States, Ladakh (0.1 degree Celsius in December) and Uttar Pradesh (-0.8 degree Celsius in January) had the lowest warming rates.

Researchers analysed records of 50 years, the period during which global warming impact has been empirically observed. n.a. reddy

Sharp change

The pattern changes dramatically between January and February. All regions have warmed in February but the warming is especially pronounced in many of the regions that showed cooling or low warming in the previous months. Jammu and Kashmir had the highest warming (3.1 degrees Celsius) and Telangana had the lowest (0.4 degrees Celsius).

In northern India, the contrast between January trends (cooling or slight warming) and February (strong warming) implied that these regions now have the potential for abrupt transitions from cool winter-like temperatures to the much warmer conditions that traditionally occurred in March.

The biggest jump in warming rates occurred in Rajasthan, where the warming in February was 2.6 degrees Celsius higher than in January. A total of nine States and Union Territories showed a January-February difference of more than 2 degrees Celsius: Rajasthan, Haryana, Delhi, Uttar Pradesh, Himachal Pradesh, Ladakh, Punjab, Jammu and Kashmir, and Uttarakhand. "This supports the reports that it feels like spring has disappeared in many parts of India," the report noted.

Meteorologists have earlier ascribed the warming of winter in South India and the lack of rainfall in the North to Prater due to an aberration in the pattern of Western Disturbances and the jet stream, winds that originate in the Mediterranean and bring moisture to North India during winter.

- **Why in News:** Indian States have been gradually registering a **withdrawal of Spring**.
- **Reason behind this situation**
  - Spring is the period of relatively benign weather between the winter of January and the scorching summers of April.
  - As the Earth orbits the Sun, sunlight strikes the surface at **varying angles** because of the planet's **tilt**. This creates seasons. However, temperatures in February have become warmer, leading to a missing spring season.
  - The warming of winter in southern India and the lack of rainfall in the north in winter due to an aberration in the pattern of **Western Disturbances** and the **jet stream, winds** that originate in the **Mediterranean**and bring moisture to **north India during winter.**

5. Centre Notifies Captive Elephant Transfer Rules
GS 3 (Environment)

- **Why in News:** The **Union Ministry of Environment, Forest and Climate Change (MoEFCC)** has notified new rules for the transfer of captive elephants.

Centre notifies rules allowing transfer of 'captive' elephants

The Hindu Bureau
NEW DELHI

The Centre has notified a set of rules called the Captive Elephant (Transfer or Transport) Rules, 2024 that liberalise the conditions under which elephants may be transferred within or between States.

The circumstances under which captive elephants can be transferred are when an owner is no longer in a position to maintain the elephant, the elephant will likely have a better upkeep than in the present circumstances or when a State's Chief Wildlife Warden "deems it fit and proper" in the circumstances of the case for better upkeep of the elephant.

Before a transfer within the State, an elephant's health has to be ratified by a veterinarian and the Deputy Conservator of Forests must establish that the animal's current habitat and prospective habitat are suitable. The Chief Wildlife Warden, on receipt of such documents, may reject or approve the transfer.

If the transfer involves moving the elephant outside a State, similar conditions apply. Before a transfer is effected, the "genetic profile" of the elephant has to be registered with the Ministry of Environment, Forest and Climate Change.

A vet has to certify that the elephant is fit for travel, states one of the rules.

Other conditions - a mahout and an elephant assistant should accompany the animal, a health certificate, a quarantine period before the transfer and more - are also part of the rules.

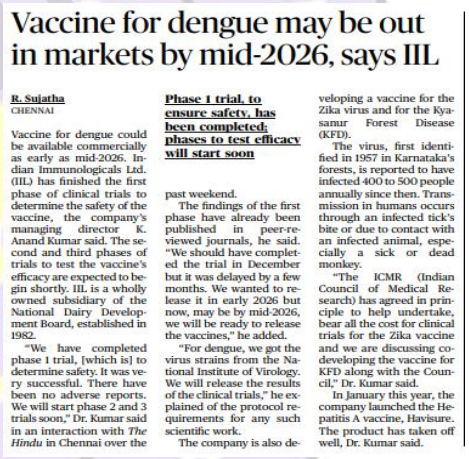
Until August 2022, the Wildlife Protection Act explicitly prohibited the trade in wildlife including both wild and captive elephants. However, amendments to the Act brought in an exemption that for the first time allowed captive elephants to be moved.

A Parliamentary Committee, led by Congress Rajya Sabha MP, Jairam Ramesh, had recommended the deletion of this exemption clause for elephants. The final version of the amended Act, however, retains the clause.

- **The new Rules**
  - For initiating transfer of elephants from one state to another, the chief wildlife warden (CWW) of the state, where the elephant is being transferred, has to be notified.
  - S/he, would, in turn, forward the application to the CWW of the state from where the animal is being transferred.
  - The transfer, according to the new rules, would be permitted if the donor is no longer capable of taking care of the captive elephant. For a transfer to be allowed, the genetic profile of the elephant has to be entered into an MoEFCC application, electronically.

6. Dengue Vaccine
GS 2 (Health)

- **Why in News: Indian Immunologicals Limited,** a wholly owned subsidiary of the **National Dairy Development Board** has finished the first phase of clinical trials of dengue vaccine to determine the safety of the vaccine. The vaccine could be available commercially as early as mid-2026.



Vaccine for dengue may be out in markets by mid-2026, says IIL

R. Sujatha
CHENNAI

Phase 1 trial, to ensure safety, has been completed; phases to test efficacy will start soon

Vaccine for dengue could be available commercially as early as mid-2026. Indian Immunologicals Ltd. (IIL) has finished the first phase of clinical trials to determine the safety of the vaccine, the company's managing director K. Anand Kumar said. The second and third phases of trials to test the vaccine's efficacy are expected to begin shortly. IIL is a wholly owned subsidiary of the National Dairy Development Board, established in 1982.

"We have completed phase 1 trial, [which is] to determine safety. It was very successful. There have been no adverse reports. We will start phase 2 and 3 trials soon," Dr. Kumar said in an interaction with *The Hindu* in Chennai over the past weekend.

The findings of the first phase have already been published in peer-reviewed journals, he said. "We should have completed the trial in December but it was delayed by a few months. We wanted to release it in early 2026 but now, may be by mid-2026, we will be ready to release the vaccines," he added.

"For dengue, we got the virus strains from the National Institute of Virology. We will release the results of the clinical trials," he explained of the protocol requirements for any such scientific work.

The company is also developing a vaccine for the Zika virus and for the Kyasanur Forest Disease (KFD).

The virus, first identified in 1957 in Karnataka's forests, is reported to have infected 400 to 500 people annually since then. Transmission in humans occurs through an infected tick's bite or due to contact with an infected animal, especially a sick or dead monkey.

"The ICMR (Indian Council of Medical Research) has agreed in principle to help undertake, bear all the cost for clinical trials for the Zika vaccine and we are discussing co-developing the vaccine for KFD along with the Council," Dr. Kumar said.

In January this year, the company launched the Hepatitis A vaccine, Havisure. The product has taken off well, Dr. Kumar said.

- **About Dengue**
  - Dengue (break-bone fever) is a **viral infection** that spreads from mosquitoes (Aedes aegypti mosquito) to people. It is more common in tropical and subtropical climates.
  - **Symptoms:** High fever, headache, body aches, nausea and rash.
  - **Treatment:** There is no specific treatment for dengue. In severe cases, dengue can be fatal.
  - **Global burden:** There are around 100–400 million infections per year and nearly half the world's population is at risk.

7. Famine
GS 3 (Disaster)

- **Why in News:** Report claims that famine is now imminent in Northern governorates of Gaza.

'Famine is imminent' in northern Gaza, says UN as Israel raids hospital again

Associated Press
RAFAH

The U.N. food agency said on Monday that "famine is imminent" in northern Gaza, where 70% of the remaining population is experiencing catastrophic hunger, and that a further escalation of the war could push around half of Gaza's total population to the brink of starvation.

The alarming report came as Israel faces mounting pressure from even its closest allies to streamline the entry of aid into the Gaza Strip and open more crossings. The European Union's top diplomat said the impending famine was "entirely man-made" as "starvation is used as a weapon of war."

Israeli forces meanwhile launched another raid on the Gaza Strip's largest hospital early Monday, saying Hamas militants had regrouped there and had fired on them from inside the compound, where Palestinian officials say tens of thousands of people have been sheltering.

The military said it killed a Hamas commander who was armed and hiding inside the medical center, and that one of its own soldiers was killed in the operation.

The army last raided Shifa Hospital in November after claiming that Hamas maintained an elaborate command center within and beneath the facility.

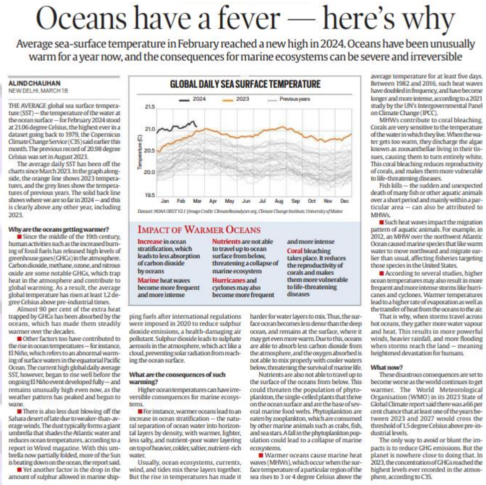
The World Food Program on Monday released the latest findings of its Integrated Food Security Phase Classification, or IPC, an international process for estimating the scale of hunger crises.

It says virtually everyone in Gaza is struggling to get enough food, and that around 6,77,000 people – nearly a third of the population of 2.3 million – are experiencing the highest level of catastrophic hunger. That includes around 2,10,000 people in the north.

It warned that if Israel broadens its offensive to the packed southern city of Rafah, as Prime Minister Benjamin Netanyahu has repeatedly vowed, the fighting could drive over a million people – half of Gaza's population – into catastrophic hunger.

- **What is Famine?**
  - Famine is essentially a technical term, referring to a **population that faces widespread malnutrition and hunger-related deaths** due to a **lack of access to food.**
  - There is a famine when **three conditions** come together in a specific geographic area-
    - At least 20 per cent of the population in that particular area are facing extreme levels of hunger;
    - 30 per cent of the children in the same place are **wasted,** or too thin for their height; and
    - The **death – or mortality – rate** has doubled, from the average, surpassing two deaths per 10,000 daily for adults and four deaths per 10,000 daily for children.

8. Warmer Oceans & Impact
GS 1 (Geography)



Oceans have a fever — here's why

Average sea-surface temperature in February reached a new high in 2024. Oceans have been unusually warm for a year now, and the consequences for marine ecosystems can be severe and irreversible

ALIND CHAUHAN
NEW DELHI, MARCH 18

THE AVERAGE global sea surface temperature (SST) — the temperature of the water at the ocean surface — for February 2024 stood at 21.06 degree Celsius, the highest ever in a dataset going back to 1979, the Copernicus Climate Change Service (C3S) said earlier this month. The previous record of 20.98 degree Celsius was set in August 2023.

The average daily SST has been off the charts since March 2023. In the graph alongside, the orange line shows 2023 temperatures, and the grey lines show the temperatures of previous years. The solid back line shows where we are so far in 2024 — and this is clearly above any other year, including 2023.

IMPACT OF WARMER OCEANS

- Increase in ocean stratification, which leads to less absorption of carbon dioxide by oceans
- Marine heat waves become more frequent and more intense
- Nutrients are not able to travel up to ocean surface from below, threatening a collapse of marine ecosystem
- Hurricanes and cyclones may also become more frequent and more intense
- Coral bleaching takes place. It reduces the reproductivity of corals and makes them more vulnerable to life-threatening diseases

Why are the oceans getting warmer?

■ Since the middle of the 19th century, human activities such as the increased burning of fossil fuels has released high levels of greenhouse gases (GHGs) in the atmosphere. Carbon dioxide, methane, ozone, and nitrous oxide are some notable GHGs, which trap heat in the atmosphere and contribute to global warming. As a result, the average global temperature has risen at least 1.2 degree Celsius above pre-industrial times.

Almost 90 per cent of the extra heat trapped by GHGs has been absorbed by the oceans, which has made them steadily warmer over the decades.

■ Other factors too have contributed to the rise in ocean temperatures — for instance, El Niño, which refers to an abnormal warming of surface waters in the equatorial Pacific Ocean. The current high global daily average SST, however, began to rise well before the ongoing El Niño event developed fully — and remains unusually high even now, as the weather pattern has peaked and begun to wane.

■ There is also less dust blowing off the Sahara desert of late due to weaker-than-average winds. The dust typically forms a giant umbrella that shades the Atlantic water and reduces ocean temperatures, according to a report in Wired magazine. With this umbrella now partially folded, more of the Sun is beating down on the ocean, the report said.

■ Yet another factor is the drop in the amount of sulphur allowed in marine shipping fuels after international regulations were imposed in 2020 to reduce sulphur dioxide emissions, a health-damaging air pollutant. Sulphur dioxide leads to sulphate aerosols in the atmosphere, which act like a cloud, preventing solar radiation from reaching the ocean surface.

What are the consequences of such warming?

Higher ocean temperatures can have irreversible consequences for marine ecosystems.

■ For instance, warmer oceans lead to an increase in ocean stratification — the natural separation of ocean water into horizontal layers by density, with warmer, lighter, less salty, and nutrient-poor water layering on top of heavier, colder, saltier, nutrient-rich water.

Usually, ocean ecosystems, currents, wind, and tides mix these layers together. But the rise in temperatures has made it harder for water layers to mix. Thus, the surface ocean becomes less dense than the deep ocean, and remains at the surface, where it may get even more warm. Due to this, oceans are able to absorb less carbon dioxide from the atmosphere, and the oxygen absorbed is not able to mix properly with cooler waters below, threatening the survival of marine life.

Nutrients are also not able to travel up to the surface of the oceans from below. This could threaten the population of phytoplankton, the single-celled plants that thrive on the ocean surface and are the base of several marine food webs. Phytoplankton are eaten by zooplankton, which are consumed by other marine animals such as crabs, fish, and sea stars. A fall in the phytoplankton population could lead to a collapse of marine ecosystems.

■ Warmer oceans cause marine heat waves (MHWs), which occur when the surface temperature of a particular region of the sea rises to 3 or 4 degree Celsius above the average temperature for at least five days. Between 1982 and 2016, such heat waves have doubled in frequency, and have become longer and more intense, according to a 2021 study by the UN's Intergovernmental Panel on Climate Change (IPCC).

MHWs contribute to coral bleaching. Corals are very sensitive to the temperature of the water in which they live. When the water gets too warm, they discharge the algae known as zooxanthellae living in their tissues, causing them to turn entirely white. This coral bleaching reduces reproductivity of corals, and makes them more vulnerable to life-threatening diseases.

Fish kills — the sudden and unexpected death of many fish or other aquatic animals over a short period and mainly within a particular area — can also be attributed to MHWs.

■ Such heat waves impact the migration pattern of aquatic animals. For example, in 2012, an MHW over the northwest Atlantic Ocean caused marine species that like warm water to move northward and migrate earlier than usual, affecting fisheries targeting those species in the United States.

■ According to several studies, higher ocean temperatures may also result in more frequent and more intense storms like hurricanes and cyclones. Warmer temperatures lead to a higher rate of evaporation as well as the transfer of heat from the oceans to the air.

That is why, when storms travel across hot oceans, they gather more water vapour and heat. This results in more powerful winds, heavier rainfall, and more flooding when storms reach the land — meaning heightened devastation for humans.

What now?

These disastrous consequences are set to become worse as the world continues to get warmer. The World Meteorological Organisation (WMO) in its 2023 State of Global Climate report said there was a 66 per cent chance that at least one of the years between 2023 and 2027 would cross the threshold of 1.5 degree Celsius above pre-industrial levels.

The only way to avoid or blunt the impacts is to reduce GHG emissions. But the planet is nowhere close to doing that. In 2023, the concentration of GHGs reached the highest levels ever recorded in the atmosphere, according to C3S.

- **Why in News:** The average global sea surface temperature (SST) — the temperature of the water at the ocean surface — for February 2024 stood at 21.06 degree Celsius, the highest ever in a dataset that goes back to 1979. The previous record of 20.98 degree Celsius was set in August 2023.
- **Reason behind the warming oceans**
  - **Trapped heat:** Since the beginning of the Industrial Revolution a few hundred years ago, humans have burned massive amounts of fossil fuels; cut down huge swaths of forest; and undertaken many other activities that pump heat-trapping carbon dioxide into Earth's atmosphere. Most of the rest of the trapped heat has been absorbed into the planets' vast oceans.
  - **El Nino:** The climate crisis is being compounded by the natural **El Niño climate pattern.**
  - **Marine heat waves**—defined as periods of persistent anomalously warm ocean temperatures (warmer than 90 percent of the previous observations for a given time of year)—have occurred recently in several areas.
  - **Weaker-than-average winds** have reduced the amount of **Saharan dust** in the atmosphere, which usually reduces sea temperatures by blocking some of the sun's energy.
- **Impact of Warm Oceans**
  - **Marine life:** Hotter marine temperatures can have a devastating effect on marine life, and there have been multiple mass mortalities of marine animals and plants due to ocean heatwaves.
  - **Displacement of species:** Heatwaves can also cause damaging **algal blooms, coral bleaching**, the displacement of marine species – as they search for colder water – and the disruption of food chains.
  - **Extreme climatic events:** Increased marine temperatures can be harmful on land too, causing extreme weather, such as storms and hurricanes.
  - **Vicious cycle of warming events**: Less sea ice not only means possible future sea level rises, it means that there's less ice to reflect the sun's energy, resulting in higher sea temperatures and more frequent marine heatwaves, a vicious cycle that could have global ramifications.
- There needs to be a reduction in emissions, but also more investment in nature-based solutions as well as more research into monitoring marine heatwaves. Furthermore, to ensure a stable climate and make real on the commitment of the Paris Agreement, UNEP has identified six sectors with the potential to reduce emissions enough to keep the world below the 1.5°C mark. They are: energy; industry; agriculture and food; forests and land use; transport; and buildings and cities.

9. Forest Fires & impact on Biodiversity
GS 3 (Environment)

EXPLAINED ENVIRONMENT

Heat, aridity, clear skies: why forests are already ablaze in the Nilgiris

ANJALI MARAR
BENGALURU, MARCH 18

FOR ALMOST a week, forest fires have been raging in the Coonoor forest range in the Nilgiris in Tamil Nadu. On Sunday, the Indian Air Force joined the ongoing firefighting efforts of the state forest department, deploying an Mi-17 V5 helicopter to conduct multiple "Bambi Bucket" operations that dumped some 16,000 litres of water on the fires.

The Bambi Bucket, also called a helicopter bucket or a helibucket, is a specialised container that is suspended by cable under a chopper, and which can be filled by lowering into a river or pond before being flown above a fire and discharged aerially by opening a valve at the bottom of the bucket.

The Bambi Bucket is especially helpful in fighting wildfires that are difficult or impossible to reach from the ground. Around the world, helicopters are frequently commissioned to fight forest fires.

How common are forest fires in India?

November to June is considered to be forest fire season in India, with hundreds of thousands of small and large fires burning every year, especially from February onward as summer approaches. April-May are usually the worst fire months across the country.

The biennial India State of Forest Report (ISFR) published by the Forest Survey of India (FSI) under the Ministry of Environment, Forest and Climate Change recorded in its 2019 report that more than 36% of India's forest cover was prone to frequent fires. About 4% of the forest cover was 'extremely prone' to fire, and another 6% was 'very highly' fire prone (ISFR 2019).

Globally, about 3% of the total forest area, or about 98 million hectares of forest, were affected by fires in the year 2015, mostly in the tropical regions.

Where do the most forest fires in India occur?

According to the FSI, severe fires break out in dry deciduous forests, while evergreen, semi-evergreen, and montane temperate forests are comparatively less prone to fires. The forests of Northeast India, Odisha, Maharashtra, Jharkhand, Chhattisgarh, and Uttarakhand are the most vulnerable to fires during the November to June period.

In March 2023, large bushfires raged in Goa, triggering an investigation into whether they were "man-made". In 2021, a series of forest fires broke out in Uttarakhand, Himachal Pradesh, Nagaland-Manipur border, Odisha, Madhya Pradesh, and Gujarat, including in wildlife sanctuaries.

How has the forest fire situation been this year?

Over the past one week, the highest number of forest fires have been reported from Mizoram (3,738), Manipur (1,702), Assam (1,652), Meghalaya (1,252), and Maharashtra (1,215), as per FSI data.

Satellite data of Monday, generated by Indian Space Research Organisation (ISRO) tools, showed that forest fires have been on an uptick since early March along the Konkan belt in Maharashtra, south-coastal Gujarat along Gir Somnath and Porbandar, southern Rajasthan and adjoining south-western districts of Madhya Pradesh, coastal and interior Odisha, and adjoining Jharkhand.

In South India, most forest covered areas of Andhra Pradesh, Karnataka and Tamil Nadu have seen fire incidents over the past week.

Are forest fires in South India unusual?

Some forest areas in Andhra Pradesh and Telangana are fire-prone. However, according to the FSI, forests in southern India are comparatively less vulnerable to fires, as the vegetation type is mainly evergreen or semi-evergreen. That said, Tamil Nadu has been reporting wildfires in its forests in recent years.

What is the reason for the fires this year?

Forest fires have man-made as well as natural causes. A majority of forest fires are a result of human carelessness like discarded cigarettes, camp fires, burning of debris, and similar other processes. Amongst natural causes, lightning is the most common originator.

Forest fires need a conducive atmosphere to spread. Hot and dry temperatures and high tree density are some of the factors that help the spread of forest fires.

This year, high aridity, above-normal day temperatures, clear sky conditions, and calm winds during the early phase of the summer season are some of the contributory factors for the spike in forest fire incidents in southern India.

Last month was exceptionally hot over Southern India in particular. This February was South India's hottest since 1901, and January was the fifth warmest in more than a century.

Over the past two months, the recorded maximum, minimum, and mean temperatures have remained above-normal over the southern states, which has helped build the heat load over the region well before the onset of the summer season. As a result, there has been an early availability of dry biomass in these forests since the winter season itself.

The IMD has warned of the prevalence of Excess Heat Factor (EHF), a value that predicts the chances of a heatwave over a region, to be significantly higher than normal over western Andhra Pradesh and neighbouring Karnataka. Maximum temperatures touched 40 degrees Celsius here last week, unusual for mid March.

In the absence of rain and prevailing high temperatures, the IMD has classified almost all districts of southern India under 'mild' aridity.

- **Why in News:** For nearly a week now, forest fires have been raging in the **Coonoor forest range** in the **Nilgiris in Tamil Nadu.**
- **Causes of Forest Fire**
  - According to the Forest Survey of India, nearly 36 per cent of India's forests are prone to frequent fires.
  - Several factors like **temperatures, precipitation, vegetation, and moisture** contribute to the scale and frequency of these

fires.

- Higher fire incidents are reported in March, April and May due to ample availability of dry biomass (fuel load) following the end of winter and the on-going summer season.
- Most forest fires are man-made due to changes in agriculture and unchecked land-use patterns.

- **Impact of Forest Fire**
  - **Loss and displacement of species:**The impact of recurrent forest fires leads to the direct loss of trees and wildlife.
  - **Pushing towards extinction:**Forest fires can meddle with the life cycle of species and push many of the threatened and endemic species closer to extinction.
  - **Affecting growth:**By destroying the leaves and foliage, a forest fire can significantly reduce the photosynthetic activity of surviving trees and thereby affect their growth.
  - **Affected seedlings:**It can also damage the seed bank, both above and below the ground, and wipe out the seedlings and saplings growing on the forest floor.
  - **Impact on recovery rate:**The loss of **keystone organisms** in forest ecosystems, such **as invertebrates, pollinators, and decomposers,** can significantly slow the recovery rate of the forest.
  - **Serious impact of reproduction:**Forest fires can also interfere with the reproduction and propagation of certain plants and animals. Such recurrent events can be deadly to the species that are native or endemic to the region.

India State of Forest Report (ISFR) 2021

- 35.46% of India's forest cover is susceptible to forest fires.
- Of this, 2.81% are extremely prone, 7.85% are very highly prone, and 11.51% are highly prone.
- India's 45–64% of forests will be impacted by changing climate and rising temperatures by 2030

DO NOT COPY

20th March, 2024

1. Ties that epitomise India's Neighbourhood First Policy
GS 2 (International Relations)

- **Why in News:** Recent discussions and reflections have brought attention to the enduring and remarkable friendship between Bhutan and India despite vast differences in size and population. This enduring partnership has sparked interest and admiration, prompting further examination of the underlying factors that have fostered such a close relationship over the past 50 years and more.

Ties that epitomise India's neighbourhood first policy

People have always marvelled at how little Bhutan with an area of 38,394 square kilometre and a population of 7.7 lakh as compared with its giant neighbour India with an area of 3.28 million sq.km and a population of 140 crores have been the closest of partners and the best of friends over the past 50 years and more.

The answer is quite simple. Both nations look to each other as equals, we treat each other with the utmost respect and we have long realised that size does not really make a difference in relations between two sovereign nation states. Thus, India has constantly respected Bhutanese identity, Bhutan's unique religious practices and its desire to be economically prosperous while retaining its own way of life. On its part, Bhutan has long known that there is no real threat to its sovereignty or identity from its southern flank. Hence, it has looked to India to help it grow, develop and prosper. India has lived up to this expectation. Over the decades this has developed into a unique level of trust amongst the leadership of the two countries. It has been in evidence in the recent past.

The Gelephu project

The King of Bhutan paid a visit to India in November 2023 during which he hinted at his plans for a Mindfulness City at Gelephu in southern Bhutan. It is to be like a Special Economic Zone to attract foreign investment and advance prosperity for that nation. Naturally, India, including its business entities, is expected to play a significant role in this effort. Simultaneously, the Gelephu Mindfulness City is to keep sustainability, well-being and environmental concerns at the forefront. Such a project is expected to lead the people of Bhutan to higher income levels while allaying any concerns about its impact on Bhutan as a carbon negative country. Gelephu city is expected to focus on human well-being too with an emphasis on yoga, rest and recreation, spa therapies and mental relaxation channels.

The visit last week by the Prime Minister of Bhutan to India was a follow-up to the king's earlier visit and there were excellent discussions with Prime Minister Narendra Modi as well as the President of India, Droupadi Murmu. This week, Mr. Modi is to pay a return visit to Bhutan. We must understand that any relationship, whether it is between two individuals or between two nations, needs constant tending, regular dialogue and a lot of care and cooperation. The back-to-back visits of the Prime Ministers of Bhutan and India to each other's nations is a manifestation of this attention placed on the relationship by both governments.

This is a good augury for the continued growth and development of India-Bhutan ties. It epitomises India's Neighbourhood First policy approach.

The anchor of hydropower cooperation

Hydropower cooperation is the bedrock of India's relations with Bhutan. Several cooperative hydroprojects have been completed and commissioned by the two governments which supply clean electricity to India and provide Thimphu with a stream of revenue due to which it has graduated out of the Least Developed Country status. The delayed Punatsangchhu-II hydropower project is expected to be completed in 2024 – yet another successful example of the government-to-government model of cooperation in hydropower.

In recent years, a new joint venture model was developed for the construction of hydroprojects between India and Bhutan, but none of the proposed five projects has really taken off. Perhaps, it is time to acknowledge that this new proposed model is flawed and there is a need to go back to the drawing board to work out a more practical and potentially successful new model for hydroprojects.

India has also been a major development assistance partner to Bhutan and contributed ₹5,000 crore to its 12th Five Year Plan which just concluded. Critical in this process of development assistance is the fact that India does not merely undertake projects which are of benefit to it but pays a lot of attention to the priorities of the Bhutanese people so that projects of direct benefit to them are constructed. Such confabulation and discussion is an integral part of the successful partnership for prosperity between New Delhi and Thimphu. It is critical that this model continues in the future too.

Measures to consider

In the years ahead, India must contribute to the success of the Gelephu Mindfulness City and can perhaps consider the following measures: commence direct flights between Mumbai/Delhi and Gelephu; provide our technology and knowledge in building hard infrastructure to Bhutan (the private sector will take the lead); encourage high-end Indian tourists and businesspersons to visit Gelephu in controlled numbers; Encourage Indian businesses to set up shop in the city.

Gelephu is next to remote parts of West Bengal and Assam and the success of the Mindfulness City will have positive socio-economic spillovers for these geographies as well. It will provide yet another example of the win-win cooperation between India and Bhutan.

Gautam Bambawale is a former Indian Ambassador to Bhutan and is currently the trustee of the think-tank, Pune International Centre

There is much evidence of the unique level of trust between the leadership of Bhutan and India that has led to a strengthening of relations

- **Basis of Strong Bilateral Ties:**
  - **Strong bond:** Despite vast differences in size and population, India and Bhutan share a longstanding bond built on mutual respect and equality.
  - **Essence in recognizing identities:** The essence of their relationship lies in recognizing each other's sovereignty and unique cultural identities.
  - **Trust:** India's commitment to respecting Bhutan's autonomy and fostering its economic growth has cultivated a deep sense of trust between the two nations.
- **Development Initiatives and Future Prospects:**
  - **New chapter and opportunities:** Bhutan's vision for a **Mindfulness City at Gelephu**, emphasizing sustainability and economic prosperity, signals a new chapter in bilateral cooperation. The success of the Gelephu Mindfulness City is expected to benefit not only Bhutan but also neighboring regions in India, fostering **socio-economic development.**
  - **Crucial sectors**: **Hydropower cooperation**, a cornerstone of their ties, has not only boosted Bhutan's economy but also exemplified successful government-to-government collaboration. To further enhance ties, India can consider measures such as initiating **direct flights to Gelephu,** providing **technology assistance**, and **encouraging Indian investment** in the city.
  - **Exemplary Relationship**: Upholding the principles of **win-win cooperation**, India and Bhutan continue to set an example of fruitful partnership and shared prosperity in the region.

2. Forced Labour profits nearly USD 250 billion: ILO
GS 2 (Social Issues)

- **Why in News:** Criminals are reaping "obscene" profits of nearly one-quarter of a trillion dollars from **forced labour**, says the International Labour Organization (ILO).

27.6 million people engaged in forced labour in 2021: ILO

A.M. Jigeesh
NEW DELHI

It perpetuates cycles of poverty and strikes at the heart of human dignity, says report

A study by the International Labour Organization (ILO), released in Geneva on Tuesday, has found that forced labour generates illegal profits worth $36 billion per year.

This is an increase of 37% of such illegal profits since 2014 and the study said this is fuelled by both a growth in the number of people forced into labour, as well as higher profits generated from the exploitation of victims. For the study, surveys have been conducted among workers, including Indians in Saudi Arabia and Qatar.

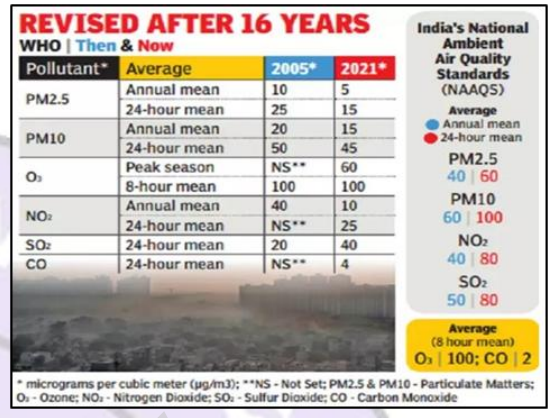
The report titled "Profits and poverty: The economics of forced labour" also estimates that traffickers and criminals are generating close to $10,000 per victim, up from $8,269 (adjusted for inflation) a decade ago. "Total annual illegal profits from forced labour are highest in Europe and Central Asia ($84 billion), followed by Asia and the Pacific ($62 billion), the Americas ($52 billion), Africa ($20 billion), and the Arab States ($18 billion)," the report said.

The report also said forced commercial sexual exploitation accounts for more than two-thirds (73%) of the total illegal profits, despite accounting for only 27% of the total number of victims in privately imposed labour. "After forced commercial sexual exploitation, the sector with the highest annual illegal profits from forced labour is industry, at US$35 billion, followed by services (US$20.8 billion), agriculture (US$5.0 billion), and domestic work (US$2.6 billion). These illegal profits are the wages that rightfully belong in the pockets of workers but instead remain in the hands of their exploiters, as a result of their coercive practices," ILO Director-General Gilbert F. Houngbo said.

"Forced labour perpetuates cycles of poverty and exploitation and strikes at the heart of human dignity. We now know that the situation has only got worse. The international community must urgently come together to take action to end this injustice," said the ILO Director-General.

There were 27.6 million people engaged in forced labour on any given day in 2021, the report said, meaning 3.5 people for every 1,000 people in the world. "Between 2016 and 2021, the number of people in forced labour increased by 2.7 million," it said.

- **Key-highlights of the Report**
  - **Report Title**: 'Profits and poverty: The economics of forced labour'
  - The report estimates that traffickers and criminals are generating close to USD 10,000 per victim, up from USD 8,269 (adjusted for inflation) a decade ago.
  - **Forced labour** generates illegal profits worth USD 36 billion per year.
  - In terms of profit per victim, figures were highest in **Europe and Central Asia**, followed by the **Arab States, the Americas, Africa, and Asia and the Pacific.**
  - **Forced commercial sexual exploitation** accounts for more than two-thirds (73%) of the total illegal profits, despite accounting for only 27% of the total number of victims in privately imposed labour.



- These illegal profits are the wages that rightfully belong in the pockets of workers but instead remain in the hands of their exploiters, as a result of their coercive practices.

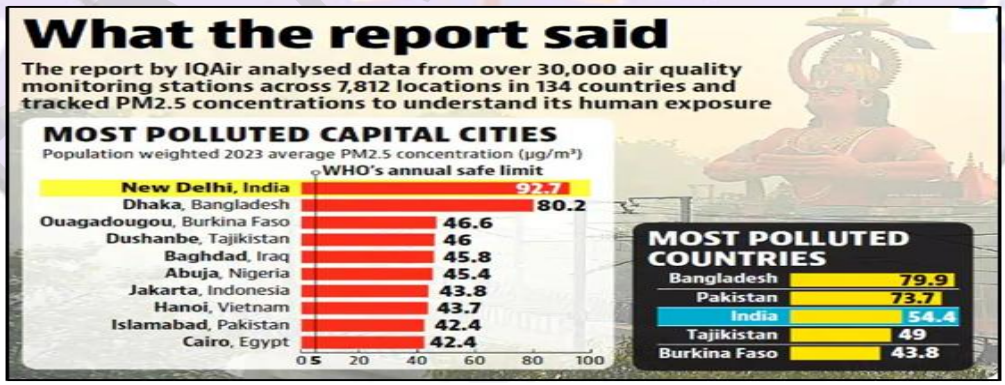
- **Reason behind the situation**
  - **Forced labour and higher profits**: This increase is fuelled by both a growth in the number of people forced into labour (a form of **modern slavery**), as well as higher profits generated from the exploitation of victims.
  - **Lack of adequate livelihood options** become more vulnerable to forced labour as they and may be easily tricked into accepting risky opportunities for survival.
  - **Limited Government intervention**: While there are improved identification measures but legal frameworks, gaps in services available to survivors remained and only limited action has been taken to address systemic risk factors to forced labour.
- **Impact of such exploitation**
  - **Cycles of poverty and exploitation**: Forced labour perpetuates cycles of poverty and exploitation and strikes at the heart of human dignity.
  - **Multiple forms of coercion:** It encompasses various forms of exploitation, including **forced marriage, commercial sexual exploitation, human trafficking, deliberate and systematic withholding of wage, slavery-like practices and the sale and exploitation of children.**
- **Required Measures**
  - **Investment:** There is urgent need for investment in enforcement measures to stem illegal profit flows and hold perpetrators accountable.
  - **Enforcement actions:** There is need for strengthening legal frameworks, providing training for enforcement officials extending labour inspection into high-risk sectors, and better coordination between labour and criminal law enforcement.
  - **Addressing root cause:** Enforcement actions must be part of a comprehensive approach that prioritises addressing root causes and safeguarding victims.

3. World Air Quality Report 2023
GS 3 (Environment)

- **Why in News:** The World Air Quality Report 2023 has been released by the Swiss organization IQAir. According to the report, India ranked third worst out of 134 countries in terms of average annual PM2.5 concentration.
- **World Air Quality Report**
  - **About**
    - The World Air Quality Report **by IQAir is an annual publication that provides a comprehensive analysis of air quality levels around the world.**
      - **IQAir is a Swiss-based air quality technology company** that specializes in providing air pollution data and solutions.
    - It ranks cities and countries based on their air quality levels, highlighting areas with the cleanest and most polluted air.
  - **Methodology**
    - The Report uses the average concentration of PM2.5, as the primary indicator of air quality for each country or territory.
    - The report uses publicly-available data from over 30,000 air quality monitoring stations across 7,812 locations in 134 countries, territories, and regions.

- Its analysis blends data both from governmental sources—such as the air-quality data tracked by regulatory bodies, like the US Environmental Protection Agency—with data from lower-cost sensors such as those IQAir produces.

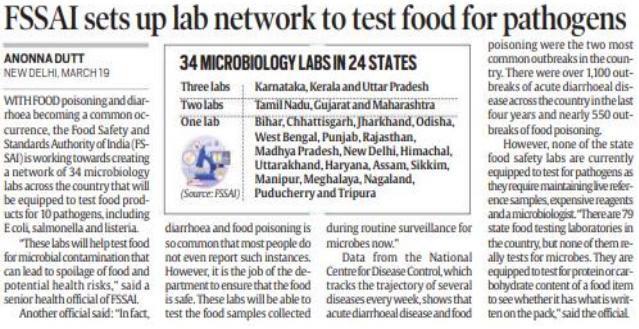
- **Air quality guidelines by WHO**
  - **Background**
    - In September 2021, the World Health Organization (WHO) revised its air quality guidelines.
    - As per WHO, air pollution is one of the biggest environmental threats to human health, causing seven million premature deaths a year.
    - Hence, ranking its burden of disease on a par with smoking and unhealthy eating.
      - Almost 80% of deaths related to PM2.5 could be avoided in the world if the current air pollution levels were reduced to those proposed in the updated guideline.
  - **Revised norms**
    - The revised norms recommend air quality levels for six pollutants
    - The recommended levels for all the six pollutants have been revised downwards from the existing norms that have been in place since 2005.
- **Key Highlights of World Air Quality Report 2023**
  - **The top five most polluted countries in 2023 compared to WHO PM2.5 annual guidelines**
    - Bangladesh (79.9 µg/m3) more than 15 times higher
    - Pakistan (73.7 µg/m3) more than 14 times higher
    - **India** (54.4 µg/m3) more than **10 times higher**
    - Tajikistan (49.0 µg/m3) more than 9 times higher
    - Burkina Faso (46.6 µg/m3) more than 9 times higher
  - **7 countries met the WHO annual PM2.5 guideline (annual average of 5 µg/m3 or less)**
    - These are - Australia, Estonia, Finland, Grenada, Iceland, Mauritius, and New Zealand.
  - A total of 124 (92.5%) out of 134 countries and regions exceeded the WHO annual PM2.5 guideline value of 5 µg/m3.
- **India specific observation**
  - India was declared as the **third-most polluted country** in 2023, after Bangladesh and Pakistan.
    - In 2022, India was ranked as the eighth most polluted country with an average PM2.5 concentration of 53.3 micrograms per cubic metre.
  - In the report's list of the top 50 most polluted cities in the world, 42 cities were in India.
    - **Begusarai was the most polluted metropolitan area of 2023**, followed by Guwahati and then Delhi.
    - Other Indian cities featuring in the top 50 most polluted cities of the world list included:
      - Greater Noida (11), Muzzafarnagar (16), Gurgaon (17), Arrah (18),
      - Dadri (19), Patna (20), Faridabad (25), Noida (26), Meerut (28), Ghaziabad (35) and Rohtak (47).
    - Of the top ten most polluted cities in the world, 9 belong to India.



4. Food Safety and Standards Authority of India (FSSAI)

GS 2 (Health)

- **Why in News:** The Food Safety and Standards Authority of India (FSSAI) is working towards creating a network of 34 microbiology labs across the country that will be equipped to test food products.
- **About Food Safety and Standards Authority of India (FSSAI):**
  - It is an autonomous body established under the **Ministry of Health and Family Welfare**, Government of India. It has been established under **the Food Safety and Standards Act, 2006,** which is a consolidating statute related to food safety and regulation in India.
  - **Mission**: **Set globally benchmarked standards for food,** encourage and ensure that food businesses adhere to these


FSSAI sets up lab network to test food for pathogens

ANONNA DUTT
NEW DELHI, MARCH 19

WITH FOOD poisoning and diarrhoea becoming a common occurrence, the Food Safety and Standards Authority of India (FSSAI) is working towards creating a network of 34 microbiology labs across the country that will be equipped to test food products for 10 pathogens, including E coli, salmonella and listeria.

"These labs will help test food for microbial contamination that can lead to spoilage of food and potential health risks," said a senior health official of FSSAI.

Another official said: "In fact, diarrhoea and food poisoning is so common that most people do not even report such instances. However, it is the job of the department to ensure that the food is safe. These labs will be able to test the food samples collected during routine surveillance for microbes now."

34 MICROBIOLOGY LABS IN 24 STATES

Three labs	Karnataka, Kerala and Uttar Pradesh
Two labs	Tamil Nadu, Gujarat and Maharashtra
One lab	Bihar, Chhattisgarh, Jharkhand, Odisha, West Bengal, Punjab, Rajasthan, Madhya Pradesh, New Delhi, Himachal, Uttarakhand, Haryana, Assam, Sikkim, Manipur, Meghalaya, Nagaland, Puducherry and Tripura

(Source: FSSAI)

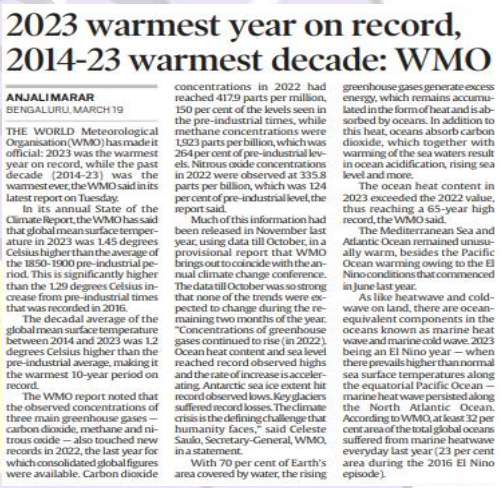
Data from the National Centre for Disease Control, which tracks the trajectory of several diseases every week, shows that acute diarrhoeal disease and food poisoning were the two most common outbreaks in the country. There were over 1,100 outbreaks of acute diarrhoeal disease across the country in the last four years and nearly 550 outbreaks of food poisoning.

However, none of the state food safety labs are currently equipped to test for pathogens as they require maintaining live reference samples, expensive reagents and a microbiologist. "There are 79 state food testing laboratories in the country, but none of them really tests for microbes. They are equipped to test for protein or carbohydrate content of a food item to see whether it has what is written on the pack," said the official.

standards, **adopt good manufacturing and hygiene practices,** and ultimately enable citizens to access safe and right food.

- **Functions**:
  - It is responsible for protecting and promoting public health through the **regulation and supervision of food safety.**
  - It **lays down standards and guidelines** in relation to articles of food and provides for licensing, registration, and accreditation for food business operators.
  - **Anyone selling or importing food** in India **needs a food license issued by FSSAI**.
  - Its officers **carry out food import controls** and ensure that the contain no harmful ingredients. It is also responsible for the **accreditation of food testing laboratories** throughout India.
  - The FSSAI is **responsible for the Food Certification in India.** It is mandated to specify systems for enforcing its standards, for accreditation of certification systems, and for certification of food safety management systems for food businesses.

5. State of Global Climate Report 2023
GS 3 (Environment)



2023 warmest year on record, 2014-23 warmest decade: WMO

ANJALI MARAR
BENGALURU, MARCH 19

THE WORLD Meteorological Organisation (WMO) has made it official: 2023 was the warmest year on record, while the past decade (2014-23) was the warmest ever, the WMO said in its latest report on Tuesday.

In its annual State of the Climate Report, the WMO has said that global mean surface temperature in 2023 was 1.45 degrees Celsius higher than the average of the 1850-1900 pre-industrial period. This is significantly higher than the 1.29 degrees Celsius increase from pre-industrial times that was recorded in 2016.

The decadal average of the global mean surface temperature between 2014 and 2023 was 1.2 degrees Celsius higher than the pre-industrial average, making it the warmest 10-year period on record.

The WMO report noted that the observed concentrations of three main greenhouse gases — carbon dioxide, methane and nitrous oxide — also touched new records in 2022, the last year for which consolidated global figures were available. Carbon dioxide concentrations in 2022 had reached 417.9 parts per million, 150 per cent of the levels seen in the pre-industrial times, while methane concentrations were 1,923 parts per billion, which was 264 per cent of pre-industrial levels. Nitrous oxide concentrations in 2022 were observed at 335.8 parts per billion, which was 124 per cent of pre-industrial level, the report said.

Much of this information had been released in November last year, using data till October, in a provisional report that WMO brings out to coincide with the annual climate change conference. The data till October was so strong that none of the trends were expected to change during the remaining two months of the year. "Concentrations of greenhouse gases continued to rise (in 2022). Ocean heat content and sea level reached record observed highs and the rate of increase is accelerating. Antarctic sea ice extent hit record observed lows. Key glaciers suffered record losses. The climate crisis is the defining challenge that humanity faces," said Celeste Saulo, Secretary-General, WMO, in a statement.

With 70 per cent of Earth's area covered by water, the rising greenhouse gases generate excess energy, which remains accumulated in the form of heat and is absorbed by oceans. In addition to this heat, oceans absorb carbon dioxide, which together with warming of the sea waters result in ocean acidification, rising sea level and more.

The ocean heat content in 2023 exceeded the 2022 value, thus reaching a 65-year high record, the WMO said.

The Mediterranean Sea and Atlantic Ocean remained unusually warm, besides the Pacific Ocean warming owing to the El Nino conditions that commenced in June last year.

As like heatwave and cold-wave on land, there are ocean-equivalent components in the oceans known as marine heat wave and marine cold wave. 2023 being an El Nino year — when there prevails higher than normal sea surface temperatures along the equatorial Pacific Ocean — marine heat wave persisted along the North Atlantic Ocean. According to WMO, at least 32 per cent area of the total global oceans suffered from marine heatwave everyday last year (23 per cent area during the 2016 El Nino episode).

