

News Juice Monthly

MAY 2025 EDITION

Made from The Hindu,
Indian Express and PIB

Covers April 2025
Current Affairs

For Prelims and Mains

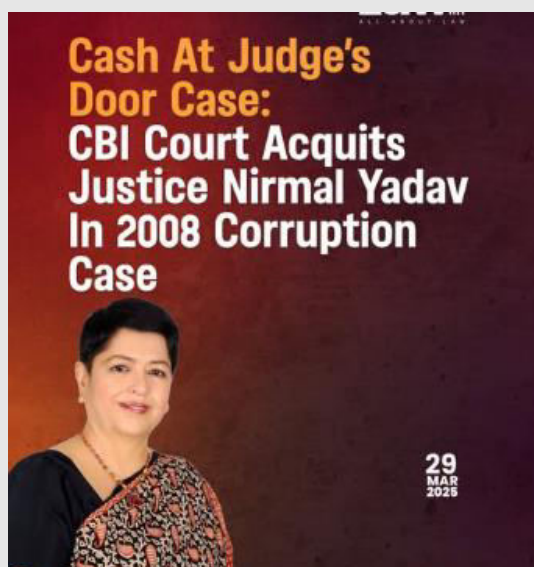
Table of Contents

1. Polity & Governance	1 - 31
2. Bilateral Relations and International Organizations.....	32 -85
3. Economics.....	86- 107
4. Environment.....	108- 120
5. Science & Technology.....	121- 142
6. Miscellaneous.....	143- 145

1. Recalling the 'Cash at Judge's Door' case, in which HC acquitted ex-judge Nirmal Yadav

Why in News?

After a prolonged legal battle spanning 14 years, a special CBI Court in Chandigarh acquitted former Punjab and Haryana High Court Judge Nirmal Yadav in the 'Cash at Judge's Door' case). With grave allegations of bribery and corruption, the case saw several legal twists and turns, multiple hearings, and changes in the judicial bench.



Who is former Judge Nirmal Yadav?

Former High Court Judge Nirmal Yadav joined the Punjab and Haryana HC in 2002. Four years later, she was elevated as Judge of Punjab and Haryana High Court at Chandigarh. She was transferred to the Uttarakhand High Court, assumed office in February 2010 and retired after around one year.

What was the 'Cash at Judge's Door' case?

The case dates back to August 13, 2008, when Rs 15 lakh in cash was allegedly delivered at the residence of another Punjab and Haryana HC judge, Justice Nirmaljit Kaur. It was alleged that the money was meant to be sent to Justice Yadav but was wrongly delivered to the other judge's

residence due to confusion over their similar names.

Justice Kaur informed the then HC Chief Justice and the police, and an FIR was registered on August 16, 2008. Ten days later, the case was transferred to the CBI, which registered a fresh FIR on August 28.

According to the CBI probe, the money was delivered by a clerk of former Haryana Additional Advocate General Sanjeev Bansal, who allegedly called up Justice Kaur and said it was mistakenly delivered at her residence.

What was the CBI court's verdict?

Under Judge Alka Malik, the CBI court acquitted Justice Nirmal Yadav and the other accused persons on the grounds of lack of evidence and contradictions in witness statements.

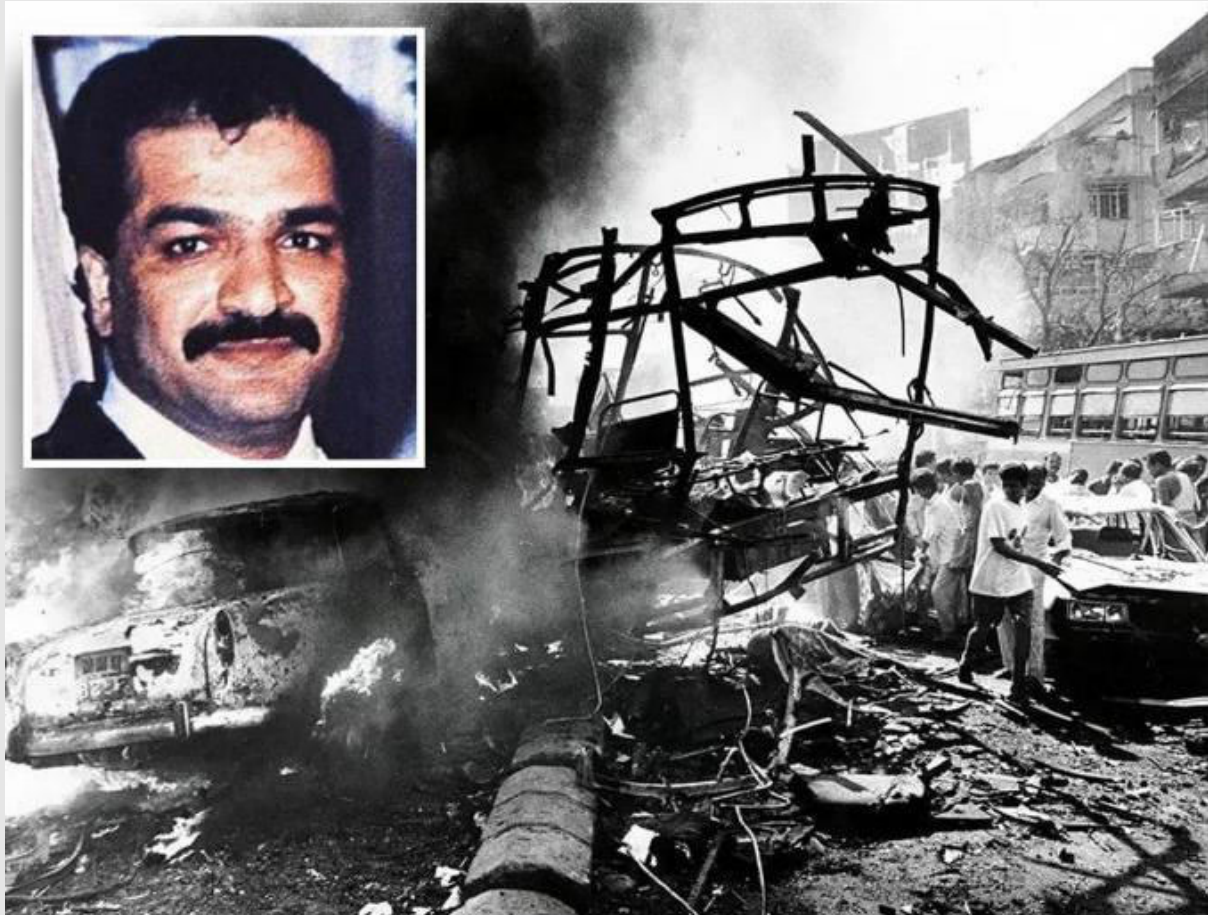
Relevance: GS Prelims; Governance

Source: Indian Express

2. SAFEMA & Tiger Memon: How 14 properties belonging to 1993 Bombay blasts accused were handed to govt

Why in News?

34 years after 14 properties belonging to Tiger Memon, the key accused in the 1993 Bombay Blasts who is still absconding, were confiscated, a special court in Mumbai last week handed them over the central government.



1993 Mumbai Bomb Blasts: Special Court Orders Release of 14 Properties of Tiger Memon to Government

Property that is acquired illegally and in contravention with the law is forfeited to the central government under the Smugglers and Foreign Exchange Manipulators (Forfeiture of Property) Act (SAFEMA), 1976.

What is the law?

Forfeiture of property is a commonly accepted criminal law remedy, especially in terrorism related cases. Section 126 of the Indian Penal Code, 1860, provided for forfeiture of property as one of the penalties apart from jail term and fine for commissioning or waging war against a friendly country.

SAFEMA was enacted in 1976 to crack down on smuggling and manipulation of foreign exchange through smuggling and other activities. It has provisions for forfeiture of illegally acquired properties of persons involved in such activities. The Act states that such persons acquire gains by violation of income tax or other laws and buy properties with such gains, in their own names or those of their relatives, associates and confidantes.

The law casts a wide net on those who own the property on behalf of the accused- from the spouse of the person; brother or sister of the person; brother or sister of the spouse of the person; any lineal ascendant or descendant of the person; any lineal ascendant or descendant of the spouse of the person and spouse or their lineal descendant of any person referred above.

It applies to anyone convicted or detained under the Customs Act, Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 among others.

The law lays down provision for detention of such properties by a competent authority and issuance of notice to the concerned parties to give them an opportunity to explain if the properties are not connected to the alleged illegal activities. If the authority finds the properties to have been acquired through illegal activities, the persons can be directed to pay a fine or the properties can be confiscated and their possession taken over by the central government. SAFEMA also has its own quasi-judicial Appellate Body that acts as a procedural safeguard against orders of confiscation.

Memon's case

In 1992, the Maharashtra government had initiated proceedings against Ibrahim Abdul Razak Memon alias Tiger Memon, allegedly involved in smuggling activities.

In 1993, the competent authority under SAFEMA ordered the forfeiture of the properties. In 1994, after Memon and other family members were named as accused in the 1993 Bombay blasts case, a designated court under the Terrorism and Disruptive Activities (Prevention) Act (TADA) ordered that their properties be attached under the anti-terror law. A court receiver was appointed as custodian.

On March 12, 1993, a series of blasts in Bombay (now Mumbai) killed 257 and left 13 injured. The main conspirators in the case were Ibrahim Tiger Memon and international fugitive gangster Dawood Ibrahim.

Under the same Act, previously properties belonging to Dawood Ibrahim too have been confiscated and auctioned in the past.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

3. The decades old dispute over who controls Mahabodhi temple in Gaya

Why in News?

Over the past two months, large-scale demonstrations have erupted across India demanding that the control over the Mahabodhi temple in Bodh Gaya, Bihar, be handed over to Buddhists.

These protests are the latest chapter in a decades-old dispute over who controls one of the holiest sites in Buddhism. Buddhists want the repeal of the Bodh Gaya Temple Act, 1949 (BGTA), under which the temple is currently governed.



The temple in Bodh Gaya

It is in Bodh Gaya, while meditating under the Bo tree, that Prince Siddhartha attained enlightenment to become the Buddha (literally, "the Enlightened One") in 589 BCE.

A simple shrine was constructed to mark the site by Emperor Ashoka in the 3rd century BCE, of which only the Vajrasana (Diamond Throne), a stone slab under the Bodhi tree next to the temple, remains. Additional

structures were built during the Shunga period (2nd to 1st century BCE).

Fifth-century Chinese traveller Faxian (also known as Fa Hien) wrote that there were three Buddhist monasteries around the temple in Gaya. But the current pyramidal structure can be dated to the reign of the Guptas in the 6th century CE.

The Palas (8th-12th century CE) were the last major royal patrons of the Mahabodhi temple. By the 11th-12th centuries, Buddhism was gradually declining in the subcontinent, and so were its many centres, including in Gaya.

Lengthy struggle for control

The shrine was in a state of disrepair when Alexander Cunningham, the founder of the Archaeological Survey of India, began restoration in the 1880s. According to the website of UNESCO, which granted the Mahabodhi temple the World Heritage Site tag in 2002, the shrine was largely abandoned between the 13th and 19th centuries.

But according to popular legend, which also finds mention in the shrine's official website, a wandering Shaivite monk named Mahant Ghamandi Giri arrived in Gaya around 1590, and established what would become the Bodh Gaya Math, a Hindu monastery. Giri's descendants continue to control the Mahabodhi temple, which they say is a Hindu site. They argue that Lord Buddha was the ninth reincarnation of Lord Vishnu.

Why BGTA is controversial

As mentioned above, Bodhi Gaya Temple Act, 1949 (BGTA) currently governs the Bodhi Gaya temple. The BGTA provided for the creation of a Committee to run the Mahabodhi temple. The Committee shall consist of a Chairman and eight members nominated by the [State] Government of whom four shall be Buddhists and four shall be Hindus including the Mahant.

The Act says the District Magistrate of Gaya shall be the ex officio Chairman of the Committee, but adds that "the State Government shall nominate a Hindu as Chairman of the Committee for the period during which the district Magistrate of Gaya is non-Hindu".

So while the BGTA gave Buddhists a stake in the management of the shrine, control effectively remained with Hindus. This is at the heart of the tensions today, with the Buddhist side claiming that Hindu rituals have gained predominance in the temple over the years.

Case complicated by Places of Worship Act, 1991

Legally speaking, the Buddhists' case is complicated by the Places of Worship Act, 1991. Introduced in the wake of the Ayodhya movement, the Act provides for the maintenance of the religious character of any place of worship as it existed on August 15, 1947.

Thus, The Places of Worship Act blocked any legal attempts by the Buddhists to regain control of the temple.

In 2012, two monks filed a petition before the Supreme Court seeking a repeal of the BGTA, but 13 years on, the case is yet to be listed before the court.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

4. What is the Gujarat police's GP-DRASTI drone program?

Why in News?

With drones used in several districts of Gujarat for policing activities in recent months, State government announced Phase I of the Gujarat Police – Drone Response and Aerial Surveillance Tactical Interventions. Gujarat police have employed quadcopter drones to track fugitives and find missing children, and under the GP-DRASTI program, they will now be actively used at the police station level, especially for crimes related to bodily harm and violence on the streets of major cities.

In recent years, police across Indian cities have deployed drones to cover crime, as well as citizens' protests.

Quicker response time

An official associated with the program said, "When the control room gets a call, they will not only intimate the local police but also the drone base station on the same channel, ensuring both the air and ground teams are deployed simultaneously. In the pilot programme, the drone reached in less than half the time of the ground teams."

With real-time video footage streamed directly to the base station, officials would identify whether an incident is escalating and order additional deployment of ground forces.



In criminal 'hotspots'

The program is meant primarily for 33 police station jurisdictions of the four cities that are hotspots for "body-related" crimes, including assault, aggravated assault, rioting, unlawful assembly, street violence, shows of weapons, mob lynchings, and so on. They were identified under the police's SHASTRA (Sharir Sambandhi Tras Rokva Abhiyan) program launched in February 2025, with 12 police stations in Ahmedabad, nine in Surat, seven in Vadodara, and five in Rajkot.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

5. SC judges to publicly declare assets: Recalling the 1997 ethics code which mentioned the idea

Why in News?

Following a significant decision taken during a full court meeting on April 1, all judges of the Supreme Court, including the Chief Justice of India, will publicly declare their assets. It comes on the heels of the discovery of wads of currency notes at the residence of Delhi High Court judge Yashwant Verma last month.

Unlike government officials and politicians, judges are not bound to make this information public, and most have not done so. The recent decision could mark an important shift and is

essentially a reiteration of the 1997 Restatement of Values of Judicial Life, a code of ethics that the judiciary adopted in another full court meeting.



This document continues to inform conversations on how judges should conduct themselves while performing their official duties.

Restatement of Values of Judicial Life

Through the code, the SC attempted to create a framework for institutional accountability on multiple issues. It included declarations of judges' assets and investments to the CJI and laying the

groundwork for an "in-house procedure" to conduct inquiries against judges who allegedly transgressed these "values" and faced allegations of misbehaviour or corruption.

This 'Restatement' is a numbered, non-exhaustive list of 16 entries enumerating values for judges to uphold and pitfalls for them to avoid, which can be summarised as:

Key points

- *Judges must avoid actions that "erode" people's faith in the higher judiciary, as "Justice must not merely be done but it must also be seen to be done";
- *Must not contest elections/hold office in clubs, societies, and associations;
- *Must avoid close association with "individual members of the Bar" and if any immediate or close family members are members of the Bar, they must not appear before the judge in court or be associated with any case or "cause" she is dealing with;
- *Similarly, such family members cannot be permitted to use the judge's residence for professional work;
- *Must practice "a degree of aloofness consistent with the dignity of his office", i.e. being impartial by maintaining distance from the case before her;
- *Must not hear and decide cases where a family member or friend is involved;
- *Must not publicly express views on political matters that may arise for judicial determination;
- *Must "let his judgments speak for themselves" and must not give interviews to the media;
- *Must not accept gifts or hospitality from anyone besides family and friends;

*Must not hear and decide matters involving a company in which the judge holds shares unless previously disclosed and no objection is raised;

*Must not "speculate in shares, stocks or the like";

*Must not engage in any trade or business "directly or indirectly". This does not include legal publishing or anything "in the nature of a hobby";

*Should not seek any financial benefit connected to her office "unless it is clearly available";

*Must be conscious that she is "under the public gaze" and avoid acts "unbecoming of the high office".

In House Procedure

On the same day, the full court resolved to develop an in-house procedure to take action against judges who "do not follow the universally accepted values of judicial life", including those indicated in the code. A five-member committee developed the procedure in October of that same year, and it was formally adopted in 1999.

Declaration of assets

Notably, they also resolved that all judges must declare to the Chief Justice of the court "all his/her assets in the form of real estate or investments... within a reasonable time of assuming office". Though the resolution states that this declaration "shall be confidential", this stance has shifted in the decades since.

Following another full court meeting in 2009, the judges decided to declare their assets publicly "purely on a voluntary basis". Then, in 2018, a Constitution Bench held that the assets and liabilities of judges are not "personal information" for the purpose of RTI inquiries.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

6. UGC will issue equivalence certificates for foreign degrees

Why in News?

The University Grants Commission (Recognition and Grant of Equivalence to Qualifications Obtained from Foreign Educational Institutions) Regulations 2025 were notified recently.

These regulations specify the procedure for obtaining equivalence certificates, which are documents certifying that a qualification obtained in an educational institution abroad (like a degree or diploma) is equivalent to a comparable qualification in India.

The UGC made a draft of these regulations public in 2023. The regulations have now been notified after considering the feedback.



What do these regulations apply to?

With some exceptions, the equivalence certificates will be valid for all academic institutions under the UGC, for higher education and research, and for employment in cases where a qualification recognised by the UGC is essential.

What is the process for granting equivalence?

The UGC will maintain an online portal to receive applications for equivalence certificates. Applications will be considered by a standing committee with experts in the field of education. The committee will recommend that an application be accepted or rejected within 10 working days.

The UGC will communicate its decision to the applicant within 15 days of receiving the application. Equivalence certificates will be made available on the portal. In case of rejection, the applicant can apply for a review, which will be considered by a committee constituted by the UGC.

How has equivalence been determined thus far?

Instead of the UGC, at the moment, the Association of Indian Universities (AIU) issues equivalence certificates for degrees from foreign universities, for higher education and employment in India.

The AIU is a registered society with several universities, public and private, as its members. It also issues equivalence certificates for students who completed school examinations from foreign boards.

UGC chairman Kumar said that the AIU's system will be replaced by the UGC's, adding that this is the first time that the UGC has notified a dedicated regulatory framework for recognising foreign qualifications.

Relevance: GS Prelims; Governance

Source: The Hindu

7. Palna Scheme

Why in News?

Lack of proper day-care services is, often, a deterrent for women to go out and work. To address these difficulties faced by the working mothers in giving due child care and protection to their children, day-care crèche facilities are being provided through Palna Scheme. Crèche services formalise the child care responsibilities hitherto considered as part of domestic work.



Erstwhile National Creche Scheme

In 2022, erstwhile National Creche Scheme was reorganized and renamed as Palna Scheme under the sub scheme 'Samarthya' of 'Mission Shakti'. Palna is a Centrally Sponsored Scheme ensuring the participation of State/ UT government to ensure better day-to-day monitoring and proper

implementation of scheme, and is implemented with a funding ratio of 60:40 between Centre and State Governments and UTs with legislature except North East & Special Category States where ratio is 90:10. For UTs without legislature, 100% funding is provided by the central government.

Objectives of the Palna Scheme

The objective of the Palna scheme is to provide quality crèche facility in safe and secure environment for children (from ages 6 months – 6 years), nutritional support, health and cognitive development of children, growth monitoring & immunization. Crèche facilities under Palna are provided to all mothers, irrespective of their employment status.

Relevance: GS Prelims; Governance

Source: PIB

8. SC sets aside Tamil Nadu Governor's move of withholding assent to Bills: The ruling, impact

Why in News?



In a significant ruling on the powers of a Governor, the Supreme Court set aside Tamil Nadu Governor R N Ravi's decision to withhold assent to 10 pending Bills, terming it illegal and erroneous in law.

The decision has a bearing on the Governor's role in Opposition-ruled states, which share a politically fraught relationship with the Centre. The current ruling will have a bearing on how similar cases are decided.

Constitutional Provisions

Article 200 specifically deals with the issue of granting assent to Bills. When a Bill passed by the legislature of a state is presented to the Governor, the Governor has four options: (1) grant

assent to the Bill; (2) withhold assent to the Bill; (3) return the Bill for reconsideration; or (4) reserve the Bill for the consideration of the President.

However, the Article has a key proviso.

It says that the Governor “may, as soon as possible”, return Bills other than money Bills, with a message requesting that the House reconsider it in parts or in whole. If the Legislative House after reconsidering the Bill sends it to the Governor once again, the Governor “shall not withhold assent therefrom”.

Ambiguity

The tug-of-war between the government and the Governor in Opposition-ruled states essentially lies in the wordplay in the proviso. While the Governor must return the Bill “as soon as possible”, no timeframe is specified. Raj Bhavans have exploited this ambiguity to sit on Bills indefinitely without returning them to the state legislature. An indefinite timeline in deciding on Bills can in effect, amount to paralysing the elected government.

What did the court say?

Recent decision by the Supreme Court:

- First, it prescribed a time limit for the Governor to exercise his powers under Article 200.

As a general rule, it is not open for the Governor to reserve a Bill for the consideration of the President if it has been considered for the first time only by the Governor. The only exception to this general rule is when the Bill presented in the second round is different from the one presented to the Governor in the first instance.

In case of reservation of Bills for the consideration of the President, the Governor shall make such reservation within a maximum period of three months. In case of presentation of a Bill after reconsideration, the Governor must grant assent forthwith subject to a maximum period of one month.

- The ruling is also significant because the court exercised powers under Article 142 of the Constitution and declared the 10 Bills as having received assent given “the unduly long period of time for which these Bills were kept pending by the Governor before the ultimate declaration of withholding of assent and in view of the scant respect shown by the Governor” to the court’s decision in similar matters earlier.

Article 142 provides a unique power to the Supreme Court — to do “complete justice” between the parties where, at times, the law or statute may not provide a remedy. In those situations, the court can extend itself to put an end to a dispute in a manner that would fit the facts of the case.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

9. New Panchayat Advancement Index to rank rural local bodies

Why in News?

The government's inaugural Panchayat Advancement Index (PAI) was launched recently, ranking over 2.16 lakh panchayats based on their performance and progress towards achieving Sustainable Development Goals (SDGs).



What is the Panchayat Advancement Index (PAI)?

According to the Ministry of Panchayati Raj (MoPR), it is a multi-dimensional index used to assess the implementation of Localization of Sustainable Development Goals (LSDGs) across nine broad themes.

These are poverty-free and enhanced livelihoods in panchayat, healthy panchayat, child-friendly panchayat, water sufficient panchayat, clean and green panchayat, panchayat with self-sufficient infrastructure, socially just and socially secured panchayat, panchayat with good governance and women-friendly panchayat. Under these brackets, performances on 144 targets were measured.

The panchayats were then scored on a scale of 0-100 based on these indicators and ranked in one of five categories: Achiever (90-100), Front Runner (75-90), Performer (60-75), Aspirant (40-60) and Beginner (below 40).

Why was the PAI introduced?

In 2015, the United Nations devised 17 Sustainable Development Goals (SDGs) to be achieved by member countries by 2030.

These goals cover 269 targets whose progress is monitored through 231 indicators. While the UN monitors the implementation progress of SDGs at the country level, India's top government think tank, the NITI Aayog, tracks state-wise progress through its SDG India Index that was launched in 2018. In recent years, the localisation of SDGs has been emphasised.

Recognising the crucial role of panchayats in local governance, the government has focused on aligning them with the SDGs. The PAI was thus developed as "a key metric for assessing

progress at the grassroots level, aiding in the formulation of localized strategies and targets for inclusive rural development."

Does the PAI cover all panchayats?

No. There are over 2.55 lakh panchayats in India, but data was received from only 2.16 lakh gram panchayats in 29 states/Union Territories after due validation by the states and UTs.

What do the rankings show?

Of the 2.16 lakh panchayats, 699 have been ranked as Front Runners, 77,298 as Performers, 1,32,392 as Aspirants, and 5,896 as Beginners. Of the 699 panchayats ranked as Front Runners, 346 are from Gujarat, followed by Telangana (270) and Tripura (42). None of the panchayats has been ranked in the Achievers (90-100) category.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

10. What to know about renewed efforts to implement long-delayed Punjab Public Libraries Bill

Why in News?

Punjab Public Libraries Bill and recent efforts for its revival

The Punjab Library Association has renewed its efforts to revive the 'Punjab Public Library and Information Services Bill, 2011' and secure its speedy implementation.

As part of its efforts, the association met with the State Education Minister Harjot Bains. Over 75 years have passed since

the first Public Library Act was passed in Madras in 1948. Today, 19 states, including neighbouring Haryana, have passed Public Library Acts.

About the bill

The draft bill was first introduced in a 2011 cabinet meeting by then-Education Minister Sewa Singh Sekhwan and approved by then-Chief Minister Parkash Singh Badal. The bill was the culmination of efforts by the Punjab Library Association since 1948 to enforce a law governing public libraries in the state.

The bill proposed a statewide library network including one State Central Library, 22 District Libraries, 141 Block Libraries, 157 Town Libraries, and 12,282 Village Libraries. This was slated to be implemented in phases over 10 years. It called for the establishment of a Punjab Public Library Governing Board, chaired by the Chief Minister, and a State Public Library Directorate to oversee operations.

A dedicated State Public Library Fund was to be created to support infrastructure, staffing, and resources. The bill also encouraged financial support from national and international agencies. Existing libraries under municipal bodies, NGOs, or cooperative institutions were to be integrated into the system.

However, the onset of the 2012 legislative election delayed the implementation of the bill. After that the draft was never taken up by successive governments.

A paucity of funds

The bill proposes the funding of public libraries in a 60:40 ratio by the centre and state. The act would also allow Punjab to secure financial support from organisations like the Raja Rammohun Roy Library Foundation (RRRLF). The RRRLF's matching scheme helps states and UTs secure grants on a matching basis, with the foundation and respective government sharing the funding typically on a 50:50 basis.

The delay in passing the act has invariably delayed the establishment of public libraries across the state.

Last year, the Central Government allocated ₹5,000 crores to establish Panchayati libraries across India. Unfortunately, Punjab did not submit any proposal to avail of these grants for setting up rural libraries in the state.

The demands

The following demands were presented by the Punjab Libraries Association to the Education Minister:

Speedy enactment: The Punjab Public Library and Information Services Bill 2011 should be presented and passed in the Punjab Legislative Assembly at the earliest. Following this, securing the government's assent to speedily issue its notification.

Permanent Committee on Public Libraries: The formation of a permanent Library Committee in the meantime to secure grants from RRRLF in Kolkata. The committee would be tasked with establishing and developing public libraries in towns and villages of Punjab.

Securing funding: The committee would also have to ensure the state does not miss on grants for Panchayati or rural libraries from the centre or RRRLF. Through this initiative, public libraries can be developed with the support of the National Mission on Libraries (NML) and the Raja Rammohun Roy Library Foundation, ensuring that Punjab's rural and urban populations benefit from information services and modern technology.

The status of Punjab's libraries

Punjab currently has one state library in Patiala, 14 district libraries, 104 municipal libraries, and around 1200 rural libraries.

The state library and the district libraries are managed by the Directorate of Public Instructions (DPI Colleges), Punjab.

104 municipal libraries are administered by Urban Local Bodies, Punjab Government. Around 200 rural libraries are run by panchayats, NGOs, NRIs, and volunteers, while the remaining rural libraries serve merely as reading rooms.

These libraries have not been well-maintained owing to the shortage of funds. However, the Punjab government has utilised Panchayati Raj funding under the 15th Finance Commission to renovate over 180 libraries, with another 200 in the pipeline.

But Punjab could have got funds from the centre, had the library act been passed. The Finance Commission funds could have been used for other development works, or the library renovations could have been more elaborate with more funds.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

11. Assam's decision to withdraw Foreigner Tribunals cases against Koch Rajbongshis

Why in News?



Earlier this month, the Assam Cabinet announced the withdrawal of around 28,000 pending cases at the state's Foreigner Tribunals against members of the Koch Rajbongshi community. The quasi-judicial bodies are meant to "furnish opinion on the question as to whether a person is or is not a foreigner within the meaning of Foreigners Act, 1946".

Chief Minister Himanta Biswa Sarma said the decision was taken as the state government considered them an "indigenous community".

Who are the Koch Rajbongshi?

The community traces its lineage to the Koch Dynasty of the Kamata Kingdom, which rose to power in the 16th century. Today, its members are spread across Assam and West Bengal, as well as parts of Bihar, Meghalaya, Bangladesh, Nepal and Bhutan, reflecting the geographical spread of the kingdom.

In Assam, the community has a significant presence in the western districts of Goalpara, Dhubri, South Salmara Mankachar, Bongaigaon and Kokrajhar. In 2020, given their dominant presence in some regions, the state government created a Kamatapur Autonomous Council in

parts of these districts for the “social, economic, educational, ethnic and cultural advancement of the Koch Rajbongshi community.”

While the community has OBC status in Assam, it is one of six communities that has long been demanding Scheduled Tribe status – a politically fraught issue in the state. Another demand that gathered steam in the 1990s, though stronger among West Bengal-based groups, has been for a separate Kamatapur state comprising parts of northern West Bengal and western Assam.

Why have there been citizenship cases against them in Assam?

According to Khitish Koch, president of the All Koch Rajbongshi Students Union, the transborder nature of the community has played a role in the “D-voter” (Doubtful voter) tag being attached to many Koch Rajbongshis, putting a question mark on their citizenship. Foreigner Tribunals are tasked with adjudicating whether “suspected foreigners” (D-voters and cases referred to them by the border police) are foreigners, that is, people who entered India after March 25, 1971, according to the 1985 Assam Accord.

What is the political significance of this announcement?

The six communities have long been promised the fulfillment of their ST status demand. Prime Minister Narendra Modi lent his support to it while campaigning in Assam for the 2014 Lok Sabha elections.

Eleven years later, a Group of Ministers formed by the state government to examine the demand has yet to formalise its report on the quantum of reservation and measures to safeguard the rights and interests of existing tribal communities. According to the 2011 census, 12.4% of the state’s population comprises Scheduled Tribes.

As the 2026 Assam Legislative Assembly election draws closer, the groups are expected to build pressure on the state government.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

12. Telangana becomes first State to notify sub-categorisation of Scheduled Castes

First State to implement sub-categorisation

The Telangana government has notified the implementation of the Telangana Scheduled Castes (Rationalisation of Reservations) Act 2025. The State has issued a gazette notification with April 14, 2025 as the appointed day for categorisation of Scheduled Castes (SC) into three groups.