- **Why in News**: As per the State of the Global Climate report, published recently, 2023 was found to be the hottest year on record**.**
- **About State of Global Climate Report 2023:**
  - It is an **annual report** published **by the World Meteorological Organisation (WMO). Many experts and partners contribute** to the report, including UN organizations, National Meteorological and Hydrological Services (NMHSs), and Global Data and Analysis Centers, as well as Regional Climate Centres, the World Climate Research Programme (WCRP), the Global Atmosphere Watch (GAW), the Global Cryosphere Watch and the Copernicus Climate Change Service operated by ECMWF.
  - **Highlights of the 2023 Report:**
    - **2023 was the hottest year** on record, with the global average near-surface temperature at 1.45 °Celsius (with a margin of uncertainty of ± 0.12 °C) above the pre-industrial baseline. It was the **warmest ten-year period on record**.
    - On an average day in 2023, nearly **one third of the global ocean** was **gripped by a marine heatwave**, harming vital ecosystems and food systems. Towards the end of 2023, over 90% of the ocean had experienced heatwave conditions at some point during the year.
    - The **global set of reference glaciers suffered the largest loss of ice on record** (since 1950), driven by extreme melt in both western North America and Europe, according to preliminary data.
    - **In 2023, renewable capacity additions increased by almost 50%** from 2022, for a total of 510 gigawatts (GW), the highest rate observed in the past two decades.
- **Key Facts about World Meteorological Organisation (WMO):**
  - It is a **specialized agency of** the **United Nations (UN).** It originated from the International Meteorological Organization (IMO), which was founded in 1873.
  - **Established in 1950**, WMO became the specialized agency of the UN for meteorology (weather and climate), operational hydrology, and related geophysical sciences.
  - **Headquarters: Geneva**, Switzerland.
  - Currently, it has a membership of 191 countries.
  - **Governance Structure:**
    - Its **supreme body is the World Meteorological Congress**, which consists of representatives of all members. It meets at least every four years to set general policy and adopt regulations.
    - A 36-member Executive Council meets annually and implements policy. The Secretariat, headed by a secretary-general appointed by the congress for a four-year term, serves as the administrative centre of the organization.

6. Hong Kong legislature unanimously passes national security bill
GS 2 (International Relations)

WHAT DOES HONG KONG'S NEW STRINGENT SECURITY LAW SAY?

HONG KONG on Tuesday passed its new national security law, which broadens the definition of crimes including sabotage, sedition and state secrets, and stipulates tougher penalties of up to life imprisonment.

The law comes on top of a 2020 security law imposed by China a year after massive pro-democracy protests.

The law could have implications for many sectors in the global financial hub including business, academia, law, diplomacy and the media, observers say.

Key offences and sentences

Sedition

The offence carries jail terms of up to 7 years for any seditious act, word or publication with the intention of bringing hatred, contempt or disaffection against the China or Hong Kong governments.

If such acts are carried out in collusion with an "external force", which could include foreign governments, a foreign political party, an international organisation or a company linked to a foreign government, the penalty rises to 10 years.

The offence also carries a 3-year jail term for possession of a publication with seditious intention, although the Bill does not give specific examples of what such material might be.

State secrets

At least 3 years jail for unlawful possession of a state secret which would likely harm national security if released, defined broadly to include secrets spanning defence, foreign affairs, economic development or scientific technology.

Jail terms of 5 years for unlawful acquisition of such secrets, and 7 years for those leaving Hong Kong with such state secrets.

External interference

Jail terms of 14 years for collaborating with an external force to bring about interference over areas including government policy, the legislature, courts or elections.

Espionage

Jail terms of 20 years for acts including entering prohibited places, and intercepting information or documents of use to an external force.

Treason

Maximum life imprisonment for various acts including joining an external armed force at war with China, or use of force to endanger Chinese unity.

Effect on defendant's rights

Rights advocates say the new law will further undermine the legal protections for defendants charged with national security crimes.

Under the new law, the detention period of suspects will be expanded from a maximum 48 hours to an additional 14 days with the approval of a magistrate. Access to legal representatives could also be denied in view of circumstances endangering national security by the magistrate, who may issue a warrant authorising a senior police officer to restrict the person's consultation with a lawyer. An arrestee's movements could also be restricted, and the early release of national security prisoners will only be allowed if not contrary to national security interests. REUTERS

Hong Kong lawmakers applaud after the new security Bill was passed on Tuesday. Reuters

- **Why in News:** The Hong Kong legislature has passed a new **national security law** unanimously, granting the government more power to curb dissent. The passing of the 'Safeguarding National Security Bill' comes in the wake of a political crackdown sparked by the 2019 pro-democracy protests.
- **Political System of Hong Kong**
  - **Political system**
    - Hong Kong is a **special administrative region of China** located to the east of Pearl River Delta in South China.

- It has its own currency, political system and cultural identity but it belongs to China.

- **Background**
  - The city was a colony of the United Kingdom, until the British handed it back over to China in 1997.
  - Qing dynasty leaders ceded Hong Kong Island to the British Crown in 1842 after China's defeat in the First Opium War.
  - At the time of handover, the Chinese Communist leadership had agreed to a unique arrangement – "One Country, Two Systems".
  - This was agreed upon to maintain Hong Kong's prosperity, and its legal system and culture.
- **One Country, Two Systems**
  - Under this policy, Hong Kong maintains a de-facto constitution, known as the Hong Kong Basic Law.
  - It guarantees freedoms that are unavailable to Chinese mainlanders, such as the right to protest, the right to a free press and freedom of speech.
  - But in recent years, Beijing has repeatedly reinterpreted the Basic Law and now it says it has "complete jurisdiction" over Hong Kong.

- **Background - 2019 pro-democracy protests and a security law**
  - **2019 pro-democracy protests**
    - In 2019, a large number of people in Hong Kong wore white and marched through the streets in one of the largest protests since the Umbrella Revolution in 2014.
    - They were protesting against a proposed law change that would allow suspects accused of serious crimes to be sent to mainland China for trial.
  - **2019 Security law**
    - Four years ago, Beijing imposed a sweeping security law triggered by the massive anti-government protests in 2019.
    - The new law was used to prosecute several leading activists.
    - Beijing and the Hong Kong governments said the law brought about stability in the region.
- **Safeguarding National Security Bill**
  - **About**
    - The 'Safeguarding National Security Bill' will come into effect on March 23.
    - It extends the government power to curb any future dissent or challenges that might arise.
    - This includes expanding the scope of punishing treason and insurrection upto life imprisonment.
    - The law allowing criminal prosecution for specific acts committed anywhere in the world.
    - It also incorporates provisions for imposing tougher penalties on people convicted of working with governments in foreign countries to commit crimes.
  - **Key offences and sentences**

Sedition

The offence carries jail terms of up to 7 years for any seditious act, word or publication with the intention of bringing hatred, contempt or disaffection against the China or Hong Kong governments.

If such acts are carried out in collusion with an "external force", which could include foreign governments, a foreign political party, an international organisation or a company linked to a foreign government, the penalty rises to 10 years.

The offence also carries a 3-year jail term for possession of a publication with seditious intention, although the Bill does not give specific examples of what such material might be.

State secrets

At least 3 years jail for unlawful possession of a state secret which would likely harm national security if released, defined broadly to include secrets spanning defence, foreign affairs, economic development or scientific technology.

Jail terms of 5 years for unlawful acquisition of such secrets, and 7 years for those leaving Hong Kong with such state secrets.

External interference

Jail terms of 14 years for collaborating with an external force to bring about interference over areas including government policy, the legislature, courts or elections.

Espionage

Jail terms of 20 years for acts including entering prohibited places, and intercepting information or documents of use to an external force.

Treason

Maximum life imprisonment for various acts including joining an external armed force at war with China, or use of force to endanger Chinese unity.

  - **Why has a new law been imposed?**
    - The law was introduced to prevent future disruptive protests like the ones that happened in 2019.
    - In 2003, there was an initial attempt to implement a national security law in Hong Kong as required by its mini-constitution.
    - This sparked protests by nearly half a million people who were concerned that it would threaten the city's freedoms

7. How is Defamation Defined under the Indian Law

GS 2 (Governance)

- **Why in News:** The Supreme Court restrained a trial court from proceeding with a defamation case against Delhi Chief Minister for retweeting a YouTube video against the BJP's IT cell.
- **How is Defamation Defined under the Indian Law?**
  - Under Indian law, defamation can be **a civil wrong or a criminal offence**.
  - **Civil defamation** can be libel (through writing) or slander (spoken word), and is based on tort law (law imposing civil liability).

Does retweeting allegedly defamatory content amount to defamation?

KHADIJA KHAN
NEW DELHI, MARCH 19

THE SUPREME Court last week restrained a trial court from proceeding until mid-May with a criminal defamation case against Delhi Chief Minister Arvind Kejriwal for retweeting a YouTube video against the BJP's IT cell in 2018. The court is hearing Kejriwal's challenge to a February 5 order of the Delhi High Court upholding the summons issued to him in the case.

Last month, a Bench of Justices Sanjiv Khanna and Dipankar Datta had said that a retweet did not always mean endorsement.

"If it is an endorsement, then it may have its own consequences," Justice Khanna had said. "The other way to look at it is, you found something on the Internet or the website, and you are just sharing that information."

View of Delhi HC

Justice Swarana Kanta Sharma of the HC had observed that "Every retweet of defamatory imputation would ordinarily amount to 'publication' under IPC Section 499", and that when a public figure tweets a defamatory post, the ramifications extend "far beyond a mere whisper in someone's ears".

Kejriwal had gone to the HC against two orders — by a magistrate's court in July 2019 summoning him, and by a sessions court in October 2019 dismissing his revision plea against the summons.

Defamation in law

Defamation can be a civil wrong or a criminal offence. Civil defamation can be libel (through writing) or slander (spoken word), and is punishable with a financial compensation.

In criminal cases, defamation must be proven beyond reasonable doubt.

Section 499 of the Indian Penal Code says, "Whoever, by words either spoken or intended to be read, or by signs or by visible representations, makes or publishes any imputation concerning any person intending to harm, or knowing or having reason to believe that such imputation will harm, the reputation of such person, is said, to defame that person."

Criminal defamation can attract a jail term up to two years, with or without fine (Section 500 IPC).

Right to free speech

In its 2016 ruling in Subramanian Swamy vs. Union of India, the SC upheld the constitutionality of IPC Sections 499 and 500, saying that the right to reputation is protected under Article 21 (Protection of life and personal liberty) of the Constitution, and that criminal defamation is a reasonable restriction on the right to freedom of expression.

While Article 19(1)(a) protects the right to speech and expression, Article 19(2) allows the state to impose "reasonable restrictions" on the right in the interest of "sovereignty and integrity of India, the security of the State, friendly relations with Foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence".

In its 2015 ruling in Rajagopal (Reform) vs. Union of India, a five-judge Bench of the SC said that no additional restrictions can be imposed on free speech except those under Article 19(2).

The erstwhile Section 66A of The IT Act, 2000, had criminalised sending "offensive messages" by means of "a computer resource or a communication device". This provision was quashed by the SC in 2015 in Shreya Singhal vs. Union of India in view of the ambiguity in the definition of the term "offensive", and on the ground that the provision was "violative of Article 19(1)(a) and not saved under Article 19(2)."

EXPLAINED LAW

Consequences of retweeting

Does retweeting allegedly defamatory content amount to defamation?

Senior advocate Madhavi Goradia Divan, author of the textbook Facets of Media Law, said: "An essential ingredient of defamation is the lowering of one's reputation in the public eye. Also, the defamatory statement must be communicated to a third person."

Divan said that "[a defamatory] retweet multiplies quickly and reaches others", and "thus, the damage is far greater in cases of online abuse".

In Kejriwal's case, the Delhi HC ruled that "retweeting a content which is allegedly defamatory on the Twitter account and projecting it to be as if his own views, will prima facie attract the liability under Section 499 of IPC for the purpose of issuance of summons".

The court noted that "while the petitioner may plead absence of any malicious intent in the act of retweeting", it has to consider the "responsibility that accompanies the petitioner's political and social standing". The large social media following of a Chief Minister "undoubtedly implies a wider reach, making any retweet a form of public endorsement or acknowledgement", the High Court said.

LONGER VERSION
indianexpress.com/explained

- It is punishable with **financial compensation**, and damages are computed based on probabilities
- **In criminal cases**, defamation must be proven beyond reasonable doubt. **Section 499 of the Indian Penal Code (criminal defamation) says:**
  - "Whoever, by words or by signs or by visible representations, makes or publishes any imputation concerning any person intending to harm the reputation of such person, is said to defame that person."
  - Criminal defamation **can attract a jail term up to two years**, with or without fine (Section 500 IPC).

- **The SC Verdicts on Defamation and the Right to Free Speech:**
  - **Subramanian Swamy vs. Union of India (2016):** The SC upheld the constitutionality of IPC Sections 499 and 500. It held that –
    - The right to reputation is protected under **Article 21** (Protection of life and personal liberty) of the Constitution,
    - And that criminal defamation is a reasonable restriction on the right to freedom of expression.
    - While **Article 19(1)(a)** of the Constitution protects the right to speech and expression, **Article 19(2)** allows the state to impose "reasonable restrictions" on this right in the interest of
      - Sovereignty and integrity of India,
      - The security of the State,
      - Friendly relations with Foreign States,
      - Public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.
  - **Kaushal Kishore vs Union of India (2017):** The SC ruled that no additional restrictions can be imposed on free speech except those under Article 19(2).
  - **Shreya Singhal vs. Union of India (2015):** The SC quashed Section 66A of the IT Act 2000, which had criminalised sending "offensive messages" by means of "a computer resource or a communication device". This provision was quashed –
    - In view of the ambiguity in the definition of the term "offensive", and
    - On the ground that the provision was violative of Article 19(1)(a) and not saved under Article 19(2).

- **What is the Recent Case and What has SC Ruled?**
  - **The SC was hearing the Delhi CM's challenge to a Delhi HC order** upholding the summons issued to him in a criminal defamation case for retweeting an allegedly defamatory video posted by a YouTuber in 2018. **The HC had observed that –**
    - **Retweeting a content** which is allegedly defamatory on the Twitter account and projecting it to be as if his own views, will prima facie attract the liability under Section 499 of IPC.
    - The large social media following of a CM undoubtedly implies a wider reach, making any retweet a form of public endorsement or acknowledgment.
  - **The SC ruled that retweeting need not always mean endorsement.**

21st March, 2024

1. India's voters deserve a bond — of probity

GS 2 (Elections)

- **Why in News:** The Electoral Bond Scheme (EBS) aimed to address the challenges of transparency and accountability in political funding in India. However, concerns have been raised regarding the efficacy and implications of the scheme, necessitating a closer examination of its genesis, design, and impact.
- **Genesis of the Electoral Bond Scheme (EBS):**
  - **Objective and Problem Statement:** The EBS was introduced with the objective of eliminating black money from political funding and enhancing transparency in the electoral process. The scheme was conceived to address the challenge of anonymous donations to political parties, which posed a threat to free and fair elections.
  - **Clean Channel for Funds:** The EBS aimed to provide a 'clean' channel for funds to flow from donors to political parties by facilitating donations through bank transactions. It sought to incentivize donors to contribute transparently and prevent the generation of black money in political funding.
  - **Lack of Safeguards:** While the EBS created a mechanism for transparent transactions, concerns arise regarding the legitimacy of the sources of funds used to purchase bonds. The absence of safeguards to ensure the integrity of the funds raised questions about the effectiveness of the scheme in curbing illicit financial practices.
- **Deficiencies and Implications of the Electoral Bond Scheme (EBS):**
  - **Confidentiality Clause:** The confidentiality clause of the EBS raised concerns about accountability and enforceability. The provision to treat information submitted by the buyer as confidential limited the scope of investigations into the sources of funds and donor-political party links.
  - **Lack of Transparency:** The EBS lacked mechanisms for ensuring transparency and accountability in political funding. The absence of comprehensive records and disclosure requirements hindered efforts to track the flow of funds and investigate potential instances of corruption.
  - **Role of Institutions:** The responsibility for addressing the deficiencies of the EBS lies with Parliament and other democratic institutions. The need for a consultative process and transparent policymaking is essential to devise effective electoral reforms and restore public trust in the political process.

India's voters deserve a bond — of probity

There are a few basic tenets of good laws and public policies: lack of ambiguity, enforceability, predictability, and accountability. All laws and policies are framed with the purpose of addressing a public issue with a view to improving the situation from when the problem was identified. Therefore, the outcome should be evaluated keeping in mind the objectives behind that law or policy.

In this framework, let us look at the genesis, design, and demise of the Electoral Bond Scheme (EBS).

Ashok Lavasa

is a former Election Commissioner and a former Finance Secretary of India

A 'clean' channel

In paragraph 143 of his Budget Speech 2017-18, the then Finance Minister stated that the objective of his government was "to eliminate black money".

And there was a problem statement (in paragraphs 164 and 165.): "Even 70 years after Independence, the country has not been able to evolve a transparent method of funding political parties which is vital to the system of free and fair elections. An attempt was made in the past by amending the provisions of the Representation of Peoples Act, the Companies Act and the Income Tax Act to incentivise donations by individuals, partnership firms, HUFs and companies to political parties.... The situation has only marginally improved since these provisions were brought into force. Political parties continue to receive most of their funds through anonymous donations which are shown in cash.... An effort, therefore, requires to be made to cleanse the system of political funding in India."

The cause for the problem was stated to be donors' "reluctance in donating by cheque or other transparent methods as it would disclose their identity and entail adverse consequences".

As a solution, the Finance Minister proposed a reform, the EBS, which "will bring about greater transparency and accountability in political funding, while preventing future generation of black money". The outcome, he expected, was that this approach "will change the colour of money".

There can be no gainsaying that political parties – the "essential ingredient of a multi-party Parliamentary democracy" – were surviving on contributions less than ₹20,000 each that did not require a disclosure of the identity of the contributors. This was how black money was allegedly finding its way to the accounts of political parties that enjoyed income-tax exemption. The fact that crores of rupees were spent during elections before and after the EBS is a separate and serious malaise that no law has been able to cure. The EBS too has not succeeded in this despite its stated objective. Thus, while political parties have been enriched through the EBS, money used in election campaigns may have still not changed colour.

There is no doubt that the EBS created a 'clean' channel for funds to flow from the donor's bank account to the political party's bank account. The questionable presumption is that since funds used to purchase the bond are drawn from an account in a designated bank, the source of those funds is also 'clean'. The Supreme Court observed that a similar channel existed, and still does, in the form of the Electoral Trusts, which is more transparent.

The information that the State Bank of India has disclosed so far shows that many purchasers bought bonds that seem to be disproportionate to their business income. There are obvious questions about the legitimacy of the sources of the funds being used for the purchase. It cannot be said with certainty that the funds that reached the designated account of the political parties were of the same "colour". There were no safeguards to protect the so-called clean channel from being contaminated.

Defenders of the EBS have argued that if there are doubts about the sources of the funds used to purchase the bonds, this would be easy to investigate. The question is who will conduct the investigation? Will it not be the same agencies that are accused of directing donations to the party in power, be it in a State or at the centre? Therein lies the rub.

However, the real twist in the tale is that according to Section 7(4) of The Electoral Bond Scheme, 2018, the information furnished by the buyer "shall be treated confidential by the authorised bank and shall not be disclosed to any authority for any purposes, except when demanded by a competent court or upon registration of criminal case by any law enforcement agency". It is being said by the 'designers' of the EBS that the bank could not have legally kept any record of the secret number on the bond issued to the purchaser (in keeping with the provision of anonymity enshrined in the EBS). If this is the case, it would be almost impossible to establish any link between purchaser and recipient.

This would mean that, as in the real life example of dispensing currency notes to a bank customer/the common man, the SBI does not have any record of the person who purchased a specific bond. The alphanumeric number in the bond was only embedded to verify the authenticity of the bond and thus meet the audit requirement. The bond was akin to currency – and this is why the Reserve Bank of India (RBI) raised objections in the beginning, which led to the amendment in the RBI Act.

That raises a few important questions.

Pertinent questions

Will this limited information with the SBI, when disclosed to an enforcement agency, reveal the identity of the purchaser but limit the scope of the investigations only to the sources of funds? Does this not rule out the possibility of providing the donor-political party link, thereby eliminating the clue that would be vital to probe allegations of a quid pro quo? Does it mean that the EBS created fiction – of the enforceability of the law and the accountability of the bank towards the court and the law enforcement agency? But finally, does not the 'confidentiality clause' apply to "information submitted by the purchaser", which was to be kept "undisclosed till asked for"? How could it mean not maintaining a record in order to fulfil its obligation to enforce the law of the land? If the SBI did not maintain any record, on what basis did it ask for time to collate information on the bonds that would link both the parties? Indeed, on what basis did the Supreme Court observe in April 2019 that the information is not behind "iron curtains incapable of being pierced"?

The SBI's affidavit on March 21 will make it clear whether the law was deficient or illusory in its design or that full disclosure was being dodged.

The Court mandated disclosures mean that there could now be wild allegations of corruption with the possibility of endless investigations under Prevention of Corruption Act, and for the tax authorities also to investigate the sources of funds used in buying the bonds. Thus, those who contributed to the ruling party face allegations of *quid pro quo*. And those who have not could face the "adverse consequences" the scheme was designed to avoid. If political parties cannot disclose the names of all those who contributed, they create an uneven playing field for donors after their donations helped in creating a permanent non-level playing field among recipients.

This appears to be the opposite of a win-win situation, with the political parties having the last laugh. No wonder, the road to hell is often paved with good intentions.

It is for Parliament to work it out

Many proponents of the EBS have criticised the Court for not suggesting a 'less worse' method of political funding and dragging political parties to the "dark alleys" of black money. I do not think it was/is for the courts to decide the future course because Parliament has the mandate to find a solution and has 'superior' wisdom in making laws (as was seen in the case of the appointments of the Election Commissioners). A reasonable way forward can only be found through a well-meaning consultative process and not through court fiats, or laws and policies crafted in secret to deal with complex and vexed problems.

Where are we headed with a public debate where the gravity of an offence is sought to be determined by per capita crime? Why are political parties not determined to accept clean money, and not funds that are "furtively slipped under the door"? Will political parties keep holding up the mirror to each other and leave people blinded? People crave for political parties with a difference but not those so different that they look alike. How long can we accept the specious explanation that people get the government that they deserve? I think voters deserve better. They deserve a bond of probity.

Political parties need to ask themselves why they are not determined to accept clean money

2. Eliminating diseases, one region at a time

GS 2 (Health)

- **Why in News:** The focus on disease elimination, particularly in regions like India, raises critical considerations regarding public health strategies, resource allocation, and regional implementation.

- **On Disease Elimination Strategy:**

▪ **Differentiating Elimination from Eradication:** Disease elimination aims at halting transmission in defined regions, distinct from eradication, which necessitates permanent cessation globally. The strategy energizes public health systems, enhancing primary care and surveillance.

Eliminating diseases, one region at a time

The Carter Center, a leader in the global elimination and eradication of diseases, recently reported that guinea worm disease was close to eradication. From 3.5 million cases a year in 21 countries in 1986, the number had come down to 13 in five countries in 2023, a reduction of 99.99%. This would be the second disease after smallpox to be eradicated and the first one with no known medicines or vaccines. This has created increased attention to disease elimination, the first step in eradication. Ending the epidemics of malaria, tuberculosis and Neglected Tropical Diseases by 2030 is one of the Sustainable Development Goals set by the United Nations.

Rajeev Sadanandan

is CEO, Health Systems Transformation Platform and a former Health Secretary, Kerala

On disease elimination, its focus

Elimination of transmission, which targets achieving zero transmission in a defined region, is different from eradication, which is the permanent cessation of infection by a pathogen with no risk of reintroduction. It is a highly desirable objective to enhance the health of the people, especially the poor who are most vulnerable to infectious diseases. There are many reasons to recommend disease elimination as a public health strategy. As a national goal it energises the public health system.

The requirements for certification by international agencies are rigorous and preparing for it improves primary health care, diagnostics and surveillance. It will lead to increased involvement of field staff and community health workers, enthused by the clearly defined goal, and attract international support. Above all, it generates high political and bureaucratic commitment, and public support. These efforts positively impact the health system.

But, elimination of transmission is challenging and resource intensive. It imposes an onerous load on the system and could lead to the neglect of other important health functions, especially for weak health systems. Therefore, disease elimination should be planned only after careful analysis of the costs and benefits and with informed political support to generate the best outcomes with the least adverse impact.

While elimination is scientifically feasible for all the diseases targeted by India, it will be strategic to focus on those pathogens whose impact on the population is high and whose numbers are low enough to make elimination feasible. If the prevalence of a disease in a population is high, at the first stage, the aim should be to reduce their numbers to the level where elimination is practical, through disease control. This will enable an understanding of the processes and cost of elimination and provide an opportunity to strengthen the existing health systems to handle the rigour of implementing elimination.

Need for surveillance systems

The government must be prepared to invest in developing surveillance systems capable of capturing every incidence of the disease, strengthening laboratories for screening and confirmation, ensuring that medicines and consumables are available, and training the workforce on the rigorous requirements of an elimination strategy. Even after elimination is achieved, surveillance has to be continued to detect reintroduction as the pathogen would not have been eradicated.

From this point of view, elimination of many of the diseases targeted by the country may be difficult to achieve for the entire nation within the declared time frame. But they are achievable for some diseases in some parts of the country. For instance, kala azar is now limited to five States in India, primarily prevalent in a few blocks in two States.

India accounts for 40% of the global case load of lymphatic filariasis, which was targeted for elimination by the World Health Assembly in a resolution in 1997. It is prevalent only in a few States and can be eliminated by a combination of surveillance, vector control, drug administration and morbidity management.

On the other hand, pathogens of some targeted diseases have long incubation periods. They are prevalent in high numbers in many parts of the country, and have developed drug resistance. For them, the strategy of elimination needs to be reworked into a localised and phased one. The diseases that can be eliminated easily in defined geographical regions – States, districts, blocks – can be targeted for elimination within those regions.

After regional certification, such areas can be ring-fenced with better control in the adjoining areas which can then move to elimination, when they are assessed to be ready.

From the regional level

Multisectoral collaboration, encouraging innovation and adopting locally effective solutions which facilitate disease elimination, is done more effectively at the regional level. Smaller units can also redeploy resources to better manage the additional load without affecting other essential tasks. While elimination can proceed region wise, national and State governments should own the process. The phasing of regional elimination to culminate at the national level has to be planned from the perspective of the entire country. Regional implementation needs technical and material support and the progress of regional elimination has to be monitored. Similarly, only the Union government can deal with the spread of diseases across States and at the ports of entry, to control reintroduction. In India, national elimination can be achieved most effectively, by starting with elimination and scaling it up, region by region, across the country.

Multisectoral collaboration, encouraging innovation and adopting locally effective solutions which facilitate disease elimination, is more effective at the regional level

- **Benefits and Challenges:** Rigorous certification requirements improve diagnostics and attract international support. However, resource intensity may strain weak health systems, necessitating careful cost-benefit analysis and political commitment.
- **Strategic Focus:** Prioritizing diseases with high impact and low prevalence for elimination allows for feasible outcomes. Initial disease control efforts pave the way for understanding elimination processes and strengthening health systems.

- **Need for Surveillance Systems**

- **Investment in Surveillance:** Developing robust surveillance systems, laboratory capacities, and workforce training are essential for effective disease tracking and confirmation, ensuring continual availability of resources post-elimination.
- **Tailored Approaches:** While nationwide elimination may be challenging within set timelines, targeting specific diseases in certain regions, like kala azar in limited states, allows for achievable goals and localized strategies.
- **Regional Collaboration:** Regional elimination efforts benefit from multisectoral collaboration, innovation, and resource reallocation. National ownership with phased regional scaling ensures effective monitoring and control of reintroduction.

3. On the mass kidnappings in Nigeria
GS 2 (International Relations)

- **Why in News:** Amid Nigeria's worst economic crisis in years, the nation is confronted with serious security challenges, particularly a resurgence of kidnappings in its troubled northern regions. Since the end of February, over 600 individuals, including at least 300 schoolchildren, have been abducted in the northeastern and northwestern parts of the country.

On the mass kidnappings in Nigeria

Who is behind the mass abductions in Nigeria and what do they want? What has caused the recent surge in kidnappings? Why do they specifically target schoolchildren? What is the government doing to improve the security situation?

EXPLAINER

Namrata

The story so far:

Beginning in worst economic crisis in years, Nigeria is also facing a resurgence of kidnappings and a resurgence of kidnappings in its troubled northern regions. Over 600 people, including at least 300 schoolchildren, have been kidnapped in the northeastern and northwestern parts of the country since the end of February.

What is the latest crisis?

Reports of a mass abduction first emerged from a remote area in northwestern Borno earlier this year. On February 29, suspected Boko Haram militants abducted at least 200 internally displaced people, mostly women and children, while they were gathering firewood outside their camps, in the Ngala Local Government Area. Similar incidents were reported from the northwestern region in quick succession. On March 7, 287 students were kidnapped from a government school in the Chikun area of Kuriga town in Kaduna State. The attackers abducted children and a few staff members, descending one billion naira ransom. On March 11, gunmen, dressed in military gear, reportedly attacked a boarding school in Sokoto State at around 1 a.m., abducting 15 children from the hostel as they slept. The gunmen fled before security forces could arrive. Tragedy struck the northern region again on March 11. Sixty-one people were kidnapped from a village in Kaduna. Nearly 100 others were abducted by gunmen in two attacks in Kaduna between March 10 and March 17.

The spate of kidnappings drew condemnation from human rights activists, with the UN High Commissioner for Human Rights Volker Türk saying that he was "appalled" by the recurrent mass abductions. He called for perpetrators to be identified and brought to account "as a first step towards reining in the impunity that feeds these attacks and abductions."

Living in fear Waiting for news about the kidnapped students in Kaduna, Nigeria, on March 9. AP

Nigeria has experienced a surge in targeted attacks on educational institutions since 2014, when nearly 300 students were kidnapped by armed men in four months. Although most were eventually released, at least five were killed. The 2014 kidnapping of 276 girls by Boko Haram insurgents from a school in the Chibok town of Borno State continues to be one of the worst crimes committed in recent years. Of the 276, several were forced to marry and endure physical and psychological abuse. A decade later, 98 are still missing.

Who's behind the mass abductions?

At the time of the first attack in February, Boko Haram emerged as the primary suspect, given its track record of violence in Nigeria. The group has been engaged in a prolonged insurgency, causing widespread devastation and displacement. Kidnapping has been a key component of their terror tactics. However, with no organization claiming responsibility for the recent incidents, there are suspicions that local armed gangs in these regions, commonly referred to as bandits, might be behind the incidents. Relatively new actors in the turbulent security landscape, bandits are believed to be an outcome of years of conflict over land and water between nomadic herdsmen and farming communities. While disputes earlier centred around such basic needs, bandits have evolved into organised armed groups in recent times. They have taken to looting, kidnapping for ransom, and forcibly seizing control of valuable assets like gold mines and farmlands.

What's fuelling the surge?

The rise of kidnapping as a 'lucrative' industry in Nigeria has stemmed from a combination of economic, security, and political issues, including a struggling economy, high unemployment rates, surging inflation, increasing food insecurity, and instability in the Niger delta. Ransom payments have become the primary motivation behind the kidnapping incidents, as successive governments have struggled to tackle the underlying issues. Meanwhile, Africa-focused consulting company SBM Intelligence says Nigeria faces security crises across all six geopolitical zones, including threats from Boko Haram, bandit groups, criminal gangs, sea piracy, and agitation by armed separatists.

Nigeria's economic challenges have worsened due to monetary policies which caused the currency to plummet against the dollar, leading to widespread protests and increased desperation. This, in turn, drives youth to join armed gangs. The country has been facing a cost-of-living crisis, with armed gangs controlling significant territories and amassing a formidable arsenal of weapons. These gangs have seized control of mining sites and farmlands, forcing rural residents into labour and threatening the country's food security by controlling vital agricultural areas. As per former federal lawmaker Shehu Sani, bandits target schoolchildren because they know "it will evoke public sympathy for the people, and pressure will be mounted on the government to bow to their demands."

How has the government responded?

While government security forces are working to obtain the safe release of the victims, President Bola Tinubu has rejected the idea of paying ransom for nearly 600 people abducted in separate incidents this month. Notably, in Nigeria, anyone found paying a ransom to free a hostage could face at least 15 years in jail. This law was enacted in 2022 due to the prevalence of kidnappings for ransom in the country. Meanwhile, the military forces are expected to last months as they navigate the remote forest areas where the victims are being held. Activists say the government must initiate dialogue with the bandits to resolve the ongoing conflict, expressing concerns over the potential consequences of using force.

THE GIST

On February 29, suspected Boko Haram militants abducted at least 200 internally displaced people, mostly women and children, while they were gathering firewood outside their camps, in the Ngala Local Government Area.

The rise of kidnapping as a 'lucrative' industry in Nigeria has stemmed from a combination of economic, security, and political issues, including a struggling economy, high unemployment rates, surging inflation, increasing food insecurity, and instability in the Niger delta.

While government security forces are working to obtain the safe release of the victims, President Bola Tinubu has rejected the idea of paying ransom for nearly 600 people abducted in separate incidents this month.

- **Why in News:** Amid Nigeria's worst economic crisis in years, the nation is confronted with serious security challenges, particularly a resurgence of kidnappings in its troubled northern regions. Since the end of February, over 600 individuals, including at least 300 schoolchildren, have been abducted in the northeastern and northwestern parts of the country.

- **Crisis Unfolding**

- **Chronology of Events:** The spate of kidnappings commenced with a mass abduction in northeastern Borno, where suspected Boko Haram militants kidnapped over 200 internally displaced people. Subsequent incidents included the abduction of students and civilians in Kaduna and Sokoto States.
- **Magnitude of the Crisis:** Over 600 individuals, including 300 schoolchildren, have been kidnapped in the northeastern and northwestern regions of Nigeria since late February, marking a significant escalation in security challenges.
- **Humanitarian Impact:** The recurrent mass abductions have drawn condemnation from international human rights activists, with the UN High Commissioner for Human Rights emphasizing the urgency of identifying and holding perpetrators accountable.

- **Identifying the Culprits**

- **Primary Suspects:** Initially, Boko Haram was suspected due to its history of violence and involvement in previous abductions. However, with no organization claiming responsibility, suspicions have also turned towards local armed groups, commonly known as bandits.
- **Evolution of Bandits:** These local armed groups, evolving from conflicts over land and resources, have become organized entities engaged in looting, ransom kidnappings, and control over valuable assets, exacerbating security challenges.
- **Complex Security Landscape:** Nigeria faces multifaceted security threats across all geopolitical zones, including those from Boko Haram, bandit groups, criminal gangs, sea piracy, and armed separatists.

- **Root Causes and Motivations**

- **Economic Factors:** The surge in kidnappings is fueled by economic distress, high unemployment rates, inflation, and food insecurity, exacerbated by Nigeria's struggling economy and monetary policies.
- **Ransom as a Motivator:** Ransom payments have become the primary motivation behind kidnappings, with armed gangs amassing significant profits and controlling territories, posing threats to national security and agricultural areas.
- **Social Impact:** Kidnappings not only perpetuate cycles of fear and exploitation but also threaten the safety and education of vulnerable populations, including schoolchildren.

- **Government Response and Challenges Ahead**

- **Security Operations:** While government forces are working to secure the safe release of victims, there is resistance to paying ransoms, supported by stringent laws enacted to deter such payments.
- **Dialogue vs. Force:** Activists emphasize the importance of initiating dialogue with the perpetrators to resolve conflicts, expressing concerns over the potential consequences of using force and the need for comprehensive strategies.
- **Long-term Solutions:** Addressing the root causes of kidnappings requires comprehensive approaches encompassing socioeconomic reforms, improved security measures, and effective coordination between government agencies.

4. Why has Karnataka banned certain colouring agents?
GS 2 (Health)

- **Why in News:** Karnataka became the third State in South India to ban the use of certain colouring agents in cotton candy and gobi manchurian that are found to be harmful.

Why has Karnataka banned certain colouring agents?

Where were these harmful agents found? Which are the colouring agents rendered as harmful? What are the stipulated penalties if manufacturers are found using these chemicals?

Sharath S. Srivatsa

The story so far:

Karnataka became the third State in South India to ban the use of certain colouring agents in cotton candy and gobi manchurian that are found to be harmful. The decision follows similar steps taken in Tamil Nadu and Goa, and came after a survey by the Public Health Department that showed the presence of harmful chemicals present in the food samples, making them unsafe for consumption. The government has also clarified that there is no ban on making cotton candy as long as these colouring agents are not used.

What did the survey results show?

Samples in the State were collected from February 12 and submitted for laboratory tests, which then revealed the presence of harmful chemicals in many samples. Of the 25 cotton candy samples collected, 15 were termed as unsafe as they contained colours, while the rest were safe samples as they were made without added colours. Among the 171 samples of gobi manchurian collected, 107 samples were declared unsafe due to added colours, while 64 were declared safe as they did not contain added colours.

What were the harmful chemicals?

The unsafe samples with added colours showed traces of sunset yellow, tartrazine and rhodamine-b in cotton candy. Similarly, the unsafe samples of gobi manchurian had tartrazine, sunset yellow and carmoisine. A ban is already in place over the use of colouring agent rhodamine-b, a suspected carcinogenic substance. In the case of tartrazine, Health Minister Dinesh Gundu Rao said that although it is an approved artificial food colour, there are restrictions on its usage. There is a list of food items in which it can be used, with the amount to be used also prescribed. However, these conditions are only for packed food items; tartrazine cannot be used for food items which are freshly prepared, he said.

While notifying the ban of harmful chemicals, the Food Safety Commissioner said that the prolonged use of snacks that contain artificial colours can lead to deadly diseases such as cancer.

What are the penalties?

As per Rule 16 of the Food Safety and Standards Act, 2006 (Food Products Standards and Food Additives Regulation 2010), no artificial colours should be used in the preparation of gobi manchurian. The same rules allow certain food colours to be used within the approved limits, while non-permitted colours, including rhodamine-b, should not be used in the preparation of cotton candy.

The cancellation of licence for commercial activities, hefty fines and jail term have been threatened against the offenders. The Food Safety and Standards Act stipulate a fine of not less than ₹10 lakh and a jail term of a minimum of seven years, extending to life imprisonment, against those using banned chemical substances in food products.

What next?

Health safety officials assert that the ban on the use of harmful chemicals has come into effect immediately. While the Government plans to create awareness among manufacturers, it has also urged consumers to be aware of what they are consuming. The notification advised the public not to use, or use minimally, food items prepared with artificial colours. Random checks will be conducted to ascertain adherence to the legal provisions.

Besides gobi manchurian, other popular food products such as kebabs in which colouring agents are used is likely to come under the scanner.

THE GIST

Karnataka became the third State in South India to ban the use of certain colouring agents in cotton candy and gobi manchurian that are found to be harmful.

While the Government plans to create awareness among manufacturers, it has also urged consumers to be aware of what they are consuming.

The Food Safety and Standards Act stipulate a fine of not less than ₹10 lakh and a jail term of a minimum of seven years, extending to life imprisonment, against those using banned chemical substances in food products.

- **Survey Results**
  - **Extent of Contamination:** The survey conducted by the Public Health Department revealed alarming findings regarding the presence of harmful chemicals in food samples.
  - **Unsafe Samples:** Out of 25 cotton candy samples collected, 15 were deemed unsafe due to the presence of added colours. Similarly, among the 171 samples of gobi manchurian collected, 107 were declared unsafe as they contained added colours.
  - **Immediate Action:** Prompt action was taken by the government following the survey results to address the issue of contaminated food items.
- **Harmful Chemicals**
  - **Identified Substances:** The unsafe samples of cotton candy contained traces of sunset yellow, tartrazine, and rhodamine-b, while unsafe gobi manchurian samples had tartrazine, sunset yellow, and carmoisine.
  - **Regulatory Restrictions:** Tartrazine, though an approved artificial food color, has restrictions on its usage, especially in freshly prepared food items. Prolonged consumption of snacks with artificial colors is linked to severe health issues, including cancer, according to health officials.
  - **Public Health Concerns:** The presence of these harmful chemicals in food items poses significant risks to public health, leading to the urgent need for regulatory action.
- **Penalties and Enforcement**
  - **Legal Ramifications:** The Food Safety and Standards Act imposes strict penalties, including fines and jail terms, for violating regulations related to food additives.
  - **Imposed Penalties:** Offenders using banned chemical substances in food products face fines starting from ?10 lakh and imprisonment ranging from seven years to life imprisonment.

- **Immediate Enforcement:** The ban on harmful chemicals is immediately effective, and stringent enforcement measures, including license cancellations and random checks, will be undertaken.

- **Way Forward**
  - **Awareness Campaigns:** The government aims to raise awareness among manufacturers and consumers regarding the hazards of consuming food items containing artificial colors.
  - **Consumer Caution:** Consumers are urged to exercise caution and minimize the consumption of food items prepared with artificial colors.
  - **Expanded Scrutiny:** Apart from gobi manchurian, other popular food products potentially containing harmful colorants, such as kebabs, are likely to undergo scrutiny.
- **FSSAI**
  - The Food Safety and Standards Authority of India (FSSAI) is a statutory body that regulates the manufacture, storage, distribution, sale, and import of food, and establishes standards to ensure food safety.
  - FSSAI was established under Food Safety and Standards, 2006, which consolidates various acts and orders that have previously handled food-related issues in various Ministries and Departments.

5. Mixed Reality
GS 3 (Science and Tech)

- **Why in News:** Apple has changed the paradigm of spatial computing by launching it's vision pro headset.
- **What is mixed reality?**
  - Mixed reality (MR) is a way to combine the physical and digital worlds, allowing users to interact with both real and virtual elements and environments. MR uses next-generation imaging and sensing technologies, such as computer vision, graphical processing, and cloud computing, to create natural 3D interactions between humans, computers, and the environment.
- **How it is different from Virtual Reality (VR)**
  - Virtual Reality, or VR, is a simulated and immersive experience projected by a device into the user's sight.
  - However Mixed reality is a hybrid of VR and AR and aims to offer the best of both worlds.
  - For instance, while it uses a headset just like VR, seeing through a translucent viewport or glass, it also projects visuals on top of our environment.

The slow and steady rise of mixed reality technology

Apple went into overdrive mode when it asked app developers, building applications for its Vision Pro, to call their apps 'spatial computing apps.' The iPhone maker must be mindful of the technology's rich history in its quest to play a larger role in making mixed reality headsets

John Xavier

When Apple unveiled its Vision Pro in June 2023, it called the device a "revolutionary spatial computer." But most tech enthusiasts preferred calling it a "mixed reality headset."

In February, just around the time it started selling the Vision Pro, CEO Tim Cook went a bit too far when it told developers to not call the Vision Pro "generally as a 'headset' when describing their apps for the device." It also told them to call their apps "spatial computing apps" — not augmented reality (AR), virtual reality (VR), or mixed reality (MR) apps. Apple's brand use of language is an anti-theist to the "metaverse" that Facebook (now Meta) that introduced the Hacintosh personal computer to a world hooked to televisions sets by breaking the idea of 'doubleshirt' with 'monopoly'. It will serve well for Apple to keep the rich history of reality-augmenting technology in mind before it finalises the use of specific terms on app developers.

So, what is the history of reality-augmenting technology?

A brief history

In the late 1960s, pioneering computer scientist Ivan Sutherland, along with his students, designed the first virtual reality and AR head-mounted display. The device consisted of two cathode-ray tubes, mounted on either side of the user's head, enabling the wearer to see a three-dimensional wireframe room. When the user moved, the device would redraw the wireframe room featuring in the correct perspective. The HMD built by Dr. Sutherland was so heavy that it had to be suspended by a large overhead beam. It was jocularly called "The Sword of Damocles" because of its sheer size.

On what such a technology could potentially do in the future, Dr. Sutherland said, in the future, the "displayed material can be made either to hang disembodied in space or to coincide with maps, desktops, walls, or the keys of a typewriter."

But, it took another two decades for Dr. Sutherland's vision to come true in some large industrial companies began to use VR and AR to improve employee productivity on the shop floor and on training costs. Boeing was one of the first few companies to test and use HMDs to train its shop floor workers.

Testing waters

In 1992, the aircraft manufacturer was looking to cut employee training costs. Boeing's workers — and it employs over 12 lakh people — used miles and miles of complex rods. And most processes are still not automated as they require high levels of dexterity and perceptual awareness.

Back then, the company used diagrams and marking devices to guide workers in the factory to put parts together. Workers had to refer to large, bulky paper schematics, much of it coming from Computer-Aided Design (CAD) systems, to assemble aircraft. When engineering designs were updated to factor in new technical changes, it take more time to pass that information along, delaying the already expensive process. Two Boeing researchers, Thomas Caudell and David Mizell, developed a prototype of a device that would let workers access the CAD system directly. They built a headset that augmented the user's field of vision with updated designs.

Like Boeing, throughout the 1990s and 2000s, several companies began working hand-in-hand making HMD-inspired products. Several military organisations were building and prototyping devices that gave the wearer an additional layer of information. Their goal was to make devices that would either create virtual environments or add layers of information over the user's field of vision with real-time information.

Changing lanes

While those experiments led to a new world of immersive experience technologies, the old not-so-new as much spotlight as other advances in computing technology in the 2000s.

But, in the early 2010s, when two versions of HMD-based products hit the market, that perception began to change. One was launched by a start-up and another by a tech giant. The former became a success, while the latter failed. The device that did not succeed was Google Glass. The smart glasses' AR glasses were launched in 2013 to much fanfare. But, the bundled users as augmented fans of the apps they were in. But the tech giant's AR glasses were not well received by consumer tech enthusiasts.

The product was criticised for its limited functionality. Some noted that the Google Glass could not do much to look around the user. The search giant even packaged it for business customers, after which the product took on different shapes and sizes before it was once and for all shelved in 2022.

While Google's AR spectacles suffered, another start-up succeeded. Oculus, founded by Palmer Luckey, built an HMD prototype that he called Rift and began gaining world by storm. The start-up was soon bought by Facebook-owner Meta Inc. And its first consumer headset, called Oculus Rift VR, was rebranded and sold as Meta Quest.

Mr. Palmer's idea of building VR headsets for gaming was quite interesting. However, the VR company's new top boss, Mark Zuckerberg, had other plans. He was looking for a device that would make his moonshot a reality — the metaverse.

Subsequently, Meta acquired several other companies, including one that was in the business of developing eye-tracking systems, and integrated it with Oculus VR. The integration brought Oculus's VR headsets' AI capabilities, which enabled it to build products both for VR and AR, in effect creating a mixed reality headset.

Apple's Vision

Apple entered the fray making into this world with a $3,500 headset. The iPhone maker's headset comes with state-of-the-art hand and eye-tracking features. It has a bunch of immersive apps, and a set of videos have been built for three-dimensional viewing.

While there are some first-generation bugs, this device offers an upgraded experience to Meta's top-of-the-line Quest Pro VR headsets, which are retailing at less than half the price of a Vision Pro headset. Despite the expensive price tag, which will definitely make consumers cringe, the Vision Pro clearly sets a new bar in headset technology with its unique features, including eye-tracking, that takes the user's gaze as input.

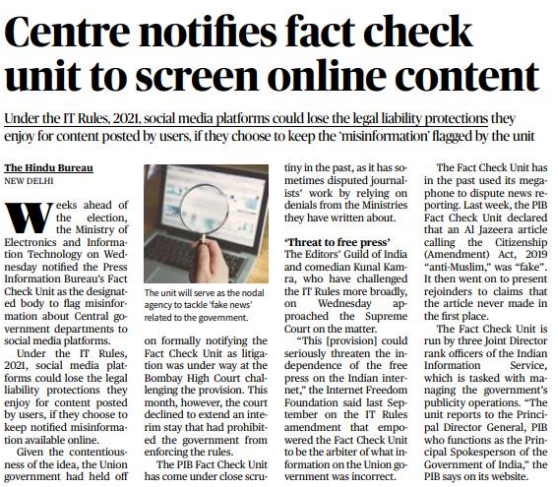
Apple has broken new ground by accomplishing its goal: input tech. In its some sense, the Vision Pro offers AR, VR, and a little bit more, and that extra bit is making Apple force developers into calling the company's device a spatial computer. According to long-time mind behind Apple's AR efforts, spatial computing "is a great overarching term for AR, MR, and VR, along with other immersive experiences such as 3D movies and teleprescence."

In his medium blog, Dr. Rosenberg recommends companies accept the "spatial computing" term.

"Spatial computing is a useful term, but so is augmented reality, mixed reality, and virtual reality, all three of which are part of our history and culture," he concluded.

6. Centre notifies its own fact check unit under PIB
GS 2 (Governance)

- **Why in News:**
  - The Centre has notified the fact check unit under the Press Information Bureau (PIB) as the authorised unit for the Union government.
  - It has been notified under the recently amended Information and Technology Rules of 2021.
- **Amendments to Information and Technology Rules of 2021**
  - In January 2023, MeitY introduced new draft amendments to the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**.
  - The draft set of rules said that the Press Information Bureau's fact check unit will flag misinformation related to the government on social media platforms.
  - In April 2023, when government notified the final rules, **it dropped**



Centre notifies fact check unit to screen online content

Under the IT Rules, 2021, social media platforms could lose the legal liability protections they enjoy for content posted by users, if they choose to keep the 'misinformation' flagged by the unit

The Hindu Bureau
NEW DELHI

Weeks ahead of the election, the Ministry of Electronics and Information Technology on Wednesday notified the Press Information Bureau's Fact Check Unit as the designated body to flag misinformation about Central government departments to social media platforms.

Under the IT Rules, 2021, social media platforms could lose the legal liability protections they enjoy for content posted by users, if they choose to keep notified misinformation available online.

Given the contentiousness of the idea, the Union government had held off on formally notifying the Fact Check Unit as litigation was under way at the Bombay High Court challenging the provision. This month, however, the court declined to extend an interim stay that had prohibited the government from enforcing the rules.

The PIB Fact Check Unit has come under close scrutiny in the past, as it has sometimes disputed journalists' work by relying on denials from the Ministries they have written about.

The unit will serve as the nodal agency to tackle 'fake news' related to the government.

'Threat to free press'

The Editors' Guild of India and comedian Kunal Kamra, who have challenged the IT Rules more broadly, on Wednesday approached the Supreme Court on the matter.

"This [provision] could seriously threaten the independence of the free press on the Indian internet," the Internet Freedom Foundation said last September on the IT Rules amendment that empowered the Fact Check Unit to be the arbiter of what information on the Union government was incorrect.

The Fact Check Unit has in the past used its megaphone to dispute news reporting. Last week, the PIB Fact Check Unit declared that an Al Jazeera article calling the Citizenship (Amendment) Act, 2019 "anti-Muslim," was "fake". It then went on to present rejoinders to claims that the article never made in the first place.

The Fact Check Unit is run by three Joint Director rank officers of the Indian Information Service, which is tasked with managing the government's publicity operations. "The unit reports to the Principal Director General, PIB who functions as the Principal Spokesperson of the Government of India," the PIB says on its website.

the mention of the PIB and replaced with a fact check unit of the Central government.

- PIB's name was first dropped in April due to concerns over its credibility, but the unit made a **comeback in the final notification on March 20, 2024**.

- **Background - FCU Under legal scanner**

  - **The matter reached to Bombay HC**
    - Lawsuits were filed in the Bombay High Court, challenging the validity of the fact check unit.
    - It was challenged by comedian Kunal Kamra, Editors' Guild of India, and some media organisations.
    - They termed the rules as arbitrary, unconstitutional, and in violation of fundamental rights.
    - The global rights group Access Now said that the rules would render government agencies, as chosen by MeitY, **the final arbiters of truth online**.
  - **Decision of Bombay HC**
    - The two-judge bench of Bombay HC had delivered a split verdict with one ordering a stay and the other upholding it.
    - Later, a third judge was assigned to this case to give an opinion on the split verdict. He is yet to give his final decision.
    - However, after the third judge refused to stay the setting up of the FCU on March 11, the **division bench formally pronounced on March 13 that with a 2:1 majority, it would not stay the FCU's notification.**
  - **Matter reached to SC**
    - Now, the Supreme Court is scheduled to hear a challenge to the Bombay High Court's interim order refusing to stay the setting up of a FCU.

- **About Fact Check Unit (FCU)**

  - The Union Electronics and IT Ministry has notified the FCU under the Press Information Bureau as **a statutory body**.
  - The FCU has powers to flag what it believes is false information related to the Central government and its agencies on social media sites.
  - With this notification, social media platforms are now legally obligated to take down content flagged as misinformation by this fact check unit, or risk facing litigation.

- **Key highlights of the FCU**

  - **Functions of FCU**
    - The unit will take a call on whether online information related to the Central Government is accurate.
    - The body will have the authority to label content related to the government on online platforms like Facebook and Twitter as "fake" or "misleading".
  - **Obligations of FCU**
    - Content flagged by the unit will have to be taken down if they wish to retain their 'safe harbour,' which is legal immunity they enjoy against third-party content.
    - Social media sites will have to take down such posts, and internet service providers will have to block URLs of such content.
  - **Designated officials**
    - FCU is run by three Joint Director rank officers of the Indian Information Service, which is tasked with managing the government's publicity operations.
      - The Unit reports to the Principal Director General, PIB who functions as the Principal Spokesperson of the Government of India.

- **Concerns related to these proposals**

  - **Empowers government to take down any news which does not suit its agenda**
    - Analysts have expressed concern that anything that contradicts government's stand might be used to justify content takedowns.
    - The determination of fake news cannot be in the sole hands of the government as it will result in the censorship of the press
  - **Government is legislating to become a judge in its own cause**
    - With this amendment, government is legislating to become a judge in its own cause.
    - The government, through the proposed amendment, is taking a step to effectively muzzle criticism and even fair comment.
  - **PIB, or an agency of the central government, is ill-equipped:**
    - The identification of fake news requires the highest standards of fairness and due process to ensure factual accuracy of reports about government business.

- In this context, many analysts believe that PIB, or an agency of the central government, is ill-equipped to handle such issues.
- PIB's fact-checking unit was set up in 2019 to verify news related to the government's ministries, departments and schemes.
- It routinely flags content that it believes is false or misleading, **yet it rarely explains** why it has flagged a specific piece of information.
- The PIB's fact-checking unit has itself tweeted (occasionally) inaccurate information.

7. Indigenous engine for Main Battle tank

GS 3 (Science and Tech)

- **Why in News: BEML conducted test firing of indigenous 100 HP engine for the main battle tank.**
- **Features of Engine**
  - High power to weight ratio
  - Operatibility in extreme conditions including high altitudes, Sub-zero temperatures
- **Main Benefactor**
  - The major benefactor in the immediate run will be the Arjun MK-1As, whose production has been delayed to lack of engine supply by a German firm.

BEML conducts test-firing of indigenous 1,500 HP engine for main battle tanks

The Hindu Bureau
NEW DELHI

The maiden test-firing of India's first indigenously-made 1,500 horsepower (HP) engine for Main Battle Tanks was successfully conducted at Bharat Earth Movers Limited (BEML) engine division in Mysuru complex on Wednesday in the presence of Union Defence Secretary Giridhar Aramane.

Historic mark: Defence Secretary Giridhar Aramane with senior officials of BEML in Mysuru on Wednesday. SPECIAL ARRANGEMENT

Advanced technology

"The 1,500 HP engine represents a paradigm shift in military propulsion systems, possessing cutting-edge features such as high power-to-weight ratio, operability in extreme conditions including high altitudes, sub-zero temperatures, and desert environments," the Defence Ministry said.

"Equipped with advanced technologies, the engine stands on par with the most advanced engines globally."

Inaugurating the test cell, the Defence Secretary described the achievement as a transformative moment which will enhance the capabilities of the armed forces. Elaborating on the developmental cycle, the Ministry said that the project, initiated in August 2020, has been meticulously structured into five major milestones, ensuring timely completion and adherence to quality standards.

8. Small-scale LNG

Recent events of importance

- **Why in News:** Recently, India's first small-scale liquefied natural gas (SSLNG) unit was inaugurated at GAIL (India) Ltd's Vijaipur complex in Madhya Pradesh.
- **Liquefied natural gas (LNG)**
  - **About**
    - It is natural gas that has been cooled to a liquid state for storage and shipping.
    - LNG is odorless, colorless, non-toxic, and non-corrosive. It is made up of almost entirely methane, which has less carbon than other fossil fuels.
    - LNG is typically 85–95% methane, and it produces 40% less carbon dioxide than coal and 30% less than oil. It also doesnot emit soot, dust, or particulates.
  - **Process**
    - LNG is created by cooling natural gas to -161°C (-259°F), which reduces it to 1/600 of its original volume and half the weight of water.
    - The cooled gas condenses into a liquid at close to atmospheric pressure.
    - The maximum transport pressure is set at around 25 kPa, which is about 1.25 times atmospheric pressure at sea level.
    - LNG is loaded onto double-hulled ships for large-volume ocean transport.
    - Once the ship arrives at the receiving port, LNG is off-loaded into well-insulated storage tanks, and later re-gasified for entrance into a pipeline distribution network.

Small-scale LNG, a big idea

LNG is cleaner and cheaper than diesel, and can save India valuable foreign exchange. However, its large-scale use is currently hindered by significant transportation and distribution challenges

SUKALP SHARMA
NEW DELHI, MARCH 20

Petroleum Minister Hardeep Singh Puri inaugurated India's first small-scale LNG unit at GAIL's Vijaipur complex this month. GAIL

- **Benefits of using LNG in long-haul trucks and buses**
  - **Relatively cleaner**
    - Compared with diesel, which is the dominant fuel in these segments, LNG is significantly cleaner.
    - It comes with reduced carbon dioxide emissions and negligible amounts of particulate matter, nitrogen oxide, and sulphur dioxide emissions.
  - **LNG offers a slightly longer range to vehicles**
    - LNG offers a slightly longer range to vehicles than diesel with similar-sized fuel tanks, and is usually cheaper than crude oil, from which diesel is derived.
  - **Savings in Forex reserve**
    - Although India imports around half of its natural gas requirement, this dependency level is much lower than in the case of crude oil.

- Replacing a major chunk of India's diesel consumption by LNG could lead to substantial foreign exchange savings.

- **Challenges faced by India in promoting the use of CNG in commercial vehicles**

  - **Challenges**
    - LNG has been used successfully and aggressively in medium and heavy commercial vehicles in many countries, most notably in China.
    - The challenges in India include:
      1. a lack of easy availability of LNG-powered vehicles,
      2. the higher initial cost of these vehicles compared with diesel,
      3. the absence of an LNG vehicle financing ecosystem, and
      4. the virtually non-existent LNG retail network.
  - **Steps taken**
    - Companies such as GAIL and Petronet are working to build a viable ecosystem for transporters to move from diesel vehicles to LNG.
    - Petronet has collaborated with commercial vehicle manufacturers and other public sector oil and gas companies for trials and pilot projects for LNG-fuelled trucks and buses.
    - Government is also promoting SSLNG facilities to ensure availability of LNG at remote locations.
    - IOC, like GAIL, is looking to build LNG dispensing stations along major highways.

- **Small-Scale Liquefied Natural Gas (SSLNG)**

  - **About**
    - There is no standard definition of this still globally nascent industry.
    - But basically, SSLNG involves turning natural gas into liquid and moving it using different methods on a smaller scale compared to the usual big operations.
    - This includes liquefying and transporting natural gas in smaller quantities without the usual big infrastructure and processes.
    - Simply put, **LNG is supplied in specialised trucks and small vessels to industrial and commercial consumers in regions that are not connected by pipelines.**
  - **SSLNG supply chain**
    - The SSLNG chain can start from a large-scale LNG import terminal from where the LNG, instead of being regasified and supplied through pipelines, can be transported to consumers by cryogenic road tankers or small vessels
    - The chain can also start at locations with ample natural gas supply or production, where small liquefaction plants can be set up.
      - The SSLNG unit at Vijaipur, which is GAIL's largest gas processing facility, is an example of the latter kind of location.

- **Need for SSLNG**

  - **Transportation of gas to remote areas**
    - The government has been pushing for the adoption and use of natural gas across sectors.
      - This is because natural gas is far less polluting than conventional hydrocarbons like coal and oil; it is also cheaper than oil.
      - Natural gas is seen as a key transition fuel in India's journey towards green energy and future fuels.
    - It aims to increase the share of natural gas in its primary energy mix to 15% by 2030 from a little more than 6% at present.
    - However, a major challenge lies in the transportation of gas to places that are not connected by the country's natural gas pipeline grid.
    - This problem also hinders the use of LNG directly as fuel for long-haul trucks and inter-city buses.
  - **Long gestation period of large-scale pipeline projects**
    - Large-scale pipeline projects that are in the works will take years to be completed; even so, last-mile delivery challenges may persist in many parts of the country
  - **New-age solution is required**
    - In this scenario, new-age solutions with fast turnaround times can help expand the reach, access, and consumption of natural gas.
    - On such solution is offered by the SSLNG where the buyer would regasify the LNG using small vapourisers, and then supply it to end-users.
      - Where the fuel is to be used directly in its liquid form, it would be supplied to end-users without regasification.

22nd March, 2024

1. Enforcement Directorate arrests Delhi Chief Minister

Recent events of importance

- **Why in News:**
  - Delhi Chief Minister Arvind Kejriwal was arrested by the Enforcement Directorate (ED) in Delhi Excise policy-linked money laundering case.
  - The arrest, the first of a sitting Chief Minister, came hours after the Delhi High Court refused to grant protection to Mr. Kejriwal from any coercive action by the agency.

ED arrests Kejriwal in excise policy case

The Hindu Bureau
NEW DELHI

Delhi Chief Minister and Aam Aadmi Party (AAP) national convener Arvind Kejriwal was arrested by the Enforcement Directorate (ED) on Thursday on charges of corruption and money laundering in connection with the formulation and execution of the government's excise policy for 2021-22, which was later scrapped.

Mr. Kejriwal will be produced before a special court on Friday.

AAP said it has moved the Supreme Court for quashing the arrest, and asked for an urgent hearing.

Earlier in the day, the Delhi High Court declined to grant any immediate protection to Mr. Kejriwal from coercive action in the excise policy-linked money laundering case.

CONTINUED ON » PAGE 12
RELATED REPORTS » PAGES 3, 12

- **Enforcement Directorate (ED)**
  - **About**
    - The Enforcement Directorate was established in the year 1956 as an 'Enforcement Unit' under the Department of Economic Affairs.
    - Later, in 1957, this Unit was renamed as 'Enforcement Directorate'.
  - **Administrative control**
    - Presently, it is under the administrative control of the Department of Revenue (Ministry of Finance) for operational purposes
  - **Functions**
    - ED is responsible for enforcement of the Foreign Exchange Management Act, 1999 (FEMA), and certain provisions under the PMLA.
    - ED has the power to attach the asset of the culprits found guilty of the violation of FEMA.
    - It has also been empowered to undertake, search, seizure, arrest, prosecution action, and survey, etc. against the offences committed under PMLA.
  - **Appointment of Director of ED**
    - The ED Director is appointed by the central government on the recommendation of a committee:
      - **i.** chaired by the Central Vigilance Commissioner and
      - **ii.** members comprising of Vigilance Commissioners, Home Secretary, Secretary DOPT and Revenue Secretary.
- **Delhi Excise Policy 2021-22**
  - **About**
    - Also known as the new liquor policy, the Delhi Excise Policy 2021-22 was implemented on November 17, 2021.
    - It changed how liquor was sold in the city — with **the government withdrawing from the business** and allowing only private operators to run liquor shops.
    - The main aim was to improve customer experience and stop black marketing.
    - However, after the whole controversy around the new excise policy, Delhi reverted to the old excise regime.
  - **Key features of the Delhi Excise Policy 2021-22**
    - Under the new policy, the city was divided into 32 zones inviting firms to bid on the zones. Instead of individual licences, bidding was done zone-by-zone.
    - Also, licenses for 849 retail vends were issued through open bidding by the Excise department in
      - Under the old liquor policy, Delhi had 864 liquor shops, including 475 run by the four government agencies, and 389 were private.
    - For the first time, shops were allowed to offer discounts to retail customers and **reduced the number of dry days to three from 21**.
    - The new policy also had a provision for home delivery of liquor. It even proposed lowering the drinking age from 25 to 21.
    - It also suggested the opening of shops till 3 am. However, these were not implemented.
  - **The controversy surrounding Delhi Excise Policy 2021-22**
    - Before the implementation, the policy had first to be examined by the Chief Secretary (CS) of Delhi.
    - The CS allegedly found procedural lapses and irregularities in the new policy.
  - **Allegations made in the report**
    - In the report, Delhi Deputy CM Sisodia, who heads the excise department, was accused of **making changes to the excise policy without the approval of the L-G.**
    - The report said arbitrary and unilateral decisions taken by then Delhi Deputy CM had resulted in **financial losses to the exchequer, estimated at more than Rs 580 crore.**

- It alleged that kickbacks were received by the Delhi government and its leaders from owners and operators of alcohol businesses for preferential treatment.
  - These kickbacks were used to influence the Assembly elections held in Punjab and Goa in early 2022.

- **Matter referred to CBI**
  - This report was referred to the CBI, and which led to the arrest of the then Delhi Dy CM Manish Sisodia.
  - 14 others were also made accused in its FIR, including AAP communications in-charge Vijay Nair.
- **ED Comes into picture**
  - Two cases, one by CBI and one on alleged money laundering being investigated by ED, have been registered in relation to the excise policy.
  - The ED told a court that the **alleged proceeds of crime amounted to more than Rs 292 crore, and that it was necessary to establish the modus operandi.**
    - It alleged that the "scam" was to give the wholesale liquor business to private entities and fix a 12% margin, for a 6% kickback.
    - It also alleged that AAP leaders received kickbacks to the tune of Rs 100 crore from a group of individuals identified as the South Group.

2. Water, an instrument to build world peace
GS 3 (Environment)

- **Why in News:** World Water Day, observed annually on March 22 since 1993, aims to raise awareness about freshwater issues. The theme for this year, "Water for Peace," underscores the significance of water in maintaining peace and stability globally.

Water, an instrument to build world peace

WORLD WATER DAY

World Water Day, which falls on March 22, is a global initiative backed by the United Nations, and has been observed every year since 1993. Under different themes, the attempt has been to raise awareness among stakeholders about the importance of freshwater. The theme this year is "Water for Peace". As everyone knows, there was a time when clean water was available in wells, ponds, streams, rivers and other sources, but the situation is vastly different now. There is a problem of water availability with respect to quantity or quality.

India too faces problems

This water crisis may be physical or economic based on multiple factors such as rapid urbanisation, industrialisation, unsustainable agricultural practices, climate change, erratic rainfall patterns, water overuse and inefficient water management, pollution, inadequate infrastructure, a lack of 'belongingness' among stakeholders, runoff due to high rain along with soil erosion and sedimentation. Water scarcity leads to the poor functioning of ecosystems, threatens food and water security, and, ultimately, affects peace. According to the World Resources Institute, 17 countries face 'extremely high' levels of water stress which is threatening to result in conflict, unrest and peace among people. India is not an exception to these problems. In India, water availability is already low enough to be categorised as water stressed, and is expected to reduce further to 1544m³ by 2025 and 1486m³ by 2050. Also, 72% of all water withdrawals are for use in agriculture, 16% by municipalities for households and services, and 12% by industries.

In almost every State and in the main cities of India, there is groundwater table depletion. The example of Bengaluru is one prominent example. In Punjab, Rajasthan, Delhi and Haryana, the ratio of groundwater consumption to availability is 172%, 137%, 137% and 133%, respectively, which is cause for alarm. In contrast, in Tamil Nadu, Uttar Pradesh, Gujarat, Madhya Pradesh and Maharashtra, it is 77%, 74%, 67%, 57%, and 53%, respectively. Most perennial rivers/streams now have intermittent flows or have run dry. In most areas after April-May, there is Less water availability even for drinking and other uses. Springs in India's hilly areas are almost dry. In

Susama Sudhakar

is Professor and Principal Scientist, Water Technology Centre, ICAR-Indian Agricultural Research Institute, New Delhi, and an expert in soil and water conservation engineering, watershed management, water harvesting and conservation, precision irrigation management and modelling

The theme this year is 'Water for Peace', pointing to the need for better water security, sustainable agricultural production, and environmental integrity

India, the total number of water bodies is 5,56,704 whose irrigation potential covered 62,71,180 hectares. But, due to a lack of or inappropriate catchment treatment measures, bad design and poor maintenance of water bodies, most of the reservoirs/waterbodies/wetlands have silted up, resulting in reduced storage capacity and lower efficacy.

In most areas, tubewell density and networks have increased. Groundwater discharge is now more than groundwater recharge. The letting out of sewerage water and other sources of grey water into water bodies and rivers is causing a deterioration in water quality. There is a lack of proper surface and groundwater management. Rainfed regions in India which comprise over 48% of land area produces nearly 45% of the gross agricultural product.

So, a large amount of India's food grains is from the rainfed region. The Prime Minister, Narendra Modi, recently laid stress on having a judicious mix of 'traditional indigenous and new technologies to improve soil health and conserve water' and pitched for the efficient use of every drop of water. Hence, paying attention to these points is important.

The vital role of rainwater harvesting

Enhancing water availability with respect to quantity and quality and blue and green water is vital since water is more than just a basic human right. Water is also an instrument of peace-building and enhances the overall quality of life. Promoting sustainable agricultural production, ensuring water security and maintaining environmental integrity are increasingly becoming important issues. This can only be possible by adopting different resource conservation measures in general and rainwater harvesting (in-situ and ex-situ) and ensuring roof top rainwater harvesting in particular. Rain water harvesting (RWH) enables resilience against water scarcity and drought by augmenting recharge and aiding irrigation. The optimum use of surface water by large-scale RWH structures, conjunctive use with groundwater And safe reuse of waste water are the only viable solutions to boost and maintain the current level of food-grain production.

The government's emphasis on 'per drop more crop', *'Gaon ka pani gaon mein'*, *'Khet ka pani khet mein'*, *'Har Medh par pul'* under various programmes such as the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), watershed management, Mission Amrit Sarovar and the Jal Shakti Abhiyan programmes. There is an emphasis on water conservation and rainwater harvesting, rejuvenation of waterbodies/tanks/wetlands, recharge of borewell and other recharge structures, watershed development and intensive afforestation. But there is the need for a protocol of the revival of ponds/waterbodies (it is unavailable right now). To tackle all these problems there is a great need to study the condition of every waterbody, its water availability, water quality and the state of ecosystem services it supports. (This writer has done some of these in Mewat, Haryana, NCT of Delhi and Odisha.) There is a need also to create more waterbodies and their revival in every village by looking into the catchment-storage-command area of each waterbody.

Additional steps

There is a need also for these additional interventions to ensure 'water for peace': monitoring the groundwater table; the reclamation of the water quality of groundwater, rivers and waterbodies; the pricing of water use; having a circular water economy; ensuring efficient irrigation techniques such as integrating water resources with micro-irrigations systems and IOT based automation; having integrated water resource management; installing water meters to reduce water use for domestic purposes; no free electricity, having a convergence and linkages of line departments; fostering community awareness and peoples' participation, awareness campaigns about water conservation; ensuring groundwater use neutrality; land neutrality, growing low water requirement crops; optimal crop plan having integrated farming system models; building resilience against climate change and ensuring the needs of a growing population by adopting an integrated and inclusive approach to manage water which is a finite resource; reducing losses from water distribution systems, and ensuring safe wastewater reuse, desalination and appropriate water allocation, tubewell/borewell development and finally, enabling the integration and collaboration of research, industry and academia to implement different developed and new technologies.

With these solutions, the theme of World Water Day 2024 can be strengthened and India can become water secure. These are also steps to ensure a more peaceful world.

- **Challenges of Water Crisis:**
  - **Multifaceted Challenges:** Factors such as rapid urbanization, industrialization, unsustainable agricultural practices, and climate change contribute to the global water crisis.
  - **Impact on Peace and Stability:** Seventeen countries face 'extremely high' water stress, threatening peace and stability, according to the World Resources Institute.
  - **India's Water Scarcity:** India faces water scarcity issues, with projections indicating a further decline in availability by 2025 and 2050.
- **Impacts on Ecosystems and Agriculture:**
  - **Ecosystem Disruption:** Water scarcity disrupts ecosystem functions, jeopardizing food and water security and ultimately undermining peace.
  - **Threat to Agricultural Sustainability:** Groundwater depletion, exemplified by cases like Bengaluru and Punjab, poses a severe threat to agricultural sustainability.
  - **Vulnerability of Rainfed Regions:** Rainfed regions in India, crucial for agricultural output, are vulnerable to water scarcity, impacting food production.
- **Water Crisis and its Implications:**
  - **India's Water Crisis:** Rapid urbanization, industrialization, unsustainable agricultural practices, and climate change have contributed to India's water scarcity issues. According to the World Resources Institute, India is categorized as water-stressed, with projections indicating further reduction in water availability by 2025 and 2050.
  - **Groundwater Depletion:** Groundwater depletion is a severe concern in many Indian states, leading to negative consequences such as reduced agricultural productivity, ecosystem degradation, and social tensions. Instances like the depletion of the groundwater table in Bengaluru and other major cities highlight the urgent need for action.

- **Impact on Peace:** Water scarcity poses a threat to peace and stability, as seen in the case of 17 countries facing 'extremely high' water stress levels. Competition over limited water resources could exacerbate tensions, leading to conflicts and unrest.

- **Promoting Water Security and Peace:**
  - **Role of Rainwater Harvesting:** Implementing rainwater harvesting techniques, both in-situ and ex-situ, is crucial for augmenting water resources and enhancing resilience against drought and water scarcity. This approach aligns with initiatives like "per drop more crop" and "Gaon ka pani gaon mein" under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).
  - **Government Initiatives:** The government's emphasis on water conservation and management through programs like Mission Amrit Sarovar and Jal Shakti Abhiyan is commendable. However, there's a need for a comprehensive protocol for the revival of water bodies and ponds to address the underlying issues effectively.
  - **Additional Interventions:** Implementing measures such as groundwater monitoring, water quality reclamation, efficient irrigation techniques, community awareness campaigns, and promoting water-neutral practices are essential for ensuring long-term water security and fostering peace.

3. Navigating the Global Waterscape: Challenges and Solutions
GS 3 (Environment)

- **Understanding the Global Water Crisis:**
  - **Persistent Scarcity:** Approximately two billion people worldwide lack access to clean water, posing risks to both individual needs and collective prosperity.
  - **Historical Context:** Throughout history, water has been central to the rise and fall of civilizations, often leading to conflicts such as the ancient tensions between Mesopotamian cities over fertile land and water resources.
  - **UN's World Water Day:** The 31st World Water Day, themed "Leveraging Water for Peace" in 2024, highlights the importance of water diplomacy in addressing global water challenges.

Navigating the global waterscape, its challenges

WORLD WATER DAY

The global challenge for securing access to clean water persists for about two billion people and its demand keeps rising. Beyond threatening our basic individual human needs, this scarcity also poses a risk to our collective prosperity and peace.

Today, March 22, 2024, is the 31st World Water Day, with the theme, "Leveraging water for peace". Under the "World Water Assessment Programme", UNESCO led the development of the 2024 edition of the flagship United Nations World Water Development Report, "Water for Prosperity and Peace" as a part of UN Water (an interagency coordination mechanism on water and sanitation of 35 UN entities along with 48 other international partners).

Throughout history, water has been a pivotal resource for some of the greatest civilisations such as those that arose around the Indus, the Nile, the Tigris and the Euphrates. But it is also true that in these civilisations, conflicts arose on account of this resource, like the well documented tensions between the Mesopotamian cities of Lagash and Umma. This conflict, one of the oldest known wars in human history, centered around a fertile piece of land and water resources. Notably, this historical episode also yielded what is considered the world's first peace treaty, the Treaty of Mesilim, recognised as one of humanity's oldest legal documents.

Water diplomacy in a time of extremities

Today, the world is also experiencing countless meteorological extremities: from intense heat waves to turbulent floods, magnifying concerns about the climate crisis as well as its continuing implications over water insecurity. For example, here in India, the monsoon has become erratic over the years and brings with it major uncertainties for agriculture, which lies at the heart of India's $3 trillion economy.

Tim Curtis
is the Director of UNESCO New Delhi Regional Office for South Asia and UNESCO Representative to India (UNESCO New Delhi is part of Team UN in India)

In the context of climate change-related pressures, the world also needs to foster improved cooperation over water-sharing

Within the added climate change-related pressures we face, the world needs to foster improved cooperation over water-sharing and embrace universal principles for International Water Law. By governing the use of shared waters and encouraging the use of water sustainably, we can strive for better water diplomacy – making water a force for peace.

The shared recognition that water is a vital resource, with limitations in quality and availability, necessitates collaborative governance to ensure effective and equitable water allocation among nations, fostering regional stability and peace, and an understanding of the intricate relationships between water, climate, and international stability.

Water diplomacy also requires inclusive approaches, acknowledging the indigenous and local communities' extensive cross-border networks, as well as involving civil society and academic networks, who can also play an important role in facilitating political processes to prevent, mitigate, and resolve water-related disputes.

This year's report also highlights a general shortage of water quality data globally and points more specifically to a prominent urban-rural divide, finding that "four out of five people lacking at least basic drinking water services live in rural areas".

Addressing rural India's needs

Within India, a total of 70% of the rural population relies on water to run their households, where agriculture remains the principal source of livelihood. This is even more striking as we know that agriculture also accounts for 70% of the total freshwater use, globally.

With improved water accessibility, these differences can be erased, and increased water investments in the rural areas have the potential for returning positive outcomes – in health, education and employment, not to mention basic human needs and dignity.

In the agrarian sector, the efficient use of emerging artificial intelligence (AI) technology in the conservation of water, ranging from tackling crop and food loss, to minimising chemicals and fertilizers, and saving water, is starting to show that outputs that are both productive and sustainable can be enabled.

The issue of transboundary waters

The report reminds us that a "large proportion of the world's freshwater resources are in transboundary waters" including in India. With its expansive landmass, India boasts a network of long rivers, not only serving its own needs but also shared with its neighbours. And, yet, in the South Asian region, the extent of water pollution has worsened considerably in recent years, especially the Meghna, Brahmaputra, Ganga and Indus, warns the 2024 report.

To solve these problems, the world needs a sophisticated form of cross-border water governance, promoting effective and equitable water allocation among nations that share water resources. Out of UNESCO's 194 member-states and 12 associate members, 153 countries can be classified as water-sharing nations, and all transboundary waters account for 60% of the world's freshwater flows.

Of these 153 countries, just 24 have managed to reach a 100% cooperation agreement on their shared waters, as per a 2021 UNESCO progress report on Sustainable Development Goal indicator 6.5.2 titled "Progress on transboundary water cooperation."

Since time immemorial, we have of course made significant progress in fostering peace; however, if freshwater runs scarce, it threatens our collective well-being and peace. This is also crucial for the 2030 Agenda and achieving the SDGs. Through transboundary cooperation on the sustainable management of water, we can realise benefits across various sectors including health, food and energy security, protection from natural disasters, education, improved living standards, employment, economic development, and numerous ecosystem services.

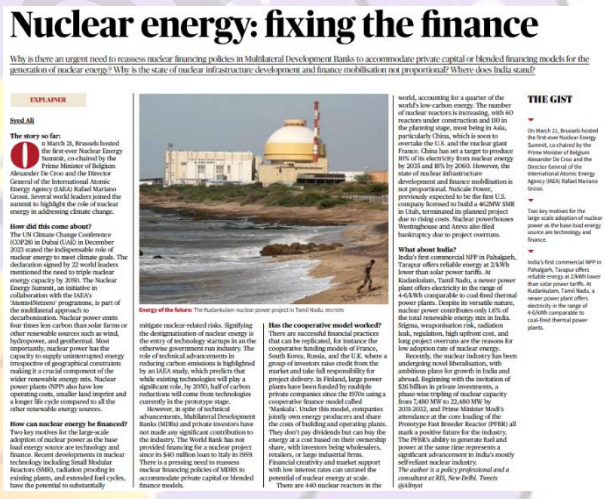
- **Water Diplomacy in a Time of Extremities:**
  - **Climate Change Impacts:** Climate-related extremes like heatwaves and floods exacerbate water insecurity, particularly in regions like India where the monsoon's unpredictability affects agriculture, a key sector of the economy.
  - **Need for Cooperation:** Improved cooperation on water-sharing and adherence to International Water Law principles are essential for sustainable water management and fostering regional stability.
  - **Inclusive Approaches:** Involving indigenous communities, civil society, and academic networks in water diplomacy processes ensures equitable and effective governance of shared water resources.

- **Addressing Rural India's Water Needs:**
  - **Rural Water Dependence:** Seventy percent of India's rural population relies on water for livelihoods, primarily in agriculture, which accounts for 70% of global freshwater use.
  - **Potential of Water Investments:** Increased water accessibility in rural areas can yield positive outcomes in health, education, and employment, besides addressing basic human needs.

- **Role of Technology:** Leveraging emerging AI technology in agriculture can promote efficient water use, crop management, and sustainability, contributing to rural development.

- **Transboundary Water Governance:**
  - **Extent of Transboundary Waters:** A significant portion of the world's freshwater resources lies in transboundary waters, including rivers shared among nations like India and its neighbours.
  - **Challenges and Progress:** The worsening water pollution in South Asian rivers underscores the need for sophisticated cross-border water governance. Despite progress, only 24 out of 153 water-sharing nations have reached full cooperation agreements.
  - **Importance for Peace:** Effective transboundary water cooperation is crucial for achieving the SDGs and fostering peace, offering benefits across various sectors and ecosystem services.

4. Financing Nuclear Energy for a Just Energy Transition
GS 3 (Environment)


Nuclear energy: fixing the finance

Why is there an urgent need to reassess nuclear financing policies in Multilateral Development Banks to accommodate private capital or blended financing models for the generation of nuclear energy? Why is the state of nuclear infrastructure development and finance mobilisation not proportional? Where does India stand?

EXPLAINER

Syed Ali

The story so far:

On March 21, Brussels hosted the first-ever Nuclear Energy Summit, co-chaired by the Prime Minister of Belgium Alexander De Croo and the Director General of the International Atomic Energy Agency (IAEA) Rafael Mariano Grossi. Several world leaders joined the summit to highlight the role of nuclear energy in addressing climate change.

How did this come about?

The UN Climate Change Conference (COP28) in Dubai (UAE) in December 2023 stated the indispensable role of nuclear energy to meet climate goals. The declaration signed by 22 world leaders mentioned the need to triple nuclear energy capacity by 2050. The Nuclear Energy Summit, an initiative in collaboration with the IAEA's 'Atoms4Netzero' programme, is part of the multilateral approach to decarbonisation. Nuclear power emits four times less carbon than solar farms or other renewable sources such as wind, hydropower, and geothermal. Most importantly, nuclear power has the capacity to supply uninterrupted energy irrespective of geographical constraints making it a crucial component of the wider renewable energy mix. Nuclear power plants (NPP) also have low operating costs, smaller land imprint and a longer life cycle compared to all the other renewable energy sources.

How can nuclear energy be financed?

Two key motives for the large-scale adoption of nuclear power as the base load energy source are technology and finance. Recent developments in nuclear technology including Small Modular Reactors (SMR), radiation proofing in existing plants, and extended fuel cycles, have the potential to substantially mitigate nuclear-related risks. Signifying the destigmatisation of nuclear energy is the entry of technology startups in an the otherwise government run industry. The role of technical advancements in reducing carbon emissions is highlighted by an IAEA study, which predicts that while existing technologies will play a significant role, by 2050, half of carbon reductions will come from technologies currently in the prototype stage.

However, in spite of technical advancements, Multilateral Development Banks (MDBs) and private investors have not made any significant contribution to the industry. The World Bank has not provided financing for a nuclear project since its $40 million loan to Italy in 1969. There is a pressing need to reassess nuclear financing policies of MDBS to accommodate private capital or blended finance models.

Energy of the future: The Kudankulam nuclear power project in Tamil Nadu. REUTERS

Has the cooperative model worked?

There are successful financial practices that can be replicated, for instance the cooperative funding models of France, South Korea, Russia, and the U.K. where a group of investors raise credit from the market and take full responsibility for project delivery. In Finland, large power plants have been funded by multiple private companies since the 1970s using a cooperative finance model called 'Mankala'. Under this model, companies jointly own energy producers and share the costs of building and operating plants. They don't pay dividends but can buy the energy at a cost based on their ownership share, with investors being wholesalers, retailers, or large industrial firms. Financial creativity and market support with low interest rates can unravel the potential of nuclear energy at scale.

There are 440 nuclear reactors in the world, accounting for a quarter of the world's low-carbon energy. The number of nuclear reactors is increasing, with 60 reactors under construction and 110 in the planning stage, most being in Asia, particularly China, which is soon to overtake the U.S. and the nuclear giant France. China has set a target to produce 10% of its electricity from nuclear energy by 2035 and 18% by 2060. However, the state of nuclear infrastructure development and finance mobilisation is not proportional. Nuclear Power, previously expected to be the first U.S. company licensed to build a 462MW SMR in Utah, terminated its planned project due to rising costs. Nuclear powerhouses Westinghouse and Areva also filed bankruptcy due to project overruns.

What about India?

India's first commercial NPP in Pahalgarh, Tarapur offers reliable energy at 2/kWh lower than solar power tariffs. At Kudankulam, Tamil Nadu, a newer power plant offers electricity in the range of 4-6/kWh comparable to coal-fired thermal power plants. Despite its versatile nature, nuclear power contributes only 1.6% of the total renewable energy mix in India. Stigma, weaponisation risk, radiation leak, regulation, high upfront cost, and long project overruns are the reasons for low adoption rate of nuclear energy.

Recently, the nuclear industry has been undergoing novel liberalisation, with ambitious plans for growth in India and abroad. Beginning with the invitation of $30 billion in private investments, a phase-wise tripling of nuclear capacity from 7,480 MW to 22,480 MW by 2031-2032, and Prime Minister Modi's attendance at the core loading of the Prototype Fast Breeder Reactor (PFBR) all mark a positive future for the industry. The PFBR's ability to generate fuel and power at the same time represents a significant advancement in India's mostly self-reliant nuclear industry.

The author is a policy professional and a consultant at RIS, New Delhi. Tweets @ikhyat

THE GIST

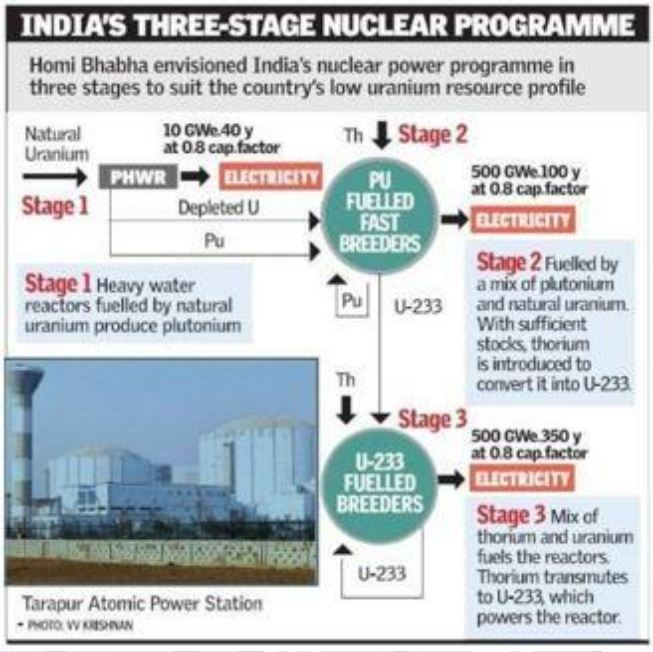
On March 21, Brussels hosted the first-ever Nuclear Energy Summit, co-chaired by the Prime Minister of Belgium Alexander De Croo and the Director General of the International Atomic Energy Agency (IAEA) Rafael Mariano Grossi.

Two key motives for the large-scale adoption of nuclear power as the base load energy source are technology and finance.

India's first commercial NPP in Pahalgarh, Tarapur offers reliable energy at 2/kWh lower than solar power tariffs. At Kudankulam, Tamil Nadu, a newer power plant offers electricity in the range of 4-6/kWh comparable to coal-fired thermal power plants.

- **Why in News:** The recent Nuclear Energy Summit held in Brussels underscores the growing recognition of nuclear power as a critical component in the global effort to combat climate change and achieve sustainable development goals.
- **Global Acknowledgment of Nuclear Energy's Role**
  - **COP28 Declaration:** The declaration signed by 22 world leaders at the UN Climate Change Conference emphasized the indispensable role of nuclear energy in meeting climate goals.
  - **Triple Nuclear Energy Capacity:** The declaration highlighted the need to triple nuclear energy capacity by 2050 to facilitate the transition towards a low-carbon future.
  - **Atoms4Netzero Programme:** The Nuclear Energy Summit, in collaboration with the IAEA's 'Atoms4Netzero' programme, signifies a multilateral approach to decarbonization.
- **Technological Advancements and Financial Considerations**
  - **Innovative Nuclear Technologies:** Recent developments in nuclear technology, including Small Modular Reactors (SMRs) and extended fuel cycles, mitigate risks associated with nuclear power.
  - **Financial Challenges:** Despite technological advancements, the nuclear industry faces significant challenges in securing financing from Multilateral Development Banks (MDBs) and private investors.
  - **Cooperative Funding Models:** Successful cooperative funding models in countries like France, South Korea, and Russia demonstrate alternative financing mechanisms for nuclear projects.
- **Maximizing Nuclear Energy's Potential**
  - **Public Perception and Education:** Addressing public concerns about nuclear safety and radiation risks through public awareness campaigns and education initiatives.
  - **Regulatory Reforms:** Streamlining regulatory processes to expedite project approvals while ensuring safety standards and environmental protection.
  - **Research and Development:** Investing in research and development to enhance nuclear technology, improve safety features, and reduce costs.
- **Financial Mobilization and Investment**

- **Role of Multilateral Institutions:** Encouraging MDBs to reassess their nuclear financing policies and explore blended finance models to attract private capital.
- **Public-Private Partnerships:** Promoting public-private partnerships to share risks and mobilize resources for nuclear projects, thereby diversifying funding sources.
- **Incentives and Subsidies:** Providing financial incentives and subsidies to incentivize private investments in nuclear energy infrastructure and technology development.



- **International Collaboration and Cooperation**
  - **Knowledge Sharing:** Facilitating knowledge sharing and technology transfer between countries to accelerate nuclear energy deployment and capacity building.
  - **Joint Research Initiatives:** Collaborating on joint research initiatives to address common challenges, such as waste management, nuclear security, and proliferation concerns.
  - **Policy Harmonization:** Harmonizing international policies and regulatory frameworks to create a conducive environment for nuclear energy development while ensuring global safety and security standards.
- **Small Modular Reactor**
  - Small Modular Reactors (SMRs) are nuclear reactors with a maximum capacity of 300 MW.
  - They are characterized by their compact size and modular design, which allows for factory assembly of components and transportation as a unit to installation sites.
  - SMRs offer advantages such as flexibility in siting, affordability in construction, and enhanced safety features compared to conventional nuclear power plants.

5. Pakistan carry out airstrikes in Afghanistan
GS 2 (International Relations)

- **Why in News:**
  - Pakistani fighters carried out airstrikes inside the Afghan provinces of Paktika and Khost, leading to fighting along the border. As per Afghani officials, at least eight civilians, including three children, were killed in the pre-dawn attacks.
  - As per Pakistan, the Tehrik-i-Taliban Pakistan (TTP) and other splinter groups were the prime target of the intelligence-based anti-terrorist operations.

Why did Pakistan carry out airstrikes in Afghanistan?

Who was the target? What is the current status of the relationship between the two countries?

Sumeda

The story so far:

In a major escalation of tensions between Pakistan and Afghanistan this week, Pakistani fighters carried out airstrikes inside the Afghan provinces of Paktika and Khost. At least eight civilians were killed in the pre-dawn attacks, Afghan officials said. The Taliban strongly condemned the strikes, and as retaliation, attacked Pakistani military posts along the border using "heavy weapons." Although the fighting across the Pakistan-Afghanistan border has stopped for now, the incident highlights the increasing tension between the two countries as Islamabad has accused the Taliban of providing refuge to terrorists launching frequent attacks on its territory.

Why has Pakistan's relationship with the Taliban soured?

The 2,670-kilometre Durand Line which marks the international land border between Pakistan and Afghanistan has long been a point of contention between the two nations. Successive Afghan governments have disputed the demarcation, claiming Pashtun territories in Pakistan, including the Federally Administered Tribal Areas (FATA) and parts of the North West Frontier Province. Tensions became apparent after the Taliban firmly rejected the Durand Line as a permanent border, dividing ethnic Pashtuns, following its return to power in 2021. A series of skirmishes between the two forces along the border were reported in the following days.

The tensions escalated after the Tehreek-e-Taliban Pakistan (TTP), also known as the Pakistani Taliban, called off a ceasefire in November 2022 when talks brokered by the Afghan Taliban broke down. The Afghan Taliban and the TTP are separate groups with common ideological links. A regrouped TTP ordered nationwide attacks after the ceasefire ended, which resulted in an unprecedented surge in terror incidents across Pakistan. The country saw a 69% increase in attacks in 2023, an 81% rise in resultant deaths, and a 60% surge in the number of injuries, according to the Pakistan Institute for Conflict and Security Studies (PICSS). The total violence-related fatalities reached a record six-year high last year, with over 1,900 deaths from 789 terror attacks and counter-terror operations. Amid a multifaceted crisis, Pakistan urged the Afghan Taliban to control the TTP. While the Taliban assured that they wouldn't permit anyone to use Afghan soil for attacks against any country, the surge in attacks since 2021 created distrust between Pakistan and the Taliban.

What triggered the airstrikes?

On March 16, seven Pakistani soldiers were killed after a suicide bomber rammed an explosive-laden truck into a post in North Waziristan. The next day, while offering the funeral prayers, President Asif Ali Zardari vowed to "respond strongly." Hours later, the Taliban released a statement, alleging that Pakistani planes had bombed the Barmal district of Paktika province and Sepera district in Khost at 3 a.m. on March 18, resulting in the deaths of civilians.