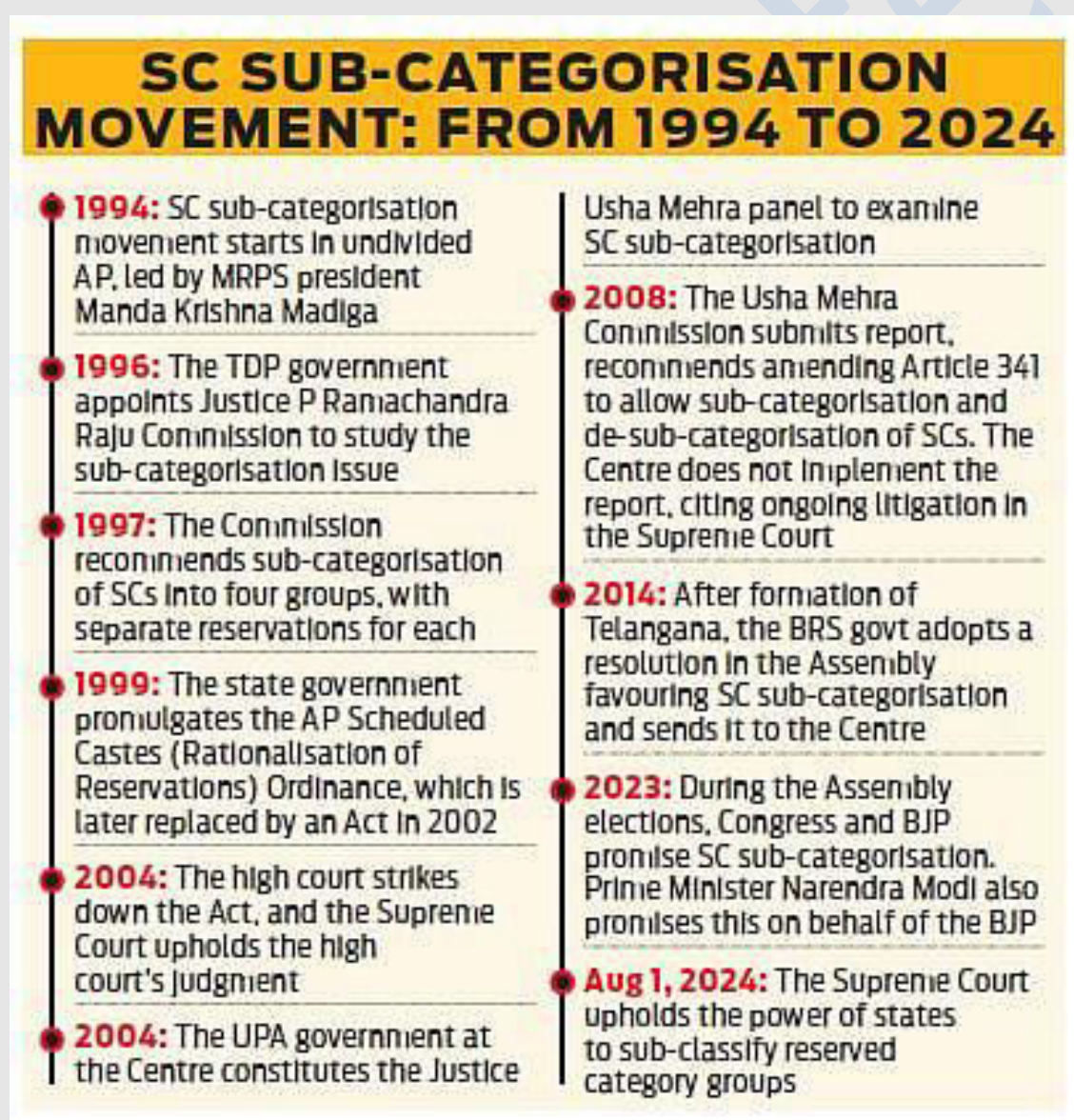
Telangana has become the first State into the country to operationalise the classification of the Scheduled Castes after the Supreme Court’s land mark judgment on August 1 last year upholding the constitutionality of sub-classifying the Scheduled Castes (SCs) and Scheduled

Tribes (STs) to grant separate quotas for the most marginalised groups within these communities.

Basis of Sub-Categorisation

The government took into consideration the contents of the top court's verdict, empirical data, social, economic, educational, employment, and political status of the communities in the categorisation of SCs into three groups for implementation of the rule of reservation.

Accordingly, 15 sub-castes categorised as most backward had been classified as Group-I with 1% reservation. Though these groups constituted 0.5% of the population, the government had decided to provide them with 1% reservation with a view to provide educational and employment opportunities to the most backward among the Scheduled Castes.



In all, 18 sub-castes of the total 59 which received marginal benefits have been placed under Group-II with 9% reservation while 26 sub-castes that were relatively better placed in terms of opportunities had been placed in Group III with 5% reservation.

The State government clarified 33 of the 59 sub-castes were continuing in the same group in which they were placed in the past and there was shuffling of only 26 sub-castes constituting 3.43% of SC population.

Recruitment to government jobs would forthwith be based on the categorisation of the SC communities, adding the categorisation would not be applicable to the vacancies already notified.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

13. Amending the RTI Act through the Data Protection Bill is unwarranted

Why Now?



That the Right to Information Act and the use of RTIs have enhanced the accountability of those in governance in India. In the last few years there have been attempts to dilute the provisions of the Act, a landmark one that was passed 20 years ago. Clearly, some in governance and administration have treated the Act and its provisions on transparency and disclosure to be encumbrances.

Digital Personal Data Protection (DPDP) Act overcoming RTI

A significant threat has now emerged in the amendment to Section 8(1)(j) of the Act, which has been introduced in Section 44(3) of the Digital Personal Data Protection (DPDP) Act, 2023. Section 8(1)(j) of the RTI Act allows government bodies to withhold "information which relates to public information" provided its disclosure is not related to public interest or results in an unnecessary invasion of privacy. While doing so, it provides the safeguard that if the Public Information Officer or an appellate authority finds public interest in disclosing such information, it could still be available.

This safeguard is important. Some information related to public servants, such as college degrees or caste certificates, might be private, but as a recent and controversial case of a bureaucrat using a fake caste certificate showed, such information could be released in public interest.

Section 44(3) of the DPDP act amends Section 8(1)(j) by allowing government bodies to simply withhold "personal information" without the safeguard provisions on public interest or other such exceptions.

View of government

In a letter to Congress leader Jairam Ramesh, Union Minister of Information and Broadcasting, Ashwini Vaishnaw defended the amendment, saying that Section 44(3) was aimed at preventing the RTI Act's "misuse" and was to harmonise the requirement of right to privacy and the right to information. He also said that information such as salaries of public officials would still remain accessible through Section 3 of the DPDP Act.

Conclusion

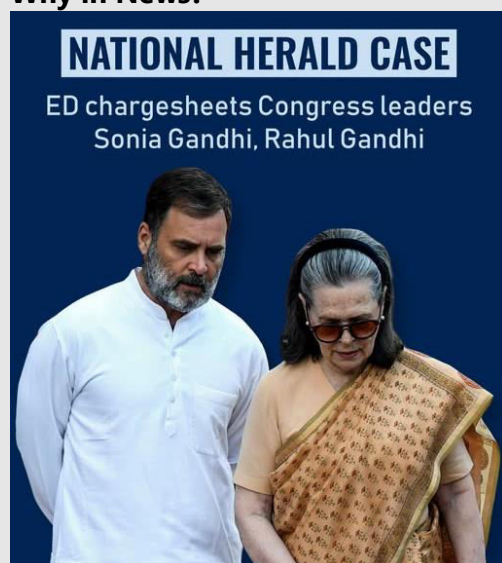
But by amending the RTI Act itself and by defining "personal information" vaguely in Section 44(3) of the DPDP Act, authorities could deny RTI requests of previously public data by classifying them as "personal" — and lessen public scrutiny. The RTI Act already harmonises concerns related to the right to information and privacy by subjecting them to the question of public interest. Therefore, the amendment using the DPDP Act is unnecessary and unwarranted. The government must take the concerns of civil society and transparency activists and remove the provision amending the RTI Act, in the DPDP Act.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

14. National Herald: What exactly is the ED case against the Gandhis?

Why in News?



For the first time, former Congress president Sonia Gandhi and leader of the opposition in Lok Sabha Rahul Gandhi have been charged under the Prevention of Money Laundering Act (PMLA). Paving the way for framing of criminal charges against them and their trial in the National Herald money-laundering case, Enforcement Directorate (ED) on April 9 filed a prosecution complaint (chargesheet) in the case involving alleged proceeds of crime worth Rs 5,000 crore.

The case pertains to allegations of financial irregularities during the acquisition of Associated Journals Limited (AJL) — which published the newspaper — by the Gandhi-owned Young Indian

Limited in 2010.

What is the National Herald, and why is it so important?

In 1938, India's first Prime Minister, Jawaharlal Nehru, launched a newspaper called The National Herald. A year before that, in 1937, Associated Journals Limited (AJL) was established with support from 5,000 freedom fighters who held shares in the company. AJL also brought out Qaumi Awaz in Urdu and Navjeevan in Hindi. Backed by some of the most prominent leaders of the independence era, The National Herald quickly became a symbol of the country's nationalist spirit and was widely seen as a voice of the freedom movement. Known

for its bold and uncompromising editorials. the newspaper clashed with the British regime, which shut it down in 1942. It, however, resumed publication in 1945.

When India became independent in 1947, Nehru stepped down from his position as chairman of the AJL board, as he became the Prime Minister. Over the decades, The National Herald was guided by some of the country's leading journalists and grew into one of India's most respected English-language newspapers, with financial support from the Congress party.

In 2008, due to economic constraints, the newspaper shut down once again. It eventually returned in 2016 as an online news portal, with the organisation promising to bring out its print edition soon to complete it as a multi-media outlet.

What is The Associated Journals Limited (AJL)?

The Associated Journals Limited (AJL) was the publisher of National Herald, a newspaper launched by former Prime Minister Jawahar Lal Nehru in the late 1930s. Besides Nehru, over 5,000 other freedom fighters were stakeholders of the AJL. However, the number of stakeholders came down to about 1,000 by 2010. AJL's registered office was at ITO in New Delhi.

What is Young Indian Ltd?

Young Indian Ltd (YIL) is a private company that was set up in November 2010. Congress president Sonia Gandhi and her son Rahul Gandhi together hold a majority share of 76 per cent in the company while the remaining 24 per cent was held by party leaders Motilal Vora and Oscar Fernandes.

How Congress got involved?

After suffering heavy losses over the years, the National Herald newspaper became defunct and suspended operations in 2008. Notably, it is estimated that National Herald had properties in Delhi, Lucknow and Mumbai worth over Rs 2,000 crore. The Congress made a proposal to revive the newspaper as it was deeply entrenched in the Indian freedom movement. For this, Congress extended a Rs 90 crore interest-free loan from the party fund. In 2010, the Congress assigned the AJL debt to its newly-founded YIL. Since AJL was unable to repay the loan, its entire shareholding was transferred to the Gandhi-owned YIL for a sum of Rs 50 lakh.

This is when the deal turned controversial. A complaint filed by BJP MP Subramanian Swamy in 2013 questioned how the Congress took over a company (AJL) with over a 1,000 shareholders and prime real estate worth over Rs 2,000 crore at just Rs 50 lakh. Swamy accused Sonia, Rahul and others of committing fraud by obtaining the right to recover Rs 90.25 crore debt that AJL originally owed to the Congress. Besides the Gandhis, Motilal Vora, Oscar Fernandes, Suman Dubey and Sam Pitroda are among the accused in the case. He also questioned how Congress gave money to AJL from the party fund since it is illegal for political parties to lend money for commercial purposes.

In retaliation, the Congress had said it did not gain commercially from extending loan to AJL. In 2015, senior lawyer Shanti Bhushan claimed that his father Vishwamitra owned shares in AJL.

and the decision to transfer the ownership to Young Indian was taken without the consent of the shareholders.

How has the National Herald case progressed?

In 2014, Metropolitan Magistrate Gomati Manocha summoned all the accused in the case, including the Gandhis. The magistrate said that the complainant had established a prima facie case against the accused under Section 403 (Dishonest Misappropriation of Property), Section 406 (Criminal Breach of Trust) and Section 420 (Cheating) read with Section 120B (Criminal Conspiracy) of the Indian Penal Code (IPC). In 2014, ED launched the probe to find out if there was any money laundering.

In 2015, the Patiala house court granted bail to Sonia and Rahul Gandhi in the case. In February 2016, the Supreme Court refused to quash proceedings against the accused. Then, in 2019, ED attached National Herald properties worth Rs 16.38 crore in Mumbai, and continued its probe to understand the shareholding pattern, financial transactions and role of the promoters of Young Indian and AJL. The agency also registered a fresh case under the criminal provisions of the PMLA after a trial court took cognisance of an Income Tax Department probe against Young Indian Pvt Ltd on the basis of Swamy's complaint.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Times of India

15. 'Waqf by use' should be allowed or not?

Why now?

Among the issues that the Supreme Court recently flagged with the amended Waqf Act, was the abolition of the concept of "Waqf by use" (referred to in the Act as "Waqf by user").

What is the concept of 'Waqf by use'?

"Waqf by use" simply means that a property can be deemed to be a Waqf through use as a Waqf, even if the original declaration is suspect or non-existent. For example, even in the absence of a Waqfnama, a deed or a document through which a Muslim expresses intention to donate a property or land for charitable purposes or Waqf, a mosque can be deemed to be Waqf property if it is continuously used as such.

What are some key characteristics of a property being 'Waqf by use'?

LONG-TERM USAGE: The defining factor here is the sustained use of a property for religious or charitable purposes over an extended period. While the length of this use is not officially defined, Indian jurisprudence and legal statutes — including the Waqf Acts of 1954 and 1995 — have upheld the concept.

IMPLIED DEDICATION: A property's dedication to Waqf status can be inferred from its usage and the owner's conduct. This is the second key feature here. A property that is being used by a mosque, or one that is being used as a graveyard can, by the virtue of this usage, be considered 'Waqf by use' even in the absence of a formal Waqfnama.

Legal Framework for Waqf Properties in India

Waqf Act of 1954

Purpose: Established State Waqf Boards to manage and oversee waqf properties for charitable use.



Waqf Act of 1995

Stricter Regulations: Strengthened waqf property management and protection.

1. **State & Central Waqf Boards:** Responsible for overseeing waqf assets.
2. **Surveys:** Regular state-led surveys to prevent misuse.
3. **Registration:** Mandatory registration of waqf properties.
4. **Mutawalli Role:** Defined trustee responsibilities and removal process for mismanagement.
5. **Property Protection:** Prohibits illegal sale or transfer of waqf assets.



2013 Waqf Amendment Act

Enhanced Powers: Strengthened the authority of Waqf Boards to prevent illegal encroachments.

- **Waqf Tribunals:** Established to handle waqf disputes quickly.
- **Transparency:** Required public notifications before changes to waqf property records.
- **Stricter Penalties:** Imposed harsher punishments for violations related to waqf properties.



Why is the abolition of this concept such a contentious issue?

In Islamic law, the dedication of a property as Waqf was largely done verbally until documentation became the standard norm. The amended Act, by omitting the provisions relating to the "Waqf by use," makes a Waqf property suspect in the absence of a valid

Waqfnama — and open to interference by the government, or raising of land disputes by private entities.

As Senior Advocate Kapil Sibal, representing the petitioners challenging the amended Waqf Act in the SC, told the court: "Many of these Waqfs were created 100 years ago. Where do you find the records? They will now ask for a Waqf deed for a 300-year-old property... that's the problem".

Chief Justice of India Sanjiv Khanna seemed to echo these concerns. He said: "Before the Britishers came, we did not have a land registration law or Transfer of Property Act. Many of the masjids were created in the 14th or 15th centuries. To require them to produce a registered deed is impossible. Most of the cases, say Jama Masjid Delhi, the waqf will be waqf by user".

Relevance: GS Prelims & Mains Paper II; Governance
Source: Indian Express

16. ED summons Robert Vadra: All about the DLF land deal case in which he will be questioned

Haryana Land Deal Case



Robert Vadra, businessman and husband of Congress MP Priyanka Vadra, appeared before the Enforcement Directorate (ED) recently over alleged irregularities in a land deal his company made in 2007-08.

Vadra claimed the move was part of a "political vendetta" aimed at silencing him and his brother-in-law, Congress leader and Leader of Opposition Rahul

Gandhi. He added that he would answer questions as part of the investigation. This was the second summons issued to him by the ED this month.

The BJP has levelled allegations of corruption and misuse of political power against Vadra since the Congress-led UPA government was at the Centre. What is the case, and how have subsequent governments acted on it?

What is the case in which the ED summoned Vadra?

It pertains to a land deal between Vadra's Skylight Hospitality and real estate giant DLF Universal Ltd. It came to light after Haryana cadre IAS officer Ashok Khemka cancelled its mutation, a process reflecting the transfer of property, in October 2012.

The BJP raked up the issue in the run-up to the 2014 Legislative Assembly elections, which it went on to win. It released a six-page booklet titled "Damad Shree" and referred to Vadra's

other allegedly unscrupulous deals in Rajasthan and Haryana. The party also claimed that the Gandhi family helped Vadra secure the deals when the Congress was in power in the state and the Centre.

What happened under this deal?

Vadra launched Skylight Hospitality in 2007 with a capital of Rs 1 lakh. The next year, the company bought about 3.5 acres of land in Manesar-Shikohpur in Gurgaon from Onkareshwar Properties for Rs 7.5 crore. The plot was mutated in favour of Skylight the next day, and the land title was transferred to Vadra within 24 hours of the purchase. This process usually takes at least three months.

A month later, the Congress-led Haryana government permitted Skylight Hospitality to develop a housing project on most of the land, leading to an immediate increase in the land's value.

In June 2008, DLF agreed to buy the plot for Rs 58 crore, meaning that in just a few months, the value of Vadra's property had increased by around 700%. The payment was made to Vadra in instalments, and it was only in 2012 that the mutation transferring the colony license on the land was transferred to DLF.

What was Khemka's role?

Khemka, then Director General of Consolidation of Land Holdings and Land Records-cum-Inspector General of Registration, cancelled the mutation of the 3.531-acre plot in 2012. He was transferred on Haryana Chief Minister Bhupinder Singh Hooda's orders hours later, on October 11, 2012.

However, Khemka completed the probe and set aside the mutation on October 15, 2012, before relinquishing the charge. His order said the assistant consolidation officer who sanctioned the mutation was not empowered to do so. It noted, "the village of Shikohpur was notified under 14(1) of the East Punjab Holdings (Consolidation and Prevention of Fragmentation) Act, 1948, on August 5, 2011, and transfer of property during the pendency of consolidation proceedings without the sanction of the consolidation officer was prohibited".

What did the Haryana government do?

After Khemka's order sparked a controversy, the Haryana government formed a panel of three senior IAS officers — Krishna Mohan, Rajan Gupta, and K K Jalan — to examine the issue. In April 2013, the government gave a clean chit to both Vadra and DLF and instead accused Khemka of "acting beyond the authority vested in him".

After coming to power in 2014, the BJP-led government under Manohar Lal Khattar set up the one-man Justice Dhingra Commission of Inquiry. It submitted an 182-page report to the state government on August 31, 2016, but it was never made public.

In 2016, Hooda moved the Punjab and Haryana High Court, challenging the decision to set up the Dhingra Commission. On the first day of the hearing on November 23, 2016, the

government gave an undertaking that the report "shall not be published". However, sources said that the Dhingra report had recommended an investigation against Hooda, concluding that "his conduct allegedly comes under the purview of the Prevention of Corruption Act for giving pecuniary advantage to close associates".

In 2018, an FIR was registered against Hooda, Vadra, and DLF and Onkareshwar Properties for alleged criminal conspiracy, cheating, fraud, and forgery, and under provisions of the Prevention of Corruption Act. Hooda, Vadra, and the Congress party have always denied any wrongdoing.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

17. What are the key issues in the challenge to the new Waqf law

Why now?

The Supreme Court recently deferred its interim decision on the pleas challenging the Waqf Act, 2025 to May 5. This came after the Centre sought time to file an affidavit defending the law, but assured the court it will not, till the next hearing, appoint non-Muslims to Waqf boards or change the character or status of any Waqf.

WHAT'S WAQF?

A waqf is established when an individual voluntarily dedicates property for religious, charitable or pious purposes in accordance with Islamic law. This dedication permanently transfers ownership from the individual to God, making the property inalienable and managed by an appointed supervisor (mutawalli). Waqf properties include mosques, prayer grounds, shrines, Sufi centres, graveyards, educational institutions and shelter homes. Waqf boards—statutory bodies under the Waqf Act—administer these properties at the state level. The Central Waqf Council, established in 1964, provides national oversight

872,000

No. of properties

Waqf boards manage, covering over 9.4 lakh acres

59,000

properties face encroachment

by private individuals, businesses and even government entities

30

waqf boards functioning across the country

₹12,000 cr.

Annual revenue

waqf properties could potentially generate. Actual collection is around Rs 200 crore (Sachar Committee Report, 2006)

The challenge

On April 16, a three-judge Bench led by Chief Justice of India Sanjiv Khanna, gave an early hearing to a batch of petitions challenging the validity of the contentious new law.

Senior Advocate Kapil Sibal, who led the arguments for the petitioners, essentially framed the law as violative of Article 26 of the Constitution, with the Parliament having interfered on “the essential and integral parts of the faith.” Article 26, a fundamental right under Part 3 of the Constitution, guarantees the freedom to manage the religious affairs of the citizens, and is subject to only three restrictions — public order, morality, and health.

Some key issues

The petitioners flagged a number of issues with the 2025 law. These include the following.

1. Doing away with concept of “Waqf by use”: “Waqf by use” simply means that land used for Muslim religious or charitable purposes for a long time can be deemed to be a Waqf even if it is not registered as such.

The 2025 law does away with the concept of Waqf by use (which it refers to as “Waqf-by-user”) for future dedications, and restricts it only to properties that are already registered as Waqf. It further states that where there is a dispute, or if a property is allegedly government-owned, that land in question will not be treated as Waqf-by-use.

The government’s argument is that land is often encroached upon in the name of Waqf, making it necessary to do away with the legal mechanism for this to happen. However, the move raises questions over the status of several Waqf-by-use properties, which have long contained mosques or graveyards but not been registered as Waqfs.

The petitioners argued that by its nature, Waqf-by-use lands are difficult to register. CJI Khanna seemed to echo this sentiment, asking the Centre how can someone register a land that has been used as Waqf for, say, 300 years.

The petitioners also stated that Waqf by use as a concept has long been recognised by courts, something that was acknowledged in the apex court’s landmark 2019 Ayodhya judgement.

2. Powers of district collector: The SC also mentioned it is considering staying another provision involving powers of the district collector, which could have a bearing on Waqf-by-use lands.

Under the 2025 law, if the district collector identifies land, currently in use as a Waqf, as government land, then it ceases to be Waqf land till a court decides the dispute. This power, which flows from a crucial proviso to Section 3(c) of the Act, could alter the status of Waqf land even before a court has decided its status.

Although this provision has not been stayed yet, recent order notes the Centre’s statement that “the character or status” of any Waqf will not be changed.

3. Inclusion of non-Muslims in Waqf boards: The petitioners argued that the 2025 law, which allows non-Muslims to be part of Waqf boards and the Waqf council, is violative of Articles 26(b), 26(c), and 26(d) of the Constitution which guarantee a community's right to "manage its own affairs in matters of religion", "own and acquire movable and immovable property", and "administer such property in accordance with law", respectively.

While the Centre argued that allowing non-Muslims will not affect the veto rights of the community when it comes to dealing with Waqfs, the petitioners said that "even one [non-Muslim] is too many."

The Bench questioned the Centre on the issue, asking Solicitor General Tushar Mehta to name one instance in which Parliament allowed members of another faith into boards managing the religious affairs of a community.

4. Applicability of Limitations Act: Sibal also challenged a provision in the 2025 law that allows the applicability of the Limitation Act with respect to Waqf properties. The Limitation Act essentially bars parties from making a legal claim, say, against encroachment, after a specific period of time has lapsed.

The 1995 Waqf Act had specifically excluded the application of the Limitation Act which allowed Waqfs to act against encroachments on its properties without a specific time frame. The 2025 law removed that exception. To this, CJI Khanna said that the "Limitation Act has both its advantages and disadvantages".

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

18. Adarsh Sanskrit village programme

Why in News?



The Uttarakhand cabinet recently approved the Adarsh Sanskrit village programme, which aims to teach the language to one village in each district of the hill state. The move is aimed at promoting Sanskrit, the second official language of the state, and comes on the heels of other similar schemes, such as financial incentives to girls and SC/ST students who opt for Sanskrit in schools.

How the scheme will be rolled out

On a pilot basis, one village from each district has been selected. Depending on the response, the scheme will be introduced at the block level.

Thirteen instructors, at Rs 20,000 per month, will be selected after a written test and an interview. The scheme, being funded by the Central Sanskrit University, Delhi, is expected to be rolled out in May. Following this, the 13 instructors will get a brief training at the Sanskrit Academy in Haridwar.

Moreover, a monthly financial incentive of Rs 250 has been launched for girls from 2023-24 and SC/ST children who learn Sanskrit from 2024-25.

Relevance: GS Prelims; Governance

Source: The Hindu

19. Andhra SC sub-categorisation ordinance gets Cabinet nod: How this will impact reservation in state

Why in News?

The Andhra Pradesh Cabinet approved the draft ordinance proposal made by the Social Welfare Department to implement sub-categorisation among Scheduled Castes in the state. Basically, this means that the state government wants to give 'reservation within reservation' to communities based on their backwardness.

What is this ordinance?

In the backdrop of the Supreme Court's verdict allowing states to sub-classify Scheduled Castes, the Telugu Desam Party-led NDA government in Andhra Pradesh on November 15, 2024 formed a commission to study SC sub-categorisation in the state.

After gathering public feedback across 13 districts (which are now divided into 26 districts), the one-man commission, led by retired IAS officer Rajeev Ranjan Mishra, submitted a comprehensive report on March 10 this year.

The report was adopted unanimously in the Legislative Council and Legislative Assembly and the ordinance has been drafted.

What is the purpose of SC sub-categorisation?

Leaders of SCs, and STs, and BCs say that it is important to provide reservations based on the numerical strength of the various sub-castes, rather than give a consolidated quota for all of them based on their overall population. The Madiga Reservation Porata Samithi (MRPS) chief Manda Krishna Madiga, who has been fighting for sub-categorisation in AP and Telangana, said reservations in education, government employment, local elected bodies, etc. should be provided based on the backwardness, social, and financial condition of each sub-caste.

The SC sub-caste of Madiga, which is further divided into several other sub-castes, claims that the other main SC sub-caste, the Mala community, corners all reservation benefits in the state.

What has the Rajeev Ranjan Mishra commission recommended?

The Commission recommended dividing the SCs in Andhra Pradesh into 59 SC sub-groups classified into three different categories.

Group 1 consists of the 'Most Backward', known as the Relli sub-group.

Group 2 consists of 18 castes of the Madiga sub-group, and has been classified as 'backward'.

Group 3 comprises 29 castes of the Mala Group classified as 'less backward'.

And how are the quotas distributed?

Group 1 – Most Backward (Relli sub-group) – 1.0% reservation

Group 2 – Backward (Madiga sub-groups) – 6.5% reservation

Group 3 – Relatively Less Backward (Mala sub-groups) – 7.5% reservation

For example, if 100 government jobs are available, 8 would go to the Mala community, 6 to Madigas, and 1 to Rellis. If 200 jobs are available, 15 would go to Malas, 13 to Madigas, and 2 to Rellis.

What will this sub-categorisation achieve?

It is aimed at the integrated and equitable progress of various sub-castes in the state, ensuring their inclusion in education, government jobs, politics, and civil society representation.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

20. BharatNet: Extending Internet Access, Expanding Rural Progress

What is the BharatNet project?

BharatNet is an ambitious project of the Government of India aimed at providing broadband connectivity to all Gram Panchayats (GPs) in the country. It is one of the biggest rural telecom projects in the world.



What is the objective of the BharatNet project?

The primary objective is to provide unrestricted access to broadband connectivity to all the telecom service providers. This enables access providers like mobile operators, Internet Service Providers (ISPs), Cable TV operators, and content providers to launch various services such as e-health, e-education, and

e-governance in rural and remote India. It aims to empower rural India, foster inclusive growth, and bridge the gap between urban and rural communities.

How many Gram Panchayats (GPs) are targeted under BharatNet?

The project initially aimed to connect approximately 2.5 lakh Gram Panchayats across the country.

What other initiatives support digital empowerment in rural India?

Several other initiatives complement BharatNet, including:

1. Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA): To ensure digital literacy in rural households, with over 6.39 crore individuals trained by March 31, 2024.

2. National Broadband Mission (NBM): Launched to fast-track the expansion of digital communications infrastructure. National Broadband Mission 2.0 was launched on January 17, 2025. Key initiatives under NBM include the Centralized Right of Way (RoW) Portal GatiShakti Sanchar.

How is BharatNet being funded?

BharatNet is primarily funded through the Digital Bharat Nidhi (DBN), which is a fund that replaced the Universal Service Obligation Fund (USOF). Digital Bharat Nidhi is a pool of funds generated by a 5 per cent Universal Service Levy charged upon all the telecom fund operators on their Adjusted Gross Revenue (AGR).

The idea is that this money would be used to fund the expansion of telecom networks in remote and rural areas, where private companies may otherwise resist offering their services due to them not being revenue-generating markets.

Who is executing the BharatNet project?

The project is being executed by a Special Purpose Vehicle (SPV) namely Bharat Broadband Network Limited (BBNL), which was incorporated in 2012 under the Indian Companies Act 1956. Under the Amended BharatNet Program, BSNL is appointed as the single Project Management Agency (PMA) for Operation & Maintenance of the entire network.

What is the current status of BharatNet implementation?

As of 19th March 2025, 2,18,347GPs have been made service ready under the BharatNet project in the country.

What are the benefits and impact of the BharatNet project?

BharatNet has had a transformative impact on rural India, contributing to socioeconomic development in multiple ways:

O Digital Inclusion: Connecting remote villages to high-speed internet, enabling access to e-governance, online education, and telemedicine.

O Economic Opportunities: Enabling participation in digital commerce, access to financial services, and entrepreneurial opportunities.

O Education and Healthcare: Facilitating digital classrooms and telehealth services.

O Empowering Local Governance: Enabling Gram Panchayats to implement e-governance projects.

Relevance: GS Prelims & Mains Paper II; Governance

Source: PIB

21. National Investigation Agency or NIA in News

Why Now?



The National Investigation Agency (NIA) recently began the process of taking over the investigation of the Pahalgam terror attack that killed 26 people last week, following orders from the Union Ministry of Home Affairs (MHA).

What is the NIA?

Following several terror attacks in India over the years, various expert committees have recommended a specialised Central agency to investigate these cases. Notably, the other key central agency, the Central Bureau of Investigation (CBI), mainly investigates corruption cases, economic offences and other serious organised crimes.

The NIA Act was thus enacted in 2008, the year of the deadly 26/11 terror attacks on Mumbai. It created an agency to "investigate and prosecute offences affecting the sovereignty, security and integrity of India, security of State, friendly relations with foreign States", and actions violating existing Acts and international treaties.

What is the Jurisdiction of NIA?

The NIA Act, amended in 2019, lists the offences the agency is empowered to investigate under a schedule. These include offences covered under sections of the criminal code, the Information Technology Act and the Arms Act, the Anti-Hijacking Act, among others.

NIA cases are tried at NIA courts. Under the Act, "The Central Government shall, in consultation with the Chief Justice of the High Court, by notification in the Official Gazette, for the trial of Scheduled Offences, designate one or more Courts of Session as Special Court for such area or areas, or for such case or class or group of cases, as may be specified in the notification."

Relevance: GS Prelims; Governance

Source: The Hindu

1. Indian Air Force Participates in Multi-Nation Air Exercise INIOCHOS-25

Why in News?

The Indian Air Force (IAF) will be participating in Exercise INIOCHOS-25, a prestigious multinational air exercise hosted by the Hellenic Air Force, belonging to Greece. The exercise will take place from 31 March 2025 to 11 April 2025.

What is INIOCHOS?

INIOCHOS is a biennial multinational air exercise hosted by the Hellenic Air Force. It serves as a platform for air forces to hone their skills, exchange tactical knowledge, and strengthen military ties. The exercise will integrate multiple air and surface assets from fifteen countries under realistic combat scenarios, designed to simulate modern-day air warfare challenges.



History

Exercise Iniochos, named after the ancient Greek term for "charioteer" or "rein-holder," is a multinational air exercise conducted by the Hellenic Air Force. Originating in the late 1980s as a small-scale tactical drill, it has evolved into one of Europe's most competitive and realistic air combat training platforms.

Based on the "Single Base Concept," the exercise operates entirely from the Andravida Air Base in northwestern Peloponnese, Greece.

Over the years, it has attracted participants from NATO and non-

NATO countries alike, including the United States, France, Italy, Israel, Saudi Arabia, and, more recently, India.

Relevance: GS Prelims; International Relations

Source: PIB

2. Who are the members of the Arctic Council? Why has the Arctic region become an area of interest now?

Why in News?

International observers have raised concerns about escalating tensions in the Arctic, warning that if left unchecked, they could eventually spark conflict in the region.

What is happening?