Pakistan confirmed the airstrikes hit rebels belonging to the TTP's Hafiz Gul Bahadur Group after the outfit claimed responsibility for the March 16 attack. The Pakistan Foreign Office said the country conveyed its serious concerns to the Afghan government over the presence of terror outfits including the TTP inside Afghanistan over the past two years. "These terrorists pose a grave threat to Pakistan's security and have consistently used Afghan territory to launch terror attacks inside Pakistani territory," it added. Notably, this was not the first time Pakistan launched airstrikes against Afghanistan. In April 2022, the Pakistani military carried out a similar operation in Khost and Kunar provinces.

What has the Taliban said?

The Taliban have warned Pakistan of "very bad consequences which will be out of Pakistan's control" in case of continued attacks inside its territory. The Taliban spokesperson claimed that attacks took place on houses of civilians, killing five women and three children. The Taliban denied Pakistan's Special Representative to Afghanistan Ambassador Asif Durrani's recent charge that Afghanistan was providing shelter to 5,000 to 6,000 TTP militants, but acknowledged the possibility of their presence due to Afghanistan's rugged terrain.

THE GIST

In a major escalation of tensions between Pakistan and Afghanistan this week, Pakistani fighters carried out airstrikes inside the Afghan provinces of Paktika and Khost.

On March 16, seven Pakistani soldiers were killed after a suicide bomber rammed an explosive-laden truck into a post in North Waziristan. The next day, while offering the funeral prayers, President Asif Ali Zardari vowed to "respond strongly."

The Taliban has warned Pakistan of "very bad consequences which will be out of Pakistan's control" in case of continued attacks inside its territory.

- **Afghanistan – Pakistan Border**
  - **About**
    - **i.** The Durand Line is the 1,640-mile (2,640-kilometer) border between Afghanistan and Pakistan.
    - **ii.** It was established in 1893 as the border between British India and the Emirate of Afghanistan.
    - **iii.** The line is named after Sir Henry Mortimer Durand, the foreign secretary of the colonial government of India
  - **Dispute**
    - **i.** The Durand Line has been a point of contention between Pakistan and Afghanistan since 1947, when Pakistan became an independent nation.
    - **ii.** The line cuts through Pashtun-dominated tribal areas, and the Pashtuns consider the line to be an artificial division.
    - **iii.** The dispute has its origins in the following events:

- The fall of the Durrani dynasty in the 18th century
- The British extending their control to the region
- The Anglo-Afghan wars (1838-42 and 1878-80)
- A policy reassessment due to fears of Russian advancement and a possible attack from the Pashtun tribes.

  - **Tensions**
    - Successive Afghan governments have also disputed the Line, claiming Pashtun territories in Pakistan, including the Federally Administered Tribal Areas (FATA) and parts of the North West Frontier Province.
    - The disagreement over the border has caused tensions between Pakistan and the Taliban— despite historically good bilateral ties.

- **Why has Pakistan's relationship with the Taliban soured?**
  - **Taliban takeover of Afghanistan in 2021**
    - After the Taliban took control in 2021, tensions rose because they refused to accept the Durand Line as a permanent border. They said it split the Pashtun ethnic group.
    - In the days after, there were small fights between the two sides along the border.
  - **Role of Tehreek-e-Taliban Pakistan (TTP)**
    - The tensions further escalated after the Tehreek-e-Taliban Pakistan (TTP), also known as the Pakistani Taliban, called off a ceasefire in November 2022, when talks brokered by the Afghan Taliban broke down.
    - The Afghan Taliban and the TTP are separate groups with common ideological links.
  - **Unprecedented terror attack across Pakistan**
    - After the ceasefire ended, the regrouped TTP's actions resulted in an unprecedented surge in terror incidents across Pakistan.
    - This led to a big increase in terror attacks, especially in the provinces of Khyber Pakhtunkhwa and Balochistan, which are next to Afghanistan
    - Amid a multifaceted crisis, Pakistan urged the Afghan Taliban to control the TTP.
    - The Taliban assured that they wouldn't permit anyone to use Afghan soil for attacks against any country.
    - However, the surge in attacks since 2021 has created distrust between Pakistan and the Taliban.
- **What triggered the airstrikes?**
  - Recently, on March 16, seven Pakistani soldiers were killed after a suicide bomber rammed an explosive-laden truck into a post in North Waziristan.
  - In response to this incident, Pakistani planes had bombed the Barmal district of Paktika province and Sepera district in Khost, Afghanistan.
  - Notably, this was not the first time that Pakistan has launched airstrikes against Afghanistan.
  - In April 2022, the Pakistani military carried out a similar operation in Khost and Kunar provinces.

6. Balancing Development of Renewable Energy with Conservation of Great Indian Bustard GS 3 (Environment)

- **Why in News:** Great Indian Bustard (GIB) is facing threat of extinction due to their entanglement in power lines build to evacuate renewable energy. The Supreme Court constituted an expert committee to balance the conservation and protection of the endangered Great Indian Bustard bird population with the country's international commitments to promote renewable sources of energy.

Panel to study scope of altering power lines in bustard habitat

The Hindu Bureau
NEW DELHI

The Supreme Court on Thursday constituted an expert committee to balance the conservation and protection of the endangered Great Indian Bustard bird population with the country's international commitments to promote renewable sources of energy.

The large-winged birds are on the brink of extinction, and one of the causes is the frequent collision with high-powered power cables running adjacent to its core habitats in Gujarat and Rajasthan.

A three-judge Bench headed by Chief Justice of India D.Y. Chandrachud said a blanket direction given by the top court in April 2019 for moving high voltage and low voltage power cables underground required "re-calibration".

The court appointed the Director, Wildlife Institute of India; wildlife and forest conservation experts, including Hari Shankar Singh, Niranjan Kumar Vasu, B. Majumdar, and Devesh Ghadvi; and Joint Secretary with the Renewable Energy Ministry Lalit Bohra and his counterpart in the Environment Ministry.

The committee would also include Ashok Kumar Rajput, Member, Power Systems, Central Electrical Authority, and P.C. Garg, Chief Operating Officer, Central Transmission Utility of India Limited as special invitees.

The remit of the panel would be to determine the scope, extent and feasibility of underground and overhead electric lines in areas identified as priority spots for the birds in Rajasthan and Gujarat.

The committee would explore alternatives to balance sustainable development goals and conservation of the birds. It could recommend additional measures to identify additional priority areas. The panel has to file its report in the top court on or before July 31.

Great Indian Bustard

- **Constitution of the Expert Committee**
  - **Multidisciplinary Expertise:** The committee comprises experts from the Wildlife Institute of India, forest conservationists, and officials from Renewable Energy and Environment Ministries.
  - **Inclusive Representation:** Eminent personalities from diverse backgrounds, including academia, government, and conservation organizations, ensure comprehensive deliberations.
  - **Special Invitations:** Inclusion of representatives from Central Electrical Authority and Central Transmission Utility reflects a holistic approach towards addressing the issue.
    - **Scope and Objectives of the Committee**

- **Feasibility Assessment:** The committee will assess the viability of transitioning power cables underground, considering technical, economic, and ecological factors.
- **Identification of Priority Areas:** Through scientific evaluation, priority spots for the birds in Rajasthan and Gujarat will be identified to focus conservation efforts effectively.
- **Sustainable Solutions:** The committee's mandate extends beyond mitigating immediate threats to recommending long-term strategies that harmonize biodiversity conservation with sustainable development goals.

- **Mitigating Human-Wildlife Conflict**

- **Technological Solutions:** Transitioning power cables underground can significantly reduce bird mortality rates by eliminating collision risks.
- **Awareness and Education:** Public awareness campaigns about the importance of biodiversity conservation and responsible infrastructure development are essential to mitigate conflicts.
- **Ecological Corridor Protection:** Establishing protected ecological corridors can facilitate safe passage for wildlife, reducing human-wildlife conflicts in the long term.

- **Integration of Sustainable Development Goals**

- **Renewable Energy Transition:** Promoting renewable energy sources such as solar and wind while minimizing ecological impact is crucial for achieving sustainable development objectives.
- **Green Infrastructure:** Investing in eco-friendly infrastructure designs, such as wildlife-friendly power lines and green corridors, can promote biodiversity conservation alongside economic growth.
- **Policy Alignment:** Harmonizing environmental regulations with developmental policies ensures that conservation efforts are integrated into broader national agendas.

- **Enhanced Conservation Efforts**

- **Habitat Restoration:** Besides mitigating immediate threats, restoring degraded habitats and creating protected areas are essential for the long-term survival of the Great Indian Bustard.
- **Community Engagement:** Involving local communities in conservation initiatives fosters stewardship and ensures the sustainable management of natural resources.
- **Research and Monitoring:** Continued scientific research and monitoring are vital to understanding the ecological needs of the species and adapting conservation strategies accordingly.

- **Great Indian Bustard**

- The great Indian bustard (Ardeotis nigriceps) is a large, ground bird native to central and western India. It has a horizontal body, long bare legs, and an ostrich-like appearance. The great Indian bustard is one of the heaviest flying birds in the world.
- It is considered the flagship grassland species and state bird of Rajasthan.
- **IUCN Status:** Critically endangered

7. PIB's Fact Check Unit

Recent events of importance

- **Why in News:** Recently, Supreme Court put on hold Centre's notification on setting up 'fact-check unit'.
- **About PIB's Fact Check Unit:**
  - It was established in November 2019. It was started with an **objective of acting as a deterrent to creators** and disseminators of **fake news and misinformation.**
  - It also provides people with an easy avenue to report suspicious and

Why SC has stayed Govt's 'Fact Check Unit' for now

APURVA VISHWANATH
NEW DELHI, MARCH 21

THE SUPREME Court on Thursday stayed the operation of the amended Information Technology (IT) Rules, which empowered the government to identify "fake news" on social media platforms through a "Fact Check Unit" (FCU).

The Union Electronics and IT Ministry had notified the FCU on March 20 as a statutory body under the Press Information Bureau with the power to flag what it believes is false information related to the central government and its agencies on social media sites.

The amendment to the IT Rules, 2021, which allowed the Ministry to appoint the FCU, were notified in April 2023. On January 31 this year, a two-judge division Bench of the Bombay High Court gave a split verdict on a challenge to the Rules.

A third judge who was assigned to give an opinion on the split verdict is yet to give his final decision. However, after the third judge declined to stay the setting up of the FCU, the division Bench on March 11 said by a 2-1 majority that it would not stay the notification of the FCU.

The amended Rules

The amendment to The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 notified in April 2023 brought in a legal framework for the online gaming eco-system and, more importantly, introduced a legal mechanism for the government to fact-check online content pertaining to "government business".

The Rules mandate it's obligatory for intermediaries like social media platforms "to not publish, share or host fake, false or misleading information in respect of any business of the Central Government". The changes raised concern that the FCU would make the government the "sole arbiter of truth" in respect of any business related to itself.

The rules were challenged before the Bombay High Court.

Question before HC

The petitioners, including stand-up comedian Kunal Kamra, Association of Indian Magazines, Editors Guild of India, news channel TV18 Broadcast Ltd, and Internet Cyberian & Company Ltd, challenged Rule 3 (1)(b)(v) of the IT Rules 2021 as being violative of Article 14, Article 19(1)(a) and (g), and Article 21 of the Constitution, and Section 79 and the Information Technology Act, 2000 (IT Act).

The amendment to Rule 3 (1)(b) (v) of the IT Rules 2021 expanded the general term "false news" to include fake news involving government business.

This provision, when enacted in 2021, referred to "...any information which is patently false or misleading in nature but may reasonable be perceived as a fact".

By the 2023 amendment, after the word "nature", the words "or, in respect of any business of the Central Government, is identified as false or fake or misleading by such a fact check unit of the Central Government as the Ministry may by notification published in the Official Gazette, specify" were inserted.

The petitioners argued that this would have a "chilling effect" on the freedom of speech and expression. Under the Rules, the Centre would ask intermediaries — not an individual or media organisation directly — to take down speech that is found misleading. However, the restraint on the intermediaries would directly affect the individual.

Section 2 (1)(w) of the IT Act defines an "intermediary" as "any person who on behalf of another person receives, stores or transmits that record or provides any service with respect to that record and includes telecom service providers, network service providers, internet service providers, web-hosting service providers, search engines, online payment sites, online-auction sites, online-marketplaces and cyber cafés". This broad definition would include big tech, social media sites, and internet service providers such as Airtel, Reliance Jio, etc.

Section 69 of the IT Act empowers the government to issue directions to block public access to any information through any computer resources. The Rules were framed essentially in exercise of this power.

However, to take a ruling powers can be exercised by Parliament in a manner that is contrary to Part III of the Constitution, which deals with fundamental rights.

The Bombay High Court examined if these Rules were violative of free speech, and were arbitrary in nature.

EXPLAINED LAW

HC ruling and after

On January 31, Justice G S Patel struck down the amended Rules, while Justice Neela Gokhale, the other judge on the Bench, upheld them.

Justice Patel held that the "state cannot coercively classify speech as true or false and compel the non-publication of the latter. That is nothing but censorship."

Justice Gokhale said the "rights of citizens to participate in the representative and participative democracy of the country in unambiguous terms when they have access to authentic information and are not misled by misinformation, information which is patently untrue, false, false, or misleading, knowingly communicated with malicious intent".

Since a split verdict was delivered, as per rules of the Bombay High Court, the case had to be heard afresh by a third judge whose opinion would create a 2-1 majority one way or another. However, before beginning a substantial hearing, Justice Atul S Chandurkar — who was assigned by Chief Justice Devendra Kumar Upadhyaya as the third judge — had to decide if the Rules were to be stayed.

After the central government told the court that the Rules were yet to be notified in the official gazette, Justice Chandurkar refused to grant an interim stay on the amended Rules.

An appeal was filed before the Supreme Court against the rejection of interim stay. However, a day before the SC was to hear the appeal against rejection of stay, the Centre notified the 2023 Rules in the official gazette. With Lok Sabha elections less than a month away, the Rules are crucial for the government's engagement with news about "government business".

The stay by the SC

The top court on Thursday stayed the amended Rules until the Bombay High Court reaches a final decision. Chief Justice of India (CJI) D Y Chandrachud observed that the issue before the court is whether the status quo should be allowed to change when one judge [Justice Patel] had completely struck down the notification.

Can the SC stay a law before it can rule it unconstitutional?

A law made by Parliament carries the presumption of constitutionality. It is subject to judicial review, but the onus is on the petitioners to prove that the law is unconstitutional. Navigating the line between judicial review and Parliament's power to legislate, courts usually shy away from staying a law before they can rule on its constitutionality.

However, there are two important aspects in this case.

One, the Rules in question are made by the Ministry in exercise of powers delegated to the central government by Parliament, and are not a direct expression of the will of Parliament. The threshold for the presumption of constitutionality varies.

Two, the SC has in the past stated that an interim stay can be granted only on an explicit finding of unconstitutionality. It can be inferred from the observations of CJI Chandrachud that Justice Patel's detailed 146-page ruling, although part of a split verdict, is an "explicit finding of unconstitutionality".

In 2020, the SC stayed the operation of a Maharashtra law granting reservation to Marathas in jobs and educational institutions through an interim order.

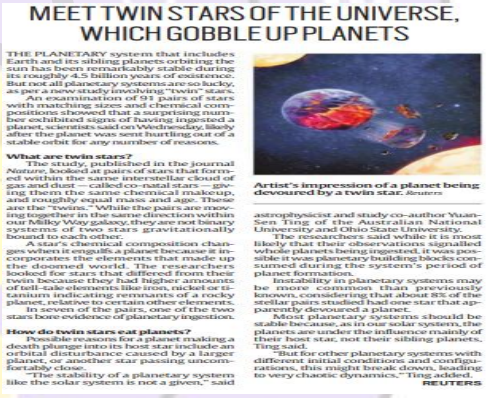
The farm laws — which were ultimately repealed — were also stayed by the SC in an interim order in 2021.

questionable information pertaining to the Government of India.

- It is mandated to counter misinformation on Government policies, initiatives and schemes either **suo motu or under a reference via complaints.**
- The FCU will actively monitors, detects and counters disinformation campaigns, ensuring that false information about the Government is promptly exposed and corrected.
- **Organisation:**
  - It is headed by a **senior DG/ADG level officer** of the Indian Information Service (IIS). The day-to-day operations of the Unit are handled by IIS officers at various levels.
  - The Unit reports to the Principal Director General, PIB who functions as the Principal Spokesperson of the Government of India.
- **Fact-Check Mechanism:**
  - Users send requests over **WhatsApp, email or a web portal**. Each such request received is considered as a 'Query'. Queries are segregated by the Unit based on their relevance to matters pertaining to Government of India.
  - Only queries pertaining to Government of India are considered and taken up as Actionable Queries, while others are deemed not relevant for action.

8. Twin Stars & Cosmic Cannibalism
GS 3 (Science and tech)

- **Why in News:** Recently, researchers analyzed 91 star pairs from the same birth cloud, sharing similar sizes and compositions.



MEET TWIN STARS OF THE UNIVERSE, WHICH GOBBLE UP PLANETS

THE PLANETARY system that includes Earth and its sibling planets orbiting the sun has been remarkably stable during its roughly 4.5 billion years of existence. But not all planetary systems are so lucky, as per a new study involving "twin" stars.

An examination of 91 pairs of stars with matching sizes and chemical compositions showed that a surprising number exhibited signs of having ingested a planet, scientists said on Wednesday, likely after the planet was sent hurtling out of a stable orbit for any number of reasons.

What are twin stars?

The study, published in the journal *Nature*, looked at pairs of stars that formed within the same interstellar cloud of gas and dust -- called co-natal stars -- giving them the same chemical makeup, and roughly equal mass and age. These are the "twins." While the pairs are moving together in the same direction within our Milky Way galaxy, they are not binary systems of two stars gravitationally bound to each other.

A star's chemical composition changes when it engulfs a planet because it incorporates the elements that made up the doomed world. The researchers looked for stars that differed from their twin because they had higher amounts of tell-tale elements like iron, nickel or titanium indicating remnants of a rocky planet, relative to certain other elements.

In seven of the pairs, one of the two stars bore evidence of planetary ingestion.

How do twin stars eat planets?

Possible reasons for a planet making a death plunge into its host star include an orbital disturbance caused by a larger planet, or another star passing uncomfortably close.

"The stability of a planetary system like the solar system is not a given," said astrophysicist and study co-author Yuan-Sen Ting of the Australian National University and Ohio State University.

Artist's impression of a planet being devoured by a twin star. *Reuters*

The researchers said while it is most likely that their observations signalled whole planets being ingested, it was possible it was planetary building blocks consumed during the system's period of planet formation.

Instability in planetary systems may be more common than previously known, considering that about 8% of the stellar pairs studied had one star that apparently devoured a planet.

Most planetary systems should be stable because, as in our solar system, the planets are under the influence mainly of their host star, not their sibling planets, Ting said.

"But for other planetary systems with different initial conditions and configurations, this might break down, leading to very chaotic dynamics," Ting added.

REUTERS

- **Background:**
  - The planetary system that includes Earth and its sibling planets orbiting the sun has been remarkably stable during its roughly 4.5 billion years of existence.
  - But not all planetary systems are stable, as shown in a new study involving "twin" stars.
  - An international research team used three huge telescopes to look at 91 pairs of twin stars and found some showed evidence of 'ingesting' planets.
  - Scientists had presumed the twin stars would have identical compositions but surprisingly found that around eight percent of them differ from the others.
  - This difference lies in one of the stars showing a tendency to 'devour' planets or planetary material.
  - The researchers found this phenomenon of cosmic cannibalism appearing in around 7 of the 91 pairs of twin stars they looked at.
  - All these stars were also in their prime of life - being so-called 'main sequence' stars - rather than stars in their final phases of life such as red giants.
- **About Twin Stars:**
  - The study looked at pairs of stars that formed within the same interstellar cloud of gas and dust - so-called co-natal stars - giving them the same chemical makeup, and were of roughly equal mass and age. These are the "**twins**."
  - While the pairs are moving together in the same direction within the **Milky Way Galaxy**, they are not binary systems of two stars gravitationally bound to each other.
  - A star's chemical composition changes when it engulfs a planet because it incorporates the elements that made up the doomed world.
  - The researchers looked for stars that differed from their twin because they had higher amounts of tell-tale elements like iron, nickel or titanium indicating remnants of a rocky planet, relative to certain other elements.
  - In seven of the pairs, one of the two stars bore evidence of planetary ingestion.
- **Possible Reasons Behind 'Cosmic Cannibalism'& Significance:**
  - Possible reasons for a planet making a death plunge into its host star include an orbital disturbance caused by a larger planet, or another star passing uncomfortably close, destabilizing the planetary system, the researchers said.
    - The researchers used the **European Space Agency's Gaia space observatory** to identify the twins and used telescopes in **Chile** and **Hawaii** to determine their composition.
  - The stars were as close as 70 light years from our solar system and as far as 960 light years away.
    - A **light year** is the distance light travels in a year, 5.9 trillion miles (9.5 trillion km).

- The researchers said while it is most likely that their observations signaled whole planets being ingested, it was possible **it was planetary building blocks consumed during the system's period of planet formation**
- In their death throes, our sun and other stars like it dramatically puff up, ingesting any planets with close orbits, before collapsing into a dense, burned-out cinder called a white dwarf.
- The study indicated that **a non-negligible fraction of planetary systems is indeed unstable, meaning there are always planets being ejected in or out**.
- Given that only a small fraction of these wayward planets might actually be gulped by their host star rather than simply wandering the cosmos, there may be more of these planetary exiles than previously estimated.

NEELOFER OJU SERVICE CLASSES *UPSC AND KPSC WITH KPSC* JAMMU AND KASHMIR DO NOT COPY

23rd March, 2024

1. India – Bhutan Bilateral Relationship
GS 2 (International Relations)

India to double assistance to Bhutan to ₹10,000 cr.

Suhasini Haidar
NEW DELHI

India has decided to double Bhutan's assistance over the next five years, from ₹5,000 crore in 2019-2024 to ₹10,000 crore for the period till 2029, Prime Minister Narendra Modi said in Thimphu on Friday.

Mr. Modi made the announcement after he was awarded Bhutan's highest honour, the 'Order of the Druk Gyalpo', which was announced in 2021, to acknowledge India's role in ensuring "Bhutan's success in managing the COVID-19 pandemic". After meeting Bhutan's Prime Minister Tshering Tobgay, India and Bhutan inked seven agreements on energy, food safety, sports and research, as well as a space collaboration road map.

Warm welcome: Prime Minister Narendra Modi greets a large gathering in Thimphu on Friday. ANI

"We will work on new possibilities for connectivity, infrastructure, trade and energy sectors between India and Bhutan," said Mr. Modi, while expressing his gratitude for the award from the Bhutanese King. "We will soon see our initiatives for a new airport for better connectivity, rail links between Kokrajhar-Gelephu and Banarhat-Samtse, and waterways navigation on the Brahmaputra. To strengthen trade infrastructure, we will build integrated check posts," he said.

Mr. Modi's specific mention of India's support to the 'Gelephu Mindfulness City', which he called a "visionary project" launched by Bhutan's King Jigme Khesar Namgyel Wangchuck in 2023, is significant, as it indicates the project would be a beneficiary of India's latest assistance to Bhutan.

Audience with the King

Mr. Modi landed in Bhutan's Paro valley on Friday morning. He was received at the airport by Mr. Tobgay, who welcomed him on X referring to him as his "elder brother". After driving to Thimphu, he received a ceremonial welcome, an audience with the King and then with his father and former King, Jigme Singye Wangchuck, who is believed to be still influential in matters of Bhutan's foreign policy.

Speaking at the award ceremony held at the Tendrelthang Festival Ground, the King said Mr. Modi was a "true friend" of the Bhutanese people and "a firm supporter of Bhutan's national vision to achieve self-reliance and become a developed nation".

The visit by Mr. Modi, after the Model Code of Conduct has been put in place, is considered unusual, given that in the past Prime Ministers haven't made bilateral visits or made major policy announcements with financial implications during this period.

Sources said the Ministry of External Affairs had received permission from the Election Commission to make the announcement for the grant of ₹10,000 crore, indicating the special relationship the two countries share.

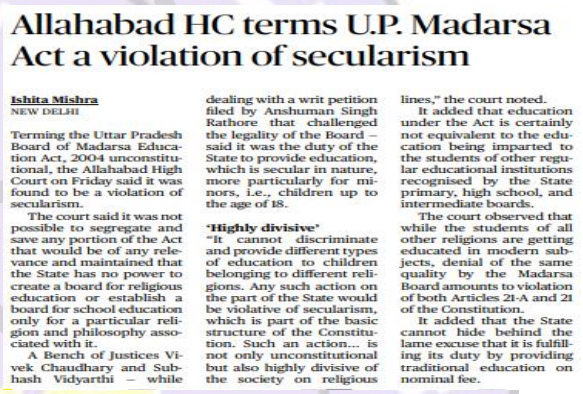
- **Why in News:** Prime Minister Narendra Modi on March 22, 2024, arrived in **Paro, Bhutan** for a 24-hour State visit.
- **India – Bhutan Bilateral Relationship:**
  - India and Bhutan share unique and exemplary bilateral relations, which are based on mutual trust, goodwill and understanding.
  - Formal diplomatic relations between India and Bhutan were established in **1968**.
  - The basic framework of India-Bhutan relations is the **Treaty of Friendship and Cooperation** signed in 1949 between the two countries, which was renewed in 2007.
- **Trade & Economic Ties:**
  - The India-Bhutan Agreement on Trade, Commerce and Transit – was first signed in 1972.
  - The agreement establishes a free trade regime between the two countries.
  - India is Bhutan's top trade partner both as an import source and as an export destination.
  - Since 2014, India's merchandise trade with Bhutan has almost tripled from USD 484 million in 2014-15 to USD 1422 million in 2021-22.
    - It accounting for about 80% of Bhutan's overall trade, with the balance of trade in India's favour.
- **Cultural & Buddhist Links:**
  - A number of Bhutanese pilgrims travel to Bodh Gaya, Rajgir, Nalanda, Sikkim, Udayagiri, and other Buddhist sites in India.
  - As a part of the 50th anniversary celebration of diplomatic relations, GOI sponsored a visit by **18 Lam Netens (Buddhist monks)** and representative of the Central Monastic Body of Bhutan to India.
- **Hydropower Cooperation:**
  - Mutually beneficial hydro-power cooperation with Bhutan is a key pillar of bilateral economic cooperation.
  - For Bhutan, hydro-power development continues to be a vital catalyst for socio-economic development.
  - Revenues from Hydropower constitutes a significant portion of the total revenues of the Royal Government of Bhutan.
  - The ongoing cooperation between India and Bhutan in hydro-power sector is covered under the 2006 bilateral agreement for cooperation and its Protocol signed in 2009.
  - Four hydro-electric projects (HEPs) totalling 2136 MW are already operational in Bhutan and are supplying electricity to India.
  - The 720 MW Mangdechhu was commissioned in August 2019 and handed over to Bhutan in December 2022.
- **New Areas of Cooperation:**
  - Apart from hydro-power cooperation and development partnership has moved into new and emerging areas with full interoperability of the flagship digital project RuPay, which has been successfully completed.
  - **Bhutan became the second country to launch the BHIM app**, further deepening the financial linkages between our two countries.
  - Space cooperation is a new and promising area of bilateral cooperation.
  - The India-Bhutan SAT was launched into space in November 2022 by ISRO's Polar Satellite Launch Vehicle (PSLV).
  - Inauguration of Ground Earth Station during visit of Chairman, ISRO also took place in March 2023.
- **Indians Working in Bhutan:**
  - About **50,000 Indian citizens are working in Bhutan**, mainly in the construction sector, education and technical consultants involved in infrastructure projects.
  - Some Indian daily-workers also enter and exit Bhutan every day in the border towns, as a sign of the close economic interdependence between both countries.
- **Educational, Cultural Cooperation and People-to-People Exchanges:**
  - There is close bilateral cooperation in the educational and cultural fields between India and Bhutan.
  - Over 950 scholarships are being provided annually by GoI for Bhutanese students to study in India in a wide range of disciplines including medicine, engineering, etc.
  - It is estimated that approximately 4,000 Bhutanese are studying in undergraduate courses in Indian Universities on self-finance basis.

- Under the **Nehru Wangchuck Scholarship Scheme** since its inception in 2010, 8 slots are annually allotted to students and scholars from Bhutan.
- 20 slots are provided every year to students from Bhutan under the ICCR Scholarship.

- **PM Modi's State Visit to Bhutan:**
  - Prime Minister Narendra Modi on March 22, 2024, arrived in **Paro, Bhutan** for a 24-hour State visit.
  - PM Modi will receive Bhutan's highest civilian award, the **Order of the Druk Gyalpo**.
  - This is PM Modi's first visit since the award was announced in 2021, which will be presented Bhutan's King **Jigme Khesar Namgyel Wangchuck**, in appreciation for his efforts towards strengthening India-Bhutan ties

2. UP Madarsa Act, a violation of secularism: Allahabad HC

Recent events of importance



Allahabad HC terms U.P. Madarsa Act a violation of secularism

Ishita Mishra
NEW DELHI

Terming the Uttar Pradesh Board of Madarsa Education Act, 2004 unconstitutional, the Allahabad High Court on Friday said it was found to be a violation of secularism.

The court said it was not possible to segregate and save any portion of the Act that would be of any relevance and maintained that the State has no power to create a board for religious education or establish a board for school education only for a particular religion and philosophy associated with it.

A Bench of Justices Vivek Chaudhary and Subhash Vidyarthi – while dealing with a writ petition filed by Anshuman Singh Rathore that challenged the legality of the Board – said it was the duty of the State to provide education, which is secular in nature, more particularly for minors, i.e., children up to the age of 18.

'Highly divisive'

"It cannot discriminate and provide different types of education to children belonging to different religions. Any such action on the part of the State would be violative of secularism, which is part of the basic structure of the Constitution. Such an action... is not only unconstitutional but also highly divisive of the society on religious lines," the court noted.

It added that education under the Act is certainly not equivalent to the education being imparted to the students of other regular educational institutions recognised by the State primary, high school, and intermediate boards.

The court observed that while the students of all other religions are getting educated in modern subjects, denial of the same quality by the Madarsa Board amounts to violation of both Articles 21-A and 21 of the Constitution.

It added that the State cannot hide behind the lame excuse that it is fulfilling its duty by providing traditional education on nominal fee.

- **Why in News:** In a significant ruling, the Allahabad High Court has struck down the **Uttar Pradesh Board of Madarsa Education Act, 2004 (Madarsa Act, 2004)** enacted by the state government.
- **Key-points highlighted by the High Court**
  - Terming the **Act** unconstitutional, the Allahabad High Court said the Act found to be a **violation of secularism.**
  - The court said it was not possible to segregate and save any portion of the Act which would be of any relevance and maintained.
  - The state has no power to create a **board for religious education** or to establish **board for school education** only for a particular religion and philosophy associated with it.
  - It was the duty of the state to provide education, which is secular in nature, more particularly for minors, that is children up to the age of 18.
  - It cannot discriminate and provide different types of education to children belonging to different religions.
  - Any such action on the part of state would be **violative of secularism**.
- **Secularism and Education in India:**
  - **Secularism** is part of the **basic structure of the Constitution.**
  - The value of Secularism is deeply ingrained all through, and particularly in **Articles 14, 19, 22, and 25.**
  - Education, being a fundamental right under **Article 21-A** of the Constitution, holds immense significance in fostering a democratic society and promoting social cohesion.
  - Secularism in education implies that the state must provide education that is free from religious bias or affiliation.
  - It entails offering a curriculum that is inclusive of **diverse perspectives, cultures, and beliefs, fostering a spirit of tolerance, pluralism, and respect for individual autonomy**.
- **Impact of Denial**
  - Education, as a **tool for empowerment and social transformation**, must be accessible to all, irrespective of their religious affiliations.
  - Denying certain groups access to quality education based on religious grounds not only perpetuates **social inequality** but also undermines the **foundational principles of democracy and secularism.**
- **Significance of the Ruling**
  - The Allahabad High Court's ruling underscores the **importance of upholding secular principles in education.**
  - By deeming the Act unconstitutional for its violation of secularism, the court reaffirmed the **state's obligation to provide education** that transcends religious boundaries and caters to the holistic development of all students.

3. India looking to Africa for Critical Minerals
GS 3 (Economy)

India now eyes Africa for critical minerals

Press Trust of India
NEW DELHI

India is looking at Africa for minerals, including cobalt, and other critical minerals, Mines Secretary V. L. Kantha Rao said on Friday. The country is still engaging with Australia for lithium blocks, he added.

Mr. Rao said, "We are looking at Zambia, Namibia, Congo, Ghana and Mozambique for minerals."

Critical minerals, including lithium are crucial for electric vehicle batteries and for India's decarbonisation mission.

Mr. Rao also said auction rules for offshore mineral blocks were being rea-

Lithium blocks in Kashmir will be auctioned again as govt. received only 2 bids in round one

died and that 10 blocks would be up for sale after the general elections. He added that the result of the first round of auction would be out in 10 days.

Mr. Rao said the lithium blocks in Jammu and Kashmir would now be auctioned in the third tranche as it received only two bids in the first round.

Seven critical mineral blocks have been put up for sale in the third round.

- **Why in News:** India is looking to Africa for minerals such as **copper, cobalt and other critical minerals**, while also engaging with **Australia for lithium blocks.**
- **What are Critical Minerals?**
  - Critical minerals are elements that are the building blocks of essential modern-day technologies, and are at risk of supply chain disruptions.
  - These minerals are now used everywhere from making mobile phones, computers to batteries, electric vehicles and green technologies like **solar panels and wind turbines.**
  - Based on their individual needs and strategic considerations, different countries create their own lists.
  - **Critical mineral in Africa:**
    i. Africa is home to **30 percent**of the **world's known critical minerals.**
    ii. Africa holds substantial reserves of **bauxite, chromium, cobalt, copper, gold, iron, lithium, manganese, platinum, and uranium**to name just a few.
- **30 Critical Minerals**
  - The Centre has identified '**30 critical minerals'**, which are essential for the country's economic development and national security:
  - **Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.**
  - **Ten minerals on the list are 100 per cent import-dependent.** These are lithium cobalt, nickel, vanadium, niobium, germanium, rhenium, beryllium, tantalum, and strontium.

4. PM Modi conferred Bhutan's highest civilian honour
Recent events of importance

Prime Minister Narendra Modi being conferred with the Order of the Druk Gyalpo, Bhutan's highest civilian award, by King Jigme Khesar Namgyel Wangchuck in Thimphu, Friday. ANI

ENERGY TO RAIL TO SPACE, PACTS SIGNED

Top Bhutan honour for PM: 'transforming ancient civilisation to dynamic tech centre'

SHUBHAJIT ROY
NEW DELHI, MARCH 22

DESCRIBING PRIME Minister Narendra Modi's leadership as "extraordinary and exemplary", Bhutan's King Jigme Khesar Namgyel Wangchuck said Friday that with Modi at the helm, India's future is bright and "a successful India means a bright future for Bhutan".

Conferring the Order of the Druk Gyalpo, Bhutan's highest civilian decoration, on Prime Minister Modi — the first foreign leader to be felicitated with this award — at Tendrelthang, Thimphu, the King said, "Nations need a great leader to progress and prosper, but such leaders are rare. A great leader must be compassionate, must care deeply for the country, and be willing to give everything in the service of the nation and people. Additionally, a great leader must be visionary and immensely capable and competent. A great leader must be powerful, not for the sake of power, but to effect real change with the wholehearted support of the people."

"In my view, Prime Minister Modi embodies all these qualities. He shoulders the responsibility to lead 1.4 billion people, 18% of the world's population. And his leadership has been extraordinary and exemplary. With him at the helm, India's future is bright. And as I said before, a successful India means a bright future for Bhutan," the King said.

Modi, who arrived in Paro airport where an exceptional welcome was accorded to him with people greeting him all along the journey from Paro to Thimphu, met the Bhutan King.

CONTINUED ON PAGE 2

- **Why in News:** The King of Bhutan conferred the **Order of the Druk Gyalpo** on Prime Minister Narendra Modi, who became the first foreign head of government to receive **Bhutan's highest civilian honour.**
- **About the Award**
  - The **Order of the Druk Gyalpo** holds immense significance within **Bhutan's honour system**, symbolising a lifetime of outstanding achievements and contributions to society.
  - The Order of the Druk Gyalpo takes **precedence over all orders**, decorations and medals.
  - Since its institution, the award has been conferred upon only four eminent personalities.
    - Queen Grandmother of Bhutan Ashi Kesang Choden Wangchuck in 2008
    - Je Thrizur Tenzin Dendup (68th Je Khenpo of Bhutan) in 2008
    - Je Khenpo Trulku Ngawang Jigme Choedra in 2018.

5. Gulaal Gota
GS 1 (Art and Culture)

GULAAL GOTA: A BEAUTIFUL, UNIQUE HOLI TRADITION OF JAIPUR

Artisan Amjad Khan gives final touches to his stock of gulaal gotas ahead of Holi in Jaipur this week. Rahul Jain Perez

PARUL KULSHRESTHA
JAIPUR, MARCH 22

AS PEOPLE celebrate Holi on Monday, revellers in many parts of the country will be seen playing with colours and drenching each other. However, in some parts of Rajasthan's Jaipur, an old tradition will play out, where colours will be thrown through a unique medium called the 'gulaal gota', dating back around 400 years.

What is a gulaal gota?

A Gulaal Gota is a small ball made of lac, filled with gulaal (dry colour). Weighing around 20 grams when filled with gulaal, these balls are thrown at people on Holi — they break up into bits on impact, and cover the person in gulaal.

Making Gulaal Gotas involves first boiling the lac in water to make it flexible. Red, yellow, and green are added first, as other colours can be obtained from these. After shaping the lac, colour processing is done, artisans heat the lac. It is then blown into a spherical shape with the help of a blower called 'phunkni'. Then, gulaal is filled in the balls before they are sealed with lac.

Where does the raw material for gulaal gota come from?

Lac is brought from Chhattisgarh and Jharkhand. As per the Chhattisgarh State Lac Development Board, a unit website, the female scale insect is one of the sources of lac. To produce 1 kg of lac resin, around 15 lakh insects are killed. These insects also yield resin, lac dye and lac wax. Gulaal is usually bought from the market.

How did gulaal gotas become a tradition in Jaipur?

Gulaal gotas are made by Muslim lac makers in Jaipur's Lashkar area, only in Jaipur.

According to Anwar Nishammad, a gulaal gota maker who has received an award for his work, his great-great-great-grandfathers' ancestors were shepherds and horse traders who arrived from Afghanistan. They settled in Bagru, a town located close to Jaipur, and learnt lac-making from Hindu lac makers (lakhera).

The city of Jaipur was established in 1727 by Maharaja Sawai Jai Singh II, a connoisseur of art, dedicated a lane at the Tripolia Bazaar to the munihars/commercial lac workers, who made lac bangles. This is where lac bangles, jewellery, and gulaal gota are mainly sold, even today.

Artisans say that in olden times, kings would ride through the city on elephant back, and throw gulaal gotas at people in the public. The erstwhile royal family is also known to order gulaal gota at the palace for the festival.

How much does gulaal gota cost? How many gulaal gotas are thrown?

A box of six gulaal gota balls is typically sold for Rs 150, which is much costlier for wear. Bulbonos. Usually, the whole family of artisans is engaged in the work, to help complete the orders that are to be sold in different parts of the country, such as Vrindavan. Preparations begin two months in advance of Holi.

For munihars, lac bangles are the main source of sustenance, accounting for around 70 per cent of their income. Now that the bangles are eco-friendly as they are made without any chemicals.

Over the years, Jaipur has become a hub of many factories, where cheap, chemical-based bangles are being made which are sold in the market, as they are brighter in tone and cheaper. Originally, lac bangles are costlier. Hence, the demand for lac-only bangles has fallen.

What is the future like for this work?

The Government of India has given "artisan cards" to the lac bangle and gulaal gota makers, allowing them to avail some benefits.

Many artisans have gone to different parts of the country to sell their products. Awaz Mohammad, for instance, was invited to put up a shop at the G20 summit in New Delhi last year, where Prime Minister Narendra Modi and other dignitaries appreciated his work.

In a bid to save the tradition, some gulaal gota makers have demanded a Geographical Indication (GI) tag for their work. A GI tag can help boost awareness about a product and highlight its location-specific exclusivity.

- **Why in News:** During the Holi festival, in some parts of **Rajasthan's Jaipur**, an old tradition involved playing out with colors through a unique medium called the "**Gulaal Gota**", dating back around 400 years.
- **What is a Gulaal Gota?**
  - A Gulaal Gota is a **small ball made of lac**, filled with dry gulaal. Weighing around 20 grams when filled with gulaal, these balls are thrown at people on Holi, getting smashed to bits on impact.
  - Making Gulaal Gotas involves first boiling the lac in water to make it flexible.

➢ **Lac is a resinous substance** that is secreted by certain insects. It is also used to make bangles.

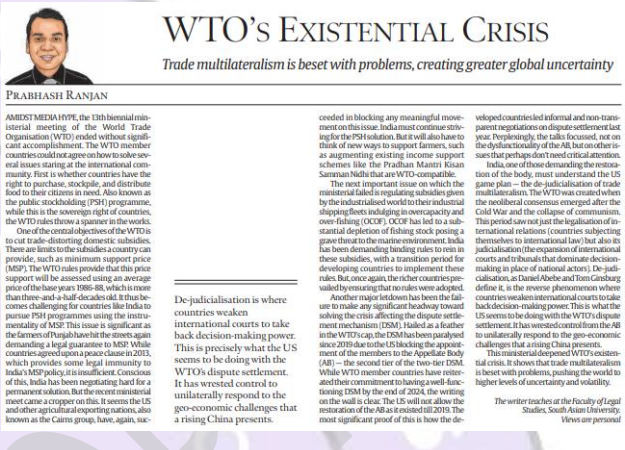
- After shaping the lac, colour is added to it. After the processing is done, artisans heat the lac. It is then blown into a spherical shape with the help of a blower called **"phunkni".**
- Then, gulaal is filled in the balls before they are sealed with lac.

DO NOT COPY

26th March, 2024

1. The WTO is Having an Existential Crisis
GS 2 (International events of importance)

- **Why in News:**
  - **The 13th biennial ministerial meeting of the World Trade Organization (WTO)** recently concluded amid much anticipation.
  - However, the meeting ended without substantial progress, leaving **several critical issues unresolved.**
  - So, **it is crucial to assess the challenges faced by WTO member countries, focusing on the impasse surrounding public stockholding (PSH) programs,** subsidies for industrial shipping fleets, and the dysfunctionality of the dispute settlement mechanism (DSM).



WTO'S EXISTENTIAL CRISIS

Trade multilateralism is beset with problems, creating greater global uncertainty

PRABHASH RANJAN

AMIDST MEDIA HYPE, the 13th biennial ministerial meeting of the World Trade Organisation (WTO) ended without significant accomplishment. The WTO member countries could not agree on how to solve several issues staring at the international community. First is whether countries have the right to purchase, stockpile, and distribute food to their citizens in need. Also known as the public stockholding (PSH) programme, while this is the sovereign right of countries, the WTO rules throw a spanner in the works.

One of the central objectives of the WTO is to cut trade-distorting domestic subsidies. There are limits to the subsidies a country can provide, such as minimum support price (MSP). The WTO rules provide that this price support will be assessed using an average price of the base years 1986-88, which is more than three-and-a-half-decades old. It thus becomes challenging for countries like India to pursue PSH programmes using the instrumentality of MSP. This issue is significant as the farmers of Punjab have hit the streets again demanding a legal guarantee to MSP. While countries agreed upon a peace clause in 2013, which provides some legal immunity to India's MSP policy, it is insufficient. Conscious of this, India has been negotiating hard for a permanent solution. But the recent ministerial meet came a cropper on this. It seems the US and other agricultural exporting nations, also known as the Cairns group, have, again, succeeded in blocking any meaningful movement on this issue. India must continue striving for the PSH solution. But it will also have to think of new ways to support farmers, such as augmenting existing income support schemes like the Pradhan Mantri Kisan Samman Nidhi that are WTO-compatible.

The next important issue on which the ministerial failed is regulating subsidies given by the industrialised world to their industrial shipping fleets indulging in overcapacity and over-fishing (OCOF). OCOF has led to a substantial depletion of fishing stock posing a grave threat to the marine environment. India has been demanding binding rules to rein in these subsidies, with a transition period for developing countries to implement these rules. But, once again, the richer countries prevailed by ensuring that no rules were adopted.

Another major letdown has been the failure to make any significant headway toward solving the crisis affecting the dispute settlement mechanism (DSM). Hailed as a feather in the WTO's cap, the DSM has been paralysed since 2019 due to the US blocking the appointment of the members to the Appellate Body (AB) — the second tier of the two-tier DSM. While WTO member countries have reiterated their commitment to having a well-functioning DSM by the end of 2024, the writing on the wall is clear. The US will not allow the restoration of the AB as it existed till 2019. The most significant proof of this is how the developed countries led informal and non-transparent negotiations on dispute settlement last year. Perplexingly, the talks focussed, not on the dysfunctionality of the AB, but on other issues that perhaps don't need critical attention.

India, one of those demanding the restoration of the body, must understand the US game plan — the de-judicialisation of trade multilateralism. The WTO was created when the neoliberal consensus emerged after the Cold War and the collapse of communism. This period saw not just the legalisation of international relations (countries subjecting themselves to international law) but also its judicialisation (the expansion of international courts and tribunals that dominate decision-making in place of national actors). De-judicialisation, as Daniel Abebe and Tom Ginsburg define it, is the reverse phenomenon where countries weaken international courts to take back decision-making power. This is what the US seems to be doing with the WTO's dispute settlement. It has wrested control from the AB to unilaterally respond to the geo-economic challenges that a rising China presents.

This ministerial deepened WTO's existential crisis. It shows that trade multilateralism is beset with problems, pushing the world to higher levels of uncertainty and volatility.

De-judicialisation is where countries weaken international courts to take back decision-making power. This is precisely what the US seems to be doing with the WTO's dispute settlement. It has wrested control to unilaterally respond to the geo-economic challenges that a rising China presents.

The writer teaches at the Faculty of Legal Studies, South Asian University. Views are personal

- **An Analysis of Points of Contention at the WTO Ministerial Meeting**
  - **Public Stockholding (PSH) Programs**
    - One of the primary points of contention at the ministerial meeting was **the debate over countries' rights to implement PSH programs**, aimed at purchasing, stockpiling, and distributing food to citizens in need
    - While acknowledging this as a sovereign right, **WTO rules impose constraints, particularly regarding trade-distorting domestic subsidies.**
    - The outdated assessment criteria, based on the average price of the base years 1986-88, pose **challenges for countries like India, making it difficult to sustain PSH programs.**
    - Despite the peace clause established in 2013, **providing temporary legal immunity to India's MSP policy, efforts for a permanent solution were blocked** at the recent meeting, largely due to opposition from agricultural exporting nations such as the US
  - **Subsidies for Industrial Shipping Fleets**
    - Another critical issue left unresolved at the **ministerial meeting pertains to regulating subsidies provided by industrialised nations** to their shipping fleets, contributing to overcapacity and over-fishing (OCOF).
    - **This practice has led to the depletion of fishing stocks**, posing a severe threat to marine ecosystems.
    - Despite calls from countries like India for binding rules to curb these subsidies, **the meeting failed to adopt any substantive measures,** largely due to the influence of wealthier nations.
  - **Dysfunctionality of the DSM**
    - **The breakdown of the DSM**, a cornerstone of the WTO's regulatory framework, represents yet another setback highlighted at the ministerial meeting.
    - **Since 2019, the DSM has been paralysed by the US's obstructionism**, particularly in appointing members to the Appellate Body.
    - **Despite reaffirmations of commitment to restoring a functional DSM by 2024, the prospects remain bleak,** with the US showing no willingness to revive its previous form.
- **US Strategy and the De-Judicialization of Trade Multilateralism and Its Implications**
  - **Response to Geo-Economic Challenges**
    - The US's stance within the WTO can be **understood within the context of its response to emerging geo-economic challenges,** notably the rise of China.
    - As China asserts itself as a dominant economic player on the global stage, **the US perceives a need to recalibrate its approach to international trade governance.**
    - By de-emphasising the role of international courts, particularly the Appellate Body of the WTO's dispute settlement mechanism, the US aims to assert greater unilateral control over trade policy decisions
  - **Reassertion of National Sovereignty**
    - **Underlying the US strategy is a broader narrative of reasserting national sovereignty** in the realm of trade policy.
    - **The proliferation of international trade agreements and the expansion of supranational institutions have raised concerns** among certain segments of the US political establishment regarding the erosion of national autonomy.
    - By obstructing the functioning of the WTO's dispute settlement mechanism, **the US seeks to reclaim decision-making authority** and safeguard perceived national interests.
  - **Critique of Judicial Overreach**

- The US's stance on the WTO's dispute settlement mechanism **can also be interpreted as a critique of perceived judicial overreach.**
- Critics argue that international adjudicatory bodies, such as the Appellate Body, have exceeded their mandate and encroached upon the policy prerogatives of sovereign states.
- **By limiting the authority of these bodies, the US aims to rebalance the distribution of power within the WTO framework** and prevent what it perceives as judicial activism.

o **Unilateral Response to Trade Imbalances**

- In addition to geopolitical considerations, **the US's strategy within the WTO reflects a broader shift towards unilateralism** in addressing trade imbalances and economic grievances.
- The Trump administration, in particular, adopted a confrontational approach to trade relations, employing tariffs and other unilateral measures to assert US interests.
- **By undermining the effectiveness of multilateral dispute resolution mechanisms, the US retains greater flexibility** to pursue unilateral trade actions without international oversight.

o **Implications for Global Trade Governance**

- The US's strategy of de-judicialization carries significant implications for the future of global trade governance.
- By weakening the institutional mechanisms of multilateralism, the US risks exacerbating fragmentation and instability in the international trading system.
- Moreover, **the erosion of trust in the WTO's dispute settlement mechanism undermines the credibility of the institution, potentially leading to further challenges** in resolving trade disputes and negotiating new agreements.

- **Ways Ahead for India Amid Challenges Within the WTO Framework**

o **Diversification of Support Mechanisms**

- Rather than solely relying on PSH programs, **countries can diversify their support mechanisms for farmers.**
- This may involve **bolstering existing income support schemes, such as the Pradhan Mantri Kisan Samman Nidhi in the case of India.**
- By providing direct financial assistance to farmers, these schemes can help alleviate income volatility and mitigate the need for trade-distorting domestic subsidies.

o **Investment in Agricultural Infrastructure**

- Another alternative approach is to prioritise investment in agricultural infrastructure and technology.
- **By modernising farming practices, improving irrigation systems, and enhancing access to credit and markets, countries can increase agricultural productivity** and competitiveness.
- Moreover, investments in research and development can lead to the development of drought-resistant crops and sustainable farming techniques, reducing reliance on subsidies for income support.

o **Promotion of Sustainable Agriculture**

- Countries can also focus on promoting sustainable agricultural practices that prioritize environmental conservation and resource efficiency.
- **This may involve incentivizing farmers to adopt organic farming methods, agroforestry, and integrated pest management techniques**
- By aligning agricultural policies with sustainability objectives, countries can enhance their resilience to climate change while complying with WTO rules on environmental protection.

o **Market Diversification and Value-Added Products**

- To reduce dependency on government support and mitigate the impact of trade restrictions, countries can explore opportunities for market diversification and value addition in agricultural products.
- This may include the **promotion of niche crops with high export potential, the development of food processing industries, and the establishment of agricultural cooperatives** to enhance bargaining power in global markets.
- By focusing on value-added products, farmers can capture greater value from their produce and reduce vulnerability to price fluctuations.

o **Strengthening of Agricultural Extension Services**

- A critical component of alternative approaches is the **strengthening of agricultural extension services and farmer education programs.**
- By providing farmers with access to information, training, and technical assistance, countries can enhance their capacity to adopt innovative practices, improve productivity, and adapt to changing market dynamics.
- Additionally, **extension services can facilitate knowledge-sharing and peer-to-peer learning, fostering a culture of innovation and resilience** within the agricultural sector.

- **Conclusion**

- **The outcomes of the 13th WTO ministerial meeting** underscore the deepening **existential crisis facing trade multilateralism.**
- **The inability to address critical issues such as PSH programs, subsidies for industrial shipping fleets, and the dysfunctionality of the DSM reflects broader systemic challenges** within the WTO framework.
- As countries grapple with increasing uncertainty and volatility in the global trading system**, the imperative for meaningful reform and collective action becomes ever more pressing.**

2. Digital Markets Act (DMA)
GS 3 (Economy)

Apple, Google, Meta targeted in European Union's first Digital Markets Act probes

REUTERS
BENGALURU, MARCH 25

APPLE, ALPHABET'S Google and Meta Platforms will be investigated for potential breaches of the Digital Markets Act, European Union's (EU) antitrust regulators said on Monday, potentially leading to hefty fines for the companies.

The law, effective from March 7, requires six gatekeepers - which provide services like search engines, social networks and chat apps used by other businesses - to comply with guidance to ensure a level playing field for their rivals and to give users more choices.

Violations could result in fines of as much as 10 per cent of the companies' global annual turnover. The European Commission said it suspects that the measures put in place by these gatekeepers fall short of effective compliance under the act, confirming a Reuters story.

The EU competition enforcer will investigate Alphabet's rules on steering in Google Play and self-preferencing on Google Search, Apple's rules on steering in the App Store and the choice screen for Safari and Meta's 'pay or consent model'.

Asked if the Commission was rushing the process, EU industry chief Thierry Breton said the investigations should not be a surprise. "The law is the law. We can't just sit around and wait," he told a press conference.

He said Meta, which introduced a no-ads subscription service in Europe last November that has triggered criticism from rivals and users, should offer free alternative options. Google and Apple have similarly introduced new fees for some services.

A Meta spokesperson said the company was endeavoring to comply with the act's guidance.

"Subscriptions as an alternative to advertising are a well-established business model across many industries, and we designed Subscription for No Ads to address several overlapping regulatory obligations, including the DMA," a Meta spokesperson said. Google, which said it has made significant changes to its services, said it would defend its approach in the coming months. Apple said it was confident its plan complied with the DMA.

The Commission is also taking steps to investigate Apple's new fee structure for alternative app stores and Amazon's ranking practices on its marketplace.

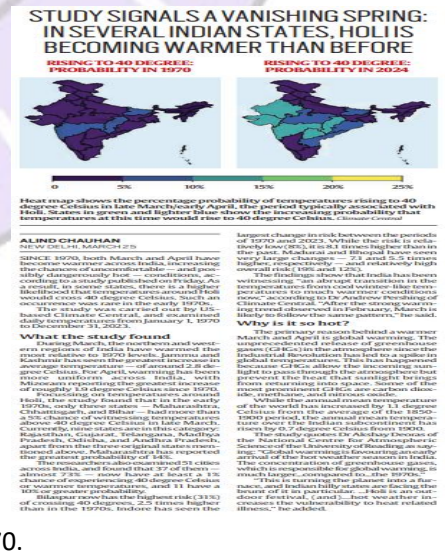
The EU executive, which aims to wrap up the investigations within a year, the timeframe set out under the DMA, said it has ordered the companies to retain certain documents, allowing them to access relevant information in its current and future probes.

The EU investigations came amid escalating criticism from apps developers and business users about shortcomings in the companies' compliance efforts.

EU antitrust chief Margrethe Vestager and European Commissioner for Internal Market Thierry Breton hold a press conference in Brussels, Belgium. Reuters

- **Why in News:** The European Union is investigating **Apple, Google, and Meta** for potential violations of the new **Digital Markets Act**, which aims to curb the power of big tech companies and create a more level playing field for smaller businesses.
- **About Digital Markets Act (DMA)**
  - The DMA is a groundbreaking **European law** aiming to prevent large online platforms that connect consumers with **content, goods, and services** from abusing their market power.
  - The DMA aims to ensure contestable and fair markets in the digital sector.
  - It regulates gatekeepers, which are large digital platforms that provide an important gateway between business users and consumers, whose position can grant them the power to create a bottleneck in the digital economy.
  - The European Commission believes that keeping the big internet companies in check can lead to **more competition and choice, greater innovation, better quality, and lower prices.**

3. Climate Change Increasing Chances Of Temperatures Reaching 40 Degrees Celsius around Holi
GS 3 (Environment)


STUDY SIGNALS A VANISHING SPRING: IN SEVERAL INDIAN STATES, HOLI IS BECOMING WARMER THAN BEFORE

RISING TO 40 DEGREE: PROBABILITY IN 1970

RISING TO 40 DEGREE: PROBABILITY IN 2024

0 5% 10% 15% 20% 25%

Heat map shows the percentage probability of temperatures rising to 40 degree Celsius in late March/early April, the period typically associated with Holi. States in green and lighter blue show the increasing probability that temperatures at this time would rise to 40 degree Celsius. / Climate Central

ALIND CHAUHAN
NEW DELHI, MARCH 25

SINCE 1970, both March and April have become warmer across India, increasing the chances of uncomfortable — and possibly dangerously hot — conditions, according to a study published on Friday. As a result, in some states, there is a higher likelihood of temperatures around Holi would cross 40 degree Celsius. Such an occurrence was rare in the early 1970s.

The study was carried out by US-based Climate Central, and examined daily temperatures from January 1, 1970 to December 31, 2023.

What the study found

During March, the northern and western regions of India have warmed the most, relative to 1970 levels. Jammu and Kashmir has seen the greatest increase in average temperature — of around 2.8 degrees Celsius. For April, warming has been more uniform across India, with Mizoram reporting the greatest increase of roughly 1.9 degree Celsius since 1970.

Focussing on temperatures around Holi, the study found that in the early 1970s, only three states — Maharashtra, Chhattisgarh, and Bihar — had more than a 5% chance of witnessing temperatures above 40 degree Celsius in late March. Currently, nine states are in this category: Rajasthan, Gujarat, Telangana, Madhya Pradesh, Odisha, and Andhra Pradesh, apart from the three original states mentioned above. Maharashtra has reported the greatest probability of 14%.

The researchers also examined 51 cities across India, and found that 37 of them — almost 73% — now have at least a 1% chance of witnessing 40 degrees Celsius or warmer temperatures, and 11 have a 10% or greater probability.

Bilaspur now has the highest risk (31%) of crossing 40 degrees, 2.5 times higher than in the 1970s. Indore has seen the largest change in risk between the periods of 1970 and 2023. While the risk is relatively low (2%), it is 8.1 times higher than in the past. Madurai and Bhopal have seen higher increases — and now face a 7% and high overall risk (16% and 12%).

The findings "...suggest that India has been witnessing "an abrupt transition in the temperatures in cold winter-like temperatures to extreme heat in March now," according to Dr Andrew Pershing of Climate Central. "After the strong warming trend observed in February, March is likely to follow the same pattern," he said.

Why is it so hot?

The primary reason behind a warmer March and April is global warming. The unprecedented release of greenhouse gases (GHGs) in the atmosphere since the 1970s has led to a significant increase in global temperatures. This has happened because GHGs allow the incoming sunlight to pass through but simultaneously prevent the heat that sunlight brings from escaping back into space. Some of the most prominent GHGs are carbon dioxide, methane, and nitrous oxide.

While the annual mean temperature of the world has increased by 1.1 degree Celsius in the 2011-2020 period, relative to 1850-1900 period, the annual mean temperature over the Indian subcontinent has risen by 0.7 degree Celsius from 1900.

The study quotes Dr Akshay Deoras of the National Centre for Atmospheric Science of the University of Reading as saying that "...the early onset and intensity of arrival of the hot weather season in India. The concentration of greenhouse gases, which is responsible for global warming, is much larger, compared to...the 1970s. As a result, the heat waves in March are further, and Indian hilly states are facing the brunt of it in particular. ...Holi is an outdoor festival, [and]...hot weather increases the vulnerability to heat related illness," he added.

- **Why in News:**
  - According to a study published recently, since 1970, both March and April have become warmer across India. As a result, in some states, there is a higher likelihood of temperatures around Holi to cross 40 degree Celsius.
  - The study was carried out by Climate Central, a US-based independent group of scientists and communicators. Researchers examined daily temperatures from January 1, 1970, to December 31, 2023, for the study.
- **Key findings of the study**
  - **The northern and western regions of India have warmed up the most**
    - The study found that during March, the northern and western regions of India have warmed up the most, relative to 1970 levels.
    - Jammu and Kashmir showed the greatest increase in average temperature of around 2.8 degree Celsius.
  - **Warming for the month of April**
    - For the month of April, warming has been more uniform across India, with Mizoram reporting the greatest increase of roughly 1.9 degree Celsius since 1970.
  - **Temperatures around Holi**
    - The study observed that in the early 1970s, only three states — Maharashtra, Chhattisgarh, and Bihar — had more than a 5% chance of witnessing temperatures above 40 degree Celsius in late March.
    - Currently, this number has shot up to include nine states with Maharashtra reporting a whopping 14% probability.
      - These nine states are - Maharashtra, Chhattisgarh, Bihar, Rajasthan, Gujarat, Telangana, Madhya Pradesh, Odisha, and Andhra Pradesh.
  - **India has been witnessing an abrupt transition in the temperatures**

- The findings show that India has been witnessing an abrupt transition in the temperatures from cool winter-like temperatures to much warmer conditions now.

- **What are the factors behind warmer temperatures?**
  - **Global warming**
    - The primary reason behind a warmer March and April is global warming.
    - The unprecedented release of heat-trapping greenhouse gases in the atmosphere has led to a spike in global temperatures.
    - The annual mean temperature of the world has increased by 1.1 degree Celsius from the average of the 1850-1900 period.
      - The annual mean temperature over the Indian subcontinent has risen by 0.7 degree Celsius from 1900.
  - **Early arrival of the hot weather season in India**
    - Global warming is favouring an early arrival of the hot weather season in India.
    - The concentration of greenhouse gases is turning the planet into a furnace, and Indian hilly states are facing the brunt of it in particular.
    - Given that Holi is an outdoor festival, the early onset of hot weather increases the vulnerability to heat related illness.

4. Falling Fertility Rate and Impact on India
GS 2 (Social Issues)

1.29 by 2050: impact of India's falling fertility rate

ANURADHA MASCARENHAS
PUNE, MARCH 25

INDIA'S TOTAL fertility rate (TFR), or the average number of children born per woman, will fall to 1.29 by 2050, a new study published in *The Lancet* has found. This is far lower than the replacement rate – the level of fertility at which a population exactly replaces itself from one generation to the next – of 2.1, meaning India will see a rapidly depleting working age population, with one in five Indians a senior citizen by 2050. India's TFR has steadily declined since Independence. It was 6.18 in 1950, 4.60 in 1980, and 1.91 in 2021.

Behind falling fertility rate

Prof Anjali Radkar, head of the Centre for the Study of Social Exclusion and Inclusive Policy at Pune's Gokhale Institute of Politics and Economics, said this scenario was expected given India's post-Independence population-control push.

Another reason has been the rise of female literacy and women's workforce participation. This has led to women having fewer children, at a later age. In urban areas, many have chosen not to have children at all.

There is also an economic dimension. "Parents now do not receive much benefit from their children the way they used to. This has influenced their decision to not have an additional child, which would involve a substantial cost of bringing them up," Prof Radkar said.

Long-term consequences

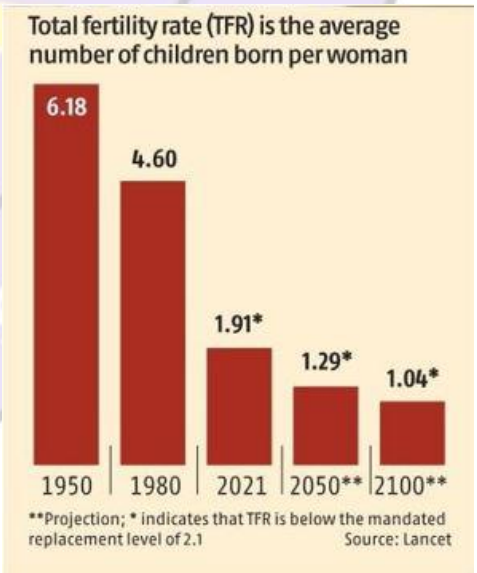
The consequences of fertility decline will be that the share of the elderly in the population will increase sharply.

Poonam Muttreja, Executive Director of Population Foundation of India, foresees challenges like labour force shortages and potential social imbalances due to gender preferences. Pointing to the way Scandinavian countries such as Sweden and Denmark have dealt with these challenges, she added: "They are providing affordable childcare, investing in healthcare, and taking on large-scale male-engagement initiatives to build gender equity... Economic policies that stimulate growth and job creation, alongside social security and pension reforms, will also be essential in mitigating the impacts of declining fertility rates."

A worldwide decline

Researchers estimate that by 2050, 155 of 204 countries (76% of the world) will be below the replacement level of fertility. This number is predicted to rise to 198 (97%) by 2100. "This means that populations will shrink unless low fertility can be offset by ethical and effective immigration," Prof Stein Emil Vollset from the Institute For Health Metrics and Evaluation (IHME), US, said.

- **Why in News:** India's **total fertility rate (TFR)** is projected to decline to 1.29 children per woman by 2050 and slip further to 1.04 by 2100, according to a recent study by Lancet on **global fertility rates.**
- **Key-findings of the Lancet Study**
  - The study suggests that India's TFR, or the average number of children born to a woman, has been seeing a decline over the last century, with the fertility rate falling from 6.18 children per woman in 1950 to a projected 1.29 children per woman by 2050.
  - The study stated that India has already fallen below the replacement level of fertility, required for a population to exactly replace one generation with another.
  - In 2021, India's TFR was at 1.91 children per woman, below the necessary replacement fertility level of 2.1.
  - The decline in TFR is in line with global trends, stating that its estimates forecast a decline in fertility rates all around the globe, over the coming century.



- **Reasons behind the fall in the fertility rate**
  - **Delayed marriages:** With the delay in the age of marriage, the average age of first pregnancy has dropped from the mid-20's to mid to late 30's.
  - **Women's workforce participation:** An increase in female literacy and women's workforce participation leads to busy lifestyles in urban areas and high stress jobs. It leads people to not consider having children at all.
  - **Other factors**: The decline in fertility rates is also influenced by factors such as **extreme shifts in the global distribution** of live births due to:
    - **improved female education**
    - increasing usage of **modern contraception methods**
- **Implications for the Economy**

- **Imbalance:** Such a trend will pose challenges such as an **ageing population, labour force shortages, and potential social imbalances** due to gender preferences in the country.
- **Burdened economy**: The plummeting fertility rate in developed or high-income countries may result in an **ageing population, burdening national health insurance, social security programmes, and healthcare infrastructure.**
- **Political instability and security difficulties**: While the declining fertility rates might appear as a green signal for the environment, the uneven concentration of live births can lead to **tense situations** across the globe.

- **Required Measures**
  - **Economic policies** that stimulate growth and job creation, alongside social security and pension reforms are essential in adapting to and mitigating the impacts of declining fertility rates.
  - **Higher male engagement in household activities**: For women to be able to manage careers with motherhood, it would be crucial for men to take greater responsibility for household and care work.
- **Replacement Level**
  - For a population to remain stable, a TFR of 2.1 children per woman is required, known as the replacement level.
  - When the fertility rate falls below the replacement level, populations begin to shrink. In India, the replacement level is 2.1.

5. China unveils Z-20 Helicopter

GS 2 (International events of importance)

- **Why in News:** China has introduced a new heavyweight in its aerial arsenal, the **Z-20 attack helicopter**, surpassing the capabilities of its predecessors, the **Z-10 and Z-19,** with a robust 10-tonne capacity.
- **More on News:**
  - The strategic addition of the Z-20, which is now being referred to as the **Z-21** for its attack configuration, is viewed by military analysts as a crucial element in potential conflicts involving Taiwan or India.
  - **Objective:** to conduct close air support and **airborne anti-armor missions.**
  - **Z-20 attack helicopter** shares the characteristics of three aircraft: **the American AH-64, the Russian Mi-28 attack helicopters, and the Z-20 medium utility helicopter.**
  - **Need of Z-20:** The PLA currently employs both the **Z-19 light attack/reconnaissance and the Z-10 medium attack helicopters** in the attack helicopter role, but both lack the necessary firepower for them to fulfill the role.
  - The Z-19 and Z-10 are comparable to the OH-58 Kiowa and the AH-1Z helicopters, which are considered reconnaissance and light attack helicopters, respectively.

6. India deploys 11 submarines

GS 2 (Security)

- **Why in News:** Marking a significant milestone for the Navy in three decades, India simultaneously deployed **11 conventional submarines** for operations.
- **Conventional Submarines in India**
  - Currently, India operates 16 conventional submarines, including five **Kalvari-class (French Scorpene),** four **HDWs Shishumar-class (German Type-209)** and seven **Sindhugosh-class (Russian Kilo) submarines.** An additional **Scorpene class (Kalvari-class submarine)** is still to be commissioned.
  - **Operational Availability:**
    - **Scorpene class:** The Scorpene submarines are brand new, hence, their availability ratio is much higher.

- **HDWs (German):** The German HDWs are the most reliable and high on performance. These submarines will last another 10-15 years.
- **Kilo-class (Russian):** The Kilos are very good but their availability ratio is down. Also, they have undergone upgrades. Most of them were commissioned in the 1980s and one of them has already been decommissioned.

NEELOFER CIVIL SERVICE CLASSES *UPSC AND KPSC WITH KPSC* JAMMU AND KASHMIR DO NOT COPY

27th March, 2024

1. Kaveri River

Recent events of importance

Cauvery is not just about water: former Madras HC judge

The Hindu Bureau
CHENNAI

For the people of Tamil Nadu and Karnataka, river Cauvery is not just about water. "She is the giver of food, literature, music. Everything that makes our life Cauvery is connected," said Prabha Sridevan, former Madras High Court judge.

She launched the book, *Cauvery - A Long-winded Dispute*, published by *The Hindu* here on Tuesday authored by its senior associate editor T. Ramakrishnan.

Ms. Sridevan said her great grandfather had been one of the signatories of the agreement on water sharing. Later her grandfather was an assistant engineer when the Mettur dam on the river was constructed. Her husband, as a special government pleader, made several trips to New Delhi to appear at hearings of the Cauvery dispute cases in the Supreme Court.

'Managed to be fair'

"It is difficult to spell what Cauvery means to us. Therefore, it is perhaps very difficult to be objective. Mr. Ramakrishnan has managed to be very fair," she said, adding that being fair would enable a person to be truthful. "Cauvery is not just a matter of dispute between two States. The issue is much more complex involving many aspects, including demand side management, an area that has received little attention," she remarked.

"Language does not separate us. The boundary line does not separate us," she said, referring to an anecdote in the book where a woman from a remote village in Karnataka refers to the river waters as '*namma neeru*' (our water). She suggested that the book be translated into Kannada and Tamil as "it tells us how the pendulum swings and how at some point some extraneous factor that has nothing to do with it pushes it [what had been achieved] backward."

Prabha Sridevan, third from left, retired judge of the Madras High Court, with N. Ravi, Director, Kasturi and Sons Ltd; Nirmala Lakshman, Chairperson of The Hindu Group of Publishing Private Limited; T. Ramakrishnan, author of the book; and N. Ram, Director, THG Publishing Private Limited at the launch of the book, *Cauvery - A Long-winded Dispute*, in Chennai on Tuesday. M. VEDHAN

'Equally objective'

Kasturi and Sons' director N. Ravi, who has written the foreword for the book, said Cauvery is a unifying source as a cultural icon but as an economic resource, becomes contentious. "It is because of the asymmetry of power on the one side and the use on the other," he said.

"Actually, living in Tamil Nadu it is very difficult to be objective," Mr. Ravi said, recalling that S. Guhan, a former bureaucrat in Tamil Nadu, had objectively reviewed the issue in his book, *The Cauvery River Dispute: Towards Reconciliation* published by *The Hindu* in 1993. The current book is also "equally objective in treating the Cauvery without taking sides".

N. Ram, director, THG Publishing Private Limited, said Mr. Guhan had studied international agreements regarding rivers in other countries as well. He appreciated Mr. Ramakrishnan for meticulously digging out data and taking a firm stand on issues relating to the Cauvery.

Mr. Ramakrishnan said the idea was to make people of the entire Cauvery basin realise that "the river is a common precious resource to be used judiciously. There is enormous scope for the riparian States to work closer in the years to come as the river's environment is facing serious challenges."

The book is available for purchase at https://publications.thehindugroup.com/bookstore/

- **Why in News:** Activists from Kodagu have urged the state government to put an end to the large-scale commercialization of land in the **Cauvery River catchment area**, noting that the rampant land use change has affected the water inflow to the river.
- **About Kaveri River**
  - Kaveri River, sacred river of southern India.
  - It rises on **Brahmagiri Hill** of the **Western Ghats** in southwestern Karnataka state, flows in a southeasterly direction for 475 miles (765 km) through the states of Karnataka and Tamil Nadu, and descends the Eastern Ghats in a series of great falls.
  - Before emptying into the Bay of Bengal south of Cuddalore, Tamil Nadu, the river breaks into a large number of distributaries forming a wide delta called the **"garden of southern India."**
  - Known to devout Hindus as **Daksina Ganga** ("Ganges of the South"), the Kaveri River is celebrated for its scenery and sanctity in Tamil literature, and its entire course is considered holy ground.

2. A Cry for Students' Help, A Call for Reflection and Action

GS 2 (Education)

A cry for help, a call for reflection and action

The current socio-academic climate in India raises significant concerns in the context of the nurturing of students. The transformation of socio-economic dynamics is not only instilling a sense of despondency among youth but is also becoming a cause for stress in their academic endeavours. This often causes students to go into a spiral, manifesting itself tragically in a spate of suicides.

Take for example, reports of a note that a teenager from Bihar wrote before fading away in Kota, Rajasthan (the hub of tuition/coaching). The stress that the child was facing was evident in the reference to the 'Joint Entrance Examination' (JEE) that the child was preparing for. In 2023, there were reports of youngsters preparing for various competitive exams in Kota ending their lives. Based on police records, 15 students faded away in 2022; 18 in 2019 and 20 in 2018. There was negligible data during the COVID-19 pandemic years of 2020-21 when traditional coaching centres were either closed or operated virtually.

Coaching and student welfare in Kota

Every year, over 2,00,000 aspirants from every corner of India flock to Kota in pursuit of 'academic excellence', to prepare rigorously for 'coveted' entrance examinations such as the JEE and the National Eligibility-cum-Entrance Test (NEET), the gateways to engineering and medical education in India, respectively. Enrolling in its residential coaching institutes, they ensure that Kota's economy thrives – an impressive annual revenue of "approximately ₹10,000 crore" due to these educational pursuits.

While the children pursue their goals, the management of these institutes have taken several significant, yet sombre, measures. Hostels have now been equipped with 'anti-suicide features' that include devices fixed to ceiling fans to prevent children from harming themselves and iron grills across balconies and passage ways. However, it is difficult to maintain uniformity in the approximately 25,000 paying guest accommodations in Kota.

In another preventive measure, the local government has stopped all routine testing in coaching institutes for over two months as a temporary measure. Hostel staff are also being trained and prepared to deal with the welfare of their wards. In the push towards professional development there is specialised training in mess administration, psychological support, behavioural counselling and an emphasis on overall student welfare. The Kota police have pushed hostel wardens to become more proactive by endorsing campaigns such as "*darwaze pe dastak* (knock on door)," while kitchen workers and meal service providers have been encouraged to alert authorities immediately if they notice students missing their meals or leaving their food untouched.

Sumant Kumar is Assistant Professor in the Alliance School of Liberal Arts, Alliance University

The unyielding quest for scholastic distinction often causes many an Indian student to go into a spiral, with tragic outcomes

In 2022, according to data in the "Accidental Deaths and Suicides in India 2022" report by the National Crime Records Bureau (NCRB), over 13,044 Indian students ended their lives – 7.6% of the total suicide fatalities in that year. Another grim statistic was that the number of suicides (students) rose from 10,335 in 2019, to 12,526 in 2020, to 13,089 in 2021. As in NCRB data (2018), nearly 95,000 students faded away between 2007-18.

There is also another grim fact. Over half of India's populace, specifically 53.7%, is made up of individuals under the age of 25. However, a significant barrier to their entry into the labour force is widespread deficiency in essential skills. The last decade has seen a distressing rise in student suicides, which is also connected to a lack of viable job opportunities.

The education system

In contemporary India, the lack of (suitable) job opportunities, a limited number of seats in government institutions and the high fees charged in private institutions have all created a climate where there is intense competition. This is deeply troubling and an issue that requires urgent attention. The relentless strain of competition plays on the young student, which is made worse by the pressures imposed on the child by parents without understanding their child's wishes. While some are coerced, often relentlessly, into achieving the 'pinnacle' of academic excellence, others are urged to aspire for admission in a 'desired institution'. Many others face harsh criticism for failing to 'meet expectations'. When the weight of these demands proves unbearable, or their aspirations seem impossible to satisfy, some choose to escape all of this in a tragic way.

An All India Survey on Higher Education (AISHE) report (2019-20), showed that only 21.4% of colleges are under governmental administration, with 78.6% under private entities (as reported by the Union Education Ministry). A study in 2008 in *The Lancet* revealed that nearly 61% of global suicide fatalities were concentrated in Asia. Numerous families in India (especially in the middle and lower-income brackets), face financial constraints that prevent them from providing their children with supplementary educational resources such as coaching and tuition. This lack of support in turn places immense and intense pressure on students to succeed in examinations of various kinds. A lack of success then leads to tragedy. Additionally, there are numerous instances of faculty members in institutions often chastising students for their subpar academic performance, when they should be offering encouragement and assistance instead.

Society and family expectations

In contemporary Indian society, there is a noticeable shift in family structures with a weakening of crucial connections between children and their families. This in turn impacts a child's ability to engage with their relatives. Various factors influence a child's development within the Indian context, in turn affecting social relationships. The lack of establishing strong bonds between parents and children becomes clear when parents impose their academic preferences on their child. Parental control, emotional detachment, and societal expectations contribute to the sidelining of a student's individual interests. As a result, students grapple with the hurdle of meeting parental standards, especially when they have no innate interest in the subject or course forced upon them. A feature in Indian society is the emphasis on expectations, performance, and personal interests in family interactions. These dynamics can either propel students forward through positive reinforcement or negatively affect them due to socio-economic circumstances.

The inability to satisfy parental expectations can leave young individuals feeling humiliated, dejected, desperate, and harassed. It is crucial to create an atmosphere of empathy and acceptance to cancel out any potential negative consequences for our younger generation.

The unyielding quest for scholastic distinction often overshadows the social facets of a student's existence, driving them to sacrifice interpersonal bonds and pursuits that are essential for a well-rounded persona. It is disconcerting to find young students voicing their inner turmoil on social media, signalling distress. Educational purveyors themselves fail to provide the requisite emotional scaffolding that these young minds require. Moreover, pupils from socioeconomically underserved communities are confronted with the stark actualities of endemic discrimination, thereby intensifying their hardships.

So, it becomes clear that there is an urgent need for our social infrastructure to grow more supportive and accommodative and support these young lives.

Those in distress are encouraged to seek professional help, visit counsellors or call helplines

- **Why in News:**
  - **The current socio-academic landscape** in India is facing challenges, **particularly concerning the well-being of its students.**
  - The amalgamation of socio-economic shifts and academic pressures has led to a distressing trend of student suicides, **notably highlighted in instances such as the tragic fate of a teenager in Kota, Rajasthan.**
  - As a result, **the multifaceted issues plaguing India's education system, factors contributing to student stress, institutional responses, societal expectations, and the urgent need for reform** need to be explored and implemented.
- **Factors Contributing to Pressure in Academic Pursuit and Students Suicide in Kota**
  - **High-Stakes Examinations**
    - Entrance examinations like the JEE and NEET are pivotal events in a student's academic journey, **with success or failure carrying significant consequences.**
    - The intense competition and pressure to perform well in these exams often result in heightened levels of stress and anxiety among students.
    - **The fear of not meeting societal expectations or failing to secure admission** to prestigious institutions **can drive students to extreme measures, including suicide.**
  - **Parental and Societal Expectations**
    - **India's education system is characterised by a culture of academic achievement**, where success is often equated with social status and financial stability.
    - **Parents, influenced by societal norms**, **place immense pressure on their children** to excel academically, sometimes at the expense of their mental health and well-being.
    - **The relentless pursuit of academic excellence**, coupled with the fear of disappointing parents or society, **can weigh heavily on students, exacerbating feelings of inadequacy** and hopelessness.
  - **Limited Opportunities and High Competition**
    - **The scarcity of seats in top-tier educational institutions** and the highly competitive nature of the job market further **compound the challenges faced by students**.

- With a vast pool of aspirants vying for a limited number of opportunities, the fear of failure looms large, intensifying the pressure to succeed.
- **Students from marginalised backgrounds, lacking access to resources and support systems, are particularly vulnerable** to the adverse effects of this competitive environment.

- **Cultural Stigma Surrounding Failure**
  - In Indian society, **there exists a pervasive stigma associated with failure**, particularly in academic endeavours.
  - Students who struggle academically or fail to meet parental expectations may face ridicule, shame, or ostracization from their families and communities.
  - **This fear of judgment and social exclusion can deter students from seeking help** or expressing their struggles, leading to feelings of isolation and despair
- **Lack of Emotional Support and Mental Health Resources**
  - Despite the growing awareness of mental health issues, **there remains a significant gap in access to emotional support and mental health resources** for students in India.
  - **Many educational institutions lack adequate counselling services** or trained professionals to address the psychological needs of students.
  - **The stigma surrounding mental health further complicates matters**, as students may hesitate to seek help for fear of being labelled as weak or unstable.
- **Inequities in Access to Education**
  - **Socio-economic disparities exacerbate the challenges faced by students**, with marginalised communities disproportionately affected by the lack of access to quality education and resources.
  - **Students from lower-income backgrounds may face additional stressors**, such as financial insecurity, inadequate infrastructure, and limited educational opportunities, further increasing their vulnerability to mental health issues and suicide.

- **Response Measures Undertaken by Institutions in Kota**
  - **Anti-Suicide Features in Hostels**
    - Coaching institutes and hostels in Kota have installed "**anti-suicide features" to prevent self-harm incidents among students.**
    - These features may include devices attached to ceiling fans to prevent hanging attempts, as well as iron grills across balconies and passageways to restrict access to potentially dangerous areas.
    - **These physical interventions aim to provide a safer living environment** for students and minimise the risk of suicide attempts
  - **Training Programs for Hostel Staff**
    - Recognising the crucial role of hostel staff in supporting student welfare, **institutions in Kota have initiated training programs to equip staff members with the necessary skills** and resources to address the mental health needs of students.
    - Training may include workshops on identifying signs of distress, providing psychological support, and intervening in crisis situations effectively.
  - **Temporary Suspension of Routine Testing**
    - In a proactive measure to alleviate academic stress, **the local government in Kota has temporarily suspended routine testing in coaching institutes** for over two months.
    - This temporary pause allows students to focus on their well-being without the added pressure of constant assessments and exams, providing a much-needed respite from academic demands.
  - **Specialised Training for Staff**
    - In addition to addressing immediate safety concerns, **institutions in Kota are prioritising the holistic well-being of students** through specialised training programs for staff members.
    - This training may encompass various aspects of student welfare, including mess administration, psychological support, behavioural counselling, and overall student supervision.
    - **By equipping staff with the necessary skills and knowledge, institutions aim to create a supportive and nurturing environment** conducive to academic success and personal growth.
  - **Community Engagement and Awareness Campaigns**
    - The Kota police have actively engaged with hostel wardens and kitchen staff to promote awareness of student welfare issues and encourage proactive intervention.
    - **Campaigns such as "darwazepe dastak (knock on the door)" emphasise the importance of vigilant monitoring** and timely intervention to prevent potential crises.

- By creating a sense of community responsibility, **these initiatives aim to create a culture of support and collaboration** in safeguarding student well-being.

- **Ways Ahead to Ease Pressure and Safeguard the Future of Younger Generation**
  - **Comprehensive Reform**
    - Addressing the systemic issues within the education system **requires comprehensive reform efforts that encompass academic, social, and institutional dimensions.**
    - Policies and initiatives should prioritize mental health support, promote holistic learning experiences, and mitigate the pressures associated with high-stakes examinations
  - **Community Engagement**
    - **Collaboration between educational institutions, government agencies, community organisations, and families is essential** in creating a supportive ecosystem that nurtures the well-being of students.
    - Community engagement initiatives, awareness campaigns, and advocacy efforts can help destigmatize mental health issues and foster a culture of support and empathy.
  - **Emphasis on Student Welfare**
    - **Institutions must prioritise student welfare** and implement proactive measures to address mental health challenges effectively.
    - **This includes investing in specialised training for staff, implementing safety protocols, providing access to counselling services**, and fostering a supportive peer network within educational settings.
  - **Promotion of Holistic Development**
    - Beyond academic achievement, **the education system should prioritise the holistic development of students**, including their social, emotional, and physical well-being.
    - Encouraging participation in extracurricular activities, **promoting work-life balance, and fostering a culture of creativity and self-expression are integral** to nurturing well-rounded individuals.
  - **Empowerment and Inclusivity**
    - **Efforts to reform the education system must prioritise the empowerment and inclusion of marginalised communities**, ensuring equitable access to educational resources and opportunities.
    - **Addressing socio-economic disparities, promoting diversity, and fostering a culture of inclusivity are essential** for creating a more equitable and just society.
- **Conclusion**
  - **The prevailing challenges in India's education system necessitate urgent reform** to address the mental health and well-being of its students.
  - **Efforts must be directed towards creating a supportive and inclusive academic environment** that prioritises holistic development over narrow academic pursuits.
  - **Only through concerted efforts at both institutional and societal levels** can India ensure the nurturing of its students and safeguard their future.

3. India's Climate Goals: Net-Zero and Black Carbon Reduction

GS 3 (Environment)

- **Why in News:** India's commitment to achieve net-zero emissions by 2070, announced at the COP26 climate talks, highlights its ambitious targets for carbon neutrality and renewable energy adoption. India's emphasis on **black carbon reduction,** particularly through initiatives like the **PMUY scheme**, underscores its commitment to addressing regional health issues and achieving sustainable development goals while contributing to global climate mitigation efforts.

The need to curb black carbon emissions

What is black carbon and why is it harmful for the environment? Which sector in India is the biggest contributor of black carbon? How has the Pradhan Mantri Ujjwala Yojana helped in reducing the use of traditional cooking fuels?

EXPLAINER

Chandrakiran Lakshmisha Kaushik Reddy

The story so far:

At the COP26 climate talks in Glasgow in November 2021, India pledged to achieve net-zero emissions by 2070, positioning itself as a frontrunner in the race to carbon neutrality. According to the Ministry of New and Renewable Energy, India had installed a renewable energy capacity of over 180 GW by 2022 and is expected to meet its target of 500 GW by 2030. While carbon dioxide mitigation strategies will yield benefits in the long term, they need to go hand-in-hand with efforts that provide short-term relief.

Why is black carbon relevant?

Black carbon is the dark, sooty material emitted alongside other pollutants when biomass and fossil fuels are not fully combusted. It contributes to global warming and poses severe risks. Studies have found a direct link between exposure to black carbon and a higher risk of heart disease, birth complications, and premature death. Most black carbon emissions in India arise from burning biomass, such as cow dung or straw, in traditional cookstoves.

According to a 2016 study, the residential sector contributes 47% of India's total black carbon emissions. Industries contribute a further 22%, diesel vehicles 17%, open burning 12%, and other sources 2%. Decarbonisation efforts in the industry and transport sectors in the past decade have yielded reductions in black carbon emissions, but the residential sector remains a challenge.

Has PMUY helped?

In May 2016, the Government of India said the Pradhan Mantri Ujjwala Yojana (PMUY) would provide free-liquefied petroleum gas (LPG) connections to households below the poverty line. The primary objective was to make clean cooking fuel available to rural and poor households and reduce their dependence on traditional cooking fuels. The PMUY has established infrastructure to go with LPG connections, including free gas stoves, deposits for LPG cylinders, and a distribution network. The programme has thus, been able to play a vital role in reducing black carbon emissions, as it offers a cleaner alternative to traditional fuel consumption. The programme has provided connections to over 10 crore households as of January 2024.

However, in 2022-2023, 25% of all PMUY beneficiaries – 2.69 crore people – availed either zero LPG refill or only one LPG refill, according to RTI data, meaning they still relied entirely on traditional biomass for cooking. *The Hindu* found in August 2021 that the average PMUY beneficiary household consumes only 3.5-4 LPG cylinders per year instead of the six or seven a regular non-PMUY household uses. This means up to half of all the energy needs of a PMUY beneficiary household are still met by traditional fuels, which have high black carbon emissions. A shortage of LPG and higher usage of traditional fuels also affect women and children disproportionately. They are more prone to higher levels of indoor air pollution, causing many health issues and leading to premature deaths.

What is the government's role?

The key to enhancing the quality of life in these areas lies primarily in securing access to clean cooking fuels. While the future holds the promise of meeting energy needs in rural areas through renewable sources, the immediate benefits for rural communities are poised to come from using LPG.

In October 2022, the government increased the LPG subsidy to ₹300 from ₹200. But with rapid increase in LPG prices over the last few years, the cost of a 14.2 kg LPG cylinder, even with an additional subsidy, is still about ₹600 per cylinder. Most PMUY beneficiaries find the price too high, more so since cow dung, firewood, etc. are 'free' alternatives. Prime Minister Narendra Modi announced a further price reduction of ₹300 in March 2024, but this subsidy is expected to be temporary. The government has estimated that about ₹12,000 crore will be spent on PMUY subsidies in 2024-2025, a figure that has continuously increased each year since the scheme's inception. While it is the rightful duty of the government to make clean fuel affordable through subsidies, the problem of low refill rates will persist if availability issues are not addressed.

Another big hurdle to the PMUY's success is the lack of last-mile connectivity in the LPG distribution network, resulting in remote rural areas depending mostly on biomass. One potential solution to this issue is the local production of coal-bed methane (CBM) gas by composting biomass. CBM is a much cleaner fuel with lower black carbon emissions and investment. Panchayats can take the initiative to produce CBM gas locally at the village level, ensuring every rural household can access clean cooking fuel.

What about the global stage?

As India navigates its responsibilities on the global stage towards long-term decarbonisation, there is an urgent need to act. Prioritising black carbon reduction through initiatives such as the PMUY scheme can help India become a global leader in addressing regional health concerns and help meet its Sustainability Development Goal of providing affordable clean energy to everyone and contributing to global climate mitigation.

Recent estimates have indicated that mitigating residential emissions will yield more than 6.1 lakh deaths per year from indoor exposure to air pollution.

The authors work at the Center for Study of Science, Technology and Policy (CSTEP).

Clean cooking: Women make tea on an earthen stove in Hisar District, Haryana. FILE PHOTO

THE GIST

Black carbon is the dark, sooty material emitted alongside other pollutants when biomass and fossil fuels are not fully combusted. It contributes to global warming and poses severe risks.

Most black carbon emissions in India arise from burning biomass, such as cow dung or straw, in traditional cookstoves. According to a 2016 study, the residential sector contributes 47% of India's total black carbon emissions.

The key to enhancing the quality of life in these areas lies primarily in securing access to clean cooking fuels.

- **India's Climate Commitments and Renewable Energy Targets**
  - At the **COP26 climate talks in Glasgow** in November 2021, India pledged to achieve **net-zero emissions by 2070,** positioning itself as a frontrunner in the race to carbon neutrality.

- According to the **Ministry of New and Renewable Energy,** India has installed a renewable energy capacity of over **180 GW by 2023** and is expected to meet its target of **500 GW by 2030.**

- **Risks of Black Carbon**
  - **Global warming:** Black carbon is the dark, sooty material emitted alongside other pollutants when biomass and fossil fuels are not fully combusted.
  - **Severe health risks:** There is a direct link between exposure to black carbon and a higher risk of heart disease, birth complications, and premature death.
  - **Source:** Most black carbon emissions in India arise from burning biomass, such as cow dung or straw, in traditional cookstoves.
    - **Residential sector** contributes 47% of India's total black carbon emissions.
    - **Industries** contribute a further 22%, diesel vehicles 17%, open burning 12%, and other sources 2%.
  - Decarbonisation efforts in the industry and transport sectors in the past decade have yielded reductions in black carbon emissions, but the residential sector remains a challenge.
- **Impact of Pradhan Mantri Ujjwala Yojana (PMUY)**
  - The programme has been able to play a vital role in reducing black carbon emissions, as it offers a **cleaner alternative to traditional fuel consumption.** The programme has provided connections to over 10 crore households as of January 2024.
  - However, in 2022-2023, 25% of all PMUY beneficiaries — 2.69 crore people — availed either zero LPG refill or only one LPG refill, according to RTI data, meaning they still relied entirely on traditional biomass for cooking.
  - The average PMUY beneficiary household consumes only 3.5-4 LPG cylinders per year instead of the six or seven a regular non-PMUY household uses. This means up to half of all the energy needs of a PMUY beneficiary household are still met by traditional fuels.
  - A shortage of LPG and higher usage of traditional fuels also affect women and children disproportionately. They are more prone to higher levels of indoor air pollution, causing many health issues and leading to premature deaths.
- **Challenges in Implementation**
  - **Rapid increase in LPG prices:** In October 2023, the government increased the LPG subsidy to Rs 300 from Rs 200. Most PMUY beneficiaries find the price too high, more so since cow dung, firewood, etc. are 'free' alternatives.
  - **Low refill rate:** While it is the rightful duty of the government to make clean fuel affordable through subsidies, the problem of low refill rates persists.
  - **Connectivity issue:** Another big hurdle to the PMUY's success is the lack of last-mile connectivity in the LPG distribution network, resulting in remote rural areas depending mostly on biomass.
- **Pradhan Mantri Ujjwala Yojana (PMUY)**
  - **Launched in:** 2016.
  - The scheme was launched to provide **free liquefied petroleum gas (LPG)** connections to households **below the poverty line.**
  - The primary objective was to **make clean cooking fuel available to rural and poor households** and reduce their dependence on traditional cooking fuels.
  - The PMUY has established infrastructure to go with LPG connections, including free gas stoves, deposits for LPG cylinders, and a distribution network.