The Arctic, the northernmost area of the planet, has remained largely isolated for centuries. However, as climate change accelerates the melting of ice caps, new strategic opportunities are emerging for global powers. Beneath the frozen landscape lie untapped reserves of natural resources such as fossil fuels, rare earth elements, phosphates, and copper as well as lucrative fishing grounds.

Most of these resources are currently inaccessible due to the year-round ice barrier, but as climate change destroys the Arctic environment, these resources and nearby trade routes will become increasingly viable.

Unlike the Antarctic, which is demilitarised and environmentally protected by a dedicated international treaty, the Arctic lacks similar legal safeguards and is primarily governed by the UN Convention on the Law of the Sea (UNCLOS). This allows nations to claim territories in the region and deploy military infrastructure. In recent years, overlapping maritime claims and military posturing have exacerbated tensions.

Who is in control?

The various islands and coastal areas in the Arctic are controlled by eight countries — Canada, Denmark (through Greenland), Finland, Iceland, Norway, Russia, Sweden, and the U.S. Together, these nations form the Arctic Council, an international body tasked with protecting the environment, conducting scientific research, and safeguarding the interests of indigenous peoples in the region. These nations exercise sovereignty over the Arctic land and can also exploit resources within their Exclusive Economic Zones (EEZs). The waters between these territories fall under international jurisdiction, ensuring freedom of navigation.

According to UNCLOS, nations can extend their claims to the seabed beyond the 200-nautical-mile EEZ if they can prove that the area is a natural prolongation of their continental shelf. Canada, Denmark, and Russia have all submitted overlapping claims to the Arctic seabed to the UN Commission on the Limits of the Continental Shelf. Despite these territorial declarations, infrastructure in the Arctic remains underdeveloped, with only a few operational ports along the coast. Among the Arctic Council members, Russia is the only country with a significant fleet of icebreakers, including one which is nuclear-powered, capable of navigating through the region's treacherous sea ice.

Where do the tensions arise?

TOP OF THE WORLD

The US's secret military space base is among the world's most isolated places



For months, news headlines have reported on U.S. President Donald Trump's renewed interest in acquiring Greenland from Denmark. He has described the world's largest island as a matter of "national security" and has questioned the legitimacy of Denmark's sovereignty over the territory. Greenland, which has been under Danish control for over 300 years, also hosts the U.S. Pituffik military base. In January, following Mr. Trump's renewed interest, Denmark's prime minister Mette Frederiksen has pledged to bolster Greenland's security and embarked on a tour of European capitals to seek support from allies.

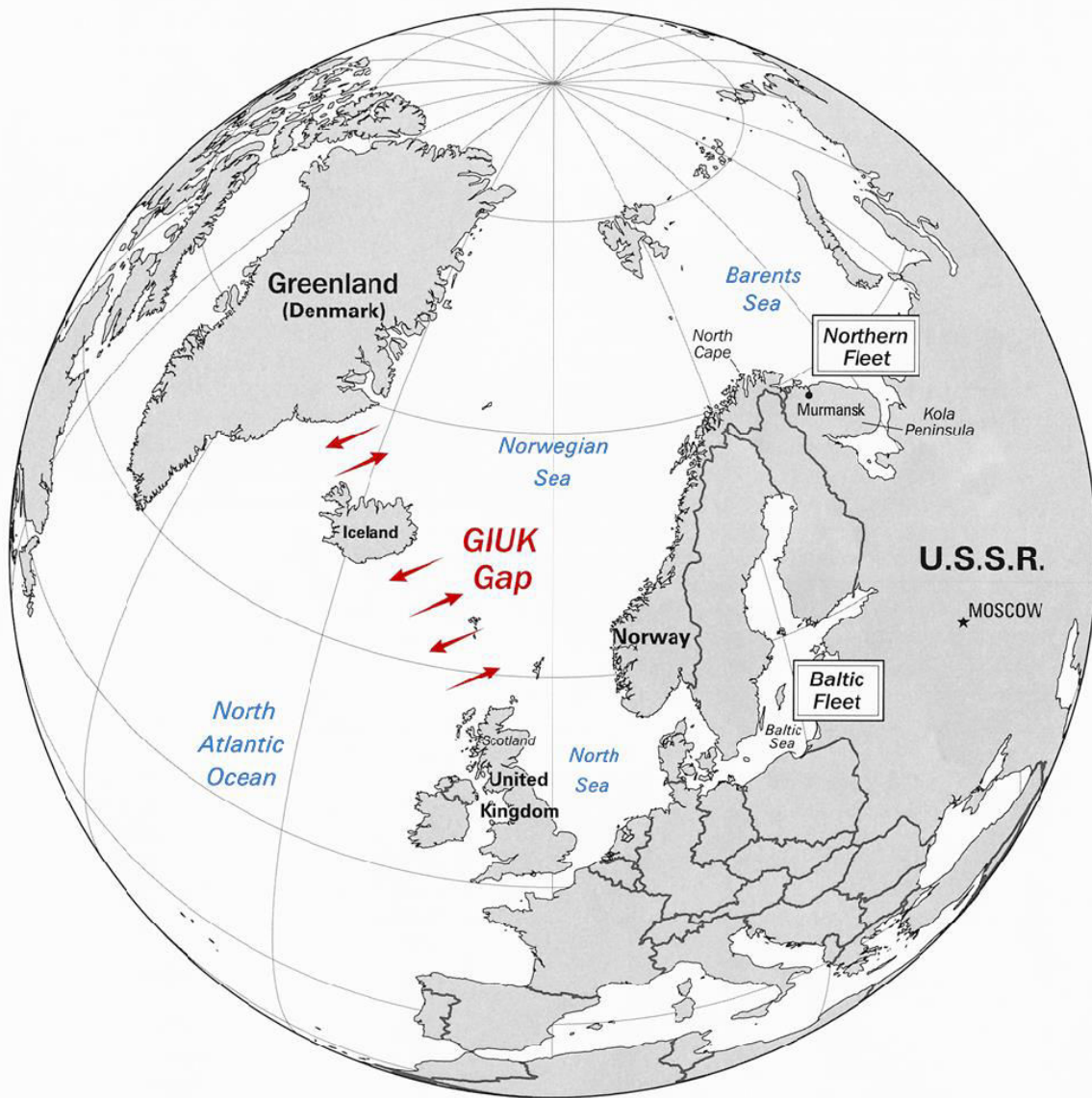
Additionally, tensions between the U.S. and Canada have risen following Mr. Trump's controversial comments about annexing Canada. Both nations have long disputed the status of the Northwest Passage, a potential Arctic shipping route that winds through Canada's Arctic Archipelago. Canada considers the passage part of its internal waters, granting it control over navigation, while Washington insists it falls under international jurisdiction, which means that any nation has freedom of navigation in the Passage.



Concerns over potential conflict also extend to Russia and the remaining Arctic Council members. These members, apart from Russia, all belong to NATO. Since the Russian invasion of Ukraine, relations within the Council have become increasingly strained. Russian officials have suggested that Norway's Arctic island of Svalbard should fall under Russian control. Meanwhile, observer states of the Arctic Council, including India, are closely monitoring developments.

The U.K., for instance, has repeatedly emphasized the strategic importance of the Greenland-Iceland-U.K. (GIUK) gap, a critical choke point for NATO's naval defences. This passage is the only feasible route for Russian submarines attempting to access the Atlantic to potentially disrupt NATO shipping in case of conflict, making it a focal point of Western military planning.

Greenland-Iceland-United Kingdom (GIUK) Gap



Note: Names and international boundaries are shown as they appeared in 1983.

Boundary representation is not necessarily authoritative.

743553 (R02446) 7-97

Why does the Arctic matter so much?

Aside from ongoing resource extraction, interest in the Arctic surged following a 2009 U.S. Geological Survey report estimating that the region holds 13% of the world's undiscovered oil reserves and 30% of its untapped natural gas reserves. Most of these resources lie beneath the seabed, making maritime claims highly significant. Greenland also harbours some of the world's richest deposits of rare earth elements, which drew significant investment interest from

Chinese companies in the early 2020s. However, many of these projects were later suspended due to environmental concerns or U.S. political pressure.

The melting of Arctic sea ice has also prompted interest into the opening of new commercial trade routes. The Northeast Passage, which runs along Russia's Arctic coast, is particularly critical for Chinese trade. This route, stretching from the Bering Strait to Norway, could reduce the maritime distance between East Asia and Europe by approximately 8,000 kilometres compared to the traditional route through the Suez Canal. Navigating commercial shipping through this passage could save Beijing billions in transportation costs. However, the so-called Polar Silk Road would require Russia to grant Chinese ships access to its Arctic ports, a prospect Moscow has so far approached with caution.

What lies ahead?

Aside from political declarations and territorial claims, some nations have taken concrete steps to assert their Arctic ambitions. In 2007, Russia sent the MIR-1 submarine to the North Pole to plant a Russian flag on the seabed beneath the Arctic ice cap — a symbolic demonstration of its presence and capabilities. Moscow has also maintained a number of military bases in the Arctic, most of them dating back to the Soviet era. In 2022, it conducted joint naval exercises with Beijing in the East China Sea, which indicated strategic implications for Arctic security.

China has also steadily become more vocal about its Arctic interests, declaring itself a 'Near-Arctic State' in 2018 and planning the construction of its first nuclear-powered icebreaker. Since Sweden and Finland joined NATO following Russia's invasion of Ukraine, the alliance has intensified its military presence in the region, including large-scale exercises near the Russian border in Finland in 2024. Analysts have pointed out NATO's limited operational capabilities in the Arctic, raising concerns about strategic imbalances. As temperatures continue to rise, tensions in the melting Arctic may soon reach a boiling point.

Relevance: GS Prelims & Mains Paper II; International Relations

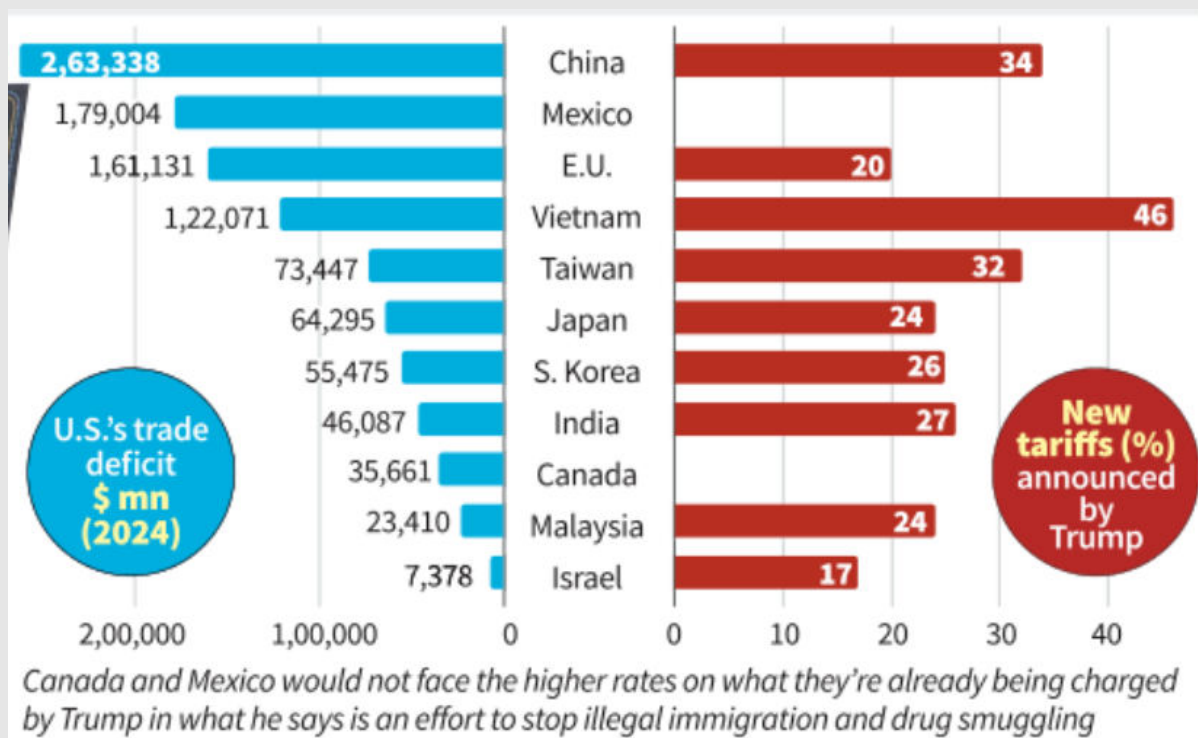
Source: The Hindu

3. Trump announces tariffs

Why in News?

U.S. President Donald Trump launched a full-scale trade war recently, announcing massive "reciprocal tariffs", ranging from 10% to 49%, on U.S. imports from its trading partners around the world. India was not spared and was hit with a 27% tariff on its exports to the U.S. despite ongoing talks for a trade agreement.

He announced a 10% baseline tariff on all countries, which will take effect from April 5. An individualised reciprocal higher tariff on the countries with which the U.S. has the largest trade deficits will also be imposed from April 9. Donald Trump has considered April 2, the date of announcement of tariffs, as the liberation day of American industry and businesses.



Response of Markets

Global markets plunged in response, from Japan's Nikkei which lost 4% and European markets that dropped more than 2% each, to India's Sensex, that shaved more than 300 points, while the Nifty dropped as well. In the U.S., the Dow Jones fell over 3% in the first hour of trading, while the Nasdaq crashed 4%.

Law behind

The U.S. President invoked his authority under the International Emergency Economic Powers Act (IEEPA) of 1977 to address large and persistent U.S. goods trade deficits, which he called a "national emergency".

Mixed impact on India depending upon sector

India's diamond and jewellery sector could be hit hard. The Gem & Jewellery Export Promotion Council (GJEPC) said that, given the tariffs, it will be a challenge to sustain India's current export volume of \$10 billion to the U.S. market. The United States accounts for more than 30% of India's annual gems and jewellery exports of \$32 billion.

The auto industry, however, does not expect to face any significant impact from the reciprocal tariff as automobiles and auto parts were not covered by it.

The developments could exacerbate supply chain challenges for aerospace manufacturer Boeing, resulting in aircraft delivery delays.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

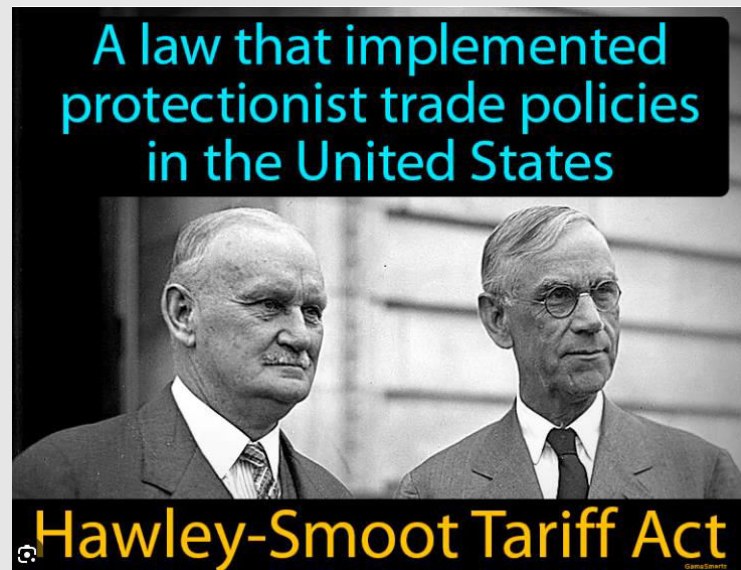
Source: The Hindu

4. Recalling the Smoot-Hawley Tariff Act, which worsened the Great Depression

Why in News?

President Donald Trump's tariff announcements have prompted a comparison with the Great Depression-era Smoot-Hawley Tariff Act, which ended up worsening the crisis it intended to resolve.

US tariffs have approached levels not seen since the Smoot-Hawley Tariff Act of 1930, which incited a global trade war and deepened the Great Depression.



Smoot-Hawley Act

In 1930, Congress passed a bill sponsored by Senator Reed Smoot and Willis Hawley to raise import duties on 20,000 goods to protect American farmers and businesses. President Herbert Hoover signed this into law. The Act placed aggressive tariffs on roughly 25% of all imported goods to the US.

Hoover, a Republican, had emerged victorious in 1928, having campaigned on

agricultural protectionism. The tariff act was originally mooted to protect the American agricultural lobby, which thrived during World War I on the back of increased foreign demand, but now found itself battling debts and low commodity prices amid a glut of produce.

Catastrophic trade war

The Act spurred a trade war. Major trading partners, including Canada and Europe, retaliated with boycotts, quotas, and their own tariffs on American goods. American exports to retaliating nations fell by 28-32%. The Act jeopardised recovery efforts of countries trying to emerge from the impacts of World War I and the Great Depression.

Smoot-Hawley came to be seen as exemplifying "beggar-thy-neighbour" policies. "Beggar thy neighbor" refers to economic policies a country uses to benefit itself at the expense of its trading partners, often through protectionist measures like tariffs or currency devaluation, potentially harming global trade.

Reversal of Tariffs

In 1934, President Franklin D Roosevelt signed the Reciprocal Trade Agreements Act, which transferred the authority for tariff policy from Congress to the White House. This allowed the President to pursue bilateral trade agreements and quickly repeal the tariffs.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: Indian Express

5. How did the US calculate reciprocal tariffs?

Why in News?



Leaving aside the wisdom of slapping every country in the world with “reciprocal tariffs”, there are now growing concerns about the methodology that the United States used to arrive at country wise tariff rates.

When Donald Trump first spoke about reciprocal tariffs, his idea was fairly straightforward: the US would simply levy the same tariffs on imports from a particular country as the tariffs levied by that country on imports from the

US. This is not how the US has actually gone about things.

So, how has the US calculated reciprocal tariffs?

The very first statement of the US Trade Representative memo on this calculation states the following: “Reciprocal tariffs are calculated as the tariff rate necessary to balance bilateral trade deficits between the US and each of our trading partners.”

This is fundamentally different from saying that the US will impose tariffs that will equal the other country’s tariffs. Instead, what the US seemingly wants from these tariffs is to raise them to a level where the trade balances out — it is not as concerned with the actual level of tariffs imposed against it but with using tariffs to wipe out its trade deficit.

Example of India

For instance, India has a trade surplus of around \$46 billion with the US. As such, the governing principle for the US while deciding the rate of reciprocal tariff against India is not to find what India charges but to raise tariffs to a level such that India’s exports to the US get neutralised completely.

In other words, at 27% (which is the reciprocal tariff rate chosen for India), the US believes India’s trade surplus against the US will be wiped out completely. On paper at least, this will happen because the 27% tariff on Indian exports will make them too costly for US consumers, who, in turn, will decide to not import those goods from India.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

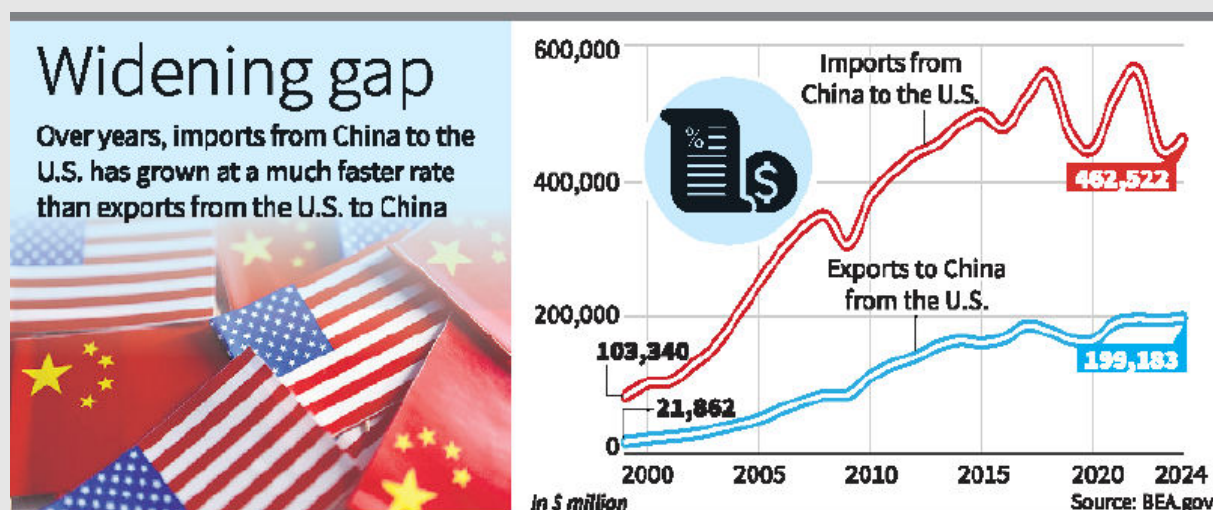
Source: Indian Express

6. China hits back with 34% tariff on U.S. goods

Why in News?

China announced that it will impose a 34% tariff on imports of all U.S. products beginning April 10, part of a flurry of retaliatory measures following U.S. President Donald Trump announcement.

Beijing also announced it filed a lawsuit with the World Trade Organization over the tariffs. The new tariff matches the rate of the U.S. "reciprocal" tariff of 34% on Chinese exports that Trump ordered this week.



Export controls on Rare Earths

The Commerce Ministry in Beijing also said in a notice that it will impose more export controls on rare earth elements, which are materials used in high-tech products such as computer chips and electric vehicle batteries.

Included in the list of minerals subject to controls was samarium and its compounds, which are used in aerospace manufacturing and the defence sector. Another element called gadolinium is used in MRI scans.

Suspended Chicken imports

China's customs administration said it had suspended chicken imports from some U.S. suppliers after it detected furazolidone, a drug banned in China, in shipments from those companies.

Separately, it said it had found high levels of mold in the sorghum and salmonella in poultry meat from some of the companies.

Relevance: GS Prelims & Mains Paper II; International Relations

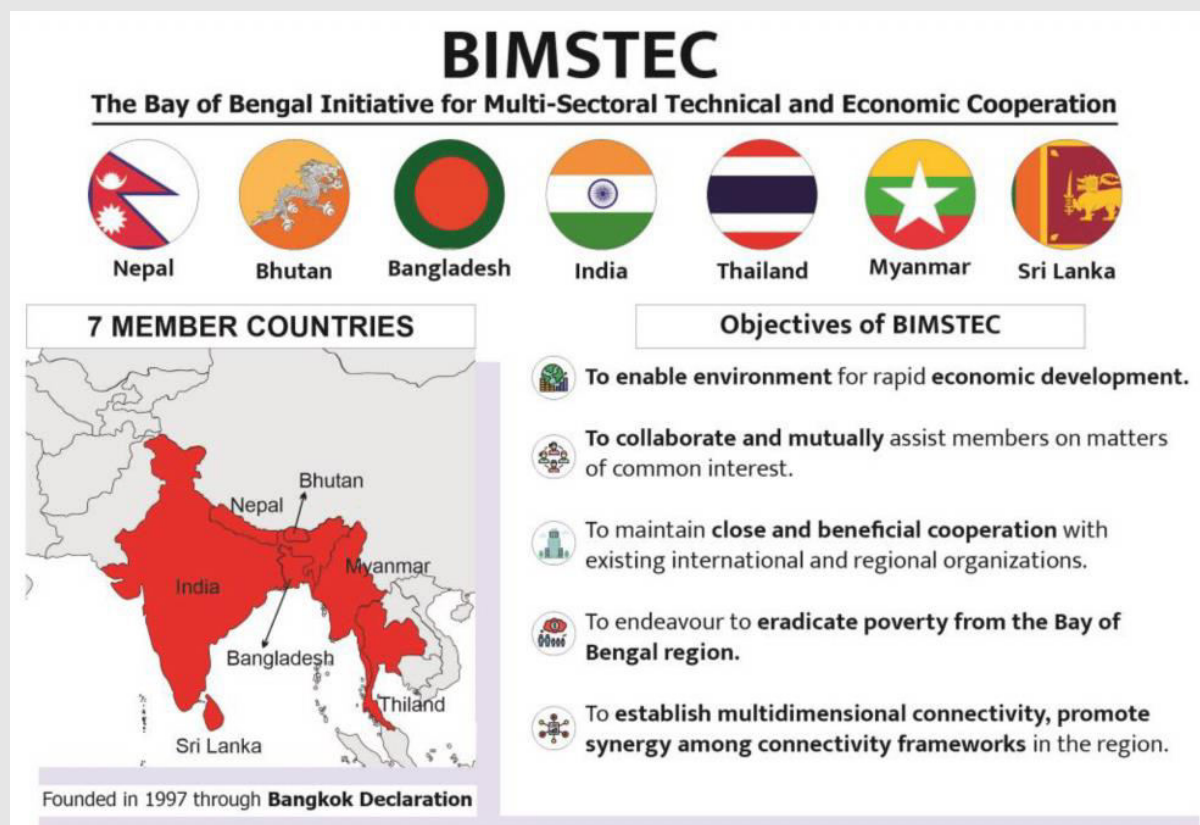
Source: The Hindu

7. BIMSTEC

Why Now?

External Affairs Minister S Jaishankar addressed the ministerial meeting of the seven-member Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) on April 3 in Bangkok, Thailand.

Prime Minister Narendra Modi will later oversee the signing of the Agreement on Maritime Cooperation at the 6th BIMSTEC summit, along with other members of the grouping.



WHAT IS BIMSTEC?

BIMSTEC includes countries of the Bay of Bengal region and seeks to act as a bridge between South and Southeast Asia. Originally formed as BIST-EC (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation) in 1997, it became BIMST-EC after Myanmar joined, and BIMSTEC in 2004 with Nepal and Bhutan.

WHAT IS THE AIM BEHIND BIMSTEC?

For one, it provides a common platform for countries in South Asia and Southeast Asia at a time when the SAARC is more or less defunct. While the Association of Southeast Asian Nations (ASEAN) is seen as one of more cohesive groupings in the world, the lack of forward movement in the fraught India-Pakistan relationship has left few options for South Asian countries. Landlocked countries, Nepal and Bhutan, may also benefit from access to the Bay of Bengal as a result of better ties with BIMSTEC countries.

China is another key part of the equation. It has undertaken a massive drive to finance and build infrastructure in South and Southeast Asia through the Belt and Road Initiative (BRI) in the last decade, in almost all BIMSTEC countries except Bhutan and India.

BIMSTEC could allow India to push a constructive agenda to counter Chinese investments, and the Bay of Bengal can be showcased as open and peaceful, contrasting with China's behaviour in the South China Sea.

Challenges

But there are challenges. Ongoing tensions between Bangladesh and Myanmar, and tensions between India and Bangladesh following Sheikh Hasina's ouster, have hampered the cooperation among nations. With the ongoing civil war in Myanmar, the country's potential as a land bridge between South and Southeast Asia is also diminished. Though the grouping may not see major breakthroughs soon, "unlike SAARC, which never truly sailed, BIMSTEC is a slow boat advancing toward greater engagement".

Relevance: GS Prelims & Mains Paper II; International Organisations

Source: Indian Express

8. Which countries are quitting a key landmine treaty and why?

Why in News?

All European countries bordering Russia have announced plans to quit the global treaty. Many have said they fear that, as United States President Donald Trump steps up pressure to end the war in Ukraine, Russia could use any pause to re-arm and target them instead.

Civilian victims

Anti-personnel landmines are generally hidden in the ground and designed to detonate automatically when someone steps on them or passes nearby.

More than 80% of mine victims are civilians, according to the International Committee of the Red Cross (ICRC).

The convention includes provisions to assist victims, many of whom have lost limbs and suffer from other permanent disabilities. In October 2024, the United Nations reported that Ukraine had become the most mined country in the world. As of August 2024, it said there had been around 1,286 civilian victims of mines and explosive remnants.

Stockpiles

Under the terms of the 1997 convention, countries were supposed to destroy all landmine stockpiles within four years, although not all have complied, according to the ICRC.

Some of the countries pulling out of the landmines treaty, including Lithuania, are also considering leaving the 2008 Convention on Cluster Munitions. Cluster munitions are weapons

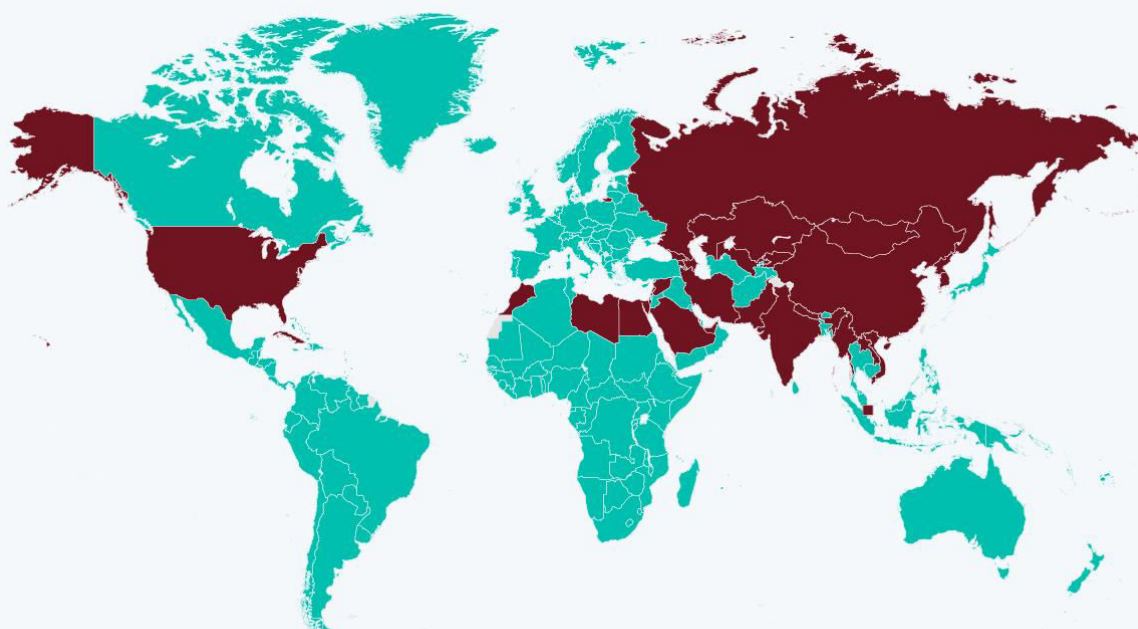
designed to release or disperse multiple explosive submunitions (also called "bomblets") over an area, often from a single container or dispenser.

The US, which had also not signed that convention, in 2023 transferred cluster munitions to Ukraine to help it defend itself against Russia.

Major Powers Among Non-Signatories of Mine Ban Treaty

Countries which have/have not signed and ratified the Ottawa Mine Ban Treaty of 1999

■ Parties to the treaty ■ Non-signatories



Source: International Campaign to Ban Landmines

Mine Ban Treaty

The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction of 1997, known informally as the Ottawa Treaty, the Anti-Personnel Mine Ban Convention, or often simply the Mine Ban Treaty, aims at eliminating anti-personnel landmines (APLs) around the world.

By March 2025, 165 states had ratified or acceded to the treaty. Major powers, which are also past and current manufacturers of landmines, are not parties to the treaty. These include the United States, China, and Russia. Other non-signatories include India and Pakistan.

Relevance: GS Prelims & Mains Paper II; International Organisations

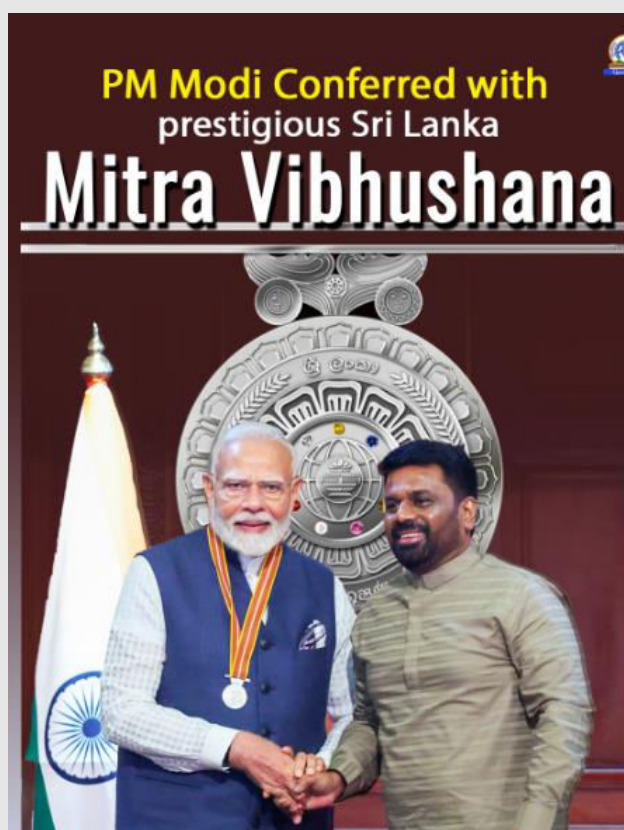
Source: Indian Express

9. PM Modi awarded Sri Lanka Mitra Vibhushana

Why in News?

Prime Minister Narendra Modi was awarded the 'Sri Lanka Mitra Vibhushana', the country's highest civilian honour, by Sri Lankan President Anura Kumara Dissanayake.

The two leaders met as part of the PM's state visit following Dissanayake's invitation. According to a social media post from MyGov India, this is the Prime Minister's 22nd international honour.



What is the Sri Lanka Mitra Vibhushana?

The Sri Lanka Mitra Vibhushana honours Heads of State and government heads with whom Sri Lanka has cordial relations. It appreciates "their friendship towards and solidarity with the people of Sri Lanka".

Instituted in 2008 by then-president Mahinda Rajapaksa, it is the foremost among awards granted to foreigners. According to a 2014 press release, this award ranks higher than the national honours granted by Sri Lanka, including the Sri Lanka Rathna (equivalent to the Bharat Ratna).

Who are the past winners?

The award is granted at the President's discretion. The names of all recipients are recorded in a special register for the purpose. Only four people have been awarded so far.

Former Maldives President Maumoon Abdul Gayoom, then approaching the end of his reign, became the inaugural recipient of the award in February 2008.

In January 2014, Rajapaksa conferred the honour on Palestinian President Mahmoud Abbas and the former President of Palestine, Yasser Arafat (posthumously). The awards were reportedly presented at a ceremony in Palestine, where the Palestinian government conferred Rajapaksa with its highest state honour, the Star of Palestine.

Relevance: GS Prelims; Bilateral Relations

Source: Indian Express

10. PM Modi at Jaya Sri Maha Bodhi: All about the 'oldest living tree', linked to an Indian princess

PM Modi Anuradhapura Visit



As part of his trip to Sri Lanka, Prime Minister Narendra Modi visited the Jaya Sri Maha Bodhi temple at the historic city of Anuradhapura.

The Jaya Sri Maha Bodhi tree is considered the oldest living cultivated plant in the world, and is believed to have grown from a branch that an Indian princess carried to Sri Lanka.

What is the Jaya Sri Maha Bodhi tree?

This Bo (*Ficus religiosa*, Pipal in Hindi) tree is believed to have grown from a branch of the tree in Bodhgaya (in present-day Bihar) under which Gautam Buddha attained enlightenment. The branch was carried to Sri Lanka by Sanghamitta (or Sanghamitra), the Mauryan king Ashoka's daughter and Buddhist nun.

Her arrival in Sri Lanka with the tree is still celebrated as Uduvapa Poya, an annual festival observed on a full moon night in December.

The tree, along with the other Buddhist shrines in the ancient city of Anuradhapura, is a major pilgrimage centre for Buddhists.

UNESCO World Heritage Site

Anuradhapura is now a UNESCO World Heritage Site. "Anuradhapura, a Ceylonese political and religious capital that flourished for 1,300 years, was abandoned after an invasion in 993 CE. Hidden away in dense jungle for many years, the splendid site, with its palaces, monasteries and monuments, is now accessible once again," the UNESCO website says. The invasion in 993 CE was by the Chola empire of south India.

Why did Sanghamitta travel to Sri Lanka?

On the invitation of the king, and the suggestion of her brother, Mahendra or Mahinda. During the reign of Ashoka, the Third Buddhist Council is believed to have met, where it was decided to send missionaries to different regions to propagate Buddhism. Missions left for various places including Sri Lanka.

The very successful mission to Sri Lanka was led by prince Mahendra, or Mahinda, Ashoka's son. Mahinda met King Devanampiya Tissa, whose capital was Anuradhapura, and converted him to Buddhism. After a number of royal ladies also wished to join the Buddhist monastic order, Mahinda sent for his sister, Sanghamitta, to come and initiate them.

Both Mahinda and Sanghamitta lived in Anuradhapura for the rest of their lives.

How has the Jaya Sri Maha Bodhi tree survived for so long?

Through dedicated care and the fact that the Pipal tree can regrow from its roots and seeds.

The tree has not been immune to attacks — in 1929, a man tried to chop it off in an act of vandalism, while in 1985, LTTE militants went on a rampage in Anuradhapura, gunning down 146 people in the vicinity of the tree.

And what about the Mahabodhi tree in Gaya?

While the original tree under which Lord Buddha meditated was destroyed (in some legends, by one of Ashoka's wives, Tishyarakshita), the existing Pipal tree at the site is believed to have descended from the germplasm (genetic material) of that original tree.

Relevance: GS Prelims; Bilateral Relations

Source: Indian Express

11. Why Trump blinked, and why the US tariff assault now seems targeted exclusively on China

90 day pause



U.S. President Donald Trump abruptly backed down in his global trade war with a 90-day pause for most countries, but slapped even more levies against China in what has become a full-scale confrontation between the world's two largest economies.

Mr. Trump took the decision after more than 75 countries had reached out to negotiate and did not retaliate against the United States.

So, Trump has paused tariffs on most nations for 90 days, including India, while raising tax on Chinese imports to 125 per cent. US Treasury Secretary Scott Bessent named India as among those willing to 'sit at the table rather than escalate'.

Baseline tariffs to stay

What has now been removed by the US is the varying country-by-country reciprocal tariffs that Trump had imposed recently. The 10 per cent tariff was the baseline rate for most nations that went into effect earlier. This is still in place, and likely to stay on.

Why punitive tariffs over China make sense?

There is a sense in Washington DC that China has gotten away with low cost manufacturing for too long. No other country has had the same level of global dominance across product

categories since the early 1970s. This is more significant now than in earlier decades, when trade represented a much lower share of global goods production and consumption. For instance, the global trade-to-GDP ratio in 1970 was around 25 per cent, but by 2022, that climbed to over 60 per cent.

Weakening domestic demand, alongside export-facilitating policies in products, where China is the world's dominant manufacturer, has led to prices collapsing globally and driving other national producers out of business.

While the benefit of this has been a phase of sustained lower global inflation, China has simultaneously created a progressive stranglehold over global manufacturing: a level of manufacturing dominance by a single country seen only twice before in world history — by the UK at the start of the Industrial Revolution, and by the US just after the second World War.

Weak Domestic Demand

What makes China's extraordinary dominance in manufacturing worse is the continuing weakness in domestic demand in China. That too comes from the problem of China's unwillingness to vacate its earlier specialisation in low value-added manufactured products as it moved up the global value chain. This has concomitantly led to a weakness in Chinese demand for imported goods, which was expected to rise if China had ceded the manufacture of low value-added manufactured goods as it progressively moved up the value chain. So, more than Beijing's export competitiveness, weak Chinese imports explain this continuing imbalance. Trump has ostensibly set out to address this imbalance. So, while many might not agree with Trump's solution, it's difficult to wish away the problem he's wants to fix.

So, in that sense, Trump's tariff action has come full circle, back to the originally intended target – China. Trump had been waiting for a call from President Xi Jinping to discuss what can be done on tariffs and secondary issues such as the fate of Tik Tok. That phone call never came, even though sources attest to backchannel negotiations at lower levels.

The structural issues with the American economy

The US economy relies heavily on trade, and that's part of its structural construct in the post World War-II era. This is because the American economy consumes more goods than it produces domestically. As a result, its imports are almost always higher than its exports, resulting in a trade deficit.

Why is that so? When a country consumes more goods than it produces domestically, it needs to source the additional goods from other countries through imports. And that is resulting in a high trade deficit — the gap between what it buys from other countries and what it sells to them.

Harsh consequences for US consumers

The impact of even these 10 per cent tariffs is that prices go up sharply for the US consumer, who then curb spending. If the flip flop on tariff outlook continues, investors get jittery and the investment impetus slows due to these uncertainties. So aggregate growth in the US

economy then slides, even as there is higher inflation and the Fed is not able to cut interest rates as much as it would have liked to. All of those things are bad for the American economy.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express and The Hindu

12. Tahawwur Rana on way to face justice in India. What is the story of the extradition of this Mumbai 26/11 terror attack accused?

What is the story of Rana's arrest and the legal process that followed?

Rana is accused of aiding and abetting the reconnaissance for the 26/11 attacks carried out by David Coleman Headley, with whom he went to school in Pakistan, and of participating in the conspiracy.

This is his story, from 2009 onward.

* Rana was arrested in Chicago in October 2009 for his involvement in the 26/11 attacks, in which more than 180 people were killed. He was also accused of providing material support, during 2008-09, to an attack planned by would-be Islamist terrorists on the Danish newspaper Jyllands Posten.

The Jyllands Posten plot was busted in December 2010, and the plotters, who had allegedly planned a "Mumbai-style" attack, were arrested. The Islamist militants had allegedly planned to punish the Copenhagen-based newspaper for having published cartoons depicting the Prophet in 2005.



* The US District Court for the Northern District of Illinois prosecuted Rana for conspiracy to provide material support to terrorism in India and Denmark, and to the Pakistan-based Lashkar-e-Taiba terrorist group.

The jury acquitted Rana of the charge of conspiring to provide material support to terrorism in India, but convicted him on the other two counts. On January 17, 2013, Rana was sentenced to 168 months (14 years) in prison.

* On June 9, 2020, Rana was released on compassionate grounds.

* But a day later, a Magistrate Judge in California, where Rana was serving his sentence, signed a provisional arrest warrant with a view to extraditing him to India based on an extradition request from December 2019. Rana opposed his extradition on the ground of "double jeopardy", a procedural defence that seeks protection from being tried again on same or similar charges after an acquittal or conviction has already taken place.

* On May 16, 2023, an extradition Magistrate Judge rejected Rana's arguments. Rana then petitioned the US District Court for the Central District of California for a writ of habeas corpus.

* This was rejected on August 10, 2023. Rana then appealed in the Court of Appeals for the Ninth Circuit. This too was rejected.

* Rana then filed a writ of certiorari in the US Supreme Court, which was rejected on January 21 this year.

* Finally, after Trump announced his extradition last month, Rana filed the emergency application in a last-ditch attempt to stay in the United States.

What is the India-US extradition treaty?

The treaty, which was signed in June 1997, established a legal framework for the extradition of individuals charged with or convicted of serious offences in either country.

An offence is extraditable if it is punishable by imprisonment for more than one year under the laws of both countries.

Political offences are not extraditable under the India-US treaty. However, certain actions such as the murder or other willful crime against a Head of State/ Government or a member of their family, aircraft hijacking and aviation sabotage, crimes against internationally protected persons, and hostage-taking, etc., are not construed as "political offences" under the treaty.

As of 2023, India had "extradition treaties" with 48 countries, and "extradition arrangements" with another 12.

How did the provisions of the treaty play out in Tahawwur Rana's case?

Following his provisional arrest in 2020, US authorities had submitted in court that Rana should be cleared for extradition to India as his offences and legal situation met all criteria required under the extradition treaty between the two countries.

They said there was "probable cause to believe that Rana committed the offences" of which he had been accused in India.

The US government submitted that it was not proceeding on Indian charges such as "membership of a terror organisation", "conspiracy to wage war", and "conspiracy to commit terrorist act" because they did not fulfil the criteria of "dual criminality".

However, "the dual-criminality requirement (of the extradition treaty) is met because the remaining charged offences are punishable in both India and the United States", the US said.

Rana claim of "double jeopardy" – arguing that India intended to prosecute him for the same offences of which he had been acquitted by the Chicago court – was rejected by the US Court

of Appeals for the Ninth Circuit on the ground that the Indian charges had “elements” distinct from the charges under which he had been prosecuted, and eventually acquitted, by the Chicago court.

The court held that “India [had] provided sufficient competent evidence to support the magistrate judge’s finding of probable cause that Rana committed the charged crimes.”

Before Rana, have there been other extraditions to India from the US on charges of terrorism?

There have been only two extraditions of alleged terrorists from the US to India so far – alleged Khalistanis Charanjeet Singh Cheema and Kulbeer Singh Kulbeera alias Barapind in February 2005 and June 2006 respectively.

According to data provided by the Ministry of External Affairs to Parliament, the treaty facilitated the extradition of only 11 Indian fugitives from the US between 2002 and 2018.

One of these individuals was accused of the sexual abuse of children, another of attempt to murder. The rest were accused of financial fraud and cheating.

The government recently told Parliament that 65 requests for extradition remain pending with the US government.

Has the US ever rejected a request for extradition from India?

Yes, the US has rejected several requests for extradition from India, most importantly that of Rana’s associate Headley.

The Lashkar operative who was born Daood Gilani was arrested along with Rana in October 2009. He was tried and sentenced by a US court for the killing of six Americans in the Mumbai attacks after he pleaded guilty to the charges. One of the key terms of his plea bargain was that he would not be extradited to India.

The US had earlier rejected India’s request to extradite Warren Anderson, who was CEO of Union Carbide at the time of the 1984 Bhopal gas leak.

Anderson had been arrested by police in India, but he was soon given bail and allowed to leave the country.

Almost 20 years later, in May 2003, India sent a request for his extradition to the US, which was declined on the ground of insufficient evidence.

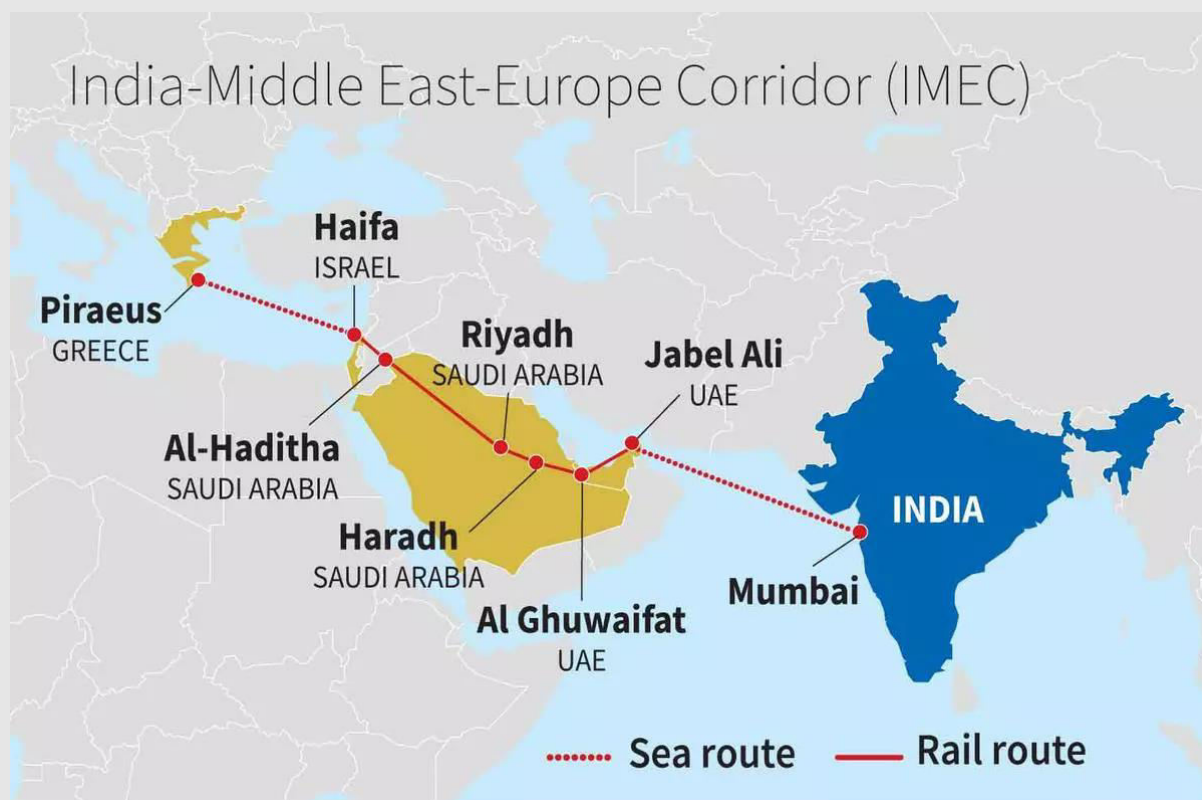
Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: Indian Express

13. India-Middle East-Europe Economic Corridor (IMEC)

Why in News?

The IMEC is a landmark project announced during the G20 Leaders' event in New Delhi in 2023. On 9 September 2023 the Memorandum of Understanding (MoU) was signed during the 2023 G20 New Delhi summit by the governments of India, United States, United Arab Emirates, Saudi Arabia, France, Germany, Italy and the European Union



Why Now?

India and Italy recently reiterated their commitment to work jointly on the ambitious India-Middle East-Europe Economic Corridor (IMEEC or the IMEC). The project was mentioned during talks between External Affairs Minister S Jaishankar and Italian Deputy Prime Minister and Minister of Foreign Affairs, Antonio Tajani, in New Delhi recently.

What is the IMEC?

The IMEC is a landmark project announced during the G20 Leaders' event in New Delhi in 2023. It was aimed at stimulating economic development through enhanced connectivity and economic integration between Asia, the Middle East, and Europe. The corridor is a proposed route from India to Europe through the United Arab Emirates, Saudi Arabia, Israel and Greece. It will have two separate corridors, the east corridor connecting India to the Arabian Gulf and the northern corridor connecting the Arabian Gulf to Europe.

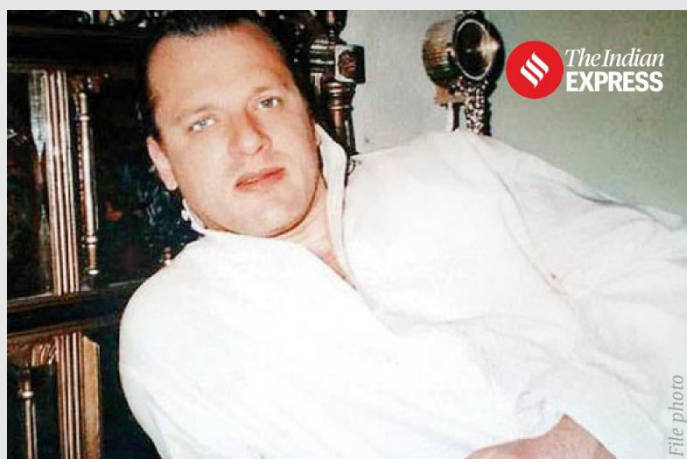
Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

14. David Coleman Headley: the 26/11 conspirator who got away with his life

Why in News?

While Tahawwur Hussain Rana is in the custody of the National Investigation Agency (NIA) in New Delhi, his closest collaborator during the 2008 Mumbai terrorist attacks, David Coleman Headley alias Daood Gilani, is serving time in prison in the United States. Rana was extradited from the US recently.



DAVID COLEMAN HEADLEY:
the 26/11 conspirator who got
away with his life

Pleaded Guilty

Headley had struck a bargain with the US authorities long ago, buying freedom from extradition to India in return for pleading guilty to all charges brought against him and cooperating with the prosecutors.

Headley was arrested in the US while intending to ultimately travel to Pakistan to deliver surveillance videos to top operatives of the Lashkar-e-Taiba and al-Qaeda.

In March 2010, Headley pleaded guilty to all 12 counts that were brought against him. In his testimony to federal officials, Headley said that the Mumbai attacks were a joint operation of the terrorist group Lashkar-e-Taiba (LeT) and Pakistan's Inter-Services Intelligence Directorate (ISI).

On January 24, 2013, Headley was sentenced to 35 years in prison for federal crimes relating to his role in planning the 26/11 attacks and a subsequent, ultimately foiled, plot to attack the offices of the Jyllands-Posten daily newspaper in Copenhagen, Denmark.

Born as Daood Gilani

Headley was born Daood Sayed Gilani in Washington DC in 1960 to Salim Sayed Gilani, a Pakistani diplomat and broadcaster, and Alice Serrill Headley, then a secretary at the Pakistani embassy in the US capital.

Headley was a months-old baby when his parents and two siblings moved to Lahore, Pakistan. After his parents divorced and his mother left Pakistan, Headley stayed on in the country with his father and his extended family. His father worked for long with Radio Pakistan, and ultimately died in December 2008, the month after the Mumbai attacks. His mother too, died in the same year, in the US.

Headley went to private military schools, including Cadet College Hasanabdal, the first quasi-military boarding school in Pakistan, located about 50 km to the northwest of Islamabad. It was at Hasanabdal in the 1970s that he met, and became close friends with, Tahawwur Rana.

When he was 17 years old, Headley returned to the US and was admitted to Valley Forge Military Academy and College in Philadelphia. He left after just one semester, and soon plunged into a world of crime and drugs.

In the 1980s, Headley became addicted to drugs, and after a bar his mother ran in Philadelphia shut down, he moved with her to New York City, and opened two video stores in Manhattan. He kept travelling to Pakistan to smuggle heroin into the US. He was arrested by the US Drug Enforcement Administration (DEA) twice, in Germany in 1988 and in New York in 1997.

He cooperated with the authorities in both cases, ending up with relatively light prison terms, delivered some of his customers to law enforcement, and ultimately became, in the late 1990s, a DEA asset and informant, according to reported articles on his career trajectory as a terrorist collaborator.

Over subsequent visits to the country, which were occasionally unsupervised, Headley's association with the LeT deepened, and he reportedly met Hafiz Saeed, the founder and leader of the terrorist organisation.

According to some reports, Headley's ties with the Lashkar likely developed with the knowledge of US officials, who were presumably trying to get him to infiltrate the terrorist group.

To David Coleman Headley

In late 2005, with the Lashkar actively preparing for the attack on Mumbai, Headley received orders to conduct surveillance in India.

In February 2006, Daood Gilani legally changed his name to David Coleman Headley in Philadelphia, which allowed him to "portray himself in India as an American who was neither Muslim nor Pakistani".

Between 2006 and 2008, Headley visited Mumbai on five extended trips. His old friend Tahawwur Rana helped him by opening a branch of Rana's American immigration consultancy firm in Mumbai.

On each trip to India, Headley recorded videos of potential targets, surveilled locations of interest, and assessed security measures. He reported back to Pakistan, where he met with LeT members.

His fourth trip in April 2008 focused on identifying potential landing sites for the terrorists who would travel to Mumbai from Pakistan by boat. He himself took boat trips around the harbour, using a GPS device to identify the precise coordinates for various locations for the landing.

In March 2009, months after the terrorist attacks, Headley made a sixth trip to India. This was to conduct additional surveillance, including that of the National Defence College in Delhi, and of Jewish Chabad Houses in several cities.

American authorities had an idea of Headley's links to suspected terrorist activity from at least 2005. His American wife at the time, who had filed a domestic complaint against him, tipped off federal investigators about his links to LeT. In December 2007, Faiza Outalha, a Moroccan woman whom he had married, informed officials at the US embassy in Pakistan about Headley's role in a possible terror plot in Mumbai.

But the American federal agencies did not act on this information. Officials who spoke to Rotella said Headley's status as an informant helped him evade detection as he travelled between Mumbai to Pakistan, allowing him to game the system.

However, the US did send a series of warnings to India about a potential terror plot in Mumbai. The first of this was in early 2008, which offered general intel about a potential LeT strike. In May, US officials identified the Taj Mahal Hotel and neighbouring sites frequented by tourists as potential strike sites. Then, on November 18, a week before the attack, they flagged a suspicious vessel posing a maritime threat to Mumbai.

How Headley evaded extradition to India

Given the familiarity of intelligence operatives with Headley's activities over several years, it would seem odd that he evaded arrest for almost a year after the Mumbai attacks.

His role as a conspirator in two terrorist plots would have made him eligible for the death. Headley moved, therefore, to make himself indispensable to the investigation by opting for his usual strategy of cooperating.

His testimony revealed the extent of the LeT's operations in Pakistan and the role of the Pakistani state intelligence in executing 26/11. This was reflected in the April 2011 indictment, which named Sajid Mir, a LeT leader and Headley's handler, as well as Major Iqbal, purportedly an ISI official, for their roles in the 26/11 attack.

Headley's 2010 plea agreement said that he "provided substantial assistance to the criminal investigation, and also has provided information of significant intelligence value".

The only 26/11 terrorist who was caught alive, Ajmal Amir Kasab, was executed in 2012. The fate of Tahawwur Rana remains to be seen.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: Indian Express

15. 'Aliens in US must register within 30 days'

US immigration registration rule

If immigrants to the US are not carrying their ID and immigration documents on their person, they could face penalties. The Donald Trump administration is now enforcing a rule that anyone who has lived in the US for more than 30 days has to register with the government and carry the registration papers with them at all times, for checks and inspections.



What is the US rule about mandatory registration?

In a statement issued on April 11, the US Department of Homeland Security (DHS) said, "all foreign nationals present in the United States longer than 30 days that the deadline are to register under the Alien Registration Act. This law requires all aliens in the United States for more than 30 days to register with the federal government. Failure to comply is a crime, punishable by fines, imprisonment, or both."

The Trump administration is demanding compliance with a rule that has been around for decades, but rarely enforced since World War II.

What is the background?

When Trump was campaigning, one of his major promises had been a crackdown on illegal immigration. Soon after coming to power, he on January 20 issued Executive Order 14159, 'Protecting the American People Against Invasion', which directed the DHS to enforce the registration rule strictly. Failure to comply with the registration requirement was to be "treated as a civil and criminal enforcement priority."

Relevance: GS Prelims & Mains Paper II; International Relations

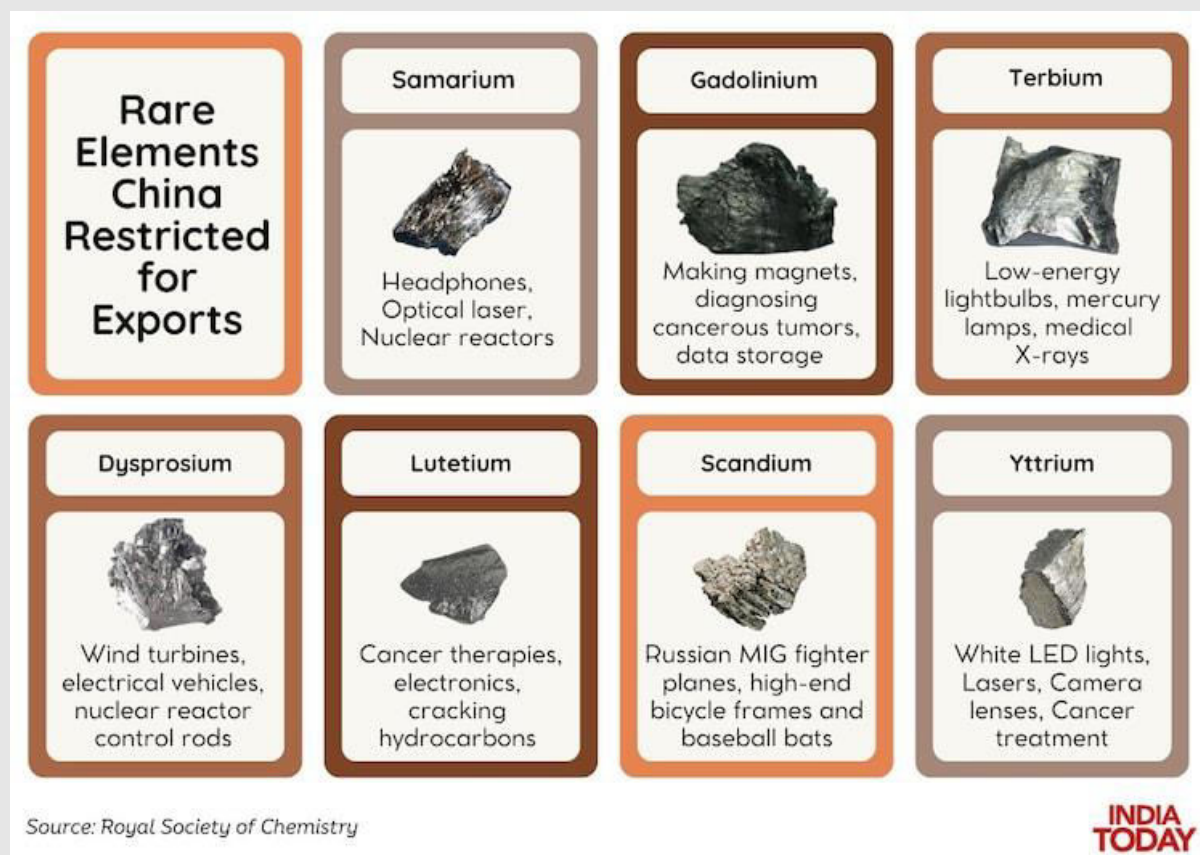
Source: Indian Express

16. China restricts exports of rare earths: What will be the impact?

Why in News?

China announced restrictions on the export of seven "rare earths", soon after US President Donald Trump decided to impose tariffs on most of the country's trade partners earlier this month.

These elements are crucial for manufacturing high-value goods, including in the fields of defence and clean energy, as well as everyday items like smartphones and electronic displays. Since the 1990s, China has held an unrivalled dominance over rare earths, supplying 85 to 95 per cent of the world's demand.



What are rare earths?

Rare Earth Elements or Rare Earth Metals are a set of 17 chemical elements in the periodic table — cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y). All have similar chemical properties and appear silver-coloured.

According to the United States Geological Survey (USGS), most REEs are not as rare as their name suggests. While nearly all REEs are more abundant on average in the Earth's crust than silver, gold, or platinum, it is unusual to find concentrated and economically mineable deposits. China holds expertise in the refining of rare earths more than any other country.

Impact on Environment

Ironically, even as REEs are being used to build electric vehicles and wind turbines, all part of the push for "clean energy", their mining process results in significant environmental damage. For instance, rare earth ores contain arsenic and cadmium, which are allowed in the open air

during the refining process. These elements can harm human health and contaminate water sources.

Uses

REEs' unique magnetic and optical properties lend them to a multiplicity of uses, including making phosphors, or substances that emit luminescence, for making digital displays and screens. Increasingly, REEs are being used to build powerful magnets, with uses in parts of automobile manufacturing — power steering, electric windows, power seats, and audio speakers.

Why has China restricted rare earth exports?

Ores of rare earth oxide are found in China, Russia, the United States, India, and Australia (in descending order), but China dwarfs others in production and refining.

In the 1990s, China's government declared rare earths to be a "protected and strategic mineral". Since then, it has periodically ordered restrictions on their extraction based on changing domestic and global demand, as well as during disputes with other countries. In 2010, following Japan's detention of a Chinese fishing trawler captain, rare earths exports were blocked for some time.

In 2022, China threatened to stop exporting rare earth materials to the US amid the trade war between the countries during the first Trump administration.

This time, China's Ministry of Commerce (MOFCOM) and the General Administration of Customs (GAC) announced export controls on seven rare earths — samarium, gadolinium, terbium, dysprosium, lutetium, scandium, and yttrium.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

17. Kailash Mansarovar Yatra to resume soon

Why in News?

The Ministry of External Affairs (MEA) recently announced that the Kailash Mansarovar Yatra, which has not taken place since 2020, will resume this year. This comes as a part of a larger rapprochement between India and China in recent months.

A thaw in ties

While the yatra had initially been suspended due to the Covid-19 pandemic, deteriorating relations between India and China meant that it did not resume even after the virus was no longer a concern.

Since 2024, however, both countries have been looking to improve ties. The resumption of the yatra was formally discussed for the first time at the Special Representatives meet in Beijing

between National Security Advisor Ajit Doval and China Foreign Minister Wang Yi in December, 2024.

In January this year, following Foreign Secretary Vikram Misri's visit to Beijing, the two countries agreed in principle to resume the yatra.