4. India backs Philippines' national sovereignty
GS 2 (International Relations)

India supports Philippines' sovereignty, says Jaishankar; sparks Beijing response

External Affairs Minister's Manila visit comes as tensions between the Philippines and Chinese navies rose to new levels. China's Ministry of Foreign Affairs says maritime disputes are matters between countries concerned and third parties have no right to interfere in the South China Sea issue

Suhasini Haidar
NEW DELHI

India supports the Philippines's sovereignty, External Affairs Minister S. Jaishankar said in Manila, in comments that sparked a response from the Chinese Ministry of Foreign Affairs, which called on "third countries" not to "interfere".

Mr. Jaishankar's visit to Manila on Tuesday, where he met Philippines President Bongbong Marcos and Foreign Minister Enrique Manalo, is part of a three-nation five-day tour to Singapore, the Philippines, and Malaysia.

"I take this opportunity to firmly reiterate India's support to the Philippines for upholding its national sovereignty," said Mr. Jaishankar, reading his opening statement to the media during a joint press conference after talks with Mr. Manalo. He said that the 1982 UN Convention on the Law of the Seas (UNCLOS) was the "the constitution of the seas" and all parties "must adhere to it in its entirety, both in letter and in spirit", in comments seen as aimed at China, whose Navy and Coast Guard have been frequently accused of violating sovereign waters of other countries and claiming islands. China's actions have drawn protest from many Asian neighbours, including the Philippines, Vietnam, and Indonesia in the South China Sea (SCS) region.

Visit to ship

The External Affairs Minister also visited the Indian Coast Guard pollution control ship *ICGS Samudra Paheredar* on Tuesday, which is on a port call in Manila until Thursday, and hailed maritime cooperation between the two countries. In a speech he gave on board the Indian ship docked at Manila's South Harbour, Mr. Jaishankar said that the ship's visit was "significant" because it highlighted "shared challenges" that India and Philippines face on oceanic pollution, illegal fishing, and protecting the environment in the region. He also underlined the need for "like-minded countries" in the Indo-Pacific region to enhance cooperation.

Naval relations: External Affairs Minister S. Jaishankar with Philippine President Bongbong Marcos. AFP

Mr. Jaishankar's Manila visit came as tensions between the Philippines and Chinese navies rose to new levels over aggressive maritime moves by the Chinese Coast Guard against a Filipino ship meant to carry supplies to their troops aboard the *BRP Sierra Madre* ship in the Spratly Islands. On Monday, the Philippines Ministry of Foreign Affairs had summoned the Chinese envoy to protest the actions, including the Chinese Coast Guard ship's physical blocking of the Philippines ship, firing it with a water cannon that injured three of its soldiers. The Chinese Coast Guard, meanwhile claimed that it was legitimately guarding "Chinese waters" from the "foreign vessel".

Reacting sharply to Mr. Jaishankar's comments in Manila within hours, the Chinese Ministry of Foreign Affairs called on India and the Philippines to "respect China's territorial sovereignty".

"Maritime disputes are issues between countries concerned. Third parties have no right to interfere whatsoever," the Chinese Ministry of Foreign Affairs spokesperson Lin Jian said. "We urge relevant parties to squarely face the facts and truth on the South China Sea issue, and respect China's territorial sovereignty and maritime rights and interests and the efforts of regional countries to keep the South China Sea peaceful and stable," he added.

India's External Affairs Ministry did not respond to requests for a response to the Chinese MFA's remarks. Apart from the current controversy, Beijing is understood to be watching India's sale of Brahmos missiles to the Philippines very closely, deliveries for which are expected to be begin shortly.

Deepening ties

During talks with Mr. Manalo, Mr. Jaishankar said he discussed other areas of growing cooperation between the two countries, including trade and capacity-building in digital infrastructure. They also spoke on issues concerning the Indo-Pacific, Myanmar, the Ukraine war, and cooperation in common fora such as the UN and Non-Aligned Movement (NAM). He said he had briefed the Philippines Minister on Indian naval deployment in the Red Sea to counter threats from Houthi militia and piracy. He also highlighted rescue operations, including those where Indian naval personnel have helped Philippines nationals on board ships in distress, including the *MV True Confidence* and *MV Lila Norfolk*.

- **Why in News:** Amid a flaring up of tensions between Beijing and Manila over the **Spratly Islands** in the **South China Sea**, India has taken its side and backed the Philippines in upholding its national sovereignty and seeks "staunch adherence" to a rules-based order.
- **India-Philippines' growing relations**
  - **Strategic cooperation** between India and the Philippines, especially in defence and security, has grown significantly in recent years.
  - India's ties with the Philippines have grown in areas such as **trade, investment, health, food security, education, science and technology, defence and maritime cooperation.**
  - In 2022, Manila became the first foreign customer for the **BrahMos cruise missile** by inking a USD 375-million order for the weapon system developed by India and Russia.
  - India and the Philippines are also part of the **Indo-Pacific maritime domain awareness initiative.**
  - Both countries are "staunch advocates" of freedom of navigation and adherence to international law, including **UNCLOS** and the 2016 ruling of the **Permanent Court of Arbitration in The Hague.**
    - This ruling declared China's claims in South China as unlawful.
- **India's interests in the Region**
  - India is "deeply invested" in the region because of its **Act East policy** and **Indo-Pacific vision** and strongly supports Asean's centrality and unity.
  - **Strategic interests, freedom of navigation, and oil and gas resources** are the three factors determining India's expanded involvement in the **South China sea.**
  - Geographically, Southeast Asia serves as a backyard for India and a **gateway to the Indian Ocean.**
- **South China Sea**
  - The South China Sea, one of the world's busiest waterways, is subject to several overlapping territorial disputes involving **China, Vietnam, the Philippines, Taiwan, Malaysia and Brunei.**
  - All countries use differing versions of history to back their assertions of sovereignty.
  - **Who claims what?**
    - China claims more than 80 percent, while Vietnam claims sovereignty over the P**aracel Islands and the Spratly Islands.**
    - The Philippines asserts ownership of the Spratly archipelago and the Scarborough Shoal, while Brunei and Malaysia have claimed sovereignty over southern parts of the sea and some of Spratly Islands.
    - China claims by far the largest portion of territory - an area defined by the **"nine-dash line".**
    - China's "nine-dash line" is a geographical marker used to assert its claim. It stretches as far as 2,000km from the Chinese mainland, reaching waters close to Indonesia and Malaysia.
- **Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)**
  - The Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA), an initiative with regional partners and allies to promote a free and open Pacific.
  - It was introduced by the **Quad group.**

5. Baltimore's Francis Scott Key Bridge

Recent events of importance

Baltimore port bridge collapses after hit by cargo ship manned by Indians

Officials say at least 7 vehicles plunged into water; rescue ops to extend for days

REUTERS & PTI
BALTIMORE, MARCH 26

A MASSIVE freight ship stacked high with containers smashed into a bridge while sailing out of Baltimore early Tuesday, sending cars and people into the river below and closing one of the busiest ports on the US Eastern Seaboard. Rescuers pulled out two survivors, one of whom was hospitalized, and were searching for more in the Patapsco River after huge metal spans of the 2.57 km Francis Scott Key Bridge crumpled into the icy water at around 1:30 a.m.

The entire 22-member crew of the cargo ship are Indians, the company said. As per the information provided by Synergy Marine Group, the crew was "All Indian, 22 in total". Grace Ocean Private Ltd owns the vessel and the ship was outbound to Colombo.

The ship named Dali faced a power issue and "lost propulsion" as it was leaving port, and crew on board notified Maryland officials they had lost control of the vessel, ABC News reported, citing a US intelligence report. Officials said at least seven vehicles plunged into the water but could not give an exact figure.

"This is a mass-casualty, multi-agency event," he said. "This operation is going to extend for many days." Eight people were on the bridge at the time and six remained unaccounted for, the state's transportation secretary said.

Maryland Governor Wes Moore declared a state of emergency to quickly deploy federal resources to deal with the emergency. Traffic was suspended at the Port of Baltimore until further notice, Maryland transportation authorities said.

The closure of one of the U.S. East Coast's major ports threatens to disrupt supplies of goods from cars, to coal and other commodities like sugar.

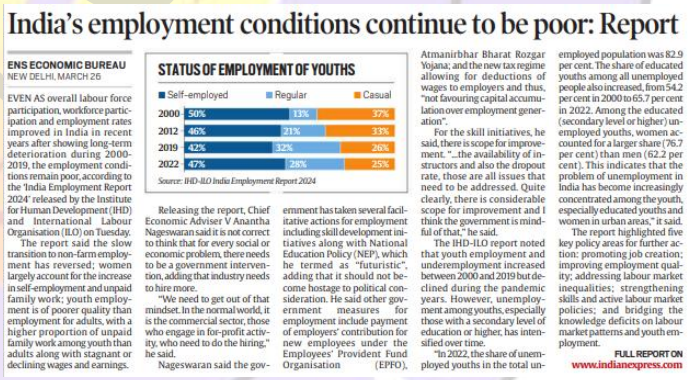
EXPLAINED 'Mayday' call that reduced casualties

THE SHIP reported a power issue and officials halted the flow of traffic on the bridge between the mayday call and the collision, Maryland Governor Wes Moore said at a briefing. "By being able to stop cars from coming over the bridge, these people are heroes. They saved lives last night," he said.

- **Why in News: Baltimore's Francis Scott Key Bridge** collapsed after a container ship smashed into a pylon.
- **About the Bridge**
  - The Francis Scott Key Bridge was one of three ways to cross the Baltimore Harbor and handled 31,000 cars per day or 11.3 million vehicles a year.
  - The steel structure is four lanes wide and sits 185 feet (56 meters) above the river.
  - It opened in 1977 and crosses the **Patapsco River.**
  - The bridge leads to the **Port of Baltimore**, the deepest harbor in **Maryland's Chesapeake Bay.**
  - **Reason behind the collapse:** The metal truss-style bridge has a suspended deck, a design that contributed to its collapse, engineers say. The ship appeared to hit a main concrete pier, which rests on soil underwater and is part of the foundation.

6. India Employment Report 2024

GS 2 (Social Issues)



India's employment conditions continue to be poor: Report

ENS ECONOMIC BUREAU
NEW DELHI, MARCH 26

EVEN AS overall labour force participation, workforce participation and employment rates improved in India in recent years after showing long-term deterioration during 2000-2019, the employment conditions remain poor, according to the 'India Employment Report 2024' released by the Institute for Human Development (IHD) and International Labour Organisation (ILO) on Tuesday.

The report said the slow transition to non-farm employment has reversed; women largely account for the increase in self-employment and unpaid family work; youth employment is of poorer quality than employment for adults, with a higher proportion of unpaid family work among youth than adults along with stagnant or declining wages and earnings.

STATUS OF EMPLOYMENT OF YOUTHS

Source: IHD-ILO India Employment Report 2024

Releasing the report, Chief Economic Adviser V Anantha Nageswaran said it is not correct to think that for every social or economic problem, there needs to be a government intervention, adding that industry needs to hire more.

"We need to get out of that mindset. In the normal world, it is the commercial sector, those who engage in for-profit activity, who need to do the hiring," he said.

Nageswaran said the government has taken several facilitative actions for employment including skill development initiatives along with National Education Policy (NEP), which he termed as "futuristic", adding that it should not become hostage to political consideration. He said other government measures for employment include payment of employers' contribution for new employees under the Employees' Provident Fund Organisation (EPFO), Atmanirbhar Bharat Rozgar Yojana; and the new tax regime allowing for deductions of wages to employers and thus, "not favouring capital accumulation over employment generation".

For the skill initiatives, he said, there is scope for improvement. "...the availability of instructors and also the dropout rate, those are all issues that need to be addressed. Quite clearly, there is considerable scope for improvement and I think the government is mindful of that," he said.

The IHD-ILO report noted that youth employment and underemployment increased between 2000 and 2019 but declined during the pandemic years. However, unemployment among youths, especially those with a secondary level of education or higher, has intensified over time.

"In 2022, the share of unemployed youths in the total unemployed population was 82.9 per cent. The share of educated youths among all unemployed people also increased, from 54.2 per cent in 2000 to 65.7 per cent in 2022. Among the educated (secondary level or higher) unemployed youths, women accounted for a larger share (76.7 per cent) than men (62.2 per cent). This indicates that the problem of unemployment in India has become increasingly concentrated among the youth, especially educated youths and women in urban areas," it said.

The report highlighted five key policy areas for further action: promoting job creation; improving employment quality; addressing labour market inequalities; strengthening skills and active labour market policies; and bridging the knowledge deficits on labour market patterns and youth employment.

FULL REPORT ON www.indianexpress.com

- **Why in News:** The **International Labour Organisation (ILO)** released its latest report on India and has said that India is poised to reap a demographic dividend but challenges related to youth unemployment persist.
- **Key-highlights of the Report**
  - **Report Title:** India Employment Report 2024
  - India's youth was 27% of the population in 2021 and this number is set to decline to 21% by 2036, and each year 7-8 million youth are added to the workforce.
  - **Vulnerable occupation:** Youth employment in India is by and larger of poorer quality than employment for adults, with employed youth being much more likely in vulnerable occupations or informal sectors.
  - **Youth wages and earnings** have increased with age but are lower than what they are for adults for all categories of employment.
  - **Poor condition of work:** There has been only a marginal gap between youth earnings from wage employment and self-employment, indicating poor conditions of work.
  - **Highest unemployment among graduates: T**he highest youth unemployment rates are among those with a graduate degree and higher among women than men.
  - **Women not in employment, education or training** amounted to a proportion nearly five times larger than among their male counterparts (48.4% versus 9.8%) and accounted for around 95% of the total youth population not in employment, education or training in 2022.
- **Disruptive Factors**
  - **Fast-changing technological advancements:** There are increasing uncertainties in the labour market due to fast-changing technologies, including artificial intelligence (AI).

- **Demographic dividend:** India remains poised to reap a demographic dividend for at least another decade due to the youth population remaining at 23 per cent of the total in 2036 from 27 per cent in 2021.
- **Temporary Jobs:** Digital platforms and the gig economy are creating many new jobs, but these jobs are largely temporary, informal, and non-standard work.
- **Algorithmic management:** On the gig and platform economy front, autonomy and flexibility are non-existent due to algorithmic management and control as the subjective and unfair nature of ratings used through the algorithmic management in these platforms also creates difficulties.

- **Required Measures**
  - **Labour-intensive manufacturing employment:** The report calls for primacy to be given to labour-intensive manufacturing employment to absorb the abundant unskilled labour, along with the emerging employment-generating modern manufacturing and services sectors, with a direct and greater focus on **micro, small and medium-sized enterprises** by providing a more supportive and decentralised approach.
  - **Green investment:** It also highlights investment in the green (environment-friendly) and blue (based on ocean resources) economies, developing rural infrastructure.
  - **Revival of employment in rural areas:** There is a need for establishing an integrated market to **revive employment in the farm and non-farm sectors in rural areas.**

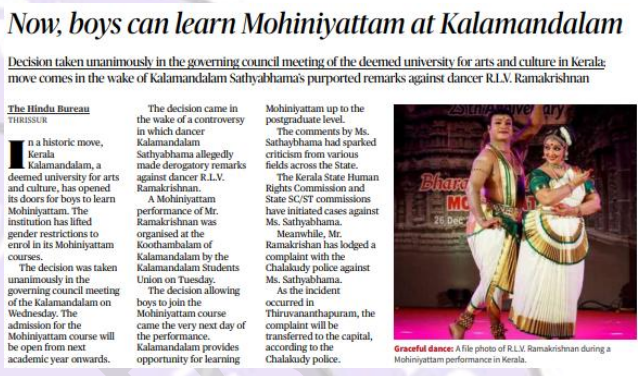
DO NOT COPY

28th March, 2024

1. Mohiniyattam

GS 1 (Art and Culture)

- **Why in News: In a historic move, the Kerala Kalamandalam, a deemed university for arts and culture, has lifted gender restrictions to learn Mohiniyattam.**
- **About Mohiniyattam:**
  - It is an **Indian classical dance** form that evolved in the **state of Kerala.**
  - **History and Evolution:**
    - Its roots date back to the age-old **Sanskrit Hindu text** on performing arts called '**Natya Shastra'.**
    - It is used to be **performed by Devadasis** (temple dancers) in temples during the rule of the **Chera kings** from 9 to 12 C.E.



Now, boys can learn Mohiniyattam at Kalamandalam

Decision taken unanimously in the governing council meeting of the deemed university for arts and culture in Kerala; move comes in the wake of Kalamandalam Sathyabhama's purported remarks against dancer R.L.V. Ramakrishnan

The Hindu Bureau
THRISSUR

In a historic move, Kerala Kalamandalam, a deemed university for arts and culture, has opened its doors for boys to learn Mohiniyattam. The institution has lifted gender restrictions to enrol in its Mohiniyattam courses.

The decision was taken unanimously in the governing council meeting of the Kalamandalam on Wednesday. The admission for the Mohiniyattam course will be open from next academic year onwards.

The decision came in the wake of a controversy in which dancer Kalamandalam Sathyabhama allegedly made derogatory remarks against dancer R.L.V. Ramakrishnan.

A Mohiniyattam performance of Mr. Ramakrishnan was organised at the Koothambalam of Kalamandalam by the Kalamandalam Students Union on Tuesday.

The decision allowing boys to join the Mohiniyattam course came the very next day of the performance. Kalamandalam provides opportunity for learning Mohiniyattam up to the postgraduate level.

The comments by Ms. Sathaybhama had sparked criticism from various fields across the State.

The Kerala State Human Rights Commission and State SC/ST commissions have initiated cases against Ms. Sathyabhama.

Meanwhile, Mr. Ramakrishnan has lodged a complaint with the Chalakudy police against Ms. Sathybhama.

As the incident occurred in Thiruvananthapuram, the complaint will be transferred to the capital, according to the Chalakudy police.

Graceful dance: A file photo of R.L.V. Ramakrishnan during a Mohiniyattam performance in Kerala.

    - **Features:**
      - It is conventionally a **solo dance** performed by **female artists.** It adheres to **the Lasya type** that showcases a more graceful, gentle and feminine form of dancing.
      - **Theme:** The dance form Mohiniyattam has **love and devotion to God** as its major themes, with usually **Lord Vishnu or his incarnation** Lord Krishna as the lead character.
      - It emotes a play through **dancing and singing**, where the song is customarily in Manipravala, which is a mix of Sanskrit and Malayalam language.
      - The recitation may be performed by the dancer or a vocalist, with the music style being Carnatic. The dance is characterized by its graceful swaying body movements with no abrupt jerks or sudden leaps.
      - More than the footwork, **emphasis** is given to **hand gestures and Mukhabhinaya** or subtle facial expressions. The hand gestures, 24 in number, are mainly adopted from '**Hastha Lakshana Deepika**', a text followed by Kathakali.
      - Costumes in Mohiniyattam include plain white or ivory cream traditional sari embroidered with bright gold-laced brocade.
      - **Instruments used:** Mridangam, Madhalam, ldakka, flute, Veena and Kuzhitalam(cymbals).

2. WTO's Investment Facilitation Negotiations Are Not Illegal

GS 3 (Economy)

- **Why in News:**
  - The 13th Ministerial Conference (MC13) of the World Trade Organisation (WTO) in Abu Dhabi witnessed a significant development with **the non-adoption of the agreement on investment facilitation for development (IFD).**
  - Despite considerable support, including from around 120 member countries, **the IFD Agreement faced opposition, notably from India and South Africa.**
  - Amid these developments, **it is important to understand India's stance against the IFD Agreement and concerns regarding its compatibility with WTO principles**, particularly regarding the nature of investment within the realm of trade and the process followed in negotiating the agreement.

WTO's investment facilitation negotiations are not illegal

One of the significant developments at the 13th Ministerial Conference (MC13) of the World Trade Organization (WTO) in Abu Dhabi was the non-adoption of the agreement on investment facilitation for development (IFD). Despite opposition from countries such as India, negotiations for an IFD agreement at the WTO were launched in 2017 on a plurilateral basis by 70 countries. This was done through a process known as the Joint Statement Initiative. The IFD agreement was finalised in November 2023. Today, around 120 of 166 WTO member countries (more than 70% of the membership) back the IFD agreement. This agreement aims to create legally binding provisions to facilitate investment flows.

In Abu Dhabi, these 120 countries wanted to include the IFD Agreement as a plurilateral agreement (PA) within Annex 4 of the WTO Agreement. It is critical to recall that while the WTO is a multilateral trade organisation, Article II.3 of the WTO Agreement categorically allows for PAs. These PAs bind those WTO member countries that accept them and do not create rights or impose obligations on the remaining members.

India's concerns

The IFD Agreement, among other things, will require states to augment regulatory transparency, and streamline administrative procedures to bolster foreign investment inflows. Importantly, this agreement does not contain provisions on market access, investment protection, and investor-state dispute settlement (ISDS). ISDS, which allows foreign investors to bring treaty claims against the state admitting investment, has been a contentious issue in recent years. Given the existing structure of the WTO's dispute settlement mechanism, where only states can bring legal claims against other states, it is implausible that ISDS can be a part of it.

India and South Africa played a crucial role in not letting the IFD agreement become a part of the WTO rulebook. India does not seem to be exceedingly concerned about the text of the IFD agreement. Instead, India's principal concerns are twofold. First, the question of whether investment can be part of the WTO. And second, the process followed to make the IFD agreement a part of the WTO rulebook.

Investment is not trade

On whether investment can be part of the WTO, India's chief contention is that investment *per se* is not trade. In other words, investment could or could not result in cross-border trade. This argument flies in the face of economic literature supporting an inextricable linkage between trade and investment. According to the Organisation for Economic Co-operation and Development, about 70% of international trade occurs through global value chains, which are characterised by trade and investment, thus proving the close relationship between the two.

Therefore, it is unsurprising that several modern-day free trade agreements, such as the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership include detailed investment provisions covering both facilitation and protection. Interestingly, India's newly minted trade agreement with the European Free Trade Association also contains provisions on investment, though it is restricted to facilitation and promotion measures.

Regarding the process followed in negotiating the IFD Agreement, India's foremost assertion is that there is no mandate to conduct negotiations on investment. India argued that in 2004, the WTO's General Council decided that the talks on the relationship between trade and investment – one of the so-called 'Singapore issues' because it was introduced at the 1996 WTO Singapore ministerial conference – would not take place as part of the Doha round of negotiations launched in 2001.

India also referred to the decision taken at the 2015 WTO Nairobi ministerial decision, which says that "any decision to launch negotiations multilaterally on [new] issues would need to be agreed by all members". Since all countries never agreed to launch negotiations on an IFD Agreement, according to India, IFD negotiations and the subsequent text that came up for adoption are illegal.

India is correct in arguing that there is a negative mandate to launch negotiations on the relationship between trade and investment. But two questions arise. First, does this negative mandate cover all aspects of investment, including facilitation? It is important to recall that the dropped investment agreement proposed at the 1996 Singapore ministerial focused on issues such as market access and investment protection. So, can the negative mandate include everything and anything on investment at the WTO?

Second, the negative mandate is to launch negotiations on new issues multilaterally. Will this also apply to negotiations launched on a plurilateral basis? The negotiations on an IFD agreement were launched not on a multilateral basis. While Article X.9 of the WTO Agreement states that the decision to add an agreement to the existing set of PAs listed in Annex 4 can be made 'exclusively by consensus', nothing in the agreement requires consensus to launch negotiations for a PA.

An essential function of the WTO is to update existing rules and make new ones to govern the increasingly complex nature of international trade. However, the WTO's decision-making process remains deadlocked because of the colossal difficulties in arriving at consensus. From this perspective, PAs such as the IFD agreement are essential for reinvigorating the WTO's stalemated legislative function. India, which will soon be the third biggest economy, should reconsider its defensive approach towards PAs, as in the proposed IFD Agreement in the WTO.

Prabhash Ranjan
teaches at the Faculty of Legal Studies, South Asian University

India should reconsider its defensive approach towards plurilateral agreements such as the investment facilitation for development agreement

The views expressed are personal

  - **Understanding the IFD Agreement**
    - **Despite opposition from countries such as India**, **negotiations for an IFD agreement at the WTO were launched in 2017 on a plurilateral basis** by 70 countries.
    - This was done through a process known as the Joint Statement Initiative. The IFD agreement was finalised in November 2023.
    - **Today, around 120 of 166 WTO member countries (more than 70% of the membership) back the IFD agreement.**
    - This agreement aims to create legally binding provisions to facilitate investment flows.

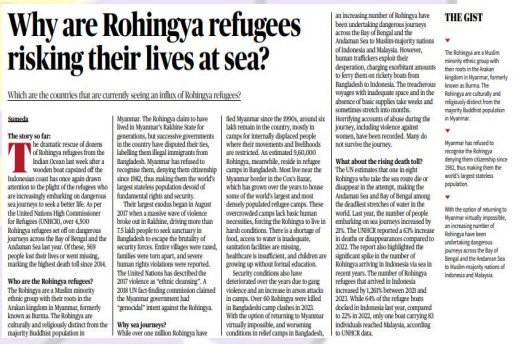
- **The IFD Agreement, among other things, will require states to augment regulatory transparency, and streamline administrative procedures** to bolster foreign investment inflows.
- Importantly, this agreement does not contain provisions on market access, investment protection, and **investor-state dispute settlement (ISDS).**
- **ISDS, which allows foreign investors to bring treaty claims against the state admitting investment, has been a contentious issue** in recent years.

- **Reason Behind India's Opposition to IFD Agreement**
  - Given the existing structure of the WTO's dispute settlement mechanism, where only states can bring legal claims against other states, **it is implausible that ISDS can be a part of it**.
  - **India and South Africa played a crucial role in not letting the IFD agreement become a part of the WTO rulebook.**
  - India does not seem to be exceedingly concerned about the text of the IFD agreement.
  - Instead, India's principal concerns are twofold. First, the question of whether investment can be part of the WTO. And second, the process followed to make the IFD agreement a part of the WTO rulebook.
- **India's Concerns with IFD Agreement at WTO's 13th Ministerial Conference (MC13)**
  - **Investment and its Relationship with Trade**
    - **India's Stance Challenges the Rethinking of Investment-Trade Nexus**
    - India's contention regarding the relationship between investment and trade **reflects a nuanced understanding of the evolving dynamics shaping international commerce.**
    - While traditional economic perspectives often portray investment and trade as inherently intertwined, **India's stance challenges this conventional wisdom by highlighting the diverse nature of investment activities** and their implications for cross-border trade.
  - **The Proposed Role of Investment in Global Economics**
    - **At the heart of India's argument lies the recognition that investment, though integral to global economic activities, does not always lead to the immediate facilitation** of cross-border trade.
    - **Unlike trade in goods and services, which involve the exchange of tangible or intangible products, investment encompasses a broader spectrum of activities**, ranging from capital injections into foreign enterprises to the acquisition of assets in overseas markets.
    - **These investment activities may not always result in immediate trade flows,** especially in cases where investments are made for strategic or long-term purposes, rather than for the explicit purpose of engaging in trade.
  - **Linkage of Global Value Chains and Investment-Trade**
    - Furthermore, **India points to the complexities of global value chains (GVCs) to underscore the multifaceted nature** of investment-trade linkages.
    - While it is undeniable that GVCs rely on both trade and investment to facilitate the seamless movement of goods and services across borders, India argues that the relationship between the two is not always straightforward.
    - **Investment in GVCs** often serves to enhance production efficiencies, reduce costs, and access new markets, but **may not necessarily translate into direct trade activities.**
    - Particularly in cases where intermediate inputs are destined for domestic consumption or further processing within the host country.
- **Concerns with the Process of Negotiating the IFD Agreement**
  - **Procedural Concerns in IFD Agreement Negotiation**
    - **India's opposition to the IFD Agreement also encompasses procedural concerns** regarding the negotiation process.
    - India asserts that there was no mandate for conducting negotiations on investment within the WTO framework.
    - **This assertion is grounded in previous WTO decisions**, such as the 2004 General Council decision, which excluded discussions on trade and investment from the Doha Round of negotiations.
    - **India contends that this decision implicitly signalled a reluctance to engage in negotiations** on investment-related matters within the WTO framework
  - **Consensus Requirement and Legitimacy of Negotiation**
    - Moreover, **India points to the consensus requirement for launching multilateral negotiations on new issues**, as outlined in the 2015 WTO Nairobi ministerial decision.
    - This decision emphasised the necessity of unanimous agreement among WTO members to initiate negotiations on novel topics.
    - **India argues that since there was no consensus among all members to launch negotiations on an IFD Agreement,** the subsequent negotiations and the text that emerged are legally questionable.

- **Upholding WTO Integrity and Transparency**
  - **India's objection raises fundamental questions about the legitimacy of negotiating agreements outside the established framework** of WTO mandates.
  - By invoking past decisions and procedural requirements, India underscores the importance of adhering to established norms and principles in shaping global trade governance.
  - **This stance reflects India's commitment to upholding the integrity of the WTO's decision-making processes** and ensuring that negotiations are conducted transparently and inclusively
- **Scope and Mandate of WTO Negotiation**
  - Furthermore, **India's concerns extend beyond mere procedural objections to broader questions about the scope and mandate of WTO negotiations.**
  - India contends that discussions on investment-related matters were explicitly excluded from previous rounds of negotiations, suggesting a reluctance among members to address such issues within the WTO framework.
  - **This reluctance underscores the need for clarity regarding the scope of WTO negotiations and the parameters** within which member states can engage in discussions on novel topics.

- **Conclusion**
  - India's opposition to the IFD Agreement at the WTO **reflects broader debates surrounding the intersection of investment and trade,** as well as procedural intricacies within the organisation.
  - While concerns regarding the nature of investment and the negotiation process are valid, **reconciling divergent perspectives is essential for fostering consensus** and advancing global trade governance.
  - As the WTO seeks to navigate evolving trade landscapes, **engaging constructively with initiatives like the IFD Agreement can contribute to revitalising its legislative function and addressing contemporary trade challenges.**

3. United Nations High Commissioner for Refugees
GS 2 (International Relations)



Why are Rohingya refugees risking their lives at sea?

Which are the countries that are currently seeing an influx of Rohingya refugees?

Sumedha

The story so far:

The dramatic rescue of dozens of Rohingya refugees from the Indian Ocean last week after a wooden boat capsized off the Indonesian coast has once again drawn attention to the plight of the refugees who are increasingly embarking on dangerous sea journeys to seek a better life. As per the United Nations High Commissioner for Refugees (UNHCR), over 4,500 Rohingya refugees set off on dangerous journeys across the Bay of Bengal and the Andaman Sea last year. Of these, 569 people lost their lives or went missing, marking the highest death toll since 2014.

Who are the Rohingya refugees?

The Rohingya are a Muslim minority ethnic group with their roots in the Arakan kingdom in Myanmar, formerly known as Burma. The Rohingya are culturally and religiously distinct from the majority Buddhist population in Myanmar. The Rohingya claim to have lived in Myanmar's Rakhine State for generations, but successive governments in the country have disputed their ties, labelling them illegal immigrants from Bangladesh. Myanmar has refused to recognise them, denying them citizenship since 1982, thus making them the world's largest stateless population devoid of fundamental rights and security.

Their largest exodus began in August 2017 when a massive wave of violence broke out in Rakhine, driving more than 7.5 lakh people to seek sanctuary in Bangladesh to escape the brutality of security forces. Entire villages were razed, families were torn apart, and severe human rights violations were reported. The United Nations has described the 2017 violence as "ethnic cleansing". A 2018 UN fact-finding commission claimed the Myanmar government had "genocidal" intent against the Rohingya.

Why sea journeys?

While over one million Rohingya have fled Myanmar since the 1990s, around six lakh remain in the country, mostly in camps for internally displaced people where their movements and livelihoods are restricted. An estimated 9,60,000 Rohingya, meanwhile, reside in refugee camps in Bangladesh. Most live near the Myanmar border in the Cox's Bazar, which has grown over the years to house some of the world's largest and most densely populated refugee camps. These overcrowded camps lack basic human necessities, forcing the Rohingya to live in harsh conditions. There is a shortage of food, access to water is inadequate, sanitation facilities are missing, healthcare is insufficient, and children are growing up without formal education.

Security conditions also have deteriorated over the years due to gang violence and an increase in arson attacks in camps. Over 60 Rohingya were killed in Bangladeshi camp clashes in 2023. With the option of returning to Myanmar virtually impossible, and worsening conditions in relief camps in Bangladesh, an increasing number of Rohingya have been undertaking dangerous journeys across the Bay of Bengal and the Andaman Sea to Muslim-majority nations of Indonesia and Malaysia. However, human traffickers exploit their desperation, charging exorbitant amounts to ferry them on rickety boats from Bangladesh to Indonesia. The treacherous voyages with inadequate space and in the absence of basic supplies take weeks and sometimes stretch into months. Horrifying accounts of abuse during the journey, including violence against women, have been recorded. Many do not survive the journey.

What about the rising death toll?

The UN estimates that one in eight Rohingya who take the sea route die or disappear in the attempt, making the Andaman Sea and Bay of Bengal among the deadliest stretches of water in the world. Last year, the number of people embarking on sea journeys increased by 2%. The UNHCR reported a 62% increase in deaths or disappearances compared to 2022. The report also highlighted the significant spike in the number of Rohingya arriving in Indonesia via sea in recent years. The number of Rohingya refugees that arrived in Indonesia increased by 1,285% between 2020 and 2023. While 64% of the refugee boats docked in Indonesia last year, compared to 22% in 2022, only one boat carrying 65 individuals reached Malaysia, according to UNHCR data.

THE GIST

The Rohingya are a Muslim minority ethnic group with their roots in the Arakan kingdom in Myanmar, formerly known as Burma. The Rohingya are culturally and religiously distinct from the majority Buddhist population in Myanmar.

Myanmar has refused to recognise the Rohingya denying them citizenship since 1982, thus making them the world's largest stateless population.

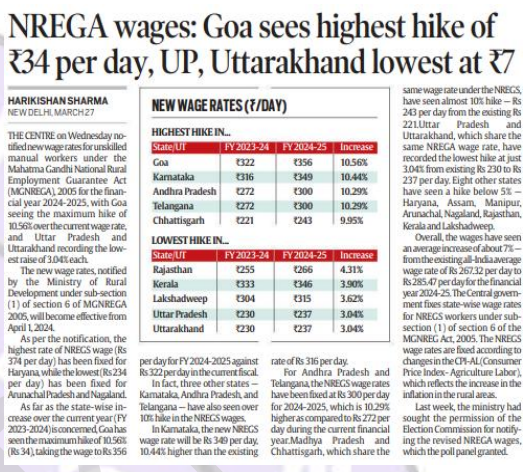
With the option of returning to Myanmar virtually impossible, an increasing number of Rohingya have been undertaking dangerous journeys across the Bay of Bengal and the Andaman Sea to Muslim-majority nations of Indonesia and Malaysia.

- **Why in News: As per the United Nations High Commissioner for Refugees (UNHCR), over 4,500 Rohingya refugees set off across the Bay of Bengal and the Andaman Sea in 2023.**
- **About United Nations High Commissioner for Refugees:**
  - It **protects refugees worldwide** and facilitates their return home or resettlement. **Headquarters:** Geneva, Switzerland
  - It was established by the General Assembly of the United Nations in 1950 in the **aftermath of the Second World War** to help the millions of people who had lost their homes.
  - It is a global organization dedicated to saving lives, protecting rights and building a better future for people forced to flee their homes because of conflict and persecution.
  - It was **awarded Nobel Peace Prizes** in 1954 and 1981. It started Nansen Refugee Award in 1954 for recognition of outstanding service to the cause of refugees, displaced or stateless people.
- **Who are the Rohingya refugees?**
  - The Rohingya are a **Muslim minority ethnic group** with their roots in the Arakan kingdom in **Myanmar.**
  - According to the Council on Foreign Relations notes that Rohang derives from the word 'Arakan' in the Rohingya dialect and ga or gya means from.
  - They are culturally and religiously distinct from the majority Buddhist population in Myanmar and **speak a Bengali dialect** which is different from the common Burmese language. Myanmar has refused to recognise them as an ethnic group, denying them citizenship since 1982.
  - According to **Myanmar's 1982 citizenship law**, members of the Rohingya community, along with other ethnic minorities, can only attain citizenship if they prove their ancestors **resided in Myanmar before 1823**.
  - Otherwise, even if one of their parents is a Myanmar citizen, they are deemed to be "resident foreigners" or "associate citizens.

4. Revision in MGNREGA Wages & Issue of Wage Disparity

GS 2 (Governance)

- **Why in News:** The central government has announced a three to 10 percent increase in wage rate for unskilled workers under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for the financial year 2024-25.



NREGA wages: Goa sees highest hike of ₹34 per day, UP, Uttarakhand lowest at ₹7

HARIKISHAN SHARMA
NEW DELHI, MARCH 27

THE CENTRE on Wednesday notified new wage rates for unskilled manual workers under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), 2005 for the financial year 2024-2025, with Goa seeing the maximum hike of 10.56% over the current wage rate, and Uttar Pradesh and Uttarakhand recording the lowest raise of 3.04% each.

The new wage rates, notified by the Ministry of Rural Development under sub-section (1) of section 6 of MGNREGA 2005, will become effective from April 1, 2024.

As per the notification, the highest rate of NREGS wage (Rs 374 per day) has been fixed for Haryana, while the lowest (Rs 234 per day) has been fixed for Arunachal Pradesh and Nagaland.

As far as the state-wise increase over the current year (FY 2023-2024) is concerned, Goa has seen the maximum hike of 10.56% (Rs 34), taking the wage to Rs 356 per day for FY 2024-2025 against Rs 322 per day in the current fiscal.

In fact, three other states — Karnataka, Andhra Pradesh, and Telangana — have also seen over 10% hike in the NREGS wages.

In Karnataka, the new NREGS wage rate will be Rs 349 per day, 10.44% higher than the existing rate of Rs 316 per day.

For Andhra Pradesh and Telangana, the NREGS wage rates have been fixed at Rs 300 per day for 2024-2025, which is 10.29% higher as compared to Rs 272 per day during the current financial year. Madhya Pradesh and Chhattisgarh, which share the same wage rate under the NREGS, have seen almost 10% hike — Rs 243 per day from the existing Rs 221. Uttar Pradesh and Uttarakhand, which share the same NREGA wage rate, have recorded the lowest hike at just 3.04% from existing Rs 230 to Rs 237 per day. Eight other states have seen a hike below 5% — Haryana, Assam, Manipur, Arunachal, Nagaland, Rajasthan, Kerala and Lakshadweep.

Overall, the wages have seen an average increase of about 7% — from the existing all-India average wage rate of Rs 267.32 per day to Rs 285.47 per day for the financial year 2024-25. The Central government fixes state-wise wage rates for NREGS workers under sub-section (1) of section 6 of the MGNREG Act, 2005. The NREGS wage rates are fixed according to changes in the CPI-AL (Consumer Price Index- Agriculture Labor), which reflects the increase in the inflation in the rural areas.

Last week, the ministry had sought the permission of the Election Commission for notifying the revised NREGA wages, which the poll panel granted.

NEW WAGE RATES (₹/DAY)

HIGHEST HIKE IN...

State/UT	FY 2023-24	FY 2024-25	Increase
Goa	₹322	₹356	10.56%
Karnataka	₹316	₹349	10.44%
Andhra Pradesh	₹272	₹300	10.29%
Telangana	₹272	₹300	10.29%
Chhattisgarh	₹221	₹243	9.95%

LOWEST HIKE IN...

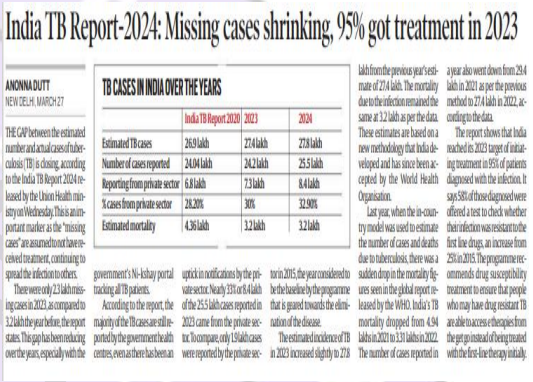
State/UT	FY 2023-24	FY 2024-25	Increase
Rajasthan	₹255	₹266	4.31%
Kerala	₹333	₹346	3.90%
Lakshadweep	₹304	₹315	3.62%
Uttar Pradesh	₹230	₹237	3.04%
Uttarakhand	₹230	₹237	3.04%

- **Issue of disparity in wages under MGNERAGA**
  - Last year, the **Parliamentary panel** had stressed on the need to address the issue of disparity in wages under MGNREGA. It had asked the ministry to explore the possibility of making **wages uniform** across the country.
  - It said, "Disparity of wages and non-increase in wages commensurately with inflation is perhaps the most discouraging aspect for labourers to undertake MGNREGA works."
  - The issue of divergence between wage rates under MGNREGA is on account of the fact that the states **do not follow a uniform policy of wage revision** for **minimum agricultural wage**. In 2023-24, the lowest wages were in Chhattisgarh and Madhya Pradesh at Rs 221, while the highest was in Haryana at Rs 357.
  - Drawing on inflation data, together with the rural monthly wage index published by the **Indian Labour Bureau, the Ministry of Finance** has observed negative trends in the purchasing power of rural Indian wages in recent years.
    - Thus, in its Economic Survey 2022-23, the Ministry highlighted a n**egative growth in real rural wages** (that is, rural wages adjusted for inflation) due to elevated inflation between April and November 2022.
- **The 'actual' outcome of wage disparity**
  - **Inadequate labour protection:**Although people in rural areas are more likely to be in employment than those in urban ones, they also tend to have jobs that can put them at risk of experiencing inadequate labour protection as well as low pay.
  - **Insufficient wage to cover inflation**: The increase in wage rate may be insufficient to meet the increase in cost of basic goods, which have risen due to spike in inflation in the last few years.
  - **Decline in the number of MGNREGA household employment demands:**The household employment demand has decreased from 8.05 crore in 2021-22 to 6.20 crore in 2023-24.
- **Way Forward**
  - The fluctuation in wage rates among States is unjustified. Hence, a uniform wage rate is recommended to end the disparity. Bridging the wage disparity will end the uncertainty among beneficiaries and also serve the larger purpose of welfare of MGNREGA workers. The government should devise a mechanism for notifying a unified wage rate across the country.
- **Mahatma Gandhi National Rural Employment Guarantee Act**
  - The Mahatma Gandhi National Rural Employment Guarantee Act was passed in 2005, and the demand-driven scheme guarantees 100 days of unskilled work per year for every rural household that wants it.
  - The wage rates are notified annually as mandated in the Act. It is the amount to be paid to unskilled workers per day for the work done under the scheme.
  - Currently, there are close to **14.34 crore active workers under MGNREGS** and the average per day rate for unskilled work is around Rs 235 per day, as per the rural development ministry.

- **Social Protection**
  - Social protection is broadly understood as measures to reduce poverty and vulnerability by reducing people's exposure to risks and enhance their capacity to manage those risks, including those associated **with unemployment, exclusion, sickness, disability, and old age.**

5. India's Tuberculosis (TB) crisis

GS 2 (Health)



India TB Report-2024: Missing cases shrinking, 95% got treatment in 2023

ANONNA DUTT
NEW DELHI, MARCH 27

THE GAP between the estimated number and actual cases of tuberculosis (TB) is closing, according to the India TB Report 2024 released by the Union Health ministry on Wednesday. This is an important marker as the "missing cases" are assumed to not have received treatment, continuing to spread the infection to others.

There were only 2.3 lakh missing cases in 2023, as compared to 3.2 lakh the year before, the report states. This gap has been reducing over the years, especially with the government's Ni-kshay portal tracking all TB patients.

According to the report, the majority of the TB cases are still reported by the government health centres, even as there has been an uptick in notifications by the private sector. Nearly 33% or 8.4 lakh of the 25.5 lakh cases reported in 2023 came from the private sector. To compare, only 1.9 lakh cases were reported by the private sector in 2015, the year considered to be the baseline by the programme that is geared towards the elimination of the disease.

The estimated incidence of TB in 2023 increased slightly to 27.8 lakh from the previous year's estimate of 27.4 lakh. The mortality due to the infection remained the same at 3.2 lakh as per the data. These estimates are based on a new methodology that India developed and has since been accepted by the World Health Organisation.

Last year, when the in-country model was used to estimate the number of cases and deaths due to tuberculosis, there was a sudden drop in the mortality figures seen in the global report released by the WHO. India's TB mortality dropped from 4.94 lakh in 2020 to 3.31 lakh in 2022. The number of cases reported in a year also went down from 29.4 lakh in 2021 as per the previous method to 27.4 lakh in 2022, according to the data.

The report shows that India reached its 2023 target of initiating treatment in 95% of patients diagnosed with the infection. It says 58% of those diagnosed were offered a test to check whether their infection was resistant to the first line drugs, an increase from 25% in 2015. The programme recommends drug susceptibility treatment to ensure that people who may have drug resistant TB are able to access etherapies from the get go instead of being treated with the first-line therapy initially.

TB CASES IN INDIA OVER THE YEARS

	India TB Report 2020	2023	2024
Estimated TB cases	26.9 lakh	27.4 lakh	27.8 lakh
Number of cases reported	24.04 lakh	24.2 lakh	25.5 lakh
Reporting from private sector	6.8 lakh	7.3 lakh	8.4 lakh
% cases from private sector	28.20%	30%	32.90%
Estimated mortality	4.36 lakh	3.2 lakh	3.2 lakh

- **Why in News:** Despite the government's commitment to "**eliminate high-burden infectious" TB by 2025**, 'India is still far from reaching its goal'. There are six key challenges identified: TB diagnosis and access; lack of access to free, quality treatment and drugs; adequate nutrition and mental health support; stigma-free and gender responsive care; economic support; and high quality care.
- **Barriers in India's progress in combating TB**
  - Insufficient diagnosis and treatment access, stigma, and socioeconomic barriers continue to impede India's progress in combating this disease.
  - **Poverty:** Socioeconomic conditions create vulnerabilities to the disease.
  - **Undernutrition**: It is a major risk factor for both the occurrence of new cases and the occurrence of severe TB that can result in TB deaths.
  - **Delayed diagnosis**, and a lack of access to quality care.
  - **Multi-drug resistance** worsens matters.
- **The right healthcare intervention**
  - **Comprehensive care for children**: Children constitute 6–7% of all patients treated under the national TB elimination programme
  - **Focus on nutrition**: The state should immediately focus on increasing the duration and quality of inpatient care, particularly for very severe undernutrition.
  - **Effective diagnosis**: There is a need to expand diagnostic facilities, include mobile testing units, improve access to molecular testing at affordable prices, and provide quick and accurate results.
  - **Addressing social factors**: There is a need to address the social factors that aggravate the infection (poverty, stigma, etc).
- **Tamil Nadu Case Study (state-wide differentiated TB care model)**
  - The first published report of a state-wide differentiated TB care model in Tamil Nadu (TN-KET), in 2023, showed that to reduce TB deaths in **resource-limited settings, triaging** — quickly examining patients to decide who is most seriously ill and must be treated first — can identify those with the immediate need for comprehensive assessment and inpatient care.
  - Considering 70% of TB deaths happen within the first two months, it is important to triage patients at TB diagnosis.
- **World TB Report 2023**
  - According to the World TB Report 2023, India recorded an average of 199 new infections in every 100,000 people in 2022.

- An estimated 13% of treated patients and 2.5% of new cases were multi-drug resistant or resistant to the first-line drug rifampicin.
- Nearly 400,000 people die of TB each year in the country.

- **Treatment**
  - **Current biomedical strategies** to reduce new infections include the
    - **BCG vaccine**, which protects against severe forms of childhood TB
    - **Tuberculosis preventive treatment (TPT)** which aims to cover other household contacts, clinical-risk groups apart from children younger than five years and household contacts with HIV
    - **Effective rifamycin-based regimes**.

6. Quantum cryptography
GS 3 (Science and Tech)

- **Why in News: Scientists are proposing new technology known as quantum cryptography to protect sensitive communications.**
- **About Quantum cryptography:**
  - It is also known as **quantum encryption** which uses the naturally occurring properties of **quantum mechanics** to secure and transmit data in a way that cannot be hacked.
  - It is completely secure against being compromised without the knowledge of the message sender or the receiver.
  - It is impossible to copy or view data encoded in a quantum state without alerting the sender or receiver. It uses individual particles **of light, or photons**, to transmit data over fiber optic wire.
  - **Process:**
    - Quantum cryptography is not replacing traditional cryptography; rather, it allows for a **more secure transfer of the keys** used in encoding and decoding.
    - The amount of information which can be transferred using quantum cryptography is not very large or very fast, **but it is very secure.**
    - The maximum speed, scale and security of the transfer is achieved by sending the secret key using quantum coding, but encoding and sending the data itself using traditional methods and algorithms.
  - **Benefits of quantum cryptography**
    - **Provides secure communication:** Instead of difficult-to-crack numbers, quantum cryptography is based on the laws of physics, which is a more sophisticated and secure method of encryption.
    - **Detects eavesdropping:** If a third party attempts to read the encoded data, then the quantum state changes, modifying the expected outcome for the users.
    - **Offers multiple methods for security:** There are numerous quantum cryptography protocols used. Some, like QKD, for example, can combine with classical encryption methods to increase security.

7. T+0, instant settlement cycle from today
GS 3 (Economy)

Optional T+0 settlement from today: How will it benefit investors?

HITESH VYAS
MUMBAI, MARCH 27

THE BSE and NSE will introduce trading in the T+0 rolling settlement cycle in the equity segment on an optional basis from March 28. The beta version of the optional T+0 settlement cycle, or same-day settlement, is going to be launched on February 26 and with a limited set of brokers. Last week, the Securities and Exchange Board of India (Sebi) issued operational guidelines for the launch of the shorter tenure settlement cycle.

What is the T+0 trading settlement cycle?

In December last year, Sebi proposed the introduction of facility for clearing and settlement of funds and securities on T+0 (same day) on an optional basis, in addition to the existing T+1 settlement cycle. The regulator has also proposed to introduce optional instant settlement at a later stage. Under the T+0 trade cycle, the settlement of trades will happen on the same day after the closure of the T+0 trading. If a trader sells a share, they will get the money credited to their account the same day, and the buyer will also get the shares in their demat account on the very day of the transaction.

What are the benefits of T+0 trade settlement?

A shortened settlement cycle will lead to greater efficiency, transparency in charges to investors and strengthen risk management at clearing corporations and the overall securities market ecosystem. The T+0 trade cycle is expected to provide flexibility in terms of faster pay-out of the funds against the securities to the sellers and faster pay-out of securities against the funds to the buyers. It will allow better pool over funds and securities by the investors.

For the securities market ecosystem, a shorter settlement cycle will further free up capital in the securities market, thereby enhancing the overall market efficiency. It will enhance the overall risk management of Clearing Corporations (CCs) as the trades are backed by upfront funds and securities.

Which securities are available for trading in the T+0 settlement cycle?

The stock exchanges said Ambuja Cements Ltd, Ashok Leyland Ltd, Bank of Baroda, Bank of Ilaroda, Bharat Petroleum Corporation Ltd, Birlasoft Ltd, Cipla Ltd, Coforge Ltd, Divi'S Laboratories, Hindalco Industries, The Indian Hotels Company Ltd, JSW Steel Ltd and LIC Housing Finance are among the set of 25 scrips which are allowed for trading on T+0 settlement cycle. The other securities include Mahindra Ltd, Mahindra and Mahindra Ltd, Motherson International Ltd, MRF Ltd, Nestle India, NMDC Ltd, Oil & Natural as Corporation Ltd, Petronet LNG Ltd, State Bank of India, Tata Communications Ltd, Trent Ltd, Union Bank of India and Vedanta Ltd.

Who can participate in the T+0 cycle?

All investors are eligible to participate in the segment for the T+0 trade settlement cycle if they are able to meet the timelines, process and risk requirements as prescribed by the Market Infrastructure Institutions (MIIs).

What are the trade timings?

For the optional T+0 settlement cycle, there will be a separate trading session from 09:15 AM to 1:30 PM. The settlement of funds will be completed on the same day by 4:30 PM.

What will be the price band in the T+0 trade cycle?

The price band in the T+0 segment will operate with a price band of +100 basis points from the price in the regular T+1 market. It will be re-calibrated after every 50 basis points movement in the underlying T+1 market.

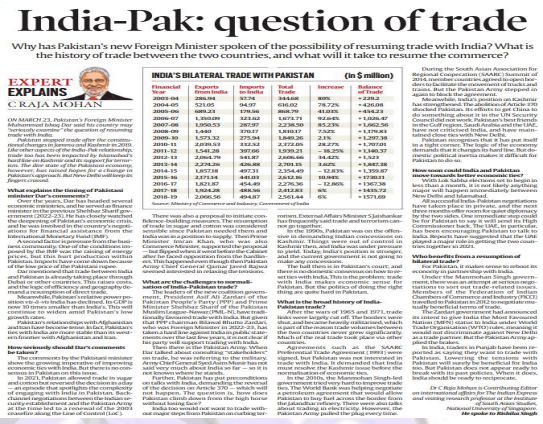
- **Why in News:**
  - Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) are all prepared to launch the T+0 or same-day trade settlement, from March 28, 2024.
  - Currently, Indian markets operate on a T+1 settlement cycle for all stocks.
- **Trade Settlement**
  - **About**
    - Settlement is a two-way process which involves the transfer of funds and securities on the settlement date.
    - A trade settlement is said to be complete once purchased securities of a listed company are delivered to the buyer and the seller gets the money.
  - **Current cycle of trade settlement**
    - SEBI has shortened the settlement cycle to T+3 from T+5 in 2002 and subsequently to T+2 in 2003.

- Currently, Indian stock market follows the cycle of T+1.
  - The migration to the T+1 cycle came into effect in **January 2023.**
  - **India became the second country in the world** to start the T+1 settlement cycle in top-listed securities after China.

- **T+1 settlement cycle**
  - The T+1 settlement cycle means that trade-related settlements must be done within a day, or 24 hours, of the completion of a transaction.
  - For example, under T+1, if a customer bought shares on Wednesday, they would be credited to the customer's demat account on Thursday.
- **T+0, Instant settlement cycle**
  - **Proposal of SEBI**
    - In December 2023, SEBI**, i**n addition to the existing T+1 settlement cycle, proposed the introduction of a shorter settlement cycle as an option.
    - It proposed to implement it in two phases:
      - Phase 1: T+0 Settlement Cycle and
      - Phase 2: Instant Settlement Cycle.
  - **Phase 1 - T+0 settlement cycle**
    - In Phase 1, an optional T+0 settlement cycle (for trades till 1:30 PM) is envisaged, with **settlement of funds and securities to be completed on the same day by 4:30 PM.**
    - This was proposed to be introduced on an optional basis starting on 28th March, 2024
  - **Phase 2: Instant Settlement Cycle**
    - In Phase 2, an optional immediate trade-by-trade settlement (funds and securities) may be carried out.
    - In this phase, trading will be carried out till 3.30 pm.
- **Working of T+0 settlement**
  - The T 0 settlement will be optional for 25 stocks and will be applicable only for trades executed between 9:15 a.m. and 1:30 p.m.
  - Trading in the T+0 cycle will be subject to a price band of 100 basis points above or below prices under the T+1 cycle.
    - To avoid market distortions due to price discrepancies for shares trading in both settlement cycles.
- **Benefits of instant settlement mechanism**
  - **Eliminate the risk of settlement shortages**
    - An instant settlement mechanism would enable instant receipt of funds and securities, vis-a-vis existing pay-out on T+1 day.
    - It would eliminate the risk of settlement shortages since both funds and securities will be required to be available before placing the order.
  - **Enhanced Liquidity**
    - Faster settlement can improve liquidity in the market, as investors can access their funds sooner after selling securities.
  - **Lower Margin Requirements**
    - Traders may require lower margin or collateral when they know that settlement will occur rapidly, potentially reducing the cost of trading.
  - **Reduced Market Risk**
    - Shorter settlement cycles can help minimize market risk, as the market price of the security is less likely to change significantly between the trade execution and settlement.
  - **Strengthened investor protection:** By enhancing the control of the investor over the securities and funds.
    - This is because as funds and securities would be credited into the client's account directly for those who are trading through blocked amounts using the UPI facility (UPI Clients).
  - **Will help establish Indian equities as an asset class** with the features of resilience, low cost and time for transaction, superior in all ways to emerging claimants of alternative asset classes.

8. India-Pakistan trade
GS 2 (International Relations)

- **Why in News:**
  - Recently, Pakistan's Foreign Minister Muhammad Ishaq Dar said that his country may seriously examine the question of resuming trade with India.
  - Pakistan had stopped trade after the constitutional changes in Jammu and Kashmir in 2019.
- **Bilateral trade between India and Pakistan**
  - **Composition of India-Pakistan trade**
    - **Despite having MFN status since 1996,** Pakistan maintained a Negative List of 1,209 products that were not allowed to be imported from India.
      - **Most Favoured Nation (MFN) status** is a principle in the WTO that ensures that countries treat all other members equally.
      - This means that if a country improves the benefits it gives to one trading partner, it must give the same treatment to all other WTO members.
    - Only 138 products were allowed to be imported from India through the Wagah-Attari border land route.
      - Still, India maintained a significant trade surplus over Pakistan.
    - In 2018-19, cotton and organic chemicals accounted for around half of Pakistan's imports from India.
      - Other major Pakistani imports from India that year included plastic, tanning/dyeing extracts, and nuclear reactors, boilers, machinery, and mechanical appliances
    - Meanwhile, India's imports from Pakistan in 2018-9 included mineral fuels and oils, edible fruits and nuts, salt, sulphur, stone and plastering materials, ores, slag and ash and raw hides and leather.
  - **Why was India-Pakistan trade paused?**
    - Pakistan suspended bilateral trade with India in August 2019, after the Indian government abrogated Article 370 of the Indian Constitution.
      - The now-scrapped article gave a special status to the erstwhile state of Jammu and Kashmir, following its accession with India in 1947.
    - However, experts believe an **underlying reason for suspending trade was the 200 per cent tariff imposed by New Delhi on Pakistani imports earlier that year after India revoked Pakistan's MFN status.**
      - India took this step in the aftermath of the Pulwama terrorist attack in February 2019.
      - India withdrew Pakistan's MFN status within 24 hours of the attack.
- **Why might Pakistan be reconsidering trade with India?**
  - **Change of government in Pakistan**
    - There has been a change of face, if not regime, since Imran Khan following elections held earlier this year.
    - While the Pakistani military remains firmly in control, a new government indicates the possibility of a new policy.
  - **Economic crisis in Pakistan**
    - **Devastating floods in 2022, high inflation, and political instability alongside structural issues**, have led to multiple crises related to meeting the food and energy needs of the population
  - **Pakistan is approaching IMF and friendly countries for loan**
    - Pakistan has had to frequently approach the IMF or friendly countries like Saudi Arabia and China for billions of dollars in loans.
    - With the pause in trade with India, **importing goods from faraway countries further depletes its low foreign exchange reserves.**
  - **Direct trade will increase the efficiency**
    - Trade between India and Pakistan is already taking place through Dubai or other countries.
    - This raises costs, and the logic of efficiency and geography demand a resumption of direct trade.
  - **Pakistan's relationships with Afghanistan and Iran have become tense**


India-Pak: question of trade

Why has Pakistan's new Foreign Minister spoken of the possibility of resuming trade with India? What is the history of trade between the two countries, and what will it take to resume the commerce?

EXPERT EXPLAINS
C. RAJA MOHAN

ON MARCH 23, Pakistan's Foreign Minister Muhammad Ishaq Dar said his country may seriously examine the question of resuming trade with India.

Pakistan stopped trade after the constitutional changes in Jammu and Kashmir in 2019. Like other aspects of the India-Pak relationship, trade too has been impacted by Islamabad's inability to delink bilateral issues from ties. The dire state of the Pakistani economy, however, has raised hopes for a change in Pakistan's approach. But New Delhi will keep its fingers crossed.

What explains the timing of Pakistani minister Dar's comments?

Dar, who has in the past headed several economic ministries, and he served as finance minister in the province Shehbaz Sharif governed before he left for Islamabad to take the deepening of Pakistan's economic crisis and he was involved in the country's negotiations for financial assistance from the International Monetary Fund (IMF).

Dar is also close to the business community. One of the conditions imposed by the IMF was the raising of energy tariffs. Many of the big industries in power-hit Pakistan, therefore, have come down because of the low price of the Pakistani rupee.

Trade between Pakistan and India and Pakistan is already taking place through Dubai or other countries. This raises costs, and the logic of efficiency and geography demand a resumption of direct trade.

Pakistan's relationships with Afghanistan and Iran have become tense. Pakistan's relations vis-à-vis India has declined. Its GDP is now 10 times smaller than India's. This will further widen as India and Pakistan's long growth rates.

Pakistan's relationship with Afghanistan and Iran have become tense. Pakistan's relations with India are more stable than its western frontier with Afghanistan and Iran.

How seriously should Dar's comments be taken?

The comments by the Pakistani minister show the growing imperative of improving economic relations. There is a sense of economic in Pakistan on this issue.

In 2021, Pakistan allowed trade in sugar and cotton with India. Islamabad has also hinted at engaging with India in Pakistan. Backchannel diplomacy between the national security establishments and the Pakistan Army at the time led to a renewal of the 2003 ceasefire along the Line of Control (LoC).

INDIA'S BILATERAL TRADE WITH PAKISTAN (in $ million)

Financial Year	Exports from India	Imports to India	Total Trade	Increase	Balance of Trade
2003-04	286.94	57.74	344.68	80%	+229.2
2004-05	521.05	94.97	616.02	78.72%	+426.08
2005-06	689.23	179.56	868.79	41.03%	+454.23
2006-07	1,350.09	323.62	1,673.71	92.64%	+1,026.47
2007-08	1,950.53	287.97	2,238.50	85.23%	+1,662.56
2008-09	1,440	370.17	1,810.17	7.52%	+1,179.83
2009-10	1,573.32	275.94	1,849.26	2.1%	+1,297.38
2010-11	2,039.53	332.52	2,372.05	28.27%	+1,707.01
2011-12	1,541.28	397.66	1,939.21	– 18.25%	+1,140.37
2012-13	2,064.79	541.87	2,606.66	34.42%	+1,523
2013-14	2,274.26	426.88	2,701.15	3.62%	+1,847.38
2014-15	1,857.18	497.31	2,354.49	– 12.83%	+1,359.87
2015-16	2,171.14	441.03	2,612.16	10.94%	+1730.11
2016-17	1,821.87	454.49	2,276.36	– 12.86%	+1367.38
2017-18	1,924.28	488.56	2,412.83	6%	+1435.72
2018-19	2,066.56	494.87	2,561.44	6%	+1571.69

Source: Ministry of Commerce and Industry, Government of India

- In fact, Pakistan's ties with India are more stable than its western frontier with Afghanistan and Iran.

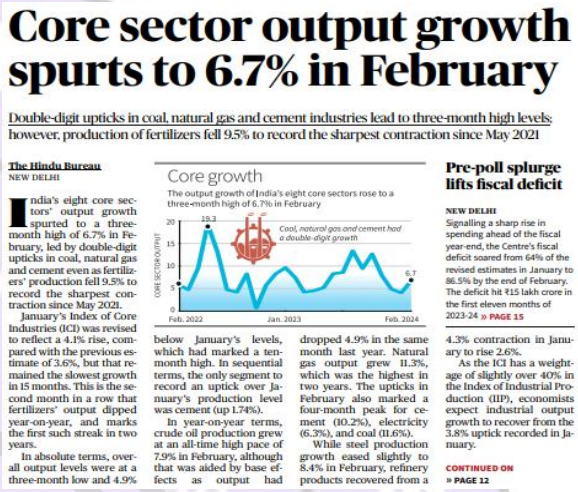
- **Challenges to normalisation of India-Pakistan trade**
  - **Role of hardliners**
    - Given that PPP chairman Bilawal Bhutto Zardari has taken a hard line against India in public statements over the last few years, it is not clear if his party will support trading with India.
  - **Role of Pakistani Army**
    - Pakistani army traditionally opposes any steps taken to normalise the relationship between these two countries.
  - **Pakistan's demand on Article 370**
    - Pakistan has put preconditions on talks with India, demanding the reversal of the decision on Article 370 — which will not happen.
  - **Terrorism**
    - India too would not want to trade without major steps from Pakistan on curbing terrorism.
    - External Affairs Minister S Jaishankar has frequently said trade and terrorism cannot go together.
- **Conclusion**
  - Today, India's position is stronger, and the Indian government is not going to make any concessions. The ball then is in Pakistan's court; and there is no domestic consensus on how to reset ties with India. This is the problem: **trade with India makes economic sense for Pakistan. But the politics of doing the right thing are quite hard in Pakistan**.

DO NOT COPY

29th March, 2024

1. India's Core Sectors Growth
GS 3 (Economy)

- **Why in News:** India's eight core sectors posted a 6.7 percent growth in February against 4.1% last month. It was 7.4 percent in February 2023.



Core sector output growth spurts to 6.7% in February

Double-digit upticks in coal, natural gas and cement industries lead to three-month high levels; however, production of fertilizers fell 9.5% to record the sharpest contraction since May 2021

The Hindu Bureau
NEW DELHI

India's eight core sectors' output growth spurted to a three-month high of 6.7% in February, led by double-digit upticks in coal, natural gas and cement even as fertilizers' production fell 9.5% to record the sharpest contraction since May 2021.

January's Index of Core Industries (ICI) was revised to reflect a 4.1% rise, compared with the previous estimate of 3.6%, but that remained the slowest growth in 15 months. This is the second month in a row that fertilizers' output dipped year-on-year, and marks the first such streak in two years.

In absolute terms, overall output levels were at a three-month low and 4.9% below January's levels, which had marked a ten-month high. In sequential terms, the only segment to record an uptick over January's production level was cement (up 1.74%).

In year-on-year terms, crude oil production grew at an all-time high pace of 7.9% in February, although that was aided by base effects as output had dropped 4.9% in the same month last year. Natural gas output grew 11.3%, which was the highest in two years. The upticks in February also marked a four-month peak for cement (10.2%), electricity (6.3%), and coal (11.6%).

While steel production growth eased slightly to 8.4% in February, refinery products recovered from a 4.3% contraction in January to rise 2.6%.

As the ICI has a weightage of slightly over 40% in the Index of Industrial Production (IIP), economists expect industrial output growth to recover from the 3.8% uptick recorded in January.

CONTINUED ON » PAGE 12

Core growth
The output growth of India's eight core sectors rose to a three-month high of 6.7% in February

Pre-poll splurge lifts fiscal deficit

NEW DELHI
Signalling a sharp rise in spending ahead of the fiscal year-end, the Centre's fiscal deficit soared from 64% of the revised estimates in January to 86.5% by the end of February. The deficit hit ₹15 lakh crore in the first eleven months of 2023-24 » PAGE 15

- **What are Core Sectors?**
  - **Eight Core Sectors:** Coal, Crude Oil, Natural Gas, Refinery Products, Fertilizer, Steel, Cement, and Electricity.
  - These comprise **27% of the weight**of items included in the Index of Industrial Production (IIP).
  - **The eight core sector industries in decreasing order of their weightage:**
  - Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers**.**
  - **Index of Industrial Production:**IIP is an indicator that measures the **changes in the volume of production**of industrial products during a given period.
    - It is compiled and published monthly by the **Central Statistical Organization (CSO),**Ministry of Statistics, and Programme Implementation.
    - **The base year for IIP is 2011-2012.**
- **Government Initiatives for Growth of the Industrial Sector in India**
  - **Production-Linked Incentive (PLI)** - To scale up domestic manufacturing capability.
  - **PM Gati Shakti- National Master Plan** - Multimodal connectivity infrastructure project.
  - **Bharatmala Project -** To Improve connectivity in North East India
  - **Start-up India** - To catalyzeStartup culture in India
  - **Make in India 2.0** - To transform India into a global design and manufacturing hub.
  - **Atmanirbhar Bharat Campaign** - To cut down import dependence
  - **Disinvestment Plans** - To support India's economic recovery
  - **Special Economic Zones**- To create additional economic activity and boost the export of goods and services
  - **MSME Innovative Scheme**- To promote the complete value chain from developing ideas into innovation through incubation and design interventions.

2. Vikram-1 space launch vehicle
GS 3 (Science and Tech)

- **Why in News:** In a significant development towards its upcoming orbital space launch, **Skyroot Aerospace**, a Hyderabad based space-tech company, has successfully test-fired the Stage-2 of **Vikram-1 space launch vehicle**, called **Kalam-250**, at the **Satish Dhawan Space Centre (SDSC)** in Sriharikota.

Skyroot Aerospace successfully test-fires stage-2 of Vikram-1 launch vehicle in A.P.'s Sriharikota

The Hindu Bureau
HYDERABAD

Leading space-tech company Skyroot Aerospace on Wednesday successfully test-fired stage-2 of its Vikram-1 launch vehicle at the propulsion testbed of the Indian Space Research Organisation (ISRO) at Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

Launch vehicles comprise multiple stages. Stage-2, called Kalam-250, is critical during the ascent of the launch vehicle since it will propel the rocket through the earth's atmosphere and into the vacuum of space.

The Vikram-1 launch will be a landmark event for the Indian space sector as it will be the country's first private orbital rocket launch.

It follows the suborbital launch of India's first private rocket – the Vikram-S by Skyroot in November 2022, said an official press release.

The test, which lasted 85 seconds, recorded a peak sea-level thrust of 186 kilonewtons (kN), which will translate to a fully expanded vacuum thrust of around 235kN in flight.

The Kalam-250 is a high-strength carbon composite rocket motor, which uses solid fuel and a high-performance Ethylene-Propylene-Diene terpolymers Thermal Protection System.

Stage-2 of the launch vehicle houses a carbon ablative flex nozzle along with high-precision electro-mechanical actuators for thrust vector control of the vehicle, which helps the rocket achieve the desired trajectory.

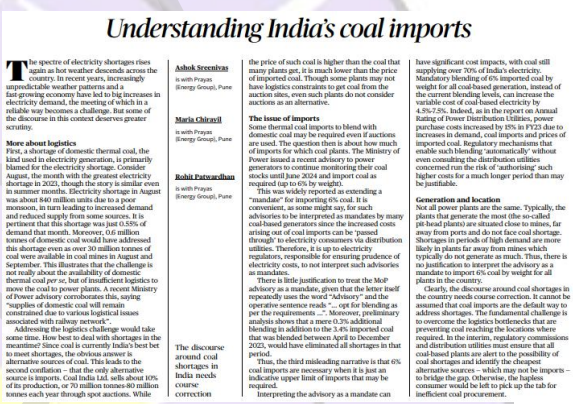
The solid propellant in Kalam-250 was processed by Solar Industries at their Nagpur facility.

Kalam-250, the second stage of Vikram-1 launch vehicle, being test fired by Skyroot Aerospace at Sriharikota in A.P. on Wednesday.

- **About Vikram-1:**
  - 'Vikram-1' is a **multi-stage launch vehicle.**
  - This launch vehicle has a capacity to place 300 kg payloads in the **Low Earth Orbit.**

- The rocket is an all-carbon-bodied vehicle capable of placing multiple satellites into orbit; it also features 3D-printed liquid engines.
- Globally, Vikram-1 is among 'elite few' rockets with the capability to deploy orbital satellites, says Skyroot.
- The 'Vikram' in the launch vehicles' name is a tribute to **Vikram Sarabhai, the father of India's space programme.**
- **Significance of Satge-2:** Stage-2 is a critical stage in the ascent of the launch vehicle, as it propels it from atmospheric phase to the deep vacuum of outer-space.

3. Understanding India's coal imports
GS 3 (Economy)



Understanding India's coal imports

The spectre of electricity shortages rises again as hot weather descends across the country. In recent years, increasingly unpredictable weather patterns and a fast-growing economy have led to big increases in electricity demand, the meeting of which in a reliable way becomes a challenge. But some of the discourse in this context deserves greater scrutiny.

More about logistics

First, a shortage of domestic thermal coal, the kind used in electricity generation, is primarily blamed for the electricity shortage. Consider August, the month with the greatest electricity shortage in 2023, though the story is similar even in summer months. Electricity shortage in August was about 840 million units due to a poor monsoon, in turn leading to increased demand and reduced supply from some sources. It is pertinent that this shortage was just 0.55% of demand that month. Moreover, 0.6 million tonnes of domestic coal would have addressed this shortage even as over 30 million tonnes of coal were available in coal mines in August and September. This illustrates that the challenge is not really about the availability of domestic thermal coal *per se*, but of insufficient logistics to move the coal to power plants. A recent Ministry of Power advisory corroborates this, saying "supplies of domestic coal will remain constrained due to various logistical issues associated with railway network".

Addressing the logistics challenge would take some time. How best to deal with shortages in the meantime? Since coal is currently India's best bet to meet shortages, the obvious answer is alternative sources of coal. This leads to the second conflation – that the only alternative source is imports. Coal India Ltd. sells about 10% of its production, or 70 million tonnes-80 million tonnes each year through spot auctions. While the price of such coal is higher than the coal that many plants get, it is much lower than the price of imported coal. Though some plants may not have logistics constraints to get coal from the auction sites, even such plants do not consider auctions as an alternative.

The issue of imports

Some thermal coal imports to blend with domestic coal may be required even if auctions are used. The question then is about how much of imports for which coal plants. The Ministry of Power issued a recent advisory to power generators to continue monitoring their coal stocks until June 2024 and import coal as required (up to 6% by weight).

This was widely reported as extending a "mandate" for importing 6% coal. It is convenient, as some might say, for such advisories to be interpreted as mandates by many coal-based generators since the increased costs arising out of coal imports can be 'passed through' to electricity consumers via distribution utilities. Therefore, it is up to electricity regulators, responsible for ensuring prudence of electricity costs, to not interpret such advisories as mandates.

There is little justification to treat the MoP advisory as a mandate, given that the letter itself repeatedly uses the word "advisory" and the operative sentence reads "... opt for blending as per the requirements ...". Moreover, preliminary analysis shows that a mere 0.3% additional blending in addition to the 3.4% imported coal that was blended between April to December 2023, would have eliminated all shortages in that period.

Thus, the third misleading narrative is that 6% coal imports are necessary when it is just an indicative upper limit of imports that may be required.

Interpreting the advisory as a mandate can have significant cost impacts, with coal still supplying over 70% of India's electricity. Mandatory blending of 6% imported coal by weight for all coal-based generation, instead of the current blending levels, can increase the variable cost of coal-based electricity by 4.5%-7.5%. Indeed, as in the report on Annual Rating of Power Distribution Utilities, power purchase costs increased by 15% in FY23 due to increases in demand, coal imports and prices of imported coal. Regulatory mechanisms that enable such blending 'automatically' without even consulting the distribution utilities concerned run the risk of 'authorising' such higher costs for a much longer period than may be justifiable.

Generation and location

Not all power plants are the same. Typically, the plants that generate the most (the so-called pit-head plants) are situated close to mines, far away from ports and do not face coal shortage. Shortages in periods of high demand are more likely in plants far away from mines which typically do not generate as much. Thus, there is no justification to interpret the advisory as a mandate to import 6% coal by weight for all plants in the country.

Clearly, the discourse around coal shortages in the country needs course correction. It cannot be assumed that coal imports are the default way to address shortages. The fundamental challenge is to overcome the logistics bottlenecks that are preventing coal reaching the locations where required. In the interim, regulatory commissions and distribution utilities must ensure that all coal-based plants are alert to the possibility of coal shortages and identify the cheapest alternative sources – which may not be imports – to bridge the gap. Otherwise, the hapless consumer would be left to pick up the tab for inefficient coal procurement.

Ashok Sreenivas is with Prayas (Energy Group), Pune

Maria Chiravil is with Prayas (Energy Group), Pune

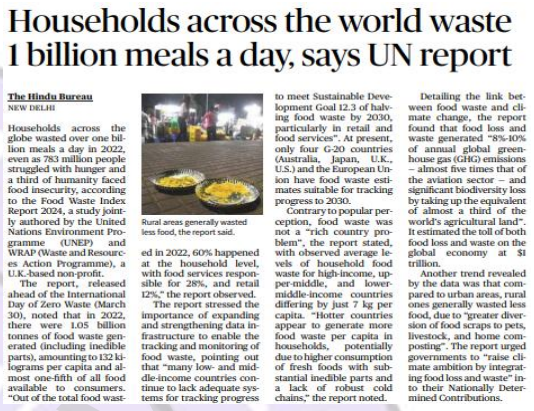
Rohit Patwardhan is with Prayas (Energy Group), Pune

The discourse around coal shortages in India needs course correction

- **Why in News:** With the onset of hot weather, concerns about electricity shortages have resurfaced in India. The discussion primarily revolves around the shortage of domestic thermal coal and the challenges in its logistics, leading to potential disruptions in electricity supply.
- **More about logistics:**
  - **Shortage of Domestic Thermal Coal:** The electricity shortage in August 2023, attributed to a poor monsoon, underscored the challenge of meeting increased demand amid reduced supply.
  - **Insufficient Logistics:** Despite ample coal reserves in mines, logistical issues hamper the transportation of coal to power plants.
  - **Transportation bottlenecks:** A Ministry of Power advisory highlights logistical constraints associated with the railway network, emphasizing the need to address transportation bottlenecks.
- **The Issue of Imports:**
  - **Alternative Sources of Coal:** With coal being India's primary energy source, exploring alternative coal sources becomes crucial to mitigate shortages. While some suggest imports as the only solution, auctions by Coal India Ltd. offer another viable option, albeit at higher prices.
  - **Import Advisory:** The Ministry of Power's advisory regarding coal imports, often misinterpreted as a mandate, recommends monitoring coal stocks and importing up to 6% by weight as needed. However, the advisory emphasizes blending coal as per requirements rather than imposing a fixed mandate.
  - **Cost Implications:** Interpreting the advisory as a mandate for 6% coal imports could significantly impact electricity costs, affecting consumers. Increased coal imports elevate variable costs, necessitating careful consideration by regulatory bodies to avoid unjustified cost burdens on consumers.
- **Generation and Location:**
  - **Diverse Power Plant Characteristics:** Power plants vary in generation capacity, proximity to coal mines, and susceptibility to shortages. Pit-head plants situated close to mines are less likely to face shortages compared to plants located farther away.
  - **Avoiding Misinterpretation:** Not all plants require imports, as shortages predominantly affect plants distant from mines.
  - **Cost effective solutions:** Regulatory commissions and utilities should focus on identifying the most cost-effective solutions to address shortages, considering factors beyond defaulting to coal imports.

4. Global Tragedy of Food Wastage

Recent events of importance



Households across the world waste 1 billion meals a day, says UN report

The Hindu Bureau
NEW DELHI

Households across the globe wasted over one billion meals a day in 2022, even as 783 million people struggled with hunger and a third of humanity faced food insecurity, according to the Food Waste Index Report 2024, a study jointly authored by the United Nations Environment Programme (UNEP) and WRAP (Waste and Resources Action Programme), a U.K.-based non-profit.

The report, released ahead of the International Day of Zero Waste (March 30), noted that in 2022, there were 1.05 billion tonnes of food waste generated (including inedible parts), amounting to 132 kilograms per capita and almost one-fifth of all food available to consumers. "Out of the total food wasted in 2022, 60% happened at the household level, with food services responsible for 28%, and retail 12%," the report observed.

Rural areas generally wasted less food, the report said.

The report stressed the importance of expanding and strengthening data infrastructure to enable the tracking and monitoring of food waste, pointing out that "many low- and middle-income countries continue to lack adequate systems for tracking progress to meet Sustainable Development Goal 12.3 of halving food waste by 2030, particularly in retail and food services". At present, only four G-20 countries (Australia, Japan, U.K., U.S.) and the European Union have food waste estimates suitable for tracking progress to 2030.

Contrary to popular perception, food waste was not a "rich country problem", the report stated, with observed average levels of household food waste for high-income, upper-middle, and lower-middle-income countries differing by just 7 kg per capita. "Hotter countries appear to generate more food waste per capita in households, potentially due to higher consumption of fresh foods with substantial inedible parts and a lack of robust cold chains," the report noted.

Detailing the link between food waste and climate change, the report found that food loss and waste generated "8%-10% of annual global greenhouse gas (GHG) emissions – almost five times that of the aviation sector – and significant biodiversity loss by taking up the equivalent of almost a third of the world's agricultural land". It estimated the toll of both food loss and waste on the global economy at $1 trillion.

Another trend revealed by the data was that compared to urban areas, rural ones generally wasted less food, due to "greater diversion of food scraps to pets, livestock, and home composting". The report urged governments to "raise climate ambition by integrating food loss and waste" into their Nationally Determined Contributions.

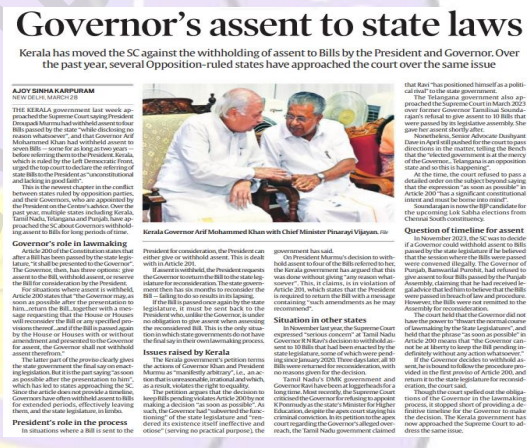
- **Why in News:** Households around the world binned one billion meals a day in 2022, as per a report by the United Nations.
- **Impact of food waste**
  - **GHG Emissions:** Food waste necessitates the conversion of vast areas of land for the production of crops that are never eaten and it emits five times as many greenhouse gases into the atmosphere as the aviation industry.
  - **Big contributor to the climate and biodiversity crises:** Not only is this waste squandering natural resources, it is also a big contributor to the climate and biodiversity crises, displacing wildlife from intensive farming, as more than a quarter of the world's agricultural land is given over to the production of food that is subsequently wasted.
  - **Economic loss**: Food loss and waste causes about USD 940 billion per year in economic losses. Reductions can save money for farmers, companies, and households.
- **Main causes of Food Waste**
  - **Climate change also contributes to food losses and lack of food security.**
  - **Hot weather:** More food appears to be thrown away in hot countries, perhaps reflecting the shorter time it takes for food to spoil in **higher temperatures, a lack of access to refrigeration** and higher consumption of fresh food with more inedible parts.
  - **Personal preferences:** Apart from natural causes, personal preferences also contribute to wasted food.
  - **Poverty:** Poorer households also tend to throw away food. This may reflect many factors, including **a lack of access to adequate refrigeration and storage, reliance on lower quality food and a lack of time** to make nutritious meals.
- **Case Study: Required Approach**
  - **Food Waste Collection**: In the UK, the government has announced £295m of funding for local councils to organise **weekly collections of food waste**, aimed at composting and preventing food waste from going to landfill, where its rotting generates methane, a powerful greenhouse gas.
    - Collecting food waste separately can encourage people to reform their habits, as they see clearly how much of what they buy is going into the bin.
  - **Food rescue scheme**: In Johannesburg, South Africa, a food rescue scheme is channelling waste foods to those who need it most during the pandemic.
  - **Food banking** is also an important and unique model in reducing food loss and waste, because food banks not only work with farms, manufacturers, retailers and food services to rescue wholesome food, but they also make sure that food ends up on the tables of people facing food insecurity.
- **Key-highlights of the Report**
  - **Report Title:** Food Waste Index Report. It tracks the progress of countries attempting to halve food waste by 2030.
  - **Over USD 1 trillion worth of food**(which is nearly one-fifth of the produce available on the global market) was thrown away by businesses and households when about 800 million people were going hungry.
  - **Food loss in supply chain**: These figures exclude an additional 13% of food that is lost in the food supply chain, between harvest and market, often from rejection or spoilage of edible food.

- Few countries have plans in place to reduce food waste and most fail to include it in their proposals for reducing carbon emissions.
- Around the world, about 79kg of food is wasted per person annually. But in some countries, including the UK, Australia, Indonesia, Mexico and South Africa, food waste has been cut substantially since 2007. Japan has cut its food waste by nearly a third, and the UK by about 18%.

- **Indian household wastage**
  - 78.2 - million tonnes every year
  - 233.9 million - of world's 783 million population (Global Hunger Index 2023)
  - Ranked 111 - In 125 countries, indicating a hunger severity level.

5. Conflict Between States and their Governors in the Matters of Law making
GS 2 (Governance)

- **Why in News:**
  - The Kerala government recently approached the SC saying the President had withheld assent to 4 Bills passed by the state (but reserved by the Governor for consideration by the President) while disclosing no reason whatsoever.
  - This is the newest chapter in the conflict between states ruled by opposition parties, and their Governors, who are appointed by the President on the Centre's advice.


Governor's assent to state laws

Kerala has moved the SC against the withholding of assent to Bills by the President and Governor. Over the past year, several Opposition-ruled states have approached the court over the same issue

AJOY SINHA KARPURAM
NEW DELHI, MARCH 28

THE KERALA government last week approached the Supreme Court saying President Draupadi Murmu had withheld assent to four Bills passed by the state "while disclosing no reason whatsoever", and that Governor Arif Mohammed Khan had withheld assent to seven Bills — some for as long as two years — before referring them to the President. Kerala, which is ruled by the Left Democratic Front, urged the top court to declare the referring of state Bills to the President as "unconstitutional and lacking in good faith".

This is the newest chapter in the conflict between states ruled by opposition parties, and their Governors, who are appointed by the President on the Centre's advice. Over the past year, multiple states including Kerala, Tamil Nadu, Telangana and Punjab, have approached the SC about Governors withholding assent to Bills for long periods of time.

Governor's role in lawmaking

Article 200 of the Constitution states that after a Bill has been passed by the state legislature, "it shall be presented to the Governor". The Governor, then, has three options: give assent to the Bill, withhold assent, or reserve the Bill for consideration by the President.

For situations where assent is withheld, Article 200 states that "the Governor may, as soon as possible after the presentation to him...return the Bill...together with a message requesting that the House or Houses will reconsider the Bill or any specified provisions thereof...and if the Bill is passed again by the House or Houses with or without amendment and presented to the Governor for assent, the Governor shall not withhold assent therefrom."

The latter part of the proviso clearly gives the state government the final say on enacting legislation. But it is the part saying "as soon as possible after the presentation to him", which has led to states approaching the SC. Since the article does not provide a timeline, Governors have often withheld assent to Bills for extended periods, effectively leaving them, and the state legislature, in limbo.

President's role in the process

In situations where a Bill is sent to the President for consideration, the President can either give or withhold assent. This is dealt with in Article 201.

If assent is withheld, the President requests the Governor to return the Bill to the state legislature for reconsideration. The state government then has six months to reconsider the Bill — failing to do so results in its lapsing.

If the Bill is passed once again by the state legislature, it must be sent back to the President who, unlike the Governor, is under no obligation to give assent when assessing the reconsidered Bill. This is the only situation in which state governments do not have the final say in their own lawmaking process.

Issues raised by Kerala

The Kerala government's petition terms the actions of Governor Khan and President Murmu as "manifestly arbitrary", i.e., an action that is unreasonable, irrational and which, as a result, violates the right to equality.

The petition argues that the decision to keep Bills pending violates Article 200 by not making a decision "as soon as possible". As such, the Governor had "subverted the functioning" of the state legislature and "rendered its existence itself ineffective and otiose" (serving no practical purpose), the government has said.

On President Murmu's decision to withhold assent to four of the Bills referred to her, the Kerala government has argued that this was done without giving "any reason whatsoever". This, it claims, is in violation of Article 201, which states that the President is required to return the Bill with a message containing "such amendments as he may recommend".

Situation in other states

In November last year, the Supreme Court expressed "serious concern" at Tamil Nadu Governor R N Ravi's decision to withhold assent to 10 Bills passed by the DMK-led state legislature, some of which were pending since January 2020. Three days later, all 10 Bills were returned for reconsideration, with no reasons given for the decision.

Tamil Nadu's DMK government and Governor Ravi have been at loggerheads for a long time. Most recently, the Supreme Court criticised the Governor for refusing to appoint K Ponmudy as the state's Minister for Higher Education, despite the apex court staying his conviction in a case. The state government has earlier approached the Supreme Court to address the same issue.

Kerala Governor Arif Mohammed Khan with Chief Minister Pinarayi Vijayan. File

Question of timeline for assent

In November 2023, the SC was to decide if a Governor could withhold assent to Bills passed by the state legislature if he believed that the session where the Bills were passed was not convened properly. The Governor of Punjab, Banwarilal Purohit, had refused to give assent to four Bills passed by the Punjab Assembly, claiming that he had received legal advice that led him to believe that the Bills were passed in breach of law and procedure. However, the Bills were not remitted to the Assembly for reconsideration.

The court held that the Governor did not have the power to "thwart the normal course of lawmaking by the State legislatures", and expressed "serious concern" at Tamil Nadu Governor R N Ravi's decision to withhold assent to 10 Bills passed by the state legislature, some of which were pending since January 2020. Three days later, all 10 Bills were returned for reconsideration, with no reasons given for the decision.

Tamil Nadu's DMK government and Governor Ravi have been at loggerheads for a long time. Most recently, the Supreme Court criticised the Governor for refusing to appoint K Ponmudy as the state's Minister for Higher Education, despite the apex court staying his conviction in a case. The state government has earlier approached the Supreme Court to address the same issue.

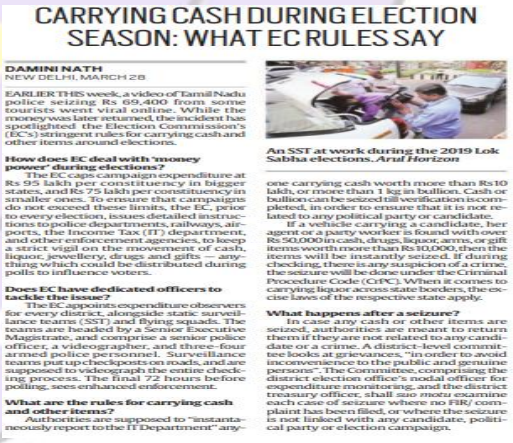
  - **Article 200 of the Constitution** states that after a Bill has been passed by the state legislature, "it shall be presented to the Governor".
  - **The Governor, then, has 3 options:** give assent to the Bill, withhold assent, or reserve the Bill for consideration by the President.
  - **For situations where assent is withheld**, Article 200 states that the Governor may (as soon as possible) return the Bill together with a message requesting that the House or Houses will reconsider the Bill or any specified provisions thereof.
  - **If the Bill is passed again** by the House or Houses with or without amendment and presented to the Governor for assent, **the Governor shall not withhold assent therefrom**.
  - The latter part of the proviso **clearly gives the state government the final say** on enacting legislation.
  - But it is the part saying "**as soon as possible after the presentation to him**", which has led to states approaching the SC.
    - **Since the article does not provide a timeline**, Governors have often withheld assent to Bills for extended periods, effectively leaving them and the state legislature in limbo.
- **President's Role in the Law making Process of the State:**
  - **This is dealt with in Article 201.** In situations where a Bill is sent to the President for consideration, **the President can either give or withhold assent**.
  - **If assent is withheld**, the President requests the Governor to return the Bill to the state legislature for reconsideration.
  - The state government then **has 6 months to reconsider the Bill** - failing to do so results in its lapsing.
  - If the Bill is passed once again by the state legislature, it **must be sent back to the President.** Unlike the Governor, **the President is under no obligation** to give assent when assessing the reconsidered Bill.
  - This is the only situation in which **state governments do not have the final say** in their own lawmaking process.
- **Petition of the Kerala Govt against the Governor and the President:**
  - The Kerala government's petition terms the actions of Governor and President as "**manifestly arbitrary**", i.e., an action that is **unreasonable, irrational and which violates the right to equality.**
  - The petition argues that **the decision to keep Bills pending violates Article 200** by not making a decision "as soon as possible".
  - **The Governor had "subverted the functioning"** of the state legislature and "rendered its existence itself ineffective".

- The President's decision to withhold assent to 4 of the Bills referred to her was done **without giving "any reason whatsoever"**.
  - **This is in violation of Article 201**, which states that the President is required to return the Bill with a message containing "such amendments as he may recommend".

- **Situation in Other States:**
  - The SC (last year) expressed "serious concern" at **Tamil Nadu Governor's** decision to withhold assent to 10 Bills that had been enacted by the state legislature, some of which were pending since 2020.
    - Three days later, all 10 Bills were returned for reconsideration, with no reasons given for the decision
  - The SC also criticised the TN Governor for **refusing to appoint K Ponmudy as the state's Minister for Higher Education**, despite the apex court staying his criminal conviction.
  - **The Telangana government** also approached the SC (in March 2023) over the former Governor's refusal to give assent to 10 Bills that were passed by its legislative assembly.
    - She gave her assent shortly after.
  - **The Governor of Punjab** had refused to give assent to four Bills passed by the Punjab Assembly, claiming that the Bills were passed in breach of law and procedure.
- **SC Ruling and Way Ahead to Reduce Conflict:**
  - In (November) 2023, the SC held that **the Governor did not have the power to "thwart the normal course of lawmaking by the State Legislatures".**
    - The phrase "as soon as possible" in Article 200 means that **the Governor cannot be at liberty to keep the Bill pending indefinitely** without any action whatsoever.
    - If the Governor decides to withhold assent, **s/he is bound to follow the procedure provided** in the Article 200
  - Though the court spelled out the obligations of the Governor in the lawmaking process, **it stopped short of providing a definitive timeline for the Governor to make the decision.**
    - The Kerala government has now approached the SC to address the same issue.