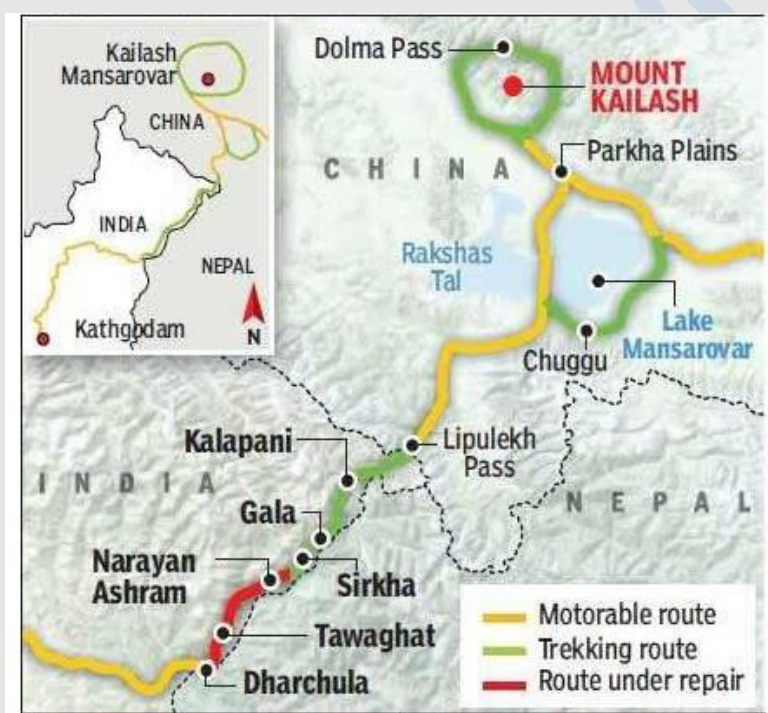
The Mansarovar yatra

Lake Mansarovar, known locally as Mapam Yumtso, is a high altitude freshwater lake near Mount Kailash in the Ngari Prefecture of the Tibet Autonomous Region (TAR).

Both the lake, which is at an elevation of 4,600 metres, and the adjacent 6,638-metre high mountain, which Hindus believe is the home to Lord Shiva, are sacred in Hinduism, Buddhism, Jainism, and the Tibetan Bon religion. Hundreds of pilgrims make the arduous journey to the region each year; they generally trek to Lake Mansarovar, and then circumambulate the nearby Mount Kailash.

The two routes

There are two primary routes to reach Lake Mansarovar from India.



Lipulekh Pass Route: Lipulekh pass lies at an altitude of 5,115 metres, on the border between Uttarakhand and TAR, near the trijunction with Nepal.

The Lipulekh pass route is the most direct way to get to Mansarovar from India. the lake is roughly 50 km from the border. However, the terrain makes the journey very challenging. Currently, this route entails roughly 200 km of hard trekking. Before 2020, it had been operational since 1981.

Nathu La Pass Route: Nathu La pass lies at an altitude of 4,310 metres on the border between Sikkim and TAR.



The route to Mansarovar from Nathu La is much longer in terms of distance — close to 1,500 km. But it is fully motorable, meaning pilgrims can make it all the way to the lake without any trekking. (They would only need to trekk 35-40 km for the circumambulation of Mount Kailash). This route became operational in 2015.

Nepal Route: No private operators function on the two official routes. There is, however, a third route through Nepal in which private companies do operate. In theory, this route has been accessible to Indians since 2023, when China reopened its border with Nepal. But visa and permit requirements, as well as high costs due to China-imposed fees, have meant that few have likely availed this option.

Darshan from distance: In recent years, some airlines have been operating chartered flights out of Nepalgunj, Nepal in which the faithful can get an aerial darshan of Mount Kailash. India too is developing a Mount Kailash viewing spot in Dharchula, near Lipulekh, which will provide a direct line of sight to the sacred peak.

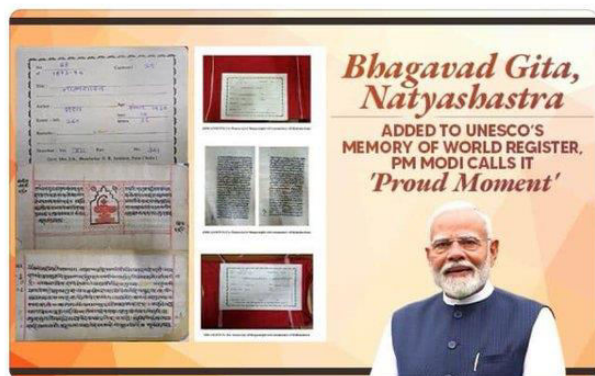
Relevance: GS Prelims & Mains Paper II; International Relations
Source: Indian Express

18. Bhagavad Gita and Natyashastra added to UNESCO's Memory of the World Register

Why in News?

Bhagavad Gita, Natyashastra Added To UNESCO's Memory Of World Register, PM Modi Calls It 'Proud Moment'

NEWS18 APRIL 19, 2025



Manuscripts of the Bhagavad Gita and Bharata's Natyashastra are among the 74 new additions to UNESCO's Memory of the World Register this year.

Memory of the World (MoW)

The United Nations Educational, Scientific and Cultural Organization, better known as UNESCO, launched the Memory of the World (MoW) Programme in 1992 with the aim of "guarding against the collective amnesia, calling upon the preservation of the valuable archive holdings and library collections all over the world, and ensuring their wide dissemination".

The central project of the MoW Programme was to create a compendium of documents — manuscripts, oral traditions, audio-visual materials, and library and archive holdings — which are of "world significance and outstanding universal value". This is the MoW Register.

Entries in Register

Beginning in 1997, the Register has been biennially updated — with the exception of a lengthy gap between 2017 and 2023. In any year, at most two submissions from a country are added. With the latest additions, the Register now contains 570 entries. These include:

- Books or collections of works (eg. Mahavamsa, the meticulously kept historical chronicle of Sri Lanka);
- Drawings (eg. Meiji-era collection of Sakubei Yamamoto of Japan);
- Manuscripts (eg. collection of more than 11,000 Shaiva Siddhanta manuscripts);
- Audio recordings (eg. 430 hours of recordings of the Frankfurt Auschwitz trials, 1963-65); and
- Video recordings (eg. Bangabandhu Sheikh Mujibur Rahman's historic March 7, 1971 speech).

Indian submissions: Rig Veda to NAM archives

The Register contains 13 submissions by India, including two joint-submissions. These range from the Rig Veda (added in 2005) and the collective works of the Shaivite philosopher Abhinavagupta (added in 2023), to the archives of the first summit meeting of the Non Aligned Movement in Belgrade in 1961 (added in 2023) and the archives of the Dutch East India Company (added in 2003).

The latter two entries were joint submissions, which India made with other countries.

This year entries

This year's entries champion India's ancient literary heritage.

Natyashastra: Traditionally attributed to the sage Bharata, Natyashastra is an ancient Sanskrit treatise on performing arts. Comprising 36,000 verses, the "Nāṭyashastra embodies a comprehensive set of rules that define natya (drama), abhinaya (performance), rasa (aesthetic experience), bhava (emotion), sangita (music)". It was "codified around the 2nd century BCE".

Bhagavad Gita: Traditionally attributed to the sage Vyasa, Bhagavad Gita is a Sanskrit scripture comprising 700 verses that are organised in 18 chapters, embedded in the sixth book (Bhishma Parva) of the epic poem Mahabharata.

The text is generally dated to the first or second century BCE, although there is considerable debate on the matter.

The Gita is essentially a dialogue between Arjuna and Krishna, which takes place just before the beginning of the great war of Mahabharata. On the brink of war against members of his own family, Arjuna is suddenly overwhelmed with the prospect of what he is about to do. He expresses his misgivings to Krishna, his charioteer and guide, also an avatar of Lord Vishnu. Krishna's responses make the central themes of the Gita, and provide spiritual and ethical basis for leading one's life.

Relevance: GS Prelims & Mains Paper II; International Organisations
Source: Indian Express

19. Pope Francis dies: How will a new pope be elected?

Why in News?

Pope Francis funeral rites: Pope Francis died after battling a lengthy illness. Pope Francis was hospitalised on February 14, following complications from bronchitis and was diagnosed with bilateral pneumonia. He spent over a month in medical care before returning to his residence to continue his recovery.

Since 1415, all popes except one have died in office. Benedict XVI, Francis's predecessor who assumed the papacy in 2005, retired in 2013, citing a "lack of strength of mind and body".

The transfer of power

Detailed laws and rituals, some dating back to the Middle Ages, govern the transfer of power from one pope to the next. In April 2024, Pope Francis approved an updated version of the Ordo Exsequiarum Romani Pontificis, the liturgical book governing the papal funeral rites to be followed, which will guide the upcoming funeral Mass.

The passing of the pontiff triggers the Interregnum, the intervening period between two papacies.

Traditionally, the Pope's death is verified by the camerlengo, the cardinal who serves as the Church's treasurer. He ceremonially calls out the Pope's baptismal name thrice and

pronounces him dead if no response is received. The update to the liturgical book changes where his death will be ascertained, from the room of the late Pope to the chapel.

The Ring of the Fisherman, the Pope's signet ring bearing the seal of his papacy, is broken off to symbolise the end of his rule. The papal apartment is locked and sealed, and the camerlengo informs the College of Cardinals that the Pope is no more. The Novendiale, or nine days of mourning, follows.

The Pope's body is dressed in papal regalia and placed for public viewing in St Peter's Basilica. In 2022, Pope Francis arranged for his body to be placed in a simple coffin, dispensing with the three coffins made of cypress, lead, and oak that are traditionally used. As per the updated Ordo Exsequiarum Romani Pontificis, the Pope will likely be placed in this coffin for public viewing.

The funeral is held within four to six days, and is led by the Dean of the College of Cardinals. Most popes are buried underneath St Peter's Basilica, but Pope Francis decided in 2022 that he should be buried away from the Vatican, in the Santa Maria Maggiore Basilica in Rome.

Sede Vacante

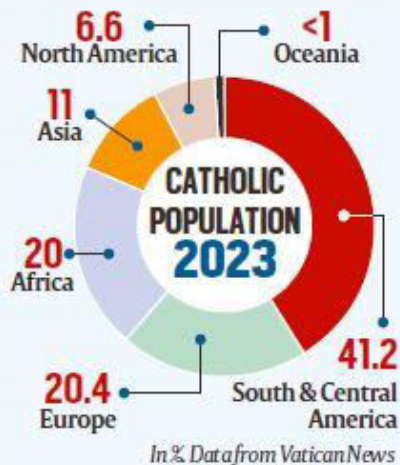
With the passing or resignation of the Pope begins the period of Sede Vacante, meaning "the seat is vacant", during which the rule of the Church falls to the College.

Within 15-20 days, cardinals under age 80 arrive from all over the world to participate in the papal conclave, the secret election process to determine a successor.

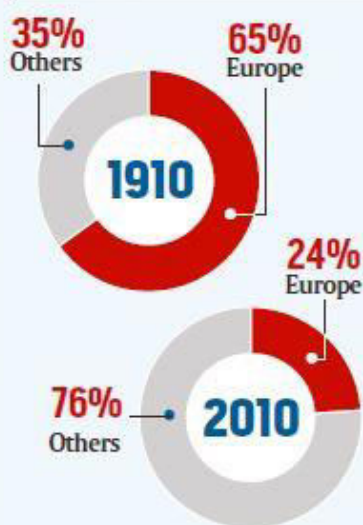
In India, four cardinals under the age of 80 are eligible to vote in a papal conclave. The cardinals, who are sequestered in the Sistine Chapel in the Vatican, vote in several rounds until a single candidate enjoys a two-thirds majority. For each round of voting that does not yield a Pope, black smoke is released from the chapel; white smoke signals the election of a new Pope.

A representative from the College of Cardinals stands in the main balcony of St Peter's Basilica and announces. "Habemus papam (We have a Pope)" to the gathered crowd of faithful. The new Pope, who chooses a name that usually honours a saint or a predecessor, then delivers his first address to the public from the balcony.

MOST CATHOLICS TODAY LIVE IN GLOBAL SOUTH



SHARE OF CATHOLICS IN EUROPE IS DOWN



Source: Pew Research Center, 'The Global Catholic Population', 2013

The office of the Pope

The Pope is the Bishop of Rome and the visible head of the Catholic Church, which regards Jesus Christ as its invisible head. He is also known as the supreme pontiff, and his office is called the Papacy. The papacy oversees the Holy See, the central governing body of the Church and Vatican City, which enjoys formal diplomatic relations with other nations.

Who was Pope Francis?

Pope Francis was the 266th pope, in a lineage dating back to Saint Peter in 30 CE. He assumed the papacy on March 13, 2013, taking over from Pope Benedict XVI.

He was the first South American Pope and the first from the Jesuit order. He was born Jorge Mario Bergoglio in 1936 in Buenos Aires, and was ordained as a Jesuit priest in 1969. He became a bishop in 1992 and the Archbishop of Buenos Aires in 1998.

From Europe to Africa

According to the Annuarium Statisticum Ecclesiae 2023, released by the Vatican's Central Office of Church Statistics in March, the world's Catholic population crossed 1.4 billion in 2023.

More than 72% of the world's Catholics lived in South and Central America (41.2%), Africa (20%), and Asia (11%) put together. Europe was home to 20.4% of the Catholic population, and North America 6.6%, according to a report by Vatican News, the official news portal of the Holy See.

The situation was very different in the early 20th century. In 1910, Europe was home to 65% of Catholics, and Latin America roughly 24%, according to data published by Pew Research Center in 2013.

If current trends hold, Europe's share in the global Catholic population will decline further in the coming decades.

Relevance: GS Prelims; International Issues

Source: Indian Express

20. Holy See

Why Now?

Pope Francis died on Monday (April 21), aged 88, after a long illness. He had been hospitalised in February for a long spell of bilateral pneumonia, and spent over a month in medical care before returning to his residence to continue his recovery.

Who is the Pope?

The Pope is the visible head of the Catholic Church, which regards Jesus Christ as its invisible head. He is also the Bishop of Rome.



What is the Holy See?

The Holy See is the central governing body of the Church and Vatican City, which enjoys formal diplomatic relations with other nations.

As the supreme pontiff, the Pope's office or the Papacy presides over the Holy See.

Is the Holy See the same as the Vatican?

No, while the terms are used interchangeably, the two are not the same entity.

The Vatican City is the world's smallest country, and the city-state that serves

as the seat of the Catholic Church. The Holy See is, quite simply, its government, and effectively the government of the Catholic Church.

This dichotomy was established by the Lateran Treaty of 1929, which established the Vatican City as an independent state under the sovereignty of the Holy See. Its jurisdiction empowers it to make decisions on matters of faith and morality for the 1.3 billion Catholics located worldwide.

Legal Status of Holy See

In international law, the Holy See occupies the status of a sovereign juridical entity. While the Holy See does not meet the established criteria for statehood (namely a permanent population, a defined territory, a stable government and capacity to enter into relations with other states), it still possesses a full legal personality in international law by virtue of the diplomatic relations it enjoys with 180 states and its membership in several international organisations.

Additionally, the Holy See is "respected by the international community of sovereign States and treated as a subject of international law having the capacity to engage in diplomatic relations and to enter into binding agreements with one, several, or many states under international law that are largely geared to establish and preserving peace in the world."

How is the Holy See administered?

Through the Roman Curia, the central body and the administrative institutions of the Catholic Church. The Curia comprises the Secretariat of State, the dicasteries (departments of the Church comparable to ministries) and the Bodies, all of which are juridically equal. The Cardinal Secretary of State functions as its chief administrator.

Relevance: GS Prelims; International Relations

Source: Indian Express

21. Anti-Semitism

Why in News?

Harvard University and the Trump administration have locked horns over allegations by the latter that the university has failed to contain anti-Semitism. Consequently, the administration has cut the funding of the university.



What is Anti-Semitism?

Anti-Semitism, as we understand it today, refers to any form of prejudice against the Jewish people, particularly the use of stereotypes.

However, the term itself is a misnomer as Semitic designates a language group, not a race. In a linguistic sense, the term could describe prejudice against speakers

of the Semitic languages (including Arabs and Ethiopians).

Why has Anti-Semitism been contentious?

A primary reason has been the enduring legacy of Nazism, which converted anti-Semitism into an institutional attack on Jewish people, ranging from a boycott of Jewish products and social ostracisation and culminating in the Holocaust.

Following the attack on Israel by the Palestinian militant group, Hamas, on October 7, 2023, and the resulting Israeli military onslaught into Palestine that has ensued since then, anti-Semitism has been used by detractors in the context of pro-Palestine protests. The Trump administration has adopted this understanding in pursuing universities and sites of such protests to shut them down.

Why the Funding Freeze?

The federal Task Force to Combat Anti-Semitism visited ten university campuses, including Harvard, in February to gather information about alleged "antisemitic incidents".

The task force subsequently sent letters to the university demanding a "federal review" of over \$8.7 billion in federal research grants for failing to combat "antisemitic harassment". Its letter to Harvard on April 11 demanded that it comply with conditions, including stopping its Diversity, Equity and Inclusion initiatives, and having its student body and staff audited by an external party, to continue receiving federal funding.

Relevance: GS Prelims; International Issues

Source: Indian Express

22. New global pandemic treaty

Why Now?

Following more than three years of arduous negotiations, member states of the World Health Organization (WHO) last week agreed on a draft of a legally binding treaty designed to tackle future pandemics better. The deal is expected to be ratified at the World Health Assembly in May.



The pandemic treaty, which was agreed upon without the United States, is the only the second legally binding accord in the WHO's 75-year history, the first being the 2003 tobacco control treaty.

But first, why was there a need for a global pandemic treaty?

The negotiations for a global pandemic treaty began in December 2021, at a time when the Omicron variant of SARS-CoV-2 was spreading across the world and producing a massive new surge of COVID-19. By then, countries that were manufacturing COVID-19 vaccines had hoarded millions of doses, leaving those with no vaccine plants often with no access to the shots.

A 2022 study published by the journal Nature revealed that more than one million lives could have been saved if COVID-19 vaccines had been shared more equitably with lower-income countries — the virus had claimed more than seven million lives across the world.

In a bid to prevent loss of human life, and disruption to households and societies at large – as it happened due to the COVID-19 pandemic — during future pandemics, WHO member states got together and began to iron out a treaty. It took nearly three-and-a-half years and 13 rounds of meetings to reach the deal.

What does the pandemic treaty say?

One of the key elements of the draft agreement is a “pathogen access and benefit sharing” system, which gives pharmaceutical companies access to scientific data such as pathogen samples and genomic sequences in return for more equitable sharing of drugs, vaccines and diagnostics during a pandemic.

The draft treaty says participating manufacturers will have to allocate 10% of their production of vaccines, therapeutics and diagnostics to the WHO. Another 10% will then be supplied at “affordable prices”.

Also, member states should “promote and otherwise facilitate or incentivise” the exchange of technology and know-how to help manufacturers in developing nations make their own drugs and vaccines.

Countries also need to develop national policies for putting conditions on research into drugs and vaccines that they fund — given either to universities or companies — to guarantee “timely and equitable access” to resulting drugs or diagnostics during pandemics.

How strong is the global pandemic treaty?

Although the agreement on the draft treaty has been hailed as groundbreaking and historic, several experts have said that it has a limited scope.

1. For instance, the agreement does not give the WHO powers over individual states.

Clause 24, paragraph three states, “Nothing in the WHO Pandemic Agreement shall be interpreted as providing the WHO Secretariat, including the WHO Director-General, any authority to direct, order, alter, or otherwise prescribe the national and/or domestic laws, as appropriate, or policies of any Party.”

2. The draft treaty also says that the WHO does not have the power to mandate or otherwise impose any requirements such as “ban or accept travellers, impose vaccination mandates or therapeutic or diagnostic measures, or implement lockdown”.

This means that in a situation like the fierce competition for COVID-19 vaccines, the WHO would have no way to ensure countries adhere to the terms to which they had agreed. As a result, pharmaceutical companies may hesitate to commit resources to developing medical solutions for emerging pathogens.

3. Also, currently, there is no clarity on how the pathogen access and benefit sharing system will work.

4. Notably, the draft treaty has been agreed upon without the US. The country withdrew from negotiations after President Donald Trump came back to the White House in January, and announced his plans of withdrawing the US from the WHO. Therefore, it is unlikely that the US will ratify the treaty.

Given the dominance of the country in the drug, vaccine, and diagnostics manufacturing industries, its absence will weaken the agreement.

Relevance: GS Prelims & Mains Paper II; International Organisations

Source: Indian Express

23. Pahalgam attack: How 'The Resistance Front' grew, spread in Kashmir

TRF Kashmir Attack

The Resistance Front (TRF) has claimed responsibility for the Pahalgam attack that killed 26 tourists. Terrorists fired at tourists in the Baisaran meadow in South Kashmir's Pahalgam, killing tourists and a local pony operator. The Resistance Front (TRF) is an offshoot of the Pakistan-based terror group Lashkar-e-Taiba (LeT).

When did The Resistance Front surface?

The Ministry of Home Affairs (MHA) declared the TRF a "terrorist organisation" under the Unlawful Activities (Prevention) Act in January 2023. The government said it was engaged in propaganda on terror activities, recruitment of terrorists, infiltration of terrorists and smuggling of weapons and narcotics from Pakistan into Jammu and Kashmir.

But the TRF first started making headlines in 2020. In May of that year, five Army commandos were killed in a gunbattle in Keran, in which five TRF militants were also killed. Similar clashes occurred around that time in Handwara and Sopore, killing security personnel.

Two key events had taken place before this.

The first was the revocation of the special status of Jammu and Kashmir under Article 370 in August 2019. The second was the decapitation of the LeT in Kashmir in 2018.



How did The Resistance Front grow?

The Lashkar-e-Taiba was founded around 1985, and one of its main goals was merging the whole of Kashmir with Pakistan. However, by the end of 2018, it had suffered significant reverses at the hands of Indian security forces.

2018 witnessed the wiping off of the top leadership drastically reduced LeT's

strike capability in the Valley.

Then came the revocation of Article 370.

Pakistan aiming to respond

According to sources in the security forces, Pakistan wanted to retaliate against this, but was mindful of its greylisting by the Financial Action Task Force (FATF). The FATF is an inter-governmental body which tracks terrorism financing. If it believes that a country is not doing enough to prevent international money laundering and terrorist financing, it puts the country on the grey list. This impacts the country's ability to attract international investment and engage with banks and other international financial institutions.

Thus, it wanted a militant outfit in Kashmir that sounded more "secular and indigenous". Hence they opted for 'Resistance' — that has some currency in global politics — in its name."

About TRF

Unlike local militants, who have no training, these new militants seem to have trained hard. As far as we know, they are trained for at least six months before being inducted. The outfit has a mix of both local and foreign militants so that it looks indigenous. The surprising part is that the local militants are also very well trained in Pakistan.

The TRF is active on social media channels, such as Facebook, Telegram, and WhatsApp, where it posts propaganda videos and claims responsibility for various attacks.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

24. Desperate step in desperate times: Pakistan's intent behind Pahalgam attack

Why Now?

A day after the Pahalgam terror attack, India announced a slew of diplomatic measures against Pakistan, including the suspension of the Indus Waters Treaty, expulsion of Pakistani personnel from India, and closure of the Attari border post.

Officially, Islamabad has denied any involvement. But initial investigations, and more importantly, the larger geopolitical context in which the attack has taken place, leave little doubt about Pakistan's role.



Pakistan in dire straits

Pakistan today is a country in dire straits. Consider the following facts.

* For years, Pakistan was a key partner to the United States with regards to its objectives in Afghanistan — there could neither be war nor peace in Afghanistan without Islamabad's support. With Washington pulling out of Kabul

in 2021, the leverage that Pakistan enjoyed with the Americans is mostly gone.

And as it faces a crippling economic crisis, the US has not stepped in to bail Pakistan out, as it had repeatedly done in the past.

* The Gulf states too have refused to open up their coffers. There is fatigue among the Gulf states about having to repeatedly bail Pakistan out, and a sense that Islamabad has not given them much in return for doing so over the years.

* Even China has seemingly grown impatient with Pakistan. Beijing has poured in billions of dollars to develop infrastructure in Pakistan as a part of its flagship Belt and Road Initiative. But many of China's projects in Pakistan remain stalled today.

Corruption and inefficiency aside, Pakistan's inability to deliver on security promises has been responsible: in recent years, a number of Chinese engineers and project supervisors have been killed by Baloch terrorists. Although China remains Pakistan's biggest patron, the two countries' bilateral relationship is not what it used to be even in the very recent past.

* The Taliban regime in Kabul has not been the client state Pakistan had hoped it would be. Instead, it has turned rather hostile. Regions bordering Afghanistan have witnessed a spate of attacks on both civilians and military personnel.

Far from providing "strategic depth" to Pakistan against India, Taliban-ruled Afghanistan has become a serious security vulnerability.

* Pakistan's border with Iran has not been much better. Just last week, eight Pakistani migrant workers were shot dead in Iran's Sistan-Baluchestan province by a Baloch militant outfit. Last year, both countries targeted alleged "terrorist sanctuaries" on the other side of the border with missile strikes.

Such is the situation with its western neighbours today that some analysts would say Pakistan's border with India is its most peaceful one at the moment.

All in all, Pakistan's economy is in doldrums, its security situation is deteriorating, even as it feels more and more marginalised and isolated on the international stage.

'India taking advantage'

In the eyes of Islamabad, India is taking advantage of Pakistan's dire situation by isolating and marginalising it. New Delhi, in recent years, has acted as if Pakistan simply does not matter, that it is but a minor distraction for a country with ambitions of becoming a superpower.

This is perhaps most obvious with regard to India's Kashmir policy, which treats Pakistan as a non-factor that is in no position to interfere with the largely successful attempts to bring stability and prosperity to the region. Contentious as it may be, the abrogation of Article 370 on August 5, 2019, which revoked Kashmir's special status, was the strongest signal that India is looking to fully integrate the region with the rest of the country, regardless of Pakistan's soft-stated position on the matter.

And in recent years, there has undoubtedly been a steady improvement in the economy and daily lives of Kashmiris, who ultimately benefit from stability in the region, regardless of their personal opinion of the ruling dispensation in Delhi. That a record number of tourists from all over India have been flocking to Kashmir is the ultimate bellwether of "normalcy".

New Delhi has also successfully pushed the US to "de-hyphenate" its relations with India and Pakistan. That US Vice President J D Vance is currently on an official trip to India, with Pakistan being nowhere on his itinerary is proof of this fact.

Moreover, as India improves its ties with other Islamic countries in the Gulf, Pakistan has been little more than a silent spectator. It is noteworthy that the attack in Pahalgam took place while Prime Minister Narendra Modi was on an official visit to Saudi Arabia, a country which had been a steadfast ally to Pakistan during its wars with India, especially in 1971.

Pakistan's desperate gambit

It is in this context that one can see a certain logic behind why Pakistan would take this rather desperate step. The terror attack in Pahalgam is essentially an attempt by Pakistan to assert that it is still a regional power which cannot simply be ignored or cast away as a non-factor, and the sense in India that "Pakistan does not matter" is misplaced.

This appears to make sense in the light of Pakistan Army Chief General Asim Munir's statements last week, in which he repeatedly invoked the logic of the "two-nation theory".

"Our religions are different, our customs are different, our traditions are different, our thoughts are different, our ambitions are different. That was the foundation of the two-nation theory that was laid there. We are two nations, we are not one nation," General Munir said at the Overseas Pakistani Convention in Islamabad on April 15.

Beyond trying to shore up support for the beleaguered Pakistani establishment, this was essentially Munir saying that Pakistan is a country with its own identity, and thus has its own place in the world, which cannot be ignored and belittled.

In his statements, Munir also invoked Kashmir, which he referred to as the "jugular vein" of Pakistan. "Our stance is absolutely clear, it was our jugular vein, it will be our jugular vein, we will not forget it. We will not leave our Kashmiri brothers in their heroic struggle," he said.

The attack in Pahalgam, can thus also be seen as an extension of Munir's statements from last week: it is not only an attempt to undermine the progress made towards "normalcy", but also a message to India that Kashmir cannot be stabilised without Pakistan as a stakeholder, and that India's policy of integration is unacceptable to Islamabad.

Note that the precise timing of the attack, with PM Modi in Saudi Arabia and US Vice President Vance in India, suggests that it is as much a message to the rest of the world, as it is to India. Pakistan wants the world to know that it is still a critical player in the region, and has the

capacity and capability to cause a serious security situation with potentially global ramifications, to prevent which there is no choice but to engage with Islamabad.

And even if the world reacts negatively to Pakistan — indeed countries from around the world have issued unequivocal condemnations of the terror attack — (Pakistan hopes) this will prompt greater engagement with it, if only as a bad actor. Amid its current international isolation, engagement of any kind would probably be received by Islamabad as a win.

India's path forward

The first order of business for India is to analyse what went wrong. Were their lapses in the security arrangements? Were we too complacent? How can such attacks be prevented in the future so that tourists continue to travel to Kashmir without fear or trepidation?

An honest assessment is necessary to ensure that the progress Kashmir has been witnessing is not undone. And the Centre must leave aside its political differences with the National Conference, avoid a "blame-game", and make the elected government an active stakeholder in this process.

Internationally, in the immediate term, India will certainly try to ensure that Pakistan remains isolated. If Pakistan believes that terror is a way to force other countries to engage with it, India will make sure that it is not.

With regards to retaliating against Pakistan, what is most important is that no action be taken based on emotions and public sentiment.

In the medium- to long-term, the attack should prompt India to rethink its assumption that Pakistan has been completely neutralised, and does not matter anymore. I have always believed that India has to engage with Pakistan. To completely isolate a neighbour with which it shares a 3,000 km border makes no sense. We have to continue talking to Pakistan, if only to know what it is thinking.

Moreover, New Delhi must appreciate that there is no one Pakistan. There is the Pakistani establishment, the elected government, as well as the people of Pakistan. Each constituency needs to be dealt with differently, and even if India has frayed relations with one of them, say the Army, it should continue to engage with the others.

At the end of the day, India's long-term policy vis-à-vis Pakistan and Kashmir has to be centred around the people of Kashmir, and the region's development and stabilisation. The attack must not interrupt the progress that is being made.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

25. What India's suspension of the Indus Waters Treaty means for Pakistan — and for Itself

Why in News?

The Indus Waters Treaty (IWT), which has survived four wars, decades of cross-border terrorism against India by Pakistan, and a long history of antagonism between the two countries, was suspended for the first time by New Delhi.

India made its decision a day after the attack on tourists in Pahalgam, in which Pakistani terrorists took the lives of 26 people.

Among the slew of diplomatic actions against Pakistan announced by India — including the closure of the Attari border post, cancellation of visas, and the expulsion of several Pakistani personnel from India — the suspension of the IWT may have the most far-reaching ramifications.

What is the Indus Waters Treaty?

The IWT was signed in Karachi on September 19, 1960, following nine years of negotiations between India and Pakistan. The Treaty has 12 Articles and 8 Annexures (from A to H).

According to the provisions of the Treaty, all the water of the “Eastern Rivers” of the Indus system — Sutlej, Beas and Ravi — shall be available for the “unrestricted use” of India. Pakistan shall receive water from the “Western Rivers” — Indus, Jhelum, and Chenab.

Why is decision by India significant?

The decision to suspend the IWT will straightaway give more options to New Delhi on how to use the waters of the Indus river system.

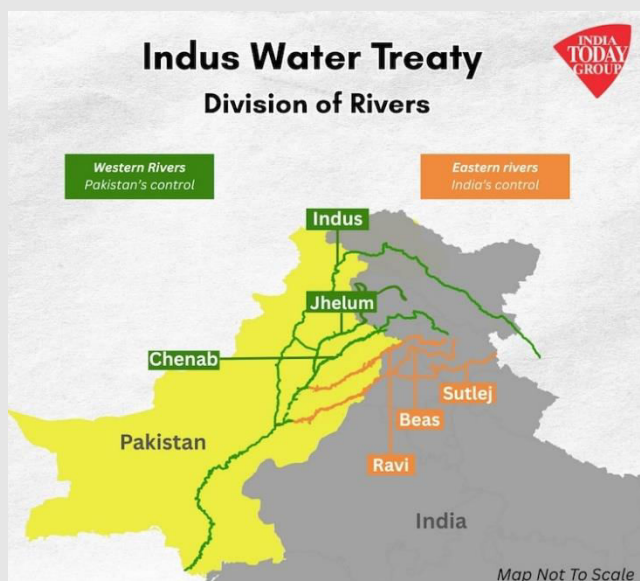
For instance, India can immediately stop sharing water flow data with Pakistan. There will be no design or operational restrictions on India for the use of the water of the Indus and its tributaries. Also, India can now create storage on the Western Rivers, Indus, Jhelum and Chenab.