6. EC rules regarding cash carrying limit during election
GS 2 (Elections)

- **Why in News:**
  - Recently, a video of Tamil Nadu police seizing Rs 69,400 from some tourists went viral on social media.
  - While the money was later returned to the couple in question, the incident has brought to limelight the Election Commission's (EC's) stringent rules for carrying cash and other items around elections.



CARRYING CASH DURING ELECTION SEASON: WHAT EC RULES SAY

DAMINI NATH
NEW DELHI, MARCH 28

EARLIER THIS week, a video of Tamil Nadu police seizing Rs 69,400 from some tourists went viral online. While the money was later returned, the incident has spotlighted the Election Commission's (EC's) stringent rules for carrying cash and other items around elections.

How does EC deal with 'money power' during elections?

The EC caps campaign expenditure at Rs 95 lakh per constituency in bigger states, and Rs 75 lakh per constituency in smaller ones. To ensure that campaigns do not exceed these limits, the EC, prior to every election, issues detailed instructions to police departments, railways, airports, the Income Tax (IT) department, and other enforcement agencies, to keep a strict vigil on the movement of cash, liquor, jewellery, drugs and gifts — anything which could be distributed during polls to influence voters.

Does EC have dedicated officers to tackle the issue?

The EC appoints expenditure observers for every district, alongside static surveillance teams (SST) and flying squads. The teams are headed by a Senior Executive Magistrate, and comprise a senior police officer, a videographer, and three-four armed police personnel. Surveillance teams put up checkposts on roads, and are supposed to videograph the entire checking process. The final 72 hours before polling, sees enhanced enforcement.

What are the rules for carrying cash and other items?

Authorities are supposed to "instantaneously report to the IT Department" any-one carrying cash worth more than Rs 10 lakh, or more than 1 kg in bullion. Cash or bullion can be seized till verification is completed, in order to ensure that it is not related to any political party or candidate.

If a vehicle carrying a candidate, her agent or a party worker is found with over Rs 50,000 in cash, drugs, liquor, arms, or gift items worth more than Rs 10,000, then the items will be instantly seized. If during checking, there is any suspicion of a crime, the seizure will be done under the Criminal Procedure Code (CrPC). When it comes to carrying liquor across state borders, the excise laws of the respective state apply.

An SST at work during the 2019 Lok Sabha elections. *Arul Horizon*

What happens after a seizure?

In case any cash or other items are seized, authorities are meant to return them if they are not related to any candidate or a crime. A district-level committee looks at grievances, "in order to avoid inconvenience to the public and genuine persons". The Committee, comprising the district election office's nodal officer for expenditure monitoring, and the district treasury officer, shall *suo motu* examine each case of seizure where no FIR/ complaint has been filed, or where the seizure is not linked with any candidate, political party or election campaign.

- **Measures to curb money power**
  - **Strict vigil on the movement of cash, liquor etc.**
    - Before each election, the Election Commission provides clear directions to the police, railways, airports, the Income Tax department, and other enforcement agencies.
    - They are instructed to closely monitor the movement of cash, liquor, jewellery, drugs, and gifts—anything that could be given out during the polls.
  - **Appointment of expenditure observers**
    - EC also appoints expenditure observers for every district, alongside static surveillance teams and flying squads.
    - The flying squads comprise a Senior Executive Magistrate as the head, a senior police officer, a videographer, and three or four armed police personnel.
    - These teams are provided with a dedicated vehicle, a mobile phone, a video camera, and necessary documents required for seizing cash or goods.
  - **Role of surveillance teams**
    - Surveillance teams put up check posts on roads, video graphing the entire checking process.
    - Their location is changed frequently to maintain an element of surprise.
    - While check posts are supposed to be set up from the date of announcement of polls, the final 72 hours before polling will see enhanced enforcement.
- **Why EC takes measures to curb money power?**

- The EC's efforts are meant to keep an eye on campaign expenditure by candidates. This is done to provide a level playing field to the candidates contesting elections.
  - The ruling governments have an advantage before elections when it comes to publishing advertisements that disturb the level playing field.
- Campaign expenditure by candidates is capped at:
  - For Parliamentary Constituencies
    - Rs 95 lakh per constituency in bigger states, and Rs 75 lakh per constituency in smaller ones.
  - For Assembly Constituencies
    - Rs 40 lakh per constituency in bigger states, and Rs 28 lakh per constituency in smaller ones

- **What are the rules for carrying cash and other items?**
  - **Rules for Airports**
    - According to EC instructions, the CISF or police at airports must immediately inform the Income Tax Dept if anyone is carrying cash exceeding Rs. 10 lakh or more than 1 kg of bullion.
    - The Income Tax Department will then verify the situation according to tax laws and take action if a satisfactory explanation is not provided.
    - This means that cash or bullion can be seized till verification is completed, in order to ensure that it is not related to any political party or candidate.
  - **At check-posts controlled by the surveillance team**
    - At check-posts, if over Rs. 10 lakh cash is found in a vehicle without any suspicion, it will not be seized.
    - Instead, the Income Tax authority will be informed for necessary action
  - **Rules for vehicle carrying a candidate, or his/her agent or party worker**
    - If a vehicle with a candidate, agent, or party worker has more than Rs. 50,000 cash or items like drugs, liquor, arms, or gifts worth over Rs. 10,000, they will be confiscated.
    - If any suspicion of a crime arises during checking, the seizure will follow the Criminal Procedure Code (CrPC), and an FIR will be lodged within 24 hours.
- **What happens after a seizure?**
  - **Seized cash/items are returned**
    - In case any cash or other items are seized, authorities are meant to return them if they are not related to any candidate or a crime.
      - Once seized, the money will be deposited as instructed by the Court.
      - A copy of the seizure of cash exceeding Rs. 10 lakhs will be sent to the Income Tax authority handling the matter.
  - **Grievance redressal committee**
    - A district-level committee will look at grievances in order to avoid inconvenience to the public and genuine persons.
    - The Committee shall suo-motu examine each case of seizure:
      - where no FIR/complaint has been filed, or
      - where the seizure is not linked with any candidate, political party or election campaign.
    - Moreover, it shall take immediate steps to return any cash seized.

DO NOT COPY

30th March, 2024

1. Bonds, big money and an imperfect democracy

Recent events of importance

Bonds, big money and an imperfect democracy

The electoral bonds scheme that has been declared unconstitutional by the Supreme Court of India, was supposed to end the financing of elections with black money. It was hoped that politics would have been transformed with great benefit to the nation. After all, illegal finance results in the control of politics passing into its hands – and that subverts democracy. The Supreme Court's verdict is relevant hence to the way politics is conducted in India. Elections continue to be fought with an increasingly larger amount of illegal funds being spent by political parties and candidates.

Gap between the professed and the actual

The lesson is clear. If politics is undemocratic in content, no patchwork such as electoral bonds can make it democratic. Indian politics requires large scale of money since it has been largely hollowed out of its content and become a means for capturing power and for serving the interests of those who finance their elections, hardly represent the interests of their constituency. Vested interests, increasingly, have got themselves elected. What they profess and what they actually do are different.

This gap between the professed and the actual undermines democracy since government is no longer an entity 'of the people, by the people and for the people'. The vast majority of people see that the gains from the implementation of policies while vested interests corner most of the gains from development. It is in the design of the policies – the packaging is cleverly done to make policies appear to be in the national interest. In fact, they are designed to serve vested interest. They take precedence over the interests of the marginalised sections.

For instance, if poverty, unemployment, ill health and poor educational standards persist, these are said to be natural and are left to market forces. Concessions are granted to businesses to invest in areas which yield high profits. This results in the inability of the poor to afford them while simultaneously leading to growing disparities. Concessions also reduce the availability of resources with the public sector to the detriment of the marginalised sections. At the requisite level, inadequate public services hurt the interests of the marginalised sections. For instance, the recent Annual Status of Education Report (ASER) shows that 40% of children in the age group 14-18 years in rural India cannot read or write or do the level of math of standard two. They cannot acquire higher skills which could enable them to end their poverty. So, why does education not receive high priority? That is because it is not in the interest of development. resources are preempted by the elite.

Businesses, not satisfied with the gains that they make legally, resort to making them illegally using undeclared incomes which constitute the black economy. Illegality is systematic and systemic. But, that is only possible if policymaker and executive become party to the subversion of democracy. This is the road that underlies black income generation.

It requires weak accountability by government personnel, which is at the root of the weakness of democracy in India and its hollowing out. This is the reason why the culture of impunity is so prevalent in society which leads to the individual's willingness to bow before authority rather than standing up to it. This is visible in the institutions that are supposed to uphold democracy.

Money and the election

Voting is often not based on a candidate's performance but on attributes such as caste, community and region. To win votes, political parties often and also the electorate along those lines, have to spend money to woo the constituents bribed just prior to an election. Campaigning is conducted by paid workers and crowds are mobilised to attend rallies and meetings using money, transportation and food. All this requires a lot of money – for more than the permitted election expenditure limit of ₹95 lakh. It is an open secret among political parties and in the know say that it is more like ₹95 crore as the amount required. Thus, ₹49 crore a candidate has to be mobilised through illegal funds. Over and above this sum, a party spends large sums to mobilise voters in the name of social mobilisation – again, most of it from illegal funds.

It is in this milieu that the electoral bonds scheme was introduced. The argument was that this scheme would enable political parties to get legitimate funds and that their dependence on illegal funds would decline. But, right from the start, it was clear that the scheme was a fraud since the electorate would not get to know who was financing a political party and why – for legitimate or illegal reasons. It enabled a bribe to be given in white for favours done. Since big sums of money are involved in elections, many of their influence and manipulations were expected to increase. The bonds could only be given to a political party and not to individuals. So, the individual continued to be in need of illegal funds. The bonds could be used by parties for all kinds of purposes and not necessarily for elections, such as setting up offices or destabilising Opposition-led governments. Thus, the name electoral bonds was inappropriate.

Shell companies could be used, opening the door for foreign firms to make donations. Even though the bonds had to be encashed within 15 days, they could be traded for 16 days and then given to the intended party. So, the entity buying the bonds and the party receiving it remain anonymous. In this case, the trail of funds and the identity of the donor were obscured.

Many of the donors did not realise that their identity would be revealed were the judiciary to declare the scheme unconstitutional. Only the experienced ones covered their tracks by making donations through shell companies or in cash. Their names may never be known. Finally, the contributions made by the BJP to the Opposition are remaining the major source of funding for political parties. In effect, the electoral bonds scheme was only an additional avenue for funds that political parties received.

Cronism uncovered

Even though the electoral bonds formed a fraction of the total funding requirement of political parties, data now made available unravels the character of Indian politics and elections. The data show that funds were given to the ruling party in order to get favours, particularly to escape prosecution for wrong-doing, and as investment for the future. Under the last category, even political parties not in power receive funds. The first category enables a crony capitalist to get a favourable interpretation of policy or preferential treatment in policy implementation as in for example needing environmental clearance or getting a contract.

The second category is one where there is no quid pro quo. Here, even though there are, some violation of rules can be detected and prosecution initiated by agencies such as the Enforcement Directorate. The case can then drag on so that the process becomes the punishment. There are businesses that cut corners and it is easy to have them under pressure. There may be other businesses that are facing such harassment. The data provided by the State Bank of India shows the quid pro quo in the case of some of the donations made. More analysis could expose the money trail and the link with policy implementation. This will also expose the criminality.

In a well-functioning democracy, where the political leadership is accountable, fighting an election would need neither big funding nor unaccounted money. In such a case, there would be no need of having to spend more than the expenditure limits set.

The electoral bonds scheme only highlights the growing weakness of Indian democracy. It could have been an ideal solution but, had it been that it would not have been required, it seems to have been designed to weaken the Opposition and democracy.

- **Why in News:** The Supreme Court of India's recent ruling declared the **electoral bonds scheme unconstitutional**, raising concerns about its effectiveness in addressing the issue of black money in politics.
- **Gap between the professed and the actual:**
  - **Failed attempt:** The electoral bonds scheme failed to bridge the divide between the stated objective of curbing illegal financing in elections and the actual practices prevalent in Indian politics.
  - **Promoting financing backers:** Despite its implementation, political leaders continue to prioritize the interests of financial backers over the welfare of their constituents.
- **Money and the election:**
  - **Persistent challenges:** The introduction of electoral bonds did not deter the flow of illegal funds into election campaigns, highlighting the persistent challenges in campaign financing and political influence.
  - **Misuse and manipulation**: The scheme's opacity facilitated potential misuse and manipulation, undermining efforts to promote transparency and accountability in electoral processes.
- **Cronyism uncovered:**
  - **Cronyism and corruption:** Recent revelations regarding the use of electoral bonds have exposed the extent of cronyism and corruption in Indian politics, with funds exchanged for favors from policymakers and to evade legal scrutiny.
  - **Need of reforms**: The scheme's failure underscores the urgent need for comprehensive reforms to address systemic issues and uphold the integrity of democratic institutions.

2. Validity of FCRA registration of NGOs extended

GS 2 (Governance)

Govt. extends validity of FCRA registration of NGOs till June 30

The Hindu Bureau
NEW DELHI

The Union Home Ministry on Thursday extended the validity of the Foreign Contribution (Regulation) Act (FCRA) registration of non-government organisations (NGOs) and associations till June 30.

Registrations of many NGOs are up for renewal since September 29, 2020. The registration, mandatory to receive foreign funds, is renewed every five years.

The Ministry has extended the validity of NGOs at least nine times since 2020 as the applications could not be processed within the stipulated time frame.

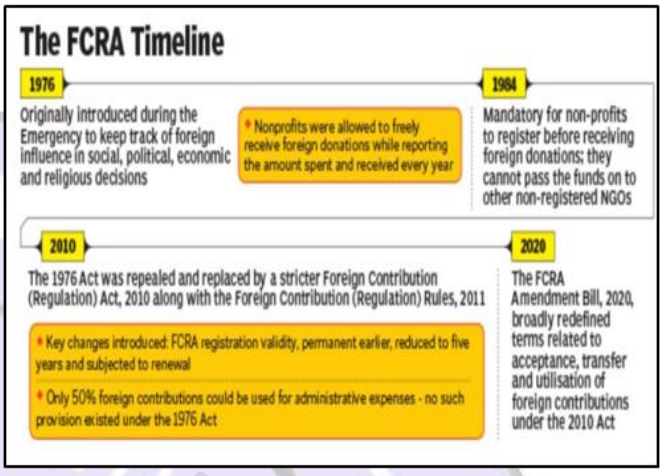
On Thursday, the Ministry, in an order, said the registration certificates of entities whose validity was extended till March 31 and "whose renewal application is pending will stand extended till June 30, 2024, or till the date of disposal of renewal application, whichever is earlier".

The Ministry said all FCRA-registered associations should note that in case of refusal of the application for renewal of registration, the validity of the certificate shall be deemed to have expired on the date of refusal of the application and the association or the NGO shall not be eligible either to receive the foreign contribution or utilise the foreign contribution received.

The order said that the registration of FCRA entities whose five-year validity period is expiring between April 1 and June 30 this year and the NGOs that have applied for renewal before the expiry of the registration will also stand extended till June 30 "or till the date of disposal of renewal application, whichever is earlier."

- **Why in News:**
  - The Ministry of Home Affairs (MHA) extended the validity of Foreign Contribution (Regulation) Act (FCRA) registration of NGOs and associations till June 30.
  - The Ministry has extended the validity of NGOs at least nine times since 2020 as the applications could not be processed within the stipulated time frame.
  - Registrations of many NGOs are up for renewal since September 29, 2020. The registration, mandatory to receive foreign funds, is renewed every five years.
- **What is the Foreign Contribution (Regulation) Act (FCRA)?**
  - **Background:**
    - During the Emergency in **1976**, the FCRA was enacted in response to concerns that foreign powers were interfering in Indian affairs by pumping money into the country through independent organisations.
    - The law sought **to regulate foreign donations to individuals and organisations in order for them to function** in accordance with the values of a sovereign democratic republic.
    - **In 2010**, the FCRA was amended to consolidate the law on the use of foreign funds and the Foreign Contribution (Regulation) Rules (FCRR), 2011, were notified.
      - It is implemented by the **Ministry of Home Affairs (MHA),** which can prohibit the use of foreign funds for any activities detrimental to national interest.

- The law was amended again in **2020**, giving the government tighter control and scrutiny over the receipt and use of foreign funds by NGOs.



- **Salient features:**
  - The FCRA requires every person or NGO seeking to receive foreign donations to be:
    - Registered under the Act.
    - To open a bank account for the receipt of the foreign funds in State Bank of India, Delhi.
    - To utilise those funds only for the purpose for which they have been received and as stipulated in the Act.
    - **To file annual returns** and must not transfer the funds to another NGO.
  - The Act prohibits the receipt of foreign funds by
    - Candidates for elections,
    - Journalists or newspaper and media broadcast companies,
    - Judges and government servants,
    - Members of legislature and political parties or their office-bearers, and
    - Organisations of a political nature.
- **Registration under FCRA:**
  - NGOs seeking foreign funding must submit an online application in a prescribed format, along with the necessary documentation.
  - Individuals or organisations with specific **cultural, economic, educational, religious, or social programs** are eligible for FCRA registration.
  - Following the NGO's application, the **MHA** conducts background checks on the applicant through the Intelligence Bureau and processes the application accordingly.
  - The MHA must approve or deny the application **within 90 days.**
  - FCRA registration is valid for **5 years** after it is granted. NGOs are expected to apply for renewal **within 6 months** of their registration expiry date.
- **Cancellation of registration:**
  - The government reserves the right to revoke any NGO's FCRA registration **if it discovers a violation of the Act.**
  - Registration can be revoked if –
    - The NGO has not engaged in any reasonable activity in its chosen field for the benefit of society **for two consecutive years** or if it has become defunct.
    - In the opinion of the Central Government, it is necessary in the public interest to revoke the certificate, etc.
    - An audit uncovers irregularities in an NGO's finances, such as the misutilisation of foreign funds.
  - No cancellation order can be issued unless the person or NGO involved has been given a reasonable opportunity to be heard.
  - Once an NGO's registration is cancelled, **it is ineligible for re-registration for 3 years.**
  - The ministry also has the authority to suspend an NGO's registration for 180 days pending an investigation and to freeze its funds.
  - All government orders can be challenged in the **High Court.**

3. Reboot of the GeM
GS 2 (Governance)

- **Why in News:** The Government e Marketplace (GeM) plans to seek the Centre's approval to enable work contracts for construction and building projects to also be bid out through the platform with a transparent monitoring mechanism to assess the progress in such contracts.
- **Role of GeM in public procurement in India**
  - **Transparent process:** GeM endeavours to make public procurement process transparent, efficient and inclusive.
  - **Inclusiveness:** It drives inclusiveness and ease of doing business (EoDB)

'GeM may offer works contracts'

The procurement portal wants works contracts for construction projects to also be bid out through the platform with a transparent monitoring mechanism; procurements through the GeM platform this year rises past the ₹4 lakh crore mark

The Hindu Bureau
NEW DELHI

The Government e-Marketplace (GeM), an online platform for public procurement of goods and services, plans to seek the Centre's approval to enable work contracts for construction and building projects to also be bid out through the platform with a transparent monitoring mechanism to assess the progress in such contracts.

This is part of a broader reboot of the GeM platform, which is now used for everything from critical defence procurements to services like aircraft chartering and printing of election-related material, its chief executive officer P. K. Singh said on Friday.

The planned upgrade includes a revamp of its online interface to switch to an open Application Programming Interface (API) architecture, that will allow individual departments, States, and local bodies to create customised micro-procurement portals with multi-lingual interfaces and flexibilities for local rules.

On Thursday evening, a service procurement order from the State Bank of India worth about ₹400 crore pushed the total gross merchandise value of procurements done through the GeM platform this year beyond the ₹4 lakh crore mark–double the ₹2.01 lakh crore recorded in 2022-23.

On work contracts, Mr. Singh said the tendering process is often time-consuming, starting with the need to draft Requests for Proposals that can take six months to a year, and the tendering process often attracts only local contractors and also faces delays.

If the GeM is allowed for such projects, a contractor in Kerala can bid for work in Rajasthan and the project's progress can be monitored online. Milestone-linked payments released electronically which save contractors from having to pursue officers, and post-contract management features can also be included, the GeM CEO said.

Better practices

GeM says it wants to expedite the tendering process for public works contracts and attract contractors across India

with the government.

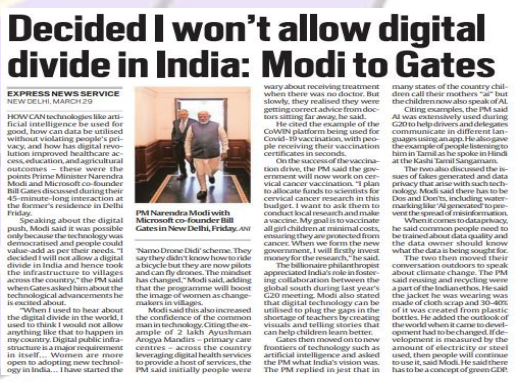
- **Standardization:** It provides for standardization of processes backed by the regulatory framework
- **Automated system:** It is a fully automated system enabled through advances technologies.
- **Efficiency:** As an end-to-end online and integrated portal, GeM increases efficiency in public procurement by eliminating manual interventions at various stages of the procurement process.
- **Minimum Government, Maximum Governance**: The platform has been effectively contributing to the government's commitment of "**Minimum Government, Maximum Governance".**

- **Need of GeM in public procurement**
  - The public procurement process involves several steps, starting with the government publishing a tender. Interested sellers participate, and once the participation deadline passes, the government (buyer) evaluates the bids to determine eligibility. The contract is then awarded to the bidder offering the lowest rate.
  - However, this process wasn't always as **straightforward and transparent** as it needed to be, which led to the **introduction of the Government e-Marketplace (GeM)**.
- **About GeM**
  - **Launched in:** 2016
  - GeM is an online platform for public procurement of goods and services.
  - The platform is now used for everything from critical defence procurements to services like aircraft chartering and printing of election-related material, envisaged for the coming year.
  - **GeM Statistics:** It offers over 12,000 product and 320 service categories generally sought by central and State government departments, and has even onboarded 90,000 Gram Panchayats as buyers.

4. Digital Divide and India

Recent events of importance

- **Why in News:** During his interaction with Gates, PM Modi covered a spectrum of critical topics ranging from AI to India's impressive advancements in digital technology. Pointing to technology's role in sectors like agriculture, education, and healthcare, Modi ruled out a digital divide in India.



Decided I won't allow digital divide in India: Modi to Gates

EXPRESS NEWS SERVICE
NEW DELHI, MARCH 29

HOW CAN technologies like artificial intelligence be used for good, how can data be utilised without violating people's privacy, and how has digital revolution improved healthcare access, education, and agricultural outcomes – these were the points Prime Minister Narendra Modi and Microsoft co-founder Bill Gates discussed during their 45-minute-long interaction at the former's residence in Delhi Friday.

Speaking about the digital push, Modi said it was possible only because the technology was democratised and people could value-add as per their needs. "I decided I will not allow a digital divide in India and hence took the infrastructure to villages across the country," the PM said when Gates asked him about the technological advancements he is excited about.

"When I used to hear about the digital divide in the world, I used to think I would not allow anything like that to happen in my country. Digital public infrastructure is a major requirement in itself... Women are more open to adopting new technology in India... I have started the

PM Narendra Modi with Microsoft co-founder Bill Gates in New Delhi, Friday. ANI

'Namo Drone Didi' scheme. They say they didn't know how to ride a bicycle but they are now pilots and can fly drones. The mindset has changed," Modi said, adding that the programme will boost the image of women as change-makers in villages.

Modi said this also increased the confidence of the common man in technology. Citing the example of 2 lakh Ayushman Arogya Mandirs – primary care centres – across the country leveraging digital health services to provide a host of services, the PM said initially people were wary about receiving treatment when there was no doctor. But slowly, they realised they were getting correct advice from doctors sitting far away, he said.

He cited the example of the CoWIN platform being used for Covid-19 vaccination, with people receiving their vaccination certificates in seconds.

On the success of the vaccination drive, the PM said the government will now work on cervical cancer vaccination. "I plan to allocate funds to scientists for cervical cancer research in this budget. I want to ask them to conduct local research and make a vaccine. My goal is to vaccinate all girl children at minimal costs, ensuring they are protected from cancer. When we form the new government, I will firstly invest money for the research," he said.

The billionaire philanthropist appreciated India's role in fostering collaboration between the global south during last year's G20 meeting. Modi also stated that digital technology can be utilised to plug the gaps in the shortage of teachers by creating visuals and telling stories that can help children learn better.

Gates then moved on to new frontiers of technology such as artificial intelligence and asked the PM what India's vision was. The PM replied in jest that in many states of the country children call their mothers "ai" but the children now also speak of AI.

Citing examples, the PM said AI was extensively used during G20 to help drivers and delegates communicate in different languages using an app. He also gave the example of people listening to him in Tamil as he spoke in Hindi at the Kashi Tamil Sangamam.

The two also discussed the issues of fakes generated and data privacy that arise with such technology. Modi said there has to be Dos and Don'ts, including watermarking like 'AI generated' to prevent the spread of misinformation.

When it comes to data privacy, he said common people need to be trained about data quality and the data owner should know what the data is being sought for.

The two then moved their conversation outdoors to speak about climate change. The PM said reusing and recycling were a part of the Indian ethos. He said the jacket he was wearing was made of cloth scrap and 30-40% of it was created from plastic bottles. He added the outlook of the world when it came to development had to be changed. If development is measured by the amount of electricity or steel used, then people will continue to use it, said Modi. He said there has to be a concept of green GDP.

- **Trends of Digital Divide**
  - **Gap:** There exists a grave digital divide in India wherein gaps exist in the usage of the internet and access to digital infrastructure based on gender, area of residence whether rural-urban, caste, or age.
  - **Gender inequality:** Men have greater access to the internet and greater ownership of mobile phones. However, it is important to note that there have been some improvements in women's access to cell phones between 2015–16 and 2019–21 which demonstrates that the efforts to reduce the digital divide are steadily coming into fruition.
  - **Rural-Urban divide**: While there might be small variances, urban men are much better off than others both in terms of access to the internet and ownership of phones when compared to urban women, rural men, and rural women.
- **Implications of digital divide**
  - **Further increasing inequality**: The inability to access technology has the potential to increase existing social exclusions and deprive individuals of essential resources.

- **Impact on employment:** Digital literacy is no longer a luxury but a prerequisite for active participation in today's job market.
- **Impact on every aspect of life:** With the increasing dependence on digital technologies and the internet, the digital divide has ramifications on education, health, mobility, safety, financial inclusion, and every other imaginable aspect of life.

- **Way forward**
  - Whilst several government initiatives like the **National Digital Literacy Mission and the Pradhan Mantri Gramin Digital Saksharta Abhiyan** have been introduced to increase digital literacy, there is a need to ramp up such efforts.
  - It is also important to improve the existing digital infrastructure to ensure physical access to ICT to different sections of society. At the same time, underprivileged groups need to be motivated to incorporate technology into their daily lives and digital skills need to be imparted to allow such a change.
- **Statistics of Digital India**
  - According to **ICRIER's State of India Digital Economy 2024 report**, while "India as a nation is highly digitalised, the average Indian is not".
  - **Nearly 48 % of Indians do not access the internet** and the quality of fixed line internet services does not match up to other G20 countries.
  - According to IAMAI's internet in India report 2023, at 759 million, **52% Indians have access to the internet.**
  - **India's gender gap** in internet connectivity is, at 10%, higher than the world average of 9%, and the rural-urban divide is at 58%, higher than the world average of 49%.
  - While the digital divide along gender is large, it is declining.

5. Cyber Slavery
GS 2 (Social Issues)

- **Why in News:** Cyber slavery is emerging as a form of organized crime of unprecedented severity and scale. Over 5,000 Indian nationals are reported to be held captive in Cambodia, coerced into committing cyber frauds targeting individuals in India.

'Cyber slavery': 75 Indians rescued in Cambodia, says official

MAHENDER SINGH MANRAL
NEW DELHI, MARCH 29

AROUND 130 complaints of Indians trapped in Cambodia have been received by the Indian embassy in Phnom Penh and as many as 75 people, who were forced to carry out cyber frauds there, have been rescued so far, said Avaran Abraham, Second Secretary (Consular and Diaspora) on Friday.

Over 5,000 Indians are allegedly being held against their will in Cambodia and being forced to carry out cyber frauds on people back home, said sources. According to government estimates, the "fraudsters" have allegedly duped people in India of at least Rs 500 crore over the last six months. A source said those trapped in Cambodia were forced to extort money from people by pretending to be law enforcement officials, saying they had found some suspicious materials in their parcels.

Earlier this month, the Ministry of Home Affairs (MHA) held a meeting with officials of the Ministry of External Affairs (MEA), Ministry of Electronics and Information Technology (MeitY), Indian Cyber Crime Coordination Centre (I4C) and other security experts to draw up a strategy to rescue the Indians trapped in Cambodia.

Abraham told *The Indian Express* over phone that they are getting four to five complaints on an average almost regularly from different parts of Cambodia. "The moment we get a request we inform the police. We also guide them on how to travel to the embassy, and since they are in trauma we even counsel them."

"The problem which should be highlighted is that when these people are being rescued and getting back to India, invariably, they are not filing an FIR with the police. It is only when FIRs are filed, the Indian police will be able to get to these agents/companies," he said.

Abraham said people who are stranded in these companies approach the embassy, which then through local Cambodian authorities tries to rescue them. "In the first three months of this year, around 130 people have approached us through different helplines. Out of them, more than 75 people have been rescued since January 1. This figure also includes those who have escaped themselves," he said.

FULL REPORT ON www.indianexpress.com

- **Factors responsible for growth of cybercrime**
  - **Internet:** The internet allows criminals to operate seamlessly across borders, accessing a marketplace of victims anywhere, anytime and at scale. The internet also helps criminals to conceal their own identity, location and size.
  - **Cybercrime-as-a-service:** Criminals have their own 'cybercrime-as-a-service'where experienced cybercriminals sell accessible tools and knowledge to help others carry out cybercrimes.
  - **Difficult to catch:** The difficulty in countering cybercrime is also a major factor.
  - **Battlefield advantage:** Cross-border attacks make cybercrime difficult for law enforcement to deal with, constrained as they are by national boundaries.
- **A global challenge**
  - The operation's international dimension was underscored by the **diversity of its workforce.**
  - Operatives from Bangladesh, Pakistan, Nepal, India, and Cambodia were drawn into the scheme, often under the guise of legitimate employment opportunities.

- Once in Cambodia, these individuals found themselves stripped of their passports and coerced into participating in the scam. Reports of physical assault, electric shock, and solitary confinement emerged for those who resisted, highlighting the **dark underbelly of cyber slavery.**
- As the scamming activities operate virtually, those running the rackets can easily shift their operations from one country to another. This makes it extremely hard to combat the crime by physically arresting the criminals.
- This challenge needs a systemic and coordinated approach from governments and NGOs.

- **Cyber slavery**
  - Criminals take advantage of the poor job opportunities available to young graduates and professionals in many countries.
  - The criminals convince people to travel abroad with promises of high-quality work and then threaten them and physically coerce them into working as online fraudsters.
  - They are forced to work on online scam farms run by cybercriminals.

6. Great Indian Bustards
GS 3 (Environment)

- **Why in News:** Recently, the Supreme Court said it will review its April 2021 order to bury underground all power lines in the habitat of the Great Indian Bustard (GIB). This was after the Centre found the order practically impossible to implement over long distances.

Power threat to the bustard

The Centre has told the SC that it is not possible to put power lines underground in the habitat of the Great Indian Bustard. What is the nature of the threat to the bird, and how valid is the Centre's argument?

JAY MAZOOMDAAR
NEW DELHI, MARCH 28

THE SUPREME Court last week said it will review its April 2021 order to bury underground all power lines in the habitat of the Great Indian Bustard (GIB), after the Centre found the order "practically impossible to implement over long distances".

The court created a seven-member committee that will suggest steps to protect and conserve the GIB, identifying critical areas where power lines may have to be laid underground.

With fewer than 150 individuals of this large, ostrich-like bird species left in the wild, the GIB is considered critically endangered. A deadly maze of power lines that criss-crosses its last refuge in the Kutch and Thar deserts of western India.

In these vast, open landscapes also carry the potential for abundant solar and wind energy, the high-tension network evacuating power are only getting denser with new projects coming up every year.

Following the deaths of a number of birds due to collisions with power lines over the last few years, conservationists have long feared that the overhead transmission network should be sent underground in key habitats of the GIB.

Why power lines kill bustards

Power lines pose a risk to all flying birds. In 2020, a study carried out by the Wildlife Institute of India (WII) found that in the GIB habitat in and around Desert National Park (DNP) in Rajasthan estimated that power lines were causing the deaths of 18,000 birds of multiple species every year.

GIBs are especially vulnerable because of their narrow frontal vision and large size. Unlike some birds that have a panoramic vision around the head, species like raptors and bustards have extensive blind areas above their heads. When they stretch their head forward to scan the ground below, they fly blind in the direction of travel.

In an affidavit submitted in court in March 2021, the Ministry of Power had said: "They (GIBs) cannot detect power lines ahead of their flight path and collide with them as they are unable to manoeuvre across power lines within close distances."

The WII study had also estimated that a "conservative estimate of 4 power line induced mortalities per year was sufficient" to cause the decline of the GIB in the next 46 years. Acknowledging the urgency, the SC in April 2021 ordered the lines to be buried "irrespective of the cost factor".

Windmills and power transmission lines criss-cross the last refuge of the Great Indian Bustard, in Thar desert.

Arguments of the Centre

In an affidavit submitted to the SC this February, the Centre said taking lines of 66 KV and higher voltage underground was not "technically feasible" due to "space issues" due to constraints such as transmission towers, maintenance challenges, multiple cable crossings, corridor requirements, and concerns of safety.

"The cost implications of undergrounding of all power lines in the large area identified are very heavy — running into many thousands of crores. This is a burden on the consumers that will burden the nation", it said, were "huge" and "disproportionate".

The Centre said the transition to renewable power from high-potential areas of Rajasthan and Gujarat was "essential for meeting rising power demand...and...India's international commitments on climate change".

On the ground, a reality check

On March 5, 2020, Power Minister R K Singh told the Lok Sabha that the transmission systems of 220-400 KV voltage were "an integral part of the Modern Day Power Transmission Network".

However, the Minister explained, due to higher reactive compensation requirements and higher costs compared to overhead systems, underground cables were being used in some Rajasthan-Gujarat transmission projects. His answer annexed a list of 54 underground power lines — the longest being a 220KV line of 14 km.

In its 2021 order, the SC listed two types of power lines — those that would install bird-diverters, and those that would be converted to underground lines, if feasible, within a year.

In Rajasthan, 25 transmission lines with a total length of 1,342 km were to install bird diverters. Only four of these lines, of 104 km in total length, are in the GIB's current range. All four are 33 KV lines, the longest of which stretches 45 km.

The Centre's affidavit estimate put the total expenses of installing bird diverters across 1,342 km and undergrounding 104 km at Rs 287.30 crore, which "could be reduced to approx Rs 150 crore by opting for economic but specific measures".

While the Centre's affidavit protested against spending "many thousands of crores" for the GIB, a study by WII has suggested 2,20,400 sq km of potential GIB area to 3 lakh sq km of priority GIB area be declared "inviolate". Bittu Sahgal, Rangkriish, the petitioner in the case, has asked that at least 20,000 sq km of GIB habitat be declared "inviolate".

The expert committee appointed by the court has until July 31 to make its recommendations.

Other threats faced by GIB

Power lines are not the only threat to the GIB. Free-ranging dogs have proliferated in the habitat of the GIB, especially in the form of packs, accounted for up to a third of Chinkara depredation in the DNP.

Scientists have also said the widened spectacularly, the widespread use of pesticides in farmlands poses a greater risk to the bird. Loss of grassland, particularly nesting sites, and an erosion of support from local communities are other threats.

In its affidavit, the Centre said the government was working to save the bustard through "conservation breeding programmes and habitat restoration and protection. Despite teething troubles, efforts at captive breeding succeeded at Sam in Jaisalmer district, where two GIB females laid eggs in captivity in 2019, paving the way for through-artificial incubation in March 2021.

However, the purpose of captive breeding is to release the birds into the wild, which is possible only where a usable habitat is freed of hostile infrastructure. "Burying power lines in the GIB habitat is therefore not foolproof. Where undergrounding is not feasible, we should buy the best diverters and spend well on their maintenance. The government has enough CAMPA funds (mioney collected from companies in lieu of environment of wildlife habitat)," a former member of the Rajasthan State Wildlife Board said.

Not green energy vs wildlife

A forest officer who has served in DNP, currently posted in the Desert National Park, has a different point, against the survival needs of a species. "Godavan (GIB) is the flagship species of the grassland, and the state bird of Rajasthan. We cannot green wash its potential habitat in the name of renewable energy", he said.

A WII researcher who has worked on the species stressed the danger of "an infrastructure-led conservation model" in which "the inaccurate how much land we can devote to installations for harnessing the sun and wind without damaging the desert ecology," he said.

In its order passed on March 21, the SC would have "to balance the need for green power from from 80,000 sq km of potential GIB area to 3 8,000 sq km of priority GIB area be declared "inviolate". Bittu Sahgal, Rangkriish, the petitioner in the case, has asked that at least 20,000 sq km of GIB habitat be declared "inviolate".

The expert committee appointed by the court has until July 31 to make its recommendations.

- **Why in News:** Recently, the Supreme Court said it will review its April 2021 order to bury underground all power lines in the habitat of the Great Indian Bustard (GIB). This was after the Centre found the order practically impossible to implement over long distances.
- **What is Great Indian Bustard (GIB)?**
  - **About**
    - GIBs are the largest among the four-bustard species found in India.
      - ❖ The other three being **MacQueen's bustard**, **lesser florican** and the **Bengal florican**.
    - Being terrestrial birds, they spend most of their time on the ground with occasional flights to go from one part of their habitat to the other.
    - They feed on insects, lizards, grass seeds etc. GIBs are considered the **flagship bird species of grassland and hence barometers of the health of grassland ecosystems.**
  - **Habitat and Status of GIB**
    - This bird, **found mainly in Rajasthan and Gujarat**, has been categorized as **critically endangered** by the International Union for Conservation of Nature (IUCN).
      - As per the 2021 report of the IUCN, they are on the verge of extinction with hardly 50 to 249 of them alive.
      - According to a report by The Corbett Foundation (TCF), less than 150 GIB are left in the wild.
    - GIBs' historic range included much of the Indian sub-continent but it has now shrunken to just 10 per cent of it.
    - **Among the heaviest birds with flight, GIBs prefer grasslands as their habitats.**
  - **Threats faced by GIB**
    - Scientists of Wildlife Institute of India (WII) have been pointing out **overhead power transmission lines** as the biggest threat to the GIBs.
      - WII research has concluded that in Rajasthan, 18 GIBs die every year after colliding with overhead powerlines.
    - These birds, **due to their poor frontal vision**, cannot detect powerlines in time and their weight make in-flight quick manoeuvres difficult.
      - Unlike some birds that have a panoramic vision around the head, species like raptors and bustards have extensive blind areas above their heads.
      - When they stretch their head forward to scan the ground below, they fly blind in the direction of travel.
    - Kutch and Thar desert are the places which have witnessed creation of **huge renewable energy infrastructure over the past two decades**.
      - This led to installation of windmills and construction of power lines even in core GIB areas.
    - Other threats include:
      - Free-ranging dogs

- Widespread use of pesticides in farmlands
- Loss of grassland, particularly nesting sites, and
- An erosion of support from local communities

- **Conservation measures initiated for the protection of GIB**
  - In 2015, the Central government launched the **GIB species recovery programme**.
  - Under the programme, the WII and Rajasthan Forest department have jointly set up **conservation breeding centres** where GIB eggs harvested from the wild are incubated artificially and hatchlings raised in controlled environment.
  - The plan is to create a population which can act as insurance against the threat of extinction and release the third generation of these captive-bred birds into the wild.
  - **Bird diverters** have also been installed on power lines to protect the Great Indian Bustard (GIB) from collisions.
    - The diverters act as reflectors that birds can see from about 50 meters away.
    - When birds spot the diverters, they change their flight path to avoid colliding with the power lines.

- **Supreme Court's intervention**
  - **2021 order of SC**
    - The SC in April 2021 ordered that all overhead power transmission lines in core and potential GIB habitats in Rajasthan and Gujarat **be made underground.**
    - The SC also formed a three-member committee, including Devesh Gadhvi, the member of the bustard specialist group of IUCN, to help power companies comply with the order.
  - **Review in 2022**
    - Again, in November 2022, the court sought reports from chief secretaries of the two states in six weeks on **installation of bird diverters in priority areas.**
    - It also asked them to assess the length of transmission lines need to go underground.
  - **March 2024 order of SC**
    - In March 2024, the Supreme Court said it will review its April 2021 order.
    - It also created a seven-member committee that will suggest steps to protect and conserve the GIB, identifying critical areas where power lines may have to go underground.
- **Arguments of the Centre on the issue of undergrounding all power lines**
  - The Centre said taking lines of 66 KV and higher voltage underground was not feasible for the evacuation of bulk power.
  - This is due to constraints such as **transmission losses, maintenance challenges, multiple cable joints, increased time requirements, and concerns of safety.**

7. Africa at the Centre
GS 2 (International Relations)

- **Why in News:** During **President Droupadi Murmu's visit to Mauritius**, India reinforced its commitment to strengthening ties with African nations, highlighting the significance of the **Indian Ocean Region and Africa** in its foreign policy agenda.

AFRICA AT THE CENTRE

India must place the region at the heart of its Global South strategy

VEDA VAIDYANATHAN

DURING HER VISIT to Mauritius from March 11-13, President Droupadi Murmu described it as "a close maritime neighbour, a cherished partner in the Indian Ocean Region, and a key player in our Africa outreach". The visit resulted in the inauguration of 14 community development projects and the laying of the foundation stone for a forensic science laboratory, all with Indian assistance.

While India works towards institutionalising the concept of the Global South, differing views exist regarding its effectiveness. Some view it as a force for change, advocating for a more inclusive global governance structure. Others critique it for oversimplifying a complex world order. Despite that, the term's utility in the transition to multipolarity cannot be ignored. As India situates itself as one of the leading voices of the Global South, I argue that it needs to centre African countries in its engagement with the developing world.

The rationale for this extends beyond the oft-quoted data points: Africa's significant growth rate of 3.8 per cent and its young population, with 60 per cent under the age of 25, estimated to reach 1.1 billion people by 2040.

As India navigates an evolving global landscape, a multifaceted relationship with Africa offers significant opportunities. First, the potential for economic partnerships is immense. Indian investments in Africa reached $98 billion in 2022, with trade totalling $100 billion. Forty-two African countries are the second-largest recipients of all credit extended by India. Around 200 developmental projects have been completed in the region. Indian-origin enterprises and NGOs are exporting low-cost, scalable solutions, from eco-friendly houses to rural women solar engineers.

Given the geographical concentration of critical minerals, diversifying sources and fostering strategic partnerships with resource-rich nations are imperative for India's growth and national security. As New Delhi prepares for what the International Energy Agency terms "the dawn of a new industrial age", the convergence of India's supply chain diversification and Africa's desire to capture the value chain introduces avenues for cooperation.

Second, Africa's influence in global forums will be important for India's vision for global governance. As Africa houses three-fourths of humanity and over 39 per cent of the global GDP, there's a call to reform existing structures towards a more inclusive system focused on development. New Delhi's advocacy for the African Union in the G20 has found resonance.

An analysis of sustainable development cooperation presents two ideas — one sectoral and the other thematic — vital for Africa's forthcoming decades of growth. Developing synergies in these areas aligns with India's interests. The first is cooperation in the critical minerals sector. To build solar panels and batteries necessary for a low-carbon future, access to minerals classified as "critical", "transition" or "green" is key. Africa, with 30 per cent of the world's mineral reserves, is vital to power the energy transition. Given the geographical concentration of critical minerals, diversifying sources and fostering strategic partnerships with resource-rich nations are imperative for India's growth and national security. As New Delhi prepares for what the International Energy Agency terms "the dawn of a new industrial age", the convergence of India's supply chain diversification and Africa's desire to capture the value chain introduces avenues for cooperation.

The second is increasing technical capacity building amongst Africa's workforces. In January, in the main assembly of the old African Union headquarters in Addis Ababa, I witnessed deliberations between the continent's policymakers and leading thinkers. A topic raised regularly was the need to improve technical skills. Given India's longstanding commitment to education and capacity building in Africa, New Delhi could revamp existing collaborations or establish new ones with African technical organisations. This endeavour would bolster negotiation skills, training in project management, and devising industry-specific technical courses. Indian research institutes engaging with Africa's research community can facilitate the creation of solutions to address Global South challenges.

In this era of geopolitical competition and realignment, India's multifaceted relationship with African nations is poised for a fundamental transformation. As India's aspirations for the Global South take shape, leveraging historical partnerships with African countries remains imperative. To dispel any ambiguity, the testimony of a Punjabi farmer who relocated to Ethiopia to invest in agriculture resonates: "If you ask me why I moved, it's obvious. Africa is the future."

The writer is an Associate Fellow at the Centre for Social and Economic Progress (CSEP). Views expressed are personal

- **India's Engagement with Africa:**
  - **Economic Partnerships**: India's engagement with Africa extends beyond rhetoric, with substantial investments and trade partnerships. Indian investments in Africa reached $98 billion in 2023, showcasing the depth of economic cooperation. Additionally, Indian social enterprises and NGOs are actively contributing to Africa's development through innovative solutions in various sectors.
  - **Global Governance**: Africa's growing influence in global forums presents opportunities for India's vision of inclusive global governance. As India advocates for the African Union's representation in platforms like the G20, it aligns with the goal of reforming existing structures to reflect the realities of a multipolar world.

- **Sustainable Development Cooperation**: India's focus on sustainable development cooperation with Africa encompasses critical minerals and technical capacity building. Collaboration in the critical minerals sector, given Africa's abundance of resources, is crucial for India's energy transition and national security. Moreover, enhancing technical capacity building among Africa's workforce aligns with India's commitment to education and skill development in the region.

- **Enhancing India-Africa Relations:**
  - **Leveraging Historical Partnerships**: As India positions itself as a leading voice of the Global South, strengthening historical partnerships with African nations becomes imperative. India's multifaceted relationship with Africa offers significant opportunities for both regions, ranging from economic cooperation to global governance reforms.
  - **Opportunities for Cooperation**: India's engagement with Africa presents avenues for cooperation in various sectors, including critical minerals, technical capacity building, and sustainable development. By leveraging Africa's potential and historical ties, India can contribute to the continent's growth and development while advancing its own strategic interests.
  - **Future Prospects**: As geopolitical dynamics evolve, India's engagement with African nations is poised for transformation. Recognizing Africa's importance in the Global South, India must prioritize deepening partnerships and fostering mutual cooperation to achieve shared developmental goals.

DO NOT COPY

NEELOFER CIVIL SERVICE CLASSES
UPSC AND KPSC WITH KPSC
JAMMU AND KASHMIR

DO NOT COPY