However, the suspension will not have an immediate impact on the flow of water to Pakistan for a few years at least. India does not currently have the infrastructure to either stop the flow of water into Pakistan, or to divert it for its own use.

Can Pakistan trigger any arbitration clause under the IWT in response to India’s decision to suspend the Treaty?

The Indus Waters Treaty lacks an exit clause, meaning neither India nor Pakistan can legally abrogate it unilaterally.

The Treaty has no end date, and any modification requires the consent of both parties.



But while the Treaty cannot be exited, it does contain a dispute resolution mechanism: Article IX, along with Annexures F and G, lays out procedures for raising grievances — first before the Permanent Indus Commission, then a neutral expert, and eventually, a forum of arbitrators.

Pakistan is yet to issue an official response to India's suspension of the IWT.

In case India 'revokes' the treaty, it literally means it has shunned it. The dispute resolution mechanism under Article IX and

Annexes F and G of the IWT will be of no use and assistance to Pakistan. It is limited to a dispute under the treaty and not meant to provide for specific performance of the treaty itself.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

26. Persona non grata

Why Now?

Following the terrorist attacks in Pahalgam that left 26 people dead, India downgraded its diplomatic relations with Pakistan, announcing measures such as suspending the 1960 Indus Water Treaty.

Foreign Secretary Vikram Misri said, "The Defence/Military, Naval and Air Advisors in the Pakistani High Commission in New Delhi are declared Persona Non Grata. They have a week to leave India. India will be withdrawing its own Defence/Navy/Air Advisors from the Indian High Commission in Islamabad."



What does persona non grata mean?

Persona non grata is a Latin phrase which means "unwelcome person." It has a specific meaning in diplomacy, referring to a diplomat or foreign person whose entry or presence in a certain country has been prohibited by that country.

The designation received diplomatic meaning at the 1961 Vienna Convention on Diplomatic Relations, which lays the ground rules for how diplomats are to be treated, including in relation to their rights and privileges in host countries.

Article 9 of the treaty mentions that a country can declare any member of a diplomatic staff persona non grata "at any time and without having to explain its decision."

Soon after the declaration, the person concerned usually returns to their home nation. In case they fail to do so within a reasonable period, the country "may refuse to recognise the person concerned as a member of the mission." The article also says that a person can be declared persona non grata even before arriving in a country.

When Can A Person Be Declared Persona Non Grata?

There aren't any fixed rules regarding when a country can declare a foreign person persona non grata, as there is no requirement of an explanation under the Vienna Convention.

Historically speaking, countries have used it to express their discontent with the actions of other nations. During the Cold War, it became a tit-for-tat sanction as both the US and the Soviet Union liberally declared each other's diplomats persona non grata.

India previously labelled a Pakistan High Commission staffer persona non-grata for espionage activities in 2016 after he was arrested by Delhi Police with documents relating to defence deployment.

Notably, the imposition of a persona non grata designation isn't limited to diplomats. One DW report noted that Hollywood actor Brad Pitt was declared persona non grata by China after starring in the 1997 film *Seven Years in Tibet*, though the ban was lifted in 2014. Donald Trump, much before becoming US President, was also labelled as persona non grata by Panama City's Municipal Council after he said that America was "stupid" to "give away the Panama Canal for nothing."

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

27. CCS takes measures against Pakistan on Pahalgam: What is the Cabinet Committee on Security?

Why in News?

Noting "the cross-border linkages of the terrorist attack" in Pahalgam that led to the deaths of 26 people, the Cabinet Committee on Security (CCS) on Wednesday announced a series of extraordinary retaliatory measures against Pakistan.

These included India suspending the decades-old Indus Waters Treaty, downgrading diplomatic relations with Pakistan by reducing the mission strength in Islamabad, cancelling visas granted to Pakistan nationals under a South Asian Association for Regional Cooperation (SAARC) scheme, and shutting the Attari-Wagah border.

What is the Cabinet Committee on Security (CCS)?



With the Prime Minister at the helm, the CCS includes the cabinet ministers holding the big four portfolios of Finance, Defence, Home Affairs and External Affairs as its members. It is responsible for debates, discussions and appointments of/ in the national security bodies. Major decisions with respect to significant appointments, issues of national

security, and defence expenditure are taken by the CCS.

It can also include the defence chiefs and other senior bureaucrats, depending on the situation and the nature of the discussion. Besides dealing with defence-related issues, the CCS brainstorms on issues relating to law and order and internal security, and policy matters concerning foreign affairs on security-related issues. It also considers matters relating to atomic energy.

What are Cabinet committees, in general?

Following general elections, once a Union Cabinet is sworn in and ministerial portfolios are allocated, the next step is the formation of the high-profile Cabinet committees. The Prime Minister sets up these committees with selected members of the Cabinet and assigns specific functions to these committees; both may later be modified.

The membership of each committee varies from three to eight. Usually, only Cabinet ministers are members of these committees. However, it is not unheard of for non-Cabinet ministers to be members or special invitees to committees. If the Prime Minister himself is a member of any such committee, he acts as the head of that committee.

The committees resolve issues and formulate proposals for the consideration of the Cabinet and take decisions on matters assigned to them. The Cabinet is empowered to review such decisions.

There are eight Cabinet committees at present, including on issues such as Economic Affairs, Political Affairs, and Parliamentary Affairs. All committees except the Cabinet Committee on Accommodation and the Cabinet Committee on Parliamentary Affairs are headed by the PM.

Relevance: GS Prelims & Mains Paper II; International Relations

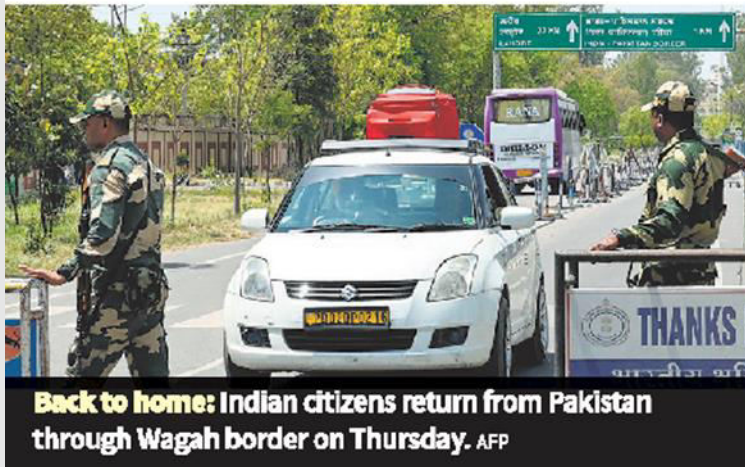
Source: Indian Express

28. Pakistan shuts airspace, snaps trade relations with India

Why Now?

Islamabad ups the ante

Pakistan's countermeasures after India's five-pronged response to Pahalgam attack



- Pakistan airspace shut to Indian-operated airlines

- Wagah border, cross-border transit and trade closed

- SAARC visas suspended, except for Sikh pilgrims

- Indian Defence, Naval, Air Advisors told to exit

- High Commission staff cut from 55 to 30

- Blocking Indus flow deemed 'act of war'; Simla Accord may be held in abeyance

Pakistan closed its air space to Indian airliners and suspended all trade as part of its response to India's actions after the Pahalgam terror attack. It warned against any "misadventure", indicating that it expects a military response from India over brutal killing of 26 men in Jammu and Kashmir by terrorists belonging to a group linked to the Pakistan-based Lashkar-e-Taiba.

'Act of war'

Pakistan also matched the decisions taken by the Cabinet Committee on Security chaired by Prime Minister Narendra Modi, including closing the Wagah border check post, declaring Indian defence, naval and air advisors persona non grata, and downsizing the High Commission from 55 to 30 personnel. Pakistan said any attempt to "stop or divert" Indus water flow to the country would be considered an 'act of war'.

In addition, Pakistan also cancelled the SAARC visa held by Indians, but made an exception for Sikh pilgrims; officials said the Kartarpur corridor to Pakistan will remain open for the present.

Pakistan's National Security Council (NSC)

These decisions were announced after a meeting of Pakistan's National Security Council (NSC) in Islamabad, chaired by Prime Minister Shahbaz Sharif.

A statement issued by the Pakistan Prime Minister's office said that the NSC had expressed "concern over the loss of tourists' lives" and "unequivocally condemns terrorism in all its forms and manifestations", but criticised the measures taken by India in response to the Pahalgam attack as "unilateral, unjust, politically motivated, extremely irresponsible and devoid of legal merit".

The Pakistan NSC warned that any attempt to “stop or divert the flow of water belonging to Pakistan as per the Indus Waters Treaty”, would be considered an Act of War.

It also threatened to cancel other bilateral agreements with India, including the Shimla Accord of 1972

Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Hindu

29. M4 carbine used by Pahalgam terrorists

Why now?

A preliminary investigation into the deadly attack on tourists near Pahalgam has revealed that the terrorists opened fire with AK-47s, and more interestingly, American-made M4 carbines.



Pahalgam attack: Terrorists armed with AK-47, M4 carbines targeted tourists in 40-min rampage

Why is this significant?

Russian-origin AKs are the weapon of choice for most militants, terrorists, and rebel groups around the world. Their simplicity, reliability, and affordability make them ideal for combatants with limited means, operating for long durations in difficult conditions without much logistics support.

American weapons do not fit this bill. In general, they require better training and upkeep to be effective, and are much more expensive.

This is what makes an M4 carbine a somewhat unlikely weapon in the hands of terrorists. The Pahalgam attackers

carried M4s indicates that they are highly sophisticated operatives, and not the run-of-the-mill disgruntled youth.

That said, it is not completely unheard of for terrorists to carry M4s, especially in the very recent past.

How did the terrorists obtain M4s?

There are two possible explanations for how the Pahalgam attackers got hold of M4 carbines. The first is to do with the United States's exit from Afghanistan in 2021. At the time they pulled out from Kabul, the Americans had been fighting in the country for two decades. In the process, they had developed massive stockpiles of weapons in Afghanistan — much of which they left behind, ostensibly for the Afghan forces to use against the Taliban.

Of course, the Afghan resistance folded almost immediately after the American exit, leaving the Taliban with the weaponry left behind. While some of this the Taliban kept for itself, huge caches of guns and ammo were sold to the highest bidder in Afghanistan's busy arms markets. The beneficiaries: a motley collection of rebel groups, militias, tribal warlords, and, of course, terrorists.

The other explanation for how the terrorists got hold of weapons is more straightforward: they were supplied by the Pakistani state, presumably the ISI. Pakistan also has a decent stockpile of M4s, which is used by its special forces.

Why is the M4 carbine a lethal weapon?

Following the military adoption of the Armalite AR-15 as the M16 rifle in the 1960s, the United States spent two decades developing an effective carbine on the same platform. Carbiners are essentially rifles which are lighter, and have a shorter barrel than a standard rifle. They are meant to be used by highly mobile units, or for urban warfare, and were originally developed as rifle-caliber arms for mounted units.

The M4 carbine was officially adopted by the US in 1994, and has since seen use by over 60 militaries around the world. Chambered in the 5.56×45mm NATO cartridge, the M4 can fire upto 950 rounds a minute, and has a maximum effective range of around 600 metres.

Weighing only 3.5 kilos (fully loaded), it is lighter than even most modern AKs with plastic magazines and stocks.

Relevance: GS Prelims; International Relations

Source: Indian Express

30. Simla Pact and all other bilateral agreements held in abeyance

Why in News?

In response to India's decision to suspend the 1960 Indus Waters Treaty in the aftermath of the Pahalgam terror attack, Pakistan's government said it could hold the 1972 Simla Agreement and "all other bilateral agreements with India" in abeyance.

Simla Agreement & the LoC

The agreement signed in 1972, in the aftermath of the 1971 India-Pakistan war (which Pakistan lost), primarily deals with two things: **how bilateral relations are to be conducted between the two countries**, and **the recognition of the Line of Control (LoC) as the de facto border**.



What does the Simla Agreement entail?

The agreement was signed in Shimla on July 2, 1972 after three days of talks between Prime Minister Indira Gandhi, victorious from the 1971 Bangladesh War, and Pakistan Prime Minister Zulfikar Ali Bhutto who had suffered a crushing defeat and the division of Pakistan in the war. The talks, for which the Soviet Union did much of the preparatory discussions through Indian and Pakistani envoys in Moscow, focused on two major issues. First, the future of post-war ties between India and Pakistan, including the return of more than 93,000 Pakistan prisoners of war; second, the resolution of the dispute over Jammu and Kashmir, where they agreed to "settle their differences by peaceful means through bilateral negotiations or by any other peaceful means mutually agreed upon between them". In addition, the Simla

agreement saw the first formal recognition of Bangladesh as a sovereign entity in a bilateral treaty.

What was the reaction in both countries?

The Simla Agreement led to severe criticism of Mrs. Gandhi in India, for not forcing Pakistan to make the ceasefire line the International Border, instead renaming it the Line of Control (LoC); and of Mr. Bhutto in Pakistan for agreeing to resolve the dispute peacefully and without recourse to the United Nations or other third-party mediators. In Srinagar, Sheikh Abdullah's criticisms stemmed from the fact that neither side had consulted the Kashmiri people.

How has Pakistan violated the pact?

In the years that followed, Pakistan violated the agreement many times, by funding and arming terror groups in Kashmir as well as sending troops across the LoC that led to the Kargil conflict in 1999. It has approached the UN and other countries over the issue, which is a breach of the terms both sides had agreed upon.

The Indian Parliament's declaration in 1994 that all of Kashmir including Pakistan Occupied Kashmir, was an integral part of India, and the 2019 amendment of Article 370, had made the Simla agreement quite irrelevant.

What are the 'other agreements' that Pakistan referred to that could be affected?

While Pakistan did not name any other agreement by name, the Shehbaz Sharif government's reference to "all other" bilateral agreements could refer to a number of different accords the two countries have signed over the years after being in armed conflict several times from the first Kashmir war in 1948 to Kargil in 1999.

The Nehru-Liaquat pact signed in 1950 relates to the treatment of minorities in their respective countries. The Bilateral Protocol on Visits to Religious Pilgrimages signed in 1974 facilitates hundreds of Hindu and Sikh pilgrims to 15 temples and gurdwaras in Pakistan, as well as Muslim pilgrims to five mosques and shrines in India. For the moment, both sides have indicated that the Kartarpur corridor agreement in 2019 between the Narendra Modi and Imran Khan governments will remain in place.

Other agreements, that relate to confidence-building measures and information sharing could also be affected. In 1988, India and Pakistan signed an agreement to inform each other of their nuclear installations and facilities every year on January 1. In 1991, they signed an agreement for the pre-notification of flight testing of all ballistic missiles, as well as an agreement on preventing airspace violations. Since February 2021, India and Pakistan have a ceasefire agreement in place, that was first agreed to in 2003. Any military operation by India on terror camps or other locations in Pakistan, to which Pakistan has threatened to retaliate, could see the ceasefire agreement collapse. In addition, India's decision to suspend the Indus Waters treaty could also have a follow-on effect, with Pakistan threatening to take India to international courts and calling the stoppage of any water an "act of war". While India is an upper riparian state to Pakistan and Bangladesh, it is also a lower riparian state to China, that has on occasion withheld cooperation with India on the Brahmaputra and other rivers. All three neighbouring countries will follow India's actions on the Indus closely.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Hindu

31. Rafale-M to be procured for Navy

Why now?



India has inked a Rs 63,000 crore deal with France to procure 26 Rafale-Marine (Rafale-M) fighter jets for the Navy. The order includes 22 single-seater jets that can operate from aircraft carriers, and four twin-seater trainer jets, that are not carrier compatible. The delivery will begin in 2028-29, and is set to be completed by 2030.

Why the Rafale?

The Rafale, designed and built by Dassault Aviation, is a French twin-engine, "omnirole" fighter aircraft most hailed for its versatility. According to Dassault's website, the Rafale's mission capabilities include:

- * Air-defence & air-superiority;
- * Reconnaissance;
- * Nuclear deterrence;
- * Air-to-ground precision strike;
- * Close air support;
- * Anti-ship attacks; and
- * Buddy-buddy refuelling.

What makes the Rafale special is its ability to carry out a diverse range of missions in a single sortie, something that has prompted analysts to liken the aircraft to a Swiss Army Knife. And although it is not a 5th generation stealth aircraft, the Rafale incorporates multiple features to reduce its radar signature (making it a 4.5th generation fighter aircraft, as per most military analysts), and comes at a fraction of the cost of an American F-35.

How is Rafale-M different?

The Rafale-M is specifically designed for carrier-based operations. Unlike on land, where runways are many kilometres long, carriers offer only hundreds of metres for aircraft to take off and land. This necessitates some specific modifications.

FOR TAKEOFF: All fixed-wing aircraft achieve liftoff by reaching a certain speed. On the confines of a carrier deck, aircraft require some help to take off.

Indian carriers use ski-jumps for this purpose. The ramp adjusts an aircraft's angle of attack for a safe climb away from the front of the ship. But such a system restricts takeoff weights, meaning carrier-based aircraft, in general, are lighter than their land-based counterparts. In addition, they come with specific design features to the nose of the aircraft (to allow a more nose-up angle of attack), and are more compact in size.

FOR LANDING: As such, the braking power of aircraft alone is insufficient for landings on a carrier's short landing deck. This necessitates the use of tailhooks, attached to an aircraft's undercarriage. While landing on a carrier, an aircraft essentially latches on to arresting wires on the flight deck which bring it to a halt almost immediately.

This process, however, puts immense strain on the airframe. All carrier-based aircraft, thus, come with reinforced airframes and strengthened undercarriages, capable of withstanding the stresses of repeated carrier landings. In absence of this, these aircraft might literally fall apart over time.

OTHER FEATURES: Carrier-based aircraft also are more resistant to corrosion from seawater (and sea breeze), and carry specific sensors and armaments to engage with enemy ships and submarines, and carry marine operations.

The Rafale-M has been operational with the French Navy, aboard its nuclear-powered Charles de Gaulle aircraft carrier, since 2004.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

32. Trump's Words Help Liberals Win Canada's Election

Why Now?



In a surprising turnaround, Prime Minister Mark Carney and Canada's Liberal Party have won the country's federal election, securing a fourth straight term in power. At the beginning of the year, the Liberals were trailing badly in the opinion polls, and the Conservative Party, led by Pierre Poilievre, seemed ready to take over. But a key figure changed the game — U.S. President Donald Trump.

Trump's Role in the Canadian Election

Trump's comments and actions toward Canada played a major role in shifting public opinion. He threatened Canada with tariffs, mocked Canada's independence, and even suggested the country become the 51st state of the U.S. His harsh remarks angered many Canadians and made dealing with Trump a top election issue — even more than the economy or housing crisis.

In response, Carney focused his campaign on defending Canada from Trump. In his victory speech, he said, "President Trump is trying to break us so he can own us. That will never happen." His message clearly resonated with voters.

Poilievre's Struggles

Pierre Poilievre, the Conservative leader, had modeled his style and message on Trump's. He used slogans like "Canada First," and promised tax cuts and smaller government. This appealed to many when Justin Trudeau was still in charge. But after Trump returned to power in the U.S. and Trudeau stepped down, Poilievre struggled to adapt. He ended up losing even his own seat in Ottawa.

Though the Conservatives increased their vote share from the last election, it wasn't enough. The Trump-like image of Poilievre seemed to turn off more voters than it attracted.

Collapse of Smaller Parties

The election was also bad news for Canada's smaller parties. Jagmeet Singh's New Democratic Party (NDP), which had supported the Liberals in the past, lost most of its seats and official party status. Singh himself lost his seat and resigned as party leader. The Bloc Québécois, which only runs in Quebec and supports the province's independence, also lost ground.

Uncertainty Ahead

As of now, the Liberals are just a few seats short of a majority. Special ballots are still being counted, which could affect the final result. If they don't reach 172 seats, they may need help from smaller parties to pass laws.

Mark Carney faces big challenges. He won on a strong message of unity and independence, but now he must deal with real problems like housing, inflation, and Canada's relationship with the U.S. He will also need to decide how to handle Trump going forward.

India-Canada Relations

India is watching closely. Ties between the two countries have been tense since the Trudeau government accused India of being involved in the killing of a Khalistani separatist in Canada. India hopes Carney's new leadership will rebuild trust and improve relations. Carney has said he wants to reset the relationship, but much depends on what happens next in Canadian politics and in court.

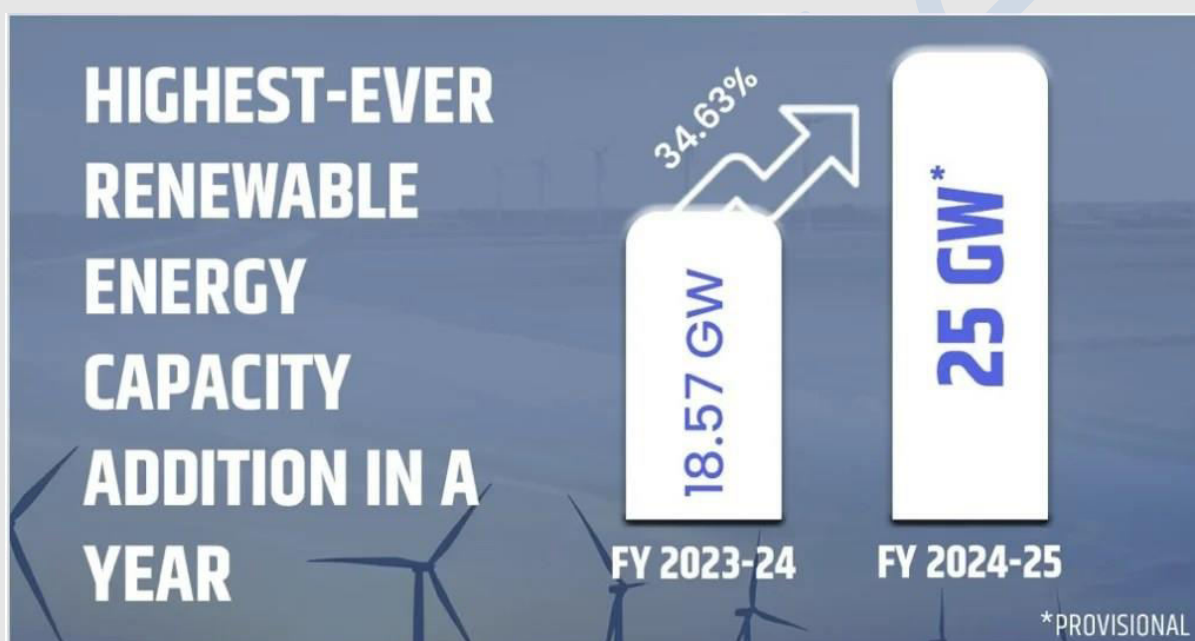
Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Hindu

1. India Achieves Historic Milestone in Renewable Energy Capacity Addition in FY 2024-25

Why in News?

The Ministry of New and Renewable Energy (MNRE) achieved historic milestone in the renewable energy sector for the financial year 2024-25. The country has added an unprecedented 25 GW of renewable energy capacity, marking an increase of nearly 35% over the previous year's addition of 18.57 GW.



Solar Sector Drives Renewable Surge

India's solar power sector led the renewable energy growth, with capacity additions soaring from 15 GW in FY24 to nearly 21 GW in FY25, a remarkable 38% increase. The country also achieved the significant milestone of surpassing 100 GW of installed solar capacity this year.

Domestic Solar Manufacturing Scales New Heights

In a strong push towards Atmanirbharta, India's solar module manufacturing capacity nearly doubled from 38 GW in March 2024 to 74 GW in March 2025, while solar PV cell manufacturing capacity tripled from 9 GW to 25 GW.

PM Surya Ghar Muft Bijli Yojana Sees Widespread Impact

The PM Surya Ghar Muft Bijli Yojana witnessed impressive progress, benefiting over 11.01 lakh households by March 31, 2025. Under the scheme, ₹5,437.20 crore has been disbursed as Central Financial Assistance to 6.98 lakh beneficiaries, significantly promoting the adoption of rooftop solar.

PM Surya Ghar Muft Bijli Yojana is a scheme launched by the Government of India in its 2024-25 budget for rooftop solar plant project with an investment of over 75,000 crore rupees to provide solar power for about 1 crore households and to provide them 300 units of free electricity every month.

Prime Minister of India, Narendra Modi announced this scheme on February 13, 2024. Under PMSG Yojana, beneficiaries receive a fixed one time subsidy amount from government directly into their bank accounts. Beneficiaries are also eligible for bank loans at concessional rates.

The criteria for application under this scheme includes citizenship of India, the ownership of legal house with sufficient space at rooftops to enable installation of solar panels.

Relevance: GS Prelims; Economics

Source: Indian Express

2. Employee Pension Scheme 1995 and need to increase pension

What Is EPS 95 Pension Scheme?



The Employee Pension Scheme 1995 (EPS 95), which the Employees' Provident Fund Organisation introduced on November 19, 1995, is a social security initiative intended to cater to the retirement needs of employees in the organised sector. Administered by the EPFO, this scheme guarantees pension benefits to eligible employees who reach the age of 58.

Under this scheme, a combined contribution of 12% of the employee's salary, which includes the basic wage and dearness allowance, is made by the employer and the employee towards the EPF. While the employee's entire share goes directly to the Employees' Provident Fund each month, 8.33% of the employer's contribution is designated for the Employees' Pension Scheme, with the remaining 3.67% directed to the Employees' Provident Fund (EPF).

Eligibility

To avail the pension, individuals need to be members of EPFO. To qualify for a service pension, an individual must serve a minimum of 10 years. The standard retirement age for a regular pension is 58 years; however, retiring earlier may still enable one to receive a pension at a reduced rate.

Employees earning Rs 15,000 or less per month are required to enroll in this scheme. In the event of an employee's passing, if the widowed spouse remarries, pension benefits will transfer to the children.

Present pension level

Presently, minimum 1,000 Rs. Per month pension is given under this scheme. The Standing Committee of Parliamentarians on Labour, Textiles, and Skill Development, in its report on the 2025–26 demands for grants to the Union Ministry of Labour and Employment, has emphasized the urgent need to revise the minimum monthly pension of ₹1,000 for member-pensioners under the Employees' Provident Fund Organisation (EPFO). This amount, set in August 2014 under the Employees' Pension Scheme (EPS) of 1995, has remained unchanged for over a decade, failing to account for inflation and the rising cost of living.

Relevance: GS Prelims; Economics

Source: The Hindu

3. The new Pamban Bridge inaugurated

Why in News?

Stretching across the blue ocean and connecting Rameswaram with mainland India, through which trains and ships both pass by with the scenic view, the new Pamban Bridge has been inaugurated by Prime Minister Narendra Modi.

The new bridge, will replace the century-old original Pamban Bridge, and is considered an engineering marvel with the tag of becoming India's First Vertical Lift Railway Sea Bridge. Built with stainless steel reinforcements and Polysiloxane Paint, the bridge is designed to withstand harsh marine conditions. Its expected lifespan is up to 58 years. It has an automated electro-mechanical lift system, which will help the bridge rise to 17 meters, allowing smooth ship passage.



Old Pamban bridge

With its genesis in the Indo-Ceylon (now Sri Lanka) trade during the British Era, the old bridge stood firm even during the horrific 1964 tsunami when a train full of passengers was washed away. According to railway officials, the new bridge is a testament to the railways' engineering prowess and has elevated the benchmark of India's infrastructure.

The construction of the old Pamban Bridge started in 1911 and was opened to traffic in 1914. It was India's first sea bridge, built for trade. In those days of British rule, the ships used to ply between two ports – Dhanushkodi, at the south-eastern tip of the Pamban or Rameswaram Island, and now abandoned, and Talaimannar in Sri Lanka. During the 1964 Tsunami, Dhanushkodi was entirely destroyed and it is still uninhabited.

The old bridge could also be raised to let ships pass. It is considered a technical marvel as the bridge was constructed with lesser availability and the corrosive environment it withstood. It remained India's longest sea link until the Bandra-Worli sea link opened in 2010.

The new bridge

The old bridge played an important role in trade and pilgrimage for over a century. Due to corrosion, high maintenance and operational challenges, the decision to construct a new Pamban bridge was taken and the foundation stone for the new bridge was laid in 2019.

The new 2.08 kilometers long structure stands three metres higher than the old Pamban Bridge. It allows the smaller ships to pass beneath without lifting the span. According to the Ministry of Railways, the bridge has been constructed with 99 spans of 18.3 meters each, with a 72.5 meter vertical lift span at its centre that can be raised up to 17 meters to accommodate larger vessels when needed.

Relevance: GS Prelims; Economics

Source: Indian Express

4. Why are undersea cables important?

Why in News?

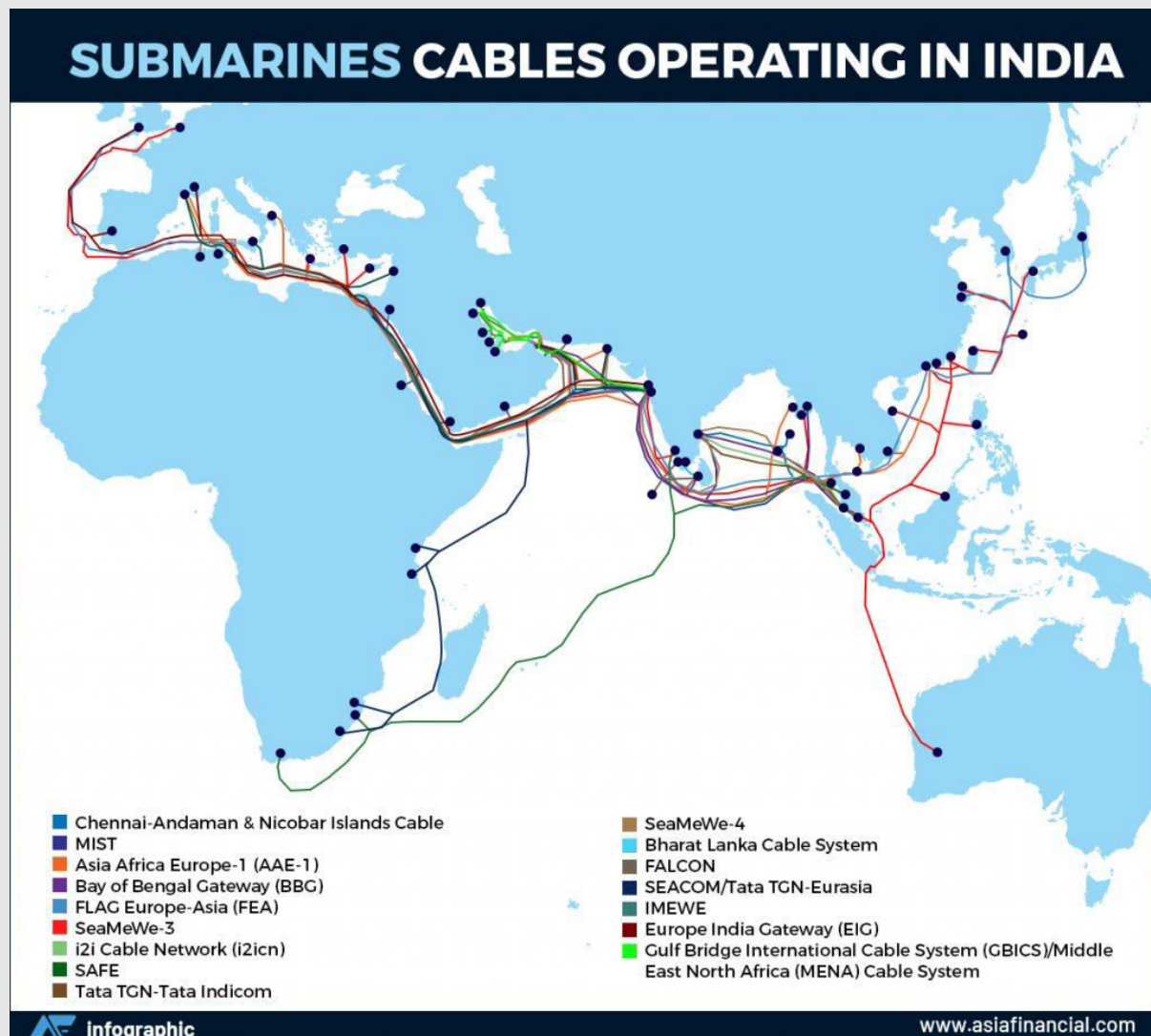
India is getting new cable landing systems coming online gradually. The latest addition is Airtel's 2Africa Pearls system, which has investments from Facebook parent Meta, adding 100 terabits per second of capacity to India's international bandwidth. Earlier this year, the SEA-ME-WE-6 cable was also landed in Chennai and Mumbai.

What are undersea cables?

Undersea cables are the main link connecting the world's internet networks. They connect internet service providers and telecom operators everywhere with those in other countries. These cables are a few inches thick and are heavily padded to withstand the hostile environment of the sea floor. Inside, strands of fiber optic cable — similar to those that connect modern telcos' towers and routers — provide massive capacity for large volumes of data to quickly crisscross the earth.

Does India have enough undersea cables?

India has two major hubs of cable landing sites: Mumbai and Chennai. Many of the cables connected to Chennai also land in Mumbai. In total, 17 cable systems land at some point in India. India also has two domestic cable systems — the Chennai Andaman and Nicobar Islands (CANI) cable to provide high-speed connectivity to the islands, and the Kochi Lakshadweep Islands project.



Cables take several months, even years, to plan out and lay, at a cost of millions of dollars. Most cables in countries with well-developed internet infrastructure are able to commission capacity years before it is required. As such, most international internet traffic in India is largely served by existing capacity.

What are some risks surrounding undersea cable deployment in India?

More cables land in Singapore, a small city-state, than they do in all of India, making India vulnerable to the consequences of cable cuts at sea. If there is a disruption at the Red Sea, it pretty much brings down 25% of India's Internet in our estimate. It's not a theory because it

just happened about two years back.” He was referring to the cuts that brought down subsea cables in the Bab-el-Mandeb Strait, likely caused by strikes by Houthi rebels in Yemen. That strait is a critical narrow passage through which dozens of subsea cables pass.

These cuts — some of which happened in 2024 — have not destabilised India’s internet experience so far, thanks to excess capacity built into other networks. But that may not always be the case. If several cables in the Red Sea are damaged, large parts of the internet may stop working, and there is only so much data that can be rerouted through other cable systems.

What can be done to bolster India’s subsea cable infrastructure?

For one, the companies laying subsea cables complain of excessive permissions needed to land a single cable in India. By last count, about 51 permissions were needed, beyond just the Department of Telecom, including the Home Ministry, Department of Fisheries, the Environment Ministry, local municipalities, and so on.

In addition to streamlining regulations, securing these cables is also important. Fishing trawlers break the cables all the time.

India depends on foreign repair vessels with long permission processes for them to begin work in Indian waters. India currently does not have the requisite subsea cable repair ships and cable storage depot capacity that is required. There is need for more domestic investment in cable repair capabilities.

Relevance: GS Prelims & Mains Paper III; Economics

Source: The Hindu

5. More remittances received from Advanced Economies than the Gulf

Why in News?

Findings of the Reserve Bank of India’s (RBI’s) latest Remittances Survey released last month show a significant shift in India’s remittance sources.

The Advanced Economies (AEs) — particularly the United States, the United Kingdom, Singapore, Canada, and Australia — together accounted for more than half the total remittances in 2023-24, overtaking the Gulf Cooperation Council (GCC) countries, which have traditionally contributed the largest share of remittances to India.

Remittances from the Gulf...

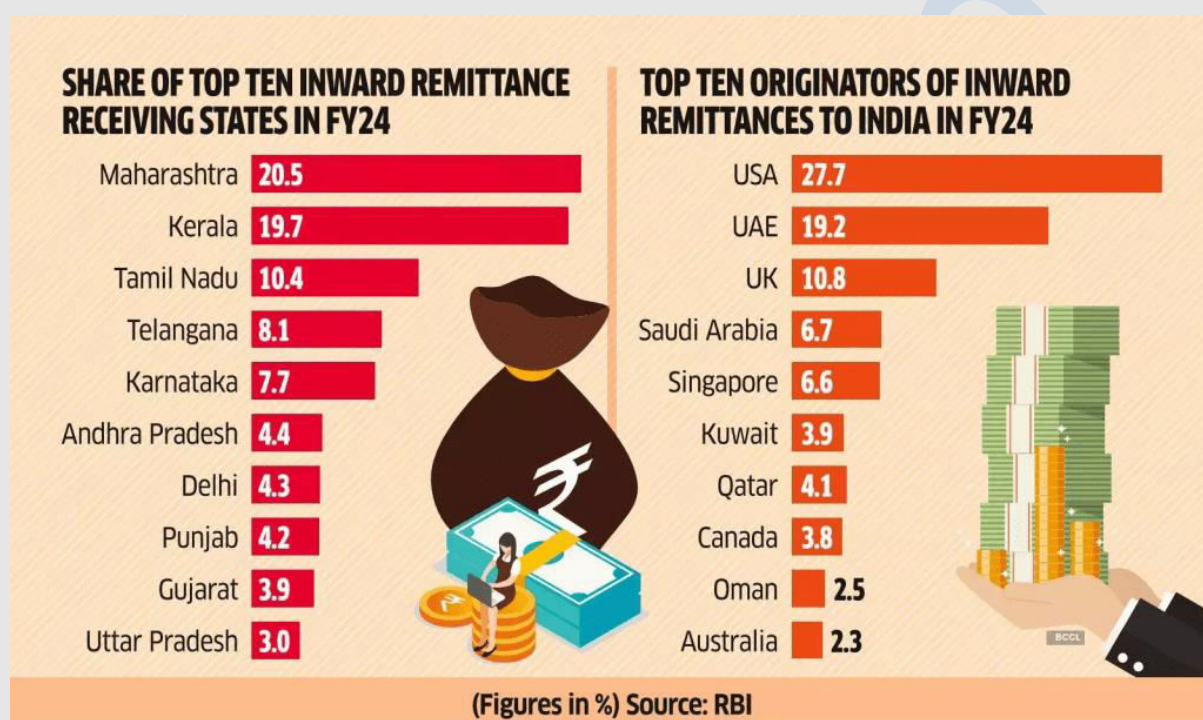
Historically, the six GCC nations — Saudi Arabia, the United Arab Emirates (UAE), Qatar, Oman, Bahrain, and Kuwait — have been the biggest contributors of remittances to India because of the large numbers of Indian workers employed in those countries.

However, multiple factors have led to a decline in remittances from the Gulf.

1. The economic downturn caused by the Covid-19 pandemic resulted in widespread job losses and salary cuts, reducing the disposable income available for remittances.

2. Additionally, “nationalisation” policies — such as the Saudi Nationalisation Scheme or Nitaqat, also known as “Saudisation” — which prioritise local employment over foreign workers, have significantly decreased opportunities for Indian migrants.

The share of the UAE in total remittances fell from 26.9% in 2016-17 to 19.2% in 2023-24, and that of Saudi Arabia and Kuwait fell from 11.6% to 6.7% and 6.5% to 3.9% respectively during this same period.



...And the Advanced Economies

Remittances from the AEs have risen steadily in recent years.

The US remains the largest contributor, accounting for 27.7% of total remittances in 2023-24. US remittances made up 22.9% of the total in 2016-17.

Between 2016-17 and 2023-24, the share of remittances from the UK, Canada, and Singapore rose from 3% to 10.8%, 3% to 3.8%, and 5.5% to 6.6% respectively.

Although the number of Indian migrants in the US is smaller than in the GCC, they send higher per capita remittances due to higher wages and the greater purchasing power of the US dollar. This pattern is also seen in other advanced economies such as Canada, the UK, Germany, and Australia, where Indian professionals earn significantly more than their counterparts in the Gulf.

Relevance: GS Prelims; Economics
Source: Indian Express

6. Why NCDRC called the current crypto regime 'nebulous', dismissed WazirX case

Why in News?

Underlining the continued lack of clarity on the issue of cryptocurrency regulation, the National Consumer Disputes Redressal Commission (NCDRC) last week dismissed a lawsuit by investors against WazirX, a cryptocurrency exchange focused on the Indian market.



Investors approached the NCDRC claiming a 'deficiency in service' by WazirX after a cybersecurity breach last July saw the firm lose about \$233 million. They argued that WazirX failed to implement adequate security measures, allowing the cyberattack to take place.

In its ruling, the NCDRC held that the governance regime for cryptocurrency was 'nebulous' and that the consumer court

does not have jurisdiction to hear the case. It did not comment on the measures WazirX could have taken to prevent a security breach or the losses to investors.

The case before the NCDRC

On July 18, 2024, over \$233 million, or about 45% of the value of WazirX's digital asset holdings, were withdrawn from one of its 'multisig wallets'. A multisig or multisignature wallet requires a user to provide two or more private keys for authentication before a transaction can be processed and confirmed.

The company immediately halted withdrawals on the platform, even as users incurred massive losses. In September, a Singapore court granted a four-month moratorium on any proceedings against it, further halting withdrawals. WazirX has since claimed that the North Korea-based Lazarus Group was responsible for the attack.

In January 2025, Indian users approached the NCDRC, claiming a deficiency in the services provided by WazirX. They also alleged that the platform was indulging in unfair trade practices by halting withdrawals.

The NCDRC considered two questions in the case. First, whether cryptocurrency could be considered a 'good' under the Consumer Protection Act, 2019 (CPA). Second, whether it could hear the case at all.

1. CRYPTO AS A 'GOOD'

Under Section 2(21) of the CPA, the term 'goods' means "every kind of movable property". The NCDRC acknowledged that cryptocurrencies, officially dubbed "virtual digital assets" (VDA), are included in the definition of property under the Income Tax Act (and taxed at a rate of 30% since April 2022). However, the NCDRC repeatedly flags the lack of clarity in this field, noting that:

- The connection between VDAs and consumer services is "still in a nebulous state";
- The Reserve Bank of India "has not yet taken any responsibility" by regulating platforms like WazirX, "even though concerns have been raised about financial crisis occurring in the offing".

Ultimately, the NCDRC did not clarify crypto's status as a good, stating, "on the one hand they can be treated to be digital products as they are digital goods, but they are still not recognised as currencies or securities".

2. NCDRC JURISDICTION

The NCDRC said there are no laws to "regulate or even provide legal measures for tackling such claims". It also noted that there are several different aspects to consider in a case like this, including the criminal aspects of the complaint against WazirX, as it paints a picture of fraud committed against the users. Depending on the nature of the deception alleged, the NCDRC also said the Prevention of Money Laundering Act could also apply.

It thus ruled that "the consumer forum (NCDRC) may not be that well equipped to carry out investigations into the alleged breach". The NCDRC indicated that either the legislature or a "judicial platform" like the SC or a High Court would have to declare that such cases could be heard in the consumer court before it takes any action.

Cryptocurrency regulation in India

So far, Parliament has not passed any laws specifically governing Virtual Currencies and related transactions, despite attempts for the same. In 2021, the Centre floated 'The Cryptocurrency and Regulation of Official Digital Currency Bill', which would ban 'private' cryptocurrencies and instead establish a Central Bank Digital Currency and a board to oversee crypto-related regulations. However, the bill was never discussed in Parliament, and there has been no movement since.

Relevance: GS Prelims & Mains Paper III; Economics

Source: The Hindu

7. Why is active mobility necessary in India?

Why in News?

Sporadic reports of accidental deaths and injuries of pedestrians, cyclists, street-hawkers, and others in the metro cities of India are on the rise. While urban development in various metro cities include patches of dedicated service lanes for pedestrians and cyclists, motor vehicles tend to ply on them as well. As a result, the risk of accidents are as high on these pathways as

on the main roads with vehicular traffic. In such a grim situation, active mobility is the need of the hour.



What is active mobility?

Active mobility refers to modes of transportation that use human power instead of a motorised form of mobility. Active modes of transport include walking, cycling, skateboarding, and other non-motorised modes that are used for travel and not recreational activities.

Push for Active Mobility

Bengaluru's first Bicycle Mayor, Sathya Sankaran, has been a key advocate for cycling and pedestrian-friendly infrastructure since 2018. His efforts contributed to the drafting of the Karnataka Active Mobility Bill, 2022. In 2020, Karnataka recorded the highest number of pedestrian deaths in the country at 13%. Therefore, the Bill aims to promote urban mobility through the protection of the rights of pedestrians and cyclists. The inherent goal of this bill is to provide a legal structure protecting and promoting active mobility, and ensuring equal access to public space. Several other States are also giving attention to active mobility.

Delhi is expanding cycling tracks and pedestrian-friendly streets under its Delhi EV policy. Pune has implemented a Comprehensive Bicycle Plan and developed over 300 km of cycling lanes. Chennai is redesigning roads under the SCM to improve pedestrian safety, while Kochi has introduced a Public Bicycle Sharing (PBS) system to enhance last-mile connectivity.

What is its significance?

As stated by the World Health Organization (WHO), active mobility in all its forms has economic, social, environmental, and health benefits. The economic benefits include reduced household expenditure on fuel and transportation and lower healthcare costs due to enhanced public health. It also boosts local businesses since pedestrian-friendly infrastructure attracts higher foot traffic.

Walking and cycling are sustainable modes of transport as compared to motorised vehicles due to their marginal carbon emissions. They enhance energy security and significantly reduce India's 12% carbon emissions from road transportation. Cities with well-developed infrastructure for active transport report cleaner air and reduced traffic congestion. Moreover, active modes of transport are known to reduce the risk of chronic diseases, improve cardiovascular health, promote mental well-being, and enhance public health among citizens. It is a mode of transportation that makes cities more vibrant and climate-conscious.

What are the barriers?

Active mobility remains severely underutilised because urban infrastructure actively discourages it. The lack of adequate pedestrian and cyclist-friendly infrastructure hinders active mobility as a primary mode of transport. As of 2021, more than 85% of roads do not

meet the minimum safety requirements for walking and cycling. This is also accompanied by the availability of low-cost, alternative modes of motorised transport. Additionally, extreme weather conditions and long distances of travel discourage people from adopting active modes of transport.

Moreover, social perceptions act as significant barriers. In many regions, cars and bikes are associated with a higher social status. India has a burgeoning number of privately owned motor vehicles plying on the road. According to the Society of Indian Automobile Manufacturers, over 12,000 cars are sold every day in India. High traffic congestion, along with weak enforcement of traffic regulations, makes walking and cycling unsafe.

How have other countries fared?

With more than 35,000 km of dedicated cycling lanes, The Netherlands is a global leader in promoting active mobility through cycling. The European Union's Mobility and Transport department prioritises promoting walking and cycling as a means of transport to enable more sustainable mobility. This is accompanied by Vision Zero, which aims to mitigate the number of incidents between pedestrians, cyclists, and motor vehicles. Germany's Berlin Mobility Act mandates wider sidewalks and dedicated cycling lanes, reduced speed limits for motorised vehicles within city limits, and prioritises pedestrians/cyclists in urban planning.

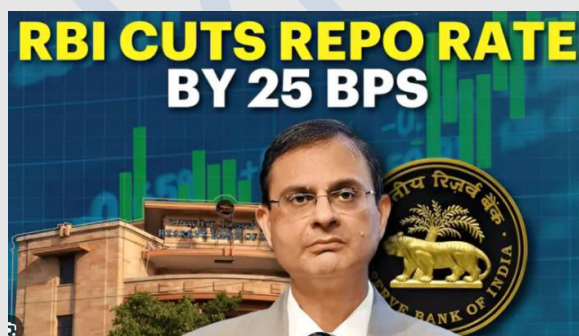
Relevance: GS Prelims & Mains Paper III; Economics

Source: The Hindu

8. Cut in Repo Rate

Why now?

The Reserve Bank of India's (RBI's) six-member Monetary Policy Committee (MPC) recently decided to cut the repo rate by 25 basis points to 6%. The rate setting panel also changed the monetary policy stance from "neutral" to "accommodative", signaling further reductions in the repo rate in the near future.



What is repo rate?

The interest rate that the RBI charges when commercial banks borrow money from it is called the repo rate. The interest rate the central bank pays commercial banks when they park their excess cash is called the reverse repo rate.

Currently, the repo rate is at 6% whereas the reverse repo rate is at 3.35%.

Why does the repo rate matter?

Using these two rates, the RBI sets the tone for all other interest rates in the banking system, and through that route, in the broader economy.

For instance, when the RBI wants to encourage economic activity in the economy, it reduces the repo rates. Doing this enables commercial banks to bring down the interest rates they charge (on their loans) as well as the interest rate they pay on deposits. This, in turn, incentivises people to spend money, because keeping their savings in the bank now pays back a little less, and businesses are incentivised to take new loans for new investments because new loans now cost a little less as well.

On the other hand, when the RBI wants to control inflation, it increases the repo rate. Banks thus have to pay more interest to borrow from the RBI, which means they will charge more interest to their borrowers. At a macro level, this inhibits people from borrowing money as well as from spending, which in turn reduces the amount of money in the market, and thus negates inflation.

It is for this reason that the repo and reverse repo rates are often referred to as the "benchmark" interest rates in the economy.

Why has RBI reduced the repo rate?

RBI Governor Sanjay Malhotra said that the central bank is "more worried" about a sluggish economy than inflation at the moment.

The January-February inflation is tracking an average of 3.9%, below the RBI's quarterly projection for January-March 2025. The RBI has projected consumer price-based inflation (CPI) at 4.8% for the fourth quarter of the fiscal 2025.

Also, the central bank's decision comes amidst heightened global economic uncertainty in the face of the far reaching reciprocal tariffs announced by the Donald Trump administration in the US.

Relevance: GS Prelims & Mains Paper III; Economics

Source: The Hindu

9. Why NREGA wage rates should be revised

Why in News?

The Parliamentary Standing Committee on Rural Development and Panchayati Raj tabled its report on the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) on April 3.

Among other things, the report took note of the "failure of [NREGA] wages to keep up with inflation" and that wages "remain below subsistence levels, making it difficult for workers to sustain themselves".

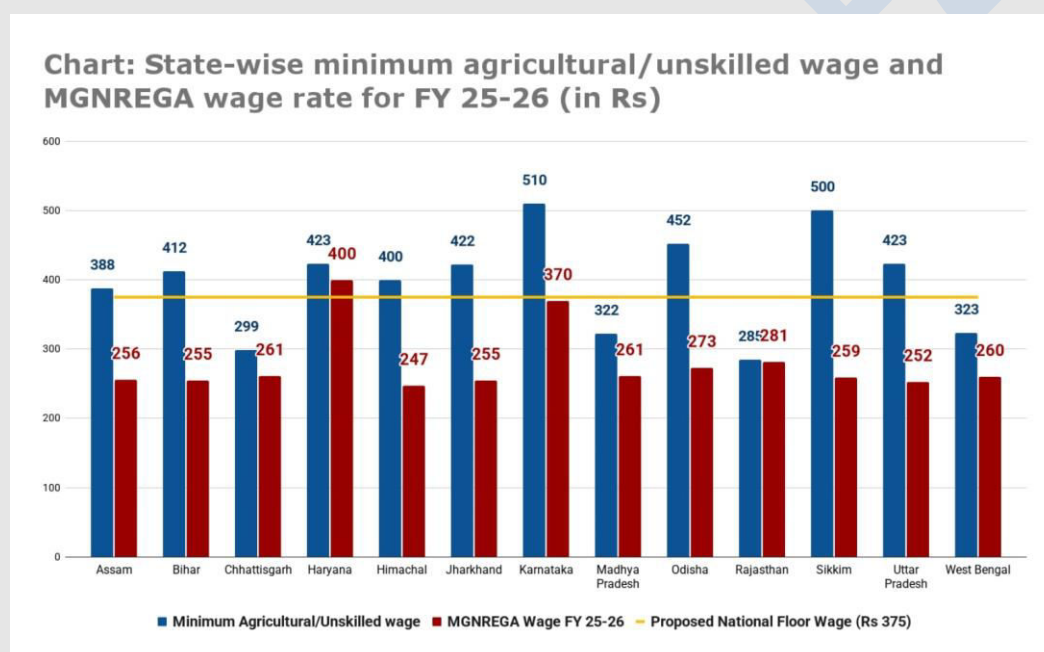
With over 25 crore registered workers, NREGA is the largest employment guarantee programme in the world. It provides up to 100 days of work annually to rural households.

How NREGA wage rates are decided

Section 6 of the Act provides two methods for calculating NREGA wage rates.

- Section 6(1) empowers the Centre to notify the wage rate notwithstanding the Minimum Wages Act, 1948 (MWA). The notified wage, however, cannot be lower than Rs 60.
- Section 6(2) states that until the Centre notifies a wage rate, the state's minimum agricultural wage rate shall be taken as the NREGA wage rate.

From 2005 to 2009, NREGA wages were equal to the minimum agricultural wage rate of each state. However, the concurrent upward revisions of states' minimum wages led to an increasing financial burden on the Centre, which foots the entire NREGA wage bill.



Capping wage rate

This prompted the Centre to cap the NREGA wage rate. Now, workers in some states were being paid less than the statutory minimum wage, in violation of the MWA. Moreover, capping the wage rate meant that the wages in real terms would actually decline over time.

NREGA wage rates are lower than the minimum agricultural wage rate in nearly every state. In some states, the gap between the two is more than Rs 200.

Key issues with NREGA wage rates

The most pressing issue with the NREGA wage today is its increasing divergence from the minimum wages for each state. In FY 25-26, the difference between the MGNREGA wage and the state minimum agricultural wage is as high as Rs 241 in Sikkim. The largest difference in FY 20-21 was Rs 119 (in Kerala).

The Parliamentary Standing Committee has repeatedly criticised the MoRD for this, highlighting the increasing cost of living and noting that the “abysmally low” wages are one of the reasons for worker drop-outs from NREGA.

Response of MoRD

The MoRD’s response to these concerns has consistently been that NREGA is a fall-back option for employment, and that each state has the ability to increase the wages, over and above what the Centre offers, paying the difference from its own coffers. Only Himachal Pradesh, Jharkhand, and Odisha have exercised this option.

A lofty vision, unfulfilled

NREGA was implemented at a time when the daily wage for casual rural/agricultural workers was very low, and workers had next to no bargaining power. Its vision was to ensure livelihood security by providing dignified employment.

Multiple studies have found that rural wages have increased as a by-product of NREGA. Over the years, NREGA has repeatedly served as a lifeline for the rural poor. This was particularly obvious during the Covid-19 pandemic.

The Supreme Court in Sanjit Roy vs State of Rajasthan (1983) had ruled that payment of less than the minimum wage amounts to “forced labour”, punishable under Article 23 of the Constitution. The Standing Committee has echoed this sentiment, recommending that “at least Rs 400 per day should be provided, as the current wage rates are inadequate to meet even basic daily expenses”.

As long as workers do not receive fair wages, NREGA’s vision of a right to dignified work will remain unfulfilled.

Relevance: GS Prelims & Mains Paper III; Economics
Source: Indian Express

10. Plastic Parks in India

Introduction

The Department of Chemicals and Petro-Chemicals is implementing the Scheme for Setting up of Plastic Parks under the umbrella scheme of New Scheme of Petrochemicals, to support setting up need-based Plastic Parks. Under the scheme, the government of India provides grant funding up to 50% of the project cost subject to a ceiling of Rs.40 crore per project.

A plastic park is an industrial zone specifically designed for plastic-related businesses and industries. It aims to consolidate and synergize the capacities of the plastic processing industry, promoting investment, production, and exports while generating employment. These parks also focus on achieving environmentally sustainable growth through waste management and recycling initiatives.



10 Plastic Parks Approved

Plastic Parks have emerged as an integral part of India's strategy for managing plastic waste, promoting recycling, and supporting the chemical industry. 10 Plastic Parks have been approved so far in different States

Background and Objectives

India stands 12th in the world export of plastics, as per the 2022 World Bank estimates. It has grown exponentially from 2014, when it was worth just 8.2 million thousand USD, as compared to the 2022 estimates, where it reached 27 million thousand USD.

Indian Plastic Industry and Environment Sustainability

The Government of India has taken several steps to ensure that the development of the plastic industry is environmentally sustainable and aligned with global sustainability standards.

1. The Extended Producer Responsibility (EPR) Regulations for plastic packaging mandate targets for minimum level of reuse, recycling and use of recycled content. This ensures

accountability for waste collection, recycling, and reuse. Certain single-use plastics have been banned, with a focus on reducing plastic waste. The regulations also mandate to utilize minimum amount of recycled material in packaging products.

2. India engages with international organizations such as the World Trade Organization (WTO) and the United Nations Environment Programme (UNEP) to enable compliance with global sustainability standards. Further, India actively participates in meetings of the International Organization for Standardization (ISO) which formulates international standards for plastic products.

Relevance: GS Prelims & Mains Paper III; Economics

Source: PIB

11. Semiconductor Manufacturing base

Why Now?

Amid the ongoing "tariff war" between the United States and China, the Trump administration announced recently that smartphones, computers, and certain other electronic devices would not be covered under the 125% reciprocal tariffs on China. It comes as a relief to companies like Apple that have a large-scale manufacturing base in China.

Trump added, "We are taking a look at Semiconductors and the Whole Electronics Supply Chain in the upcoming National Security Tariff Investigations. What has been exposed is that we need to make products in the United States, and that we will not be held hostage by other Countries, especially hostile trading Nations like China, which will do everything within its power to disrespect the American People."

What Are Semiconductors?

As the name suggests, a semiconductor can periodically conduct electricity or block its flow. The semiconductors in use today are made of materials such as silicon and comprise millions of transistors that act like miniature electrical switches, flipping on and off to process data such as images, radio waves, and sounds.

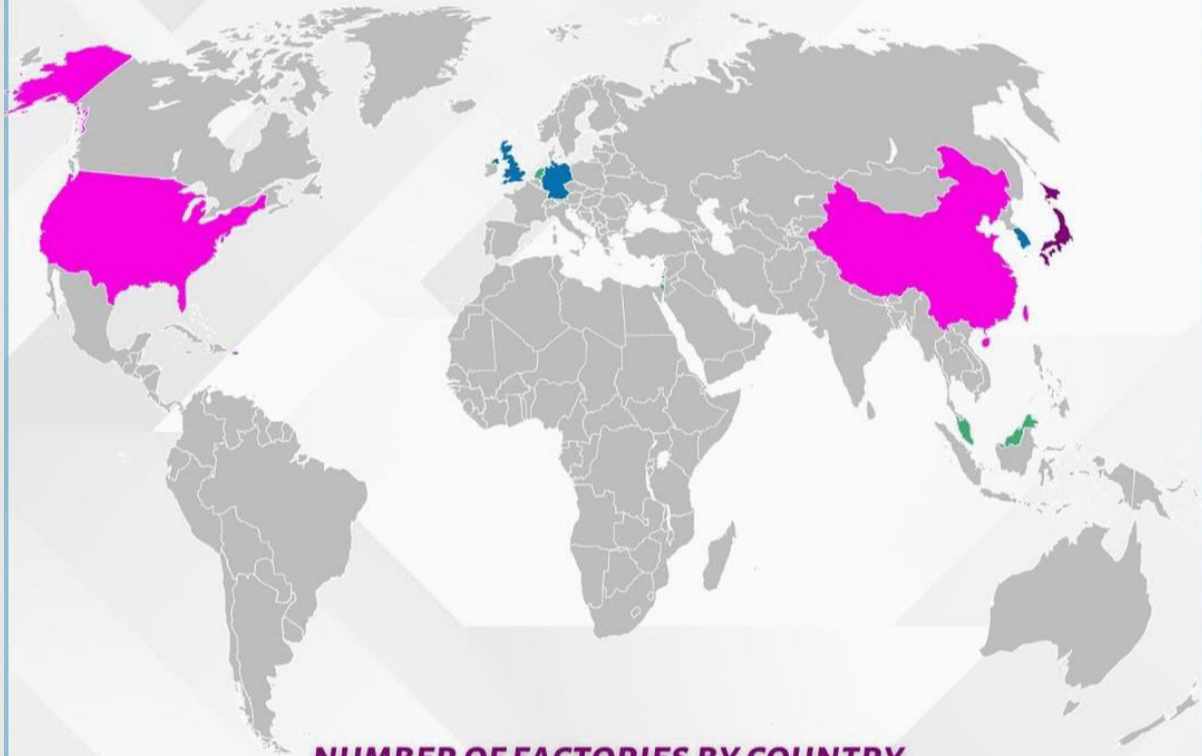
Semiconductors are found in most modern technology, from household appliances to sophisticated defence systems, mobile phones to cars, toys to high-end luxury products. They are also called microchips or integrated circuits.

Why Do Semiconductors Matter to the US?

It's not only the United States which wants to become self-reliant in the production of semiconductors. As technology proliferates rapidly worldwide, semiconductors have become key to ensuring high-end manufacturing domestically and fulfilling the growing demand for smartphones, laptops and other electronic devices. The growing integration of artificial intelligence (AI) in modern devices also matters in this context because AI systems are trained using specialised chips known as Graphics Processing Units (GPUs).



COUNTRIES WITH SEMICONDUCTOR FACTORIES



NUMBER OF FACTORIES BY COUNTRY



What became obvious during the Covid-19 pandemic, which dealt a blow to global supply chains for some time, was the dominance of a few players in semiconductor manufacturing (mostly in Taiwan). The manufacturing process is also costly and requires a constant electricity supply and "ultrapure" water to remove residue from silicon chips, making it difficult for many countries to replicate Taiwan's success.

A 2020 report by the Semiconductor Industry Association and the Boston Consulting Group estimated that the US only accounted for 12% of the world's semiconductor manufacturing, a decline from 37% in 1990.

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

12. Mehul Choksi arrested in Belgium. What happens now?

Why Now?



Mehul Choksi, a key accused in the Rs 13,500 crore Punjab National Bank loan fraud case, was arrested in Belgium recently. New Delhi has pressed for his extradition from Belgium, so that the 65-year-old fugitive diamantaire can be tried in India.

Choksi is said to have arrived in Belgium last year to get cancer treatment. Prior to that, he had been living in Antigua and Barbuda as a citizen since 2018. Choksi's wife, Preeti, is said to be a Belgian citizen.

Extradition Treaty with Belgium

India first signed an extradition treaty with Belgium in 1901. The treaty allows extradition on the basis of "dual criminality", including for financial crimes. Dual criminality essentially means that an individual can be extradited only if her offence is punishable in both jurisdictions involved.

The treaty, however, prohibits extradition for offences of political nature or in cases where the individual in question can prove she is being prosecuted in the requesting country for political reasons. It also says that the fugitive arrested shall be released if the requesting country fails to present evidence of culpability within two months.

In 2020, India and Belgium signed the Mutual Legal Assistance Treaty for better cooperation on fugitives.

Extradition Process

Choksi was arrested in Belgium on the requests of the Central Bureau of Investigation (CBI) and the Enforcement Directorate (ED), which are probing the case against Choksi. Once the extradition process begins, teams from both agencies will visit Belgium, and prepare a case in accordance with the country's laws.

However, it is unlikely that Choksi will be back in India any time soon, if at all. While extraditions are typically lengthy legal processes, this is especially true in Europe.

Choksi's arrest in Belgium showcases India's diplomatic heft, but whether it can also fast track the legal process remains to be seen.

India's experience with the UK, for the extradition of Choksi's nephew and co-accused Nirav Modi and former Kingfisher Airlines owner Vijay Mallya, has not been encouraging. Mallya left India in 2016, while Modi fled to the UK in 2018.

What is Choksi accused of?

Coming from a family of diamantaires, Choksi expanded his family business by opening fancy stores across India and abroad under the aegis of Gitanjali Group. Along with his nephew Nirav Modi, he splurged heavily on marketing and advertising — roping in international stars such as Kate Winslet and Rosie Huntington-Whiteley.

Much of this, however, was funded by loans from the PNB. By the time the PNB discovered the irregularities and approached the CBI, both Choksi and Modi had fled the country, after setting the bank back by over Rs 13,500 crore. Choksi alone stands accused of defrauding the bank of more than Rs 6,000 crore.

Following the registration of the case, ED attached Choksi's assets, including the diamonds in his stores, claiming them to be of value in excess of Rs 5,000 crore. However, a laboratory examination of the diamonds revealed most of them were fake. The real value of Choksi's assets, including all his properties and investments, today stands at around Rs 2,500 crore.

Relevance: GS Prelims & Mains Paper III; Economics

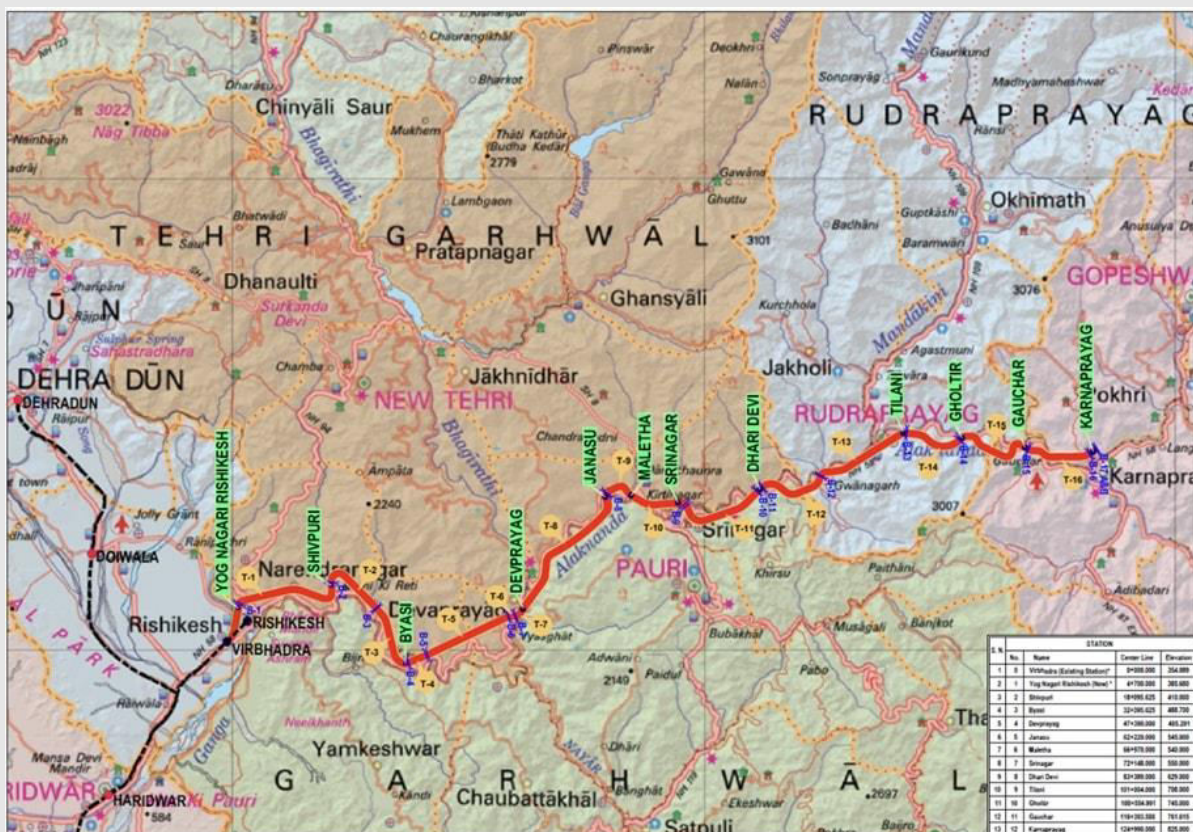
Source: Indian Express

13. Significance of Railways completing breakthrough for India's 'longest transport tunnel' in Uttarakhand

Why in News?

Union Minister for Railways Ashwini Vaishnaw and Uttarakhand Chief Minister Pushkar Singh Dhami witnessed the "tunnel breakthrough" of tunnel no. 8 on the Rishikesh-Karnaprayag railway in the Himalayas last week. It marked a major milestone towards what is slated to be the longest transport tunnel in India.

A tunnel breakthrough is the point or moment when a tunnel being excavated from both ends finally connects, marking the completion of a critical phase of tunnel-building. Spanning a length of 14.58 km, tunnel no. 8, or the Janasu tunnel, falls on the Devprayag to Janasu stretch of the Rishikesh-Karnaprayag line, an ambitious project of the Indian Railways.



Rudraprayag line

At present, the longest rail tunnel in India is 12.75 km long, between Khari and Sumber Stations on the Katra-Banihal Section of the Kashmir line or the Udhampur-Srinagar-Baramulla Rail Link (USBRL). The longest road tunnel is the Atal tunnel on the Manali-Leh highway, which is 9.02 km long.

The significance

Beyond the larger project, the breakthrough matters because it signifies the first successful tunnel boring machine (TBM) use in the Himalayan terrain and the first by the Indian Railways. TBM is a special machine for excavating tunnels through hard rocks. Unlike the blasting method, it reduces the disturbance to the surroundings and the cost of lining the tunnel.

Along with TBM, the New Austrian Tunnelling Method (NATM) has also been used, involving controlled and small-scale excavation. NATM was earlier used for constructing tunnels on the Katra-Banihal section. The TBM has tunnelled 10.4 km in tunnel no. 8, with 4.11 km excavated through NATM.

The rail link

The Rishikesh-Karnaprayag rail link project is 125.20 km long. Of this, 104 km or 83 per cent of it is in the form of tunnels. It is a single-line broad-gauge network. The alignment has 12 new stations, 16 main tunnels and 19 major bridges covering five districts – Dehradun, Tehri Garhwal, Pauri Garhwal, Rudraprayag and Chamoli – in Uttarakhand.

Evacuation tunnels

Apart from the 16 main tunnels, the project will have 12 escape tunnels of 97.72 km length and 7.05 km long cross passages. The escape tunnels are built alongside the main tunnel to provide a safe passage for people to evacuate in an emergency, like a fire or accident.

Bridges

The project includes five important bridges, one each on the Ganga and the Chandrabhaga, and three bridges over the Alaknanda. The longest bridge in the project is Srinagar Bridge no. 9, which will be half a kilometre long. The highest bridge is the Gauchar Bridge, at 46.9 meters.

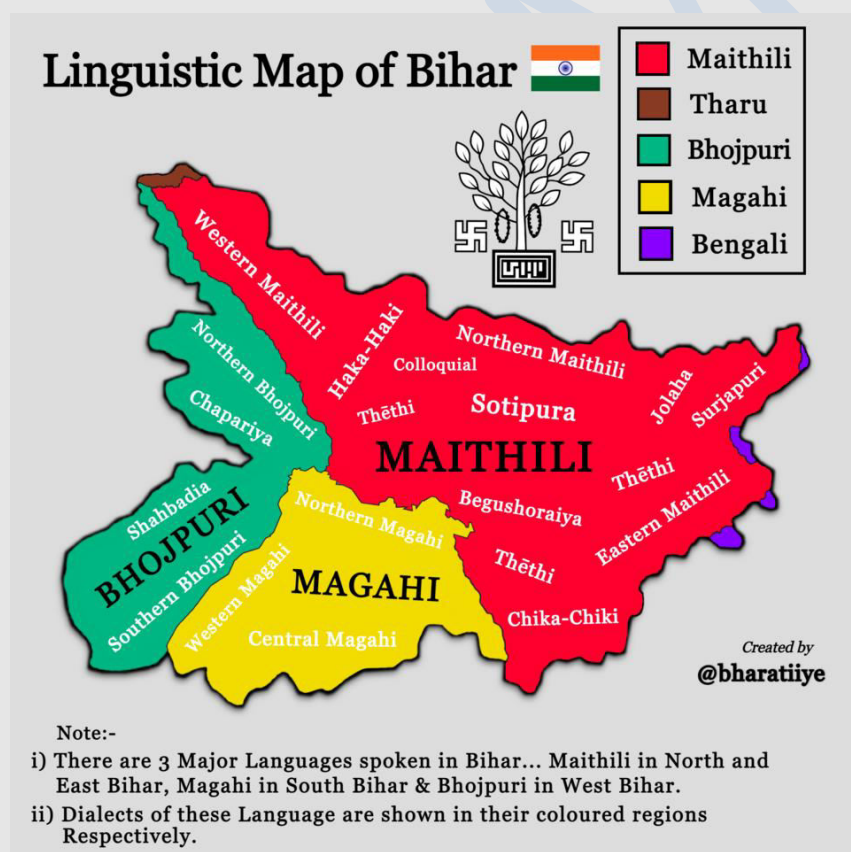
Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

14. Namo Bharat Rapid Rail from Jaynagar to Patna

Why in News?

Prime Minister Narendra Modi flagged off the Namo Bharat Rapid Rail train between Jaynagar and Patna while addressing a rally in the city of Madhubani.



What is the Namo Bharat Rail project?

Namo Bharat Rapid Rail (also referred to as Vande Metro) is a short-distance service that operates on an inter-city rail network to connect major cities within a distance of around 100–250 km (62–155 mi). The Rail Coach Factory, Kapurthala had rolled out the first Basic Unit (4 coaches) of the train in April 2024. This train is part of the 'Make in India' initiative by the Government of India and entered commercial service in September 2024.

Self propelled coaches

The Nam0 Bharat Rapid Rail is a self-propelled trainset similar to the Vande Bharat Express. The self-propelled feature eliminates the need for a separate locomotive and offers faster acceleration and deceleration. Designed to replace Mainline Electric Multiple Unit (MEMU) trains, its primary aim is to reduce the inter-city travel time. With a maximum operational speed of 130 km/h (81 mph), it surpasses the current running MEMUs.

Recent Projects

The Nam0 Bharat Rapid project will be the fastest and the first fully air-conditioned train between Jaynagar, which borders Nepal, and the state capital. It is only the second rake of the train project, after being launched between Ahmedabad and Bhuj last September.

What's behind the Centre's announcements for Mithilanchal, specifically?

Jaynagar falls in Mithilanchal region. The Mithilanchal region, comprising districts such as Darbhanga, Madhubani, Sitamarhi, Saharsa, Supaul and Madhepura.

Relevance: GS Prelims; Economics

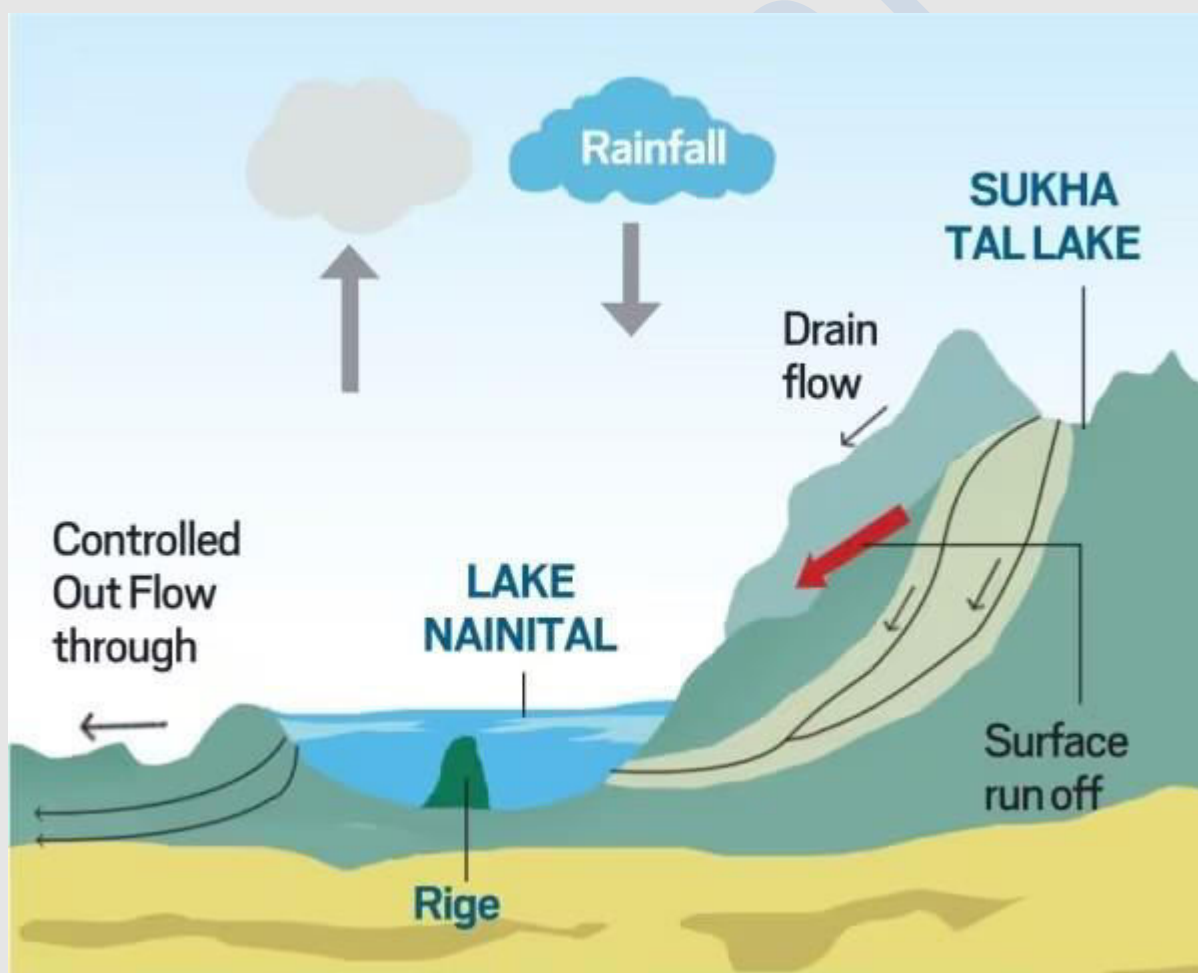
Source: The Hindu

1. Why Naini Lake is seeing record-low water levels this year

Why in News?

The Naini Lake, one of Nainital's key attractions, has recorded fall in water level. This has sparked concerns over drinking water scarcity ahead of the summer season. The Uttarakhand Jal Sansthan extracts 10 million litres everyday from the lake to supply drinking water to the city.

For many years now, alarm bells have been sounded about the lake's depleting water levels. This time, a decrease in snowfall and rainfall in the winter months has played a role, compounded by long-term issues surrounding the lake's upkeep.



Central to Nainital

The Naini Lake is a natural kidney-shaped lake in the heart of Nainital, surrounded by seven hills. It is said that English businessman P Barron chanced upon it around the mid-19th Century, spurring the town's development as a hill station for the British.

Nearly, 76% of the city's water demand was met by the Naini Lake in 2024.

Reasons behind falling levels

Pressure from an increasing population, the increase in tourist activity, and commercialisation of nearby areas have impacted its health.

There are other civic issues also. For instance, pollution from the discharge of untreated wastewater, improper disposal of solid waste, and inadequate sewer systems causing sewage to overflow into stormwater drains, which ultimately discharge into the Naini Lake.

Climate change has a bearing on prevailing weather patterns. Annual mean temperatures in Uttarakhand have increased by nearly 1.5 degrees Celsius between 1970 and 2022. Experts say the warming is affecting rainfall and snowfall.

Also, Enhancing siltation, dumping debris in Sukhatal Lake, which is a major aquifer recharge area for Naini Lake, is fall in water level of Naini lake.

Efforts to Save lake

Several petitions have been filed concerning the lake, with one of the earliest going to the Supreme Court in 1993. The court held that projects of commercial complexes should be banned in Nainital. However, construction had not stopped.

Homestays have been permitted, and almost every third house is a homestay. Construction has been done on wetlands as well. Water is stored in wetlands for six months and serves as an important source for the lake during the lean period.

Relevance: GS Prelims; Environment

Source: Indian Express

2. Green Credit Programme: What the scheme entails, criticisms against it

What is the Green Credit Programme?

Prime Minister Narendra Modi and Sheikh Mohammed bin Zayed Al Nahyan, the President of the UAE, officially unveiled the GCP on December 1, 2023, during the annual United Nations climate conference in Dubai. It was dubbed as a mechanism to incentivise "pro-planet" actions in response to climate change, and one which would promote the Centre's Mission LiFE (Lifestyle for Sustainable Environment).

The Union Environment Ministry notified the Green Credit Rules, which spelt out the programme's objectives and implementation, in October 2023.

Trading green

The programme will cover 8 types of activities, including tree plantation, water management and sustainable agriculture



■ **Applicant shall register activity via web site**

■ **Activity will then be verified by a designated agency**

■ **Based on its report, administrator shall grant credit certificate**

What do rules say?

At its core, the GCP seeks voluntary participation of individuals, companies, industries, and other entities across seven different activities — such as tree plantation, waste management, and water conservation — that will lead to improvements in the environment. This participation will be incentivised by generating “green credits”, which can then be traded on a domestic market platform to potential buyers looking to meet sustainability targets, or existing legal obligations.

For instance, could be exchanged for meeting compliance of compensatory afforestation, in cases where forest land has been used for development projects.

The credits can also be used by listed companies as part of their environmental, social and governance disclosures under SEBI’s Business Responsibility and Sustainability framework, indicating efforts taken by these companies on environmental sustainability.

How will green credits be calculated?

To begin with, the Centre has rolled out the scheme through the pilot on tree plantation, which was later expanded to eco-restoration activities such as plantation of shrubs, herbs and grasses, soil moisture conservation, rain water harvesting, and other similar measures as per site suitability.

Under GCP pilot on tree plantation and eco-restoration, the Indian Council of Forestry Research and Education (ICFRE), Dehradun, will act as the nodal administrator. Plantations will be carried out in degraded land parcels including open forest, scrubland, wasteland and catchment areas, and they must be five hectares in size or above.

Forest departments of states and Union Territories would have to identify these land parcels, which are under their control. Any party interested in participating would have to apply and register with ICFRE. After processing the applications and charging a fee, the land parcels identified by forest departments would be allotted to the parties. It would be the forest department's responsibility to carry out and maintain the tree plantations, and the plantation would have to be completed within a period of two years after the money is paid.

One grown tree raised on the identified land parcels would be accounted as one green credit. This would be subject to a minimum density of 1,100 trees per hectare based on local silvicultural conditions and after certification of completion provided by the forest department.

As on March 4, 2364 land parcels spread over 54,669.46 hectares were registered by forest departments across 17 states, as per GCP progress status data shared by the union environment ministry in Parliament. So far, a total of 384 entities have registered for participation in the GCP, including 41 public-sector undertakings and central public sector undertakings.

What have some people criticised the scheme?

GCP has been criticised for incentivising forest diversion for industries, by generating tradable credits which could also be used to meet legal obligations such as compensatory afforestation. It has also been criticised for promoting plantations on degraded lands, open forests and scrub lands, which experts have argued offer unique and important ecological services.

Earlier this month, the Supreme Court also heard an intervention application on the GCP, in an on-going case challenging the amendments to the Forest Conservation Act. The plea questioned the survival issues of plantations raised under the scheme, and the SC Bench has sought the Environment Ministry's views on the matter.

Under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 2023, India's forest conservation law, non-forest land equivalent to forest land used for industries and development projects is mandated for compensatory afforestation. Only if non-forest land is unavailable, twice the size of degraded or unclassed forest land is used for compensatory afforestation. This is to ensure land-for-land compensation.

However, GCP mandates use of degraded forest land for plantations. It also has complementary provisions which allow exchange of credits, generated by paying money, for meeting the compensatory afforestation compliance. This translates into compensating for older forests with existing forest land, rather than adding non-forest land into the forest cover, as laid down in the Van Adhiniyam.

In April 2024, over 100 environmental organisations and 400 citizens demanded the government to rollback the scheme. The representation to the government stated that arbitrary tree plantation cannot be used as credit to compensate for old-growth forests.

3. Kancha Gachibowli forest issue: All you need to know

Why in News?

The Supreme Court recently directed the Telangana government to stop its “alarming deforestation activities” in the Kancha Gachibowli forested area.

This came after the Telangana government in February announced it plans to auction some 400 acres of forested land adjacent to the University of Hyderabad (UoH) to build IT parks. This decision has since led to massive student protests, and now, got the attention of the highest courts in the land.

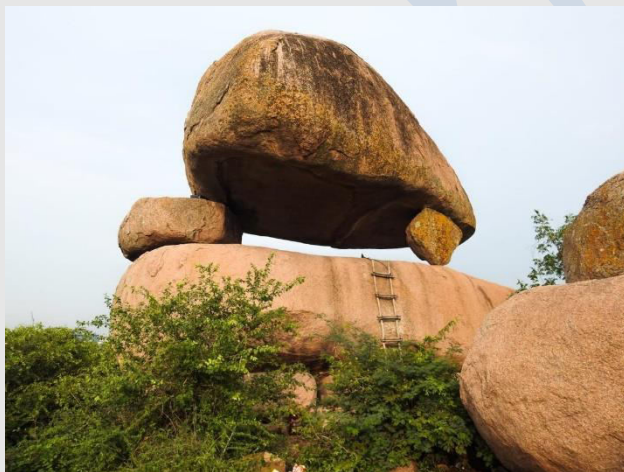
Primely located urban forest

Kancha Gachibowli is one of Hyderabad’s last remaining urban forests. It is rich in biodiversity, home to numerous bird, mammal and reptile species, and beautiful rock formations.

Urban forests such as Kancha Gachibowli help regulate local climates by providing shade, reducing temperatures, and increasing humidity.

View of government

For the government, the forest lies bang in the middle of Hyderabad’s Financial District. Auctioning the land would not only fill government coffers, but also attract potential



investments of Rs 50,000 crore, and generate as many as 5 lakh jobs, the government says. Notably, the Gachibowli IT corridor is one of the most expensive localities in Hyderabad, boasting extremely high property rates.

The Telangana Industrial Infrastructure Corporation (TGIIC) says it has prepared a layout duly preserving rock formations including the so-called ‘Mushroom Rock’ as green spaces.

Mushroom Rock in Kancha Gachibowli

Question of land ownership

Although the 400 acres in question were a part of the 2,300 acre parcel allotted to the UoH when it was established in 1974, legally, the state government is the sole owner of the entire land. Over the years, it has allocated pockets of land from this 2,300 acres for various purposes: constructing a bus depot, a telephone exchange, a IIIT campus, the Gachibowli sports stadium, a shooting range, etc.

The disputed 400 acres were handed over by the then united Andhra Pradesh government to a private sports management firm in 2003, only to be reclaimed in 2006 due to non-use. This triggered a lengthy legal battle, which eventually saw the SC reiterate that the Telangana government was the sole owner of the land.

But the 400 acres have never been demarcated. Nor has it been notified as a forest, even though it is a part of the UoH's larger forest ecosystem. This is at the heart of the current issue.

View of Students and Activists

Students and activists protesting against the Telangana government cite the SC's landmark verdict in *T N Godavarman Thirumulpad v Union of India* (1996). The apex court had held that any land with forest cover qualifies as "forest land", even if the land is not notified as a forest. Some have also called the government to declare the land as a National Park, something that would provide it protection from future deforestation.

Latest escalation, courts get involved

On March 30, the government sent at least 50 earthmovers to the UoH campus to begin clear the forested land for auction. This triggered massive protests in the campus.

As the issue began to get national attention, two public interest litigations (PILs) were filed before the Telangana High Court. The HC issued an interim order directing the state government to stop the felling of trees till the next hearing the day after.

However, the SC took suo motu cognisance of the matter, and sought a ground report from the High Court registrar (judicial). The apex court on sought an explanation from the Telangana government on the "compelling urgency" for clearing the forest, and put a stay on all activities till further orders.

The SC also directed a central empowered committee to visit the site and file a report by April 16.

Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

4. Ramban rain causes destruction: Understanding the weather events affecting the region

Why in News?



Jammu Kashmir rainfall impact:

Three people were killed after torrential rainfall and hail in the Ramban tehsil of Jammu and Kashmir recently. Buildings collapsed, transport was disrupted and hundreds of people had to be relocated due to the heavy rain.

According to the India Meteorological Department (IMD), in the 24 hours

ending 8:30 am on April 20, Jammu and Kashmir received 16.9 mm of rainfall, which is a 575% departure from the normal of 2.5 mm.

The Ramban district administration, Udhampur MP and Union Minister Jitendra Singh, and the J&K Office of Chief Minister all posted information about the events on social media, using terms like flash flood, landslide, and cloudburst. What are these events, what causes them, and what impact can they have?

What is a cloudburst?

While episodes of heavy rain are often termed "cloudburst", a cloudburst has a specific technical definition — rainfall of 10 cm or more in an hour, over a roughly 10 km x 10 km area. Cloudbursts are more common in hilly areas because of a phenomenon called 'orographic lift', which basically means warm air rising up the side of a mountain. As warm air 'climbs' a mountain, it expands because of the low pressure above. The expanding air cools, releasing the moisture it was holding as rain. But if more and more warm air keeps rising, it prevents that rain, till a large amount of rain builds up and bursts out in a massive shower all at once. Because cloudbursts happen in localised areas (over a roughly 10 km x 10 km area), they are difficult to capture accurately.

The sudden rain released by a cloudburst can quickly overwhelm drainage systems and lead to flash floods and landslides.

What is a flash flood?

As the name suggests, a flash flood happens quickly, when a lot of rain suddenly enters into the drainage systems (waterbodies, drains), and water overflows. Flash floods are again more common in hills, because rocky terrain does not absorb water very well.

While river floods, the kind normally seen in plains, last longer and cause more damage to property, the sudden flash floods are more likely to lead to loss of life.

What is a landslide?

Landslide is a portion of 'land' coming loose and sliding — rocks and soil slipping down a mountain, for example. As the British Geological Survey's website says, "When the force of gravity acting on a slope exceeds the resisting forces of a slope, the slope will fail and a landslide occurs...adding water to the material on a slope makes a landslide more likely to

happen. This is because water adds weight, lowers the strength of the material and reduces friction, making it easier for material to move downslope.”

A lot of water gushing down just speeds up this process. Landslides can crush people and animals under the debris, make roads unmotorable, and a lot of debris falling into a water body can cause floods.

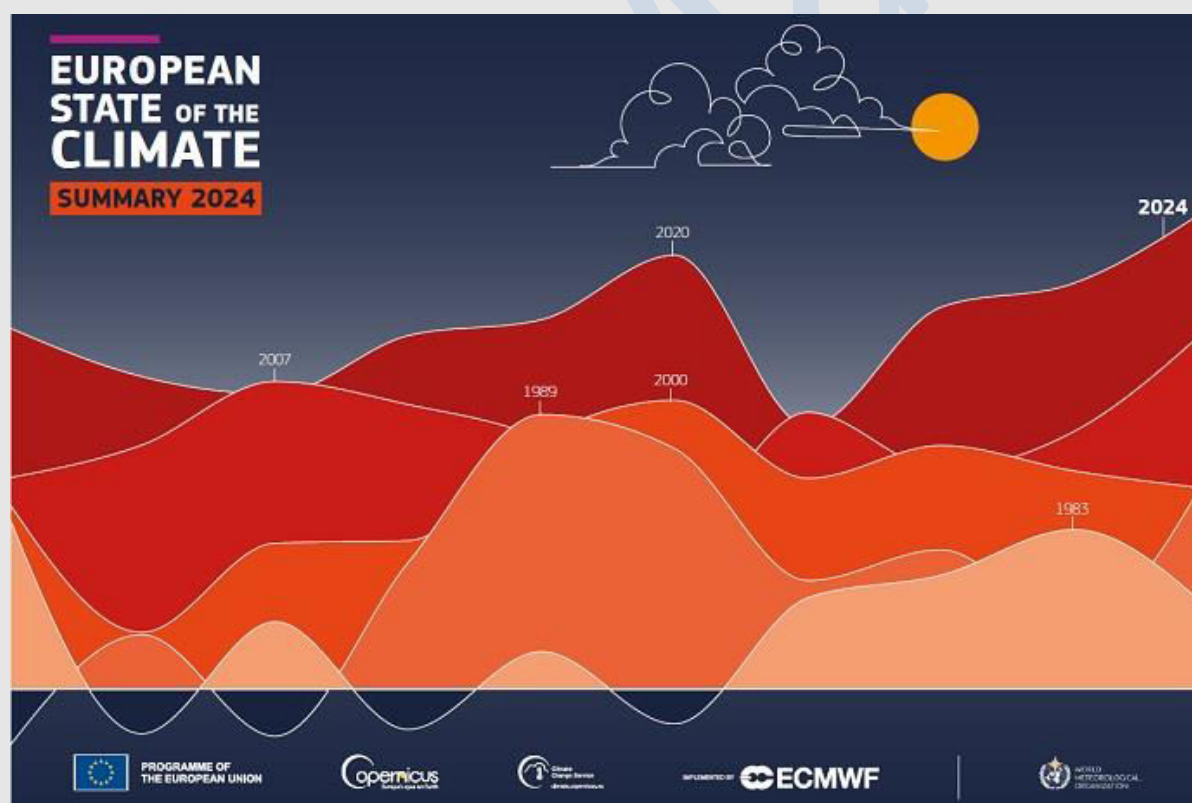
Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

5. Why Europe is warming faster: Causes many, including its cleaner air

Why now?

While global temperatures have been rising rapidly, primarily due to human activities that release greenhouse gases into the atmosphere, not every region has been warming at the same rate. Europe, for example, has warmed about twice as much as the world as a whole, as highlighted by the 2024 European State of the Climate Report that came out last week.



European State of Climate Report

The European State of Climate Report — an annual publication of Copernicus Climate Change Service, which is part of the European Commission — captures climate trends in Europe, and is published in collaboration with the World Meteorological Organisation.

The new edition of the report has said that the year 2024, which was the warmest ever for the planet, was the warmest for Europe as well. Eastern Europe was sunny and warm, while the western part was cloudier and wetter.

The report said much of eastern Europe saw warmer than average, or record-high, temperatures through the entire year in 2024. Southeastern Europe, comprising countries like Bulgaria, Romania, Croatia, Kosovo, Serbia and others, also experienced its longest heatwave on record.

Higher warming in Europe

The planet as a whole has seen its annual average temperature rise by about 1.3 degree Celsius from the pre-industrial baseline (the average of 1850-1900), though the year 2024 breached the 1.5 degree Celsius warming for the first time.

Europe, however, has seen its average annual temperature rise by about 2.4 degree Celsius compared with pre-industrial times. This has resulted in an unprecedented spate of extreme weather events, including heatwaves, heavy rainfall and flooding.

1. The Arctic Effect

Several factors contribute to the greater rate of warming over Europe, the most prominent being the fact that a substantial part of the continent lies in the Arctic region. In fact, Europe has the largest inhabited landmass in the polar region. And the warming around the poles, particularly the North Pole, is much more pronounced than anywhere else in the world. The contribution of warming around the North Pole pushes the average for Europe.

The prime reason for greater warming in the Arctic is what is known as the albedo effect. The ice cover in the Arctic is melting, because of which more land or water is getting exposed to the Sun. Ice traps the least amount of heat, reflecting most solar radiation back. Land or water, which are darker surfaces, tend to absorb solar radiation better, leading to higher degrees of warming. The melting of ice sheets is a little less in Antarctica, because of which warming in Antarctica is less pronounced than that in the Arctic.

The Arctic is known to be warming three to four times faster than the global average, and accounts for the substantial part of the average global warming.

2. Un-uniform warming

Warming is not uniform over the entire planet. Land areas have warmed more than the oceans, and higher-latitude areas, in general, have warmed more than tropical areas, which are nearer the equator. India, for example, has warmed only 0.7 degree Celsius from pre-industrial times, compared with the average of 1.59 degree Celsius for the entire land area on the planet. These numbers are from studies conducted a few years ago, and would have changed in the last few years.

3. Reduction in aerosols

Another factor contributing to higher warming rate in Europe is the reduction in aerosols emissions, the State of Climate report said. This is ironic since reduction in aerosols points to reduced air pollution and cleaner air to breathe. Aerosols refer to all kinds of tiny solid and liquid particles suspended in the atmosphere, and largely consist of air pollutants.

These particles are able to scatter sunlight back so that there is less absorption of solar radiation by the Earth's surface. Aerosols also help in cloud formation and clouds, in turn, have an impact on how much sunlight is reflected or absorbed.

Europe having relatively cleaner air and less emission of aerosols contributes to a faster warming.

4. Other contributing factors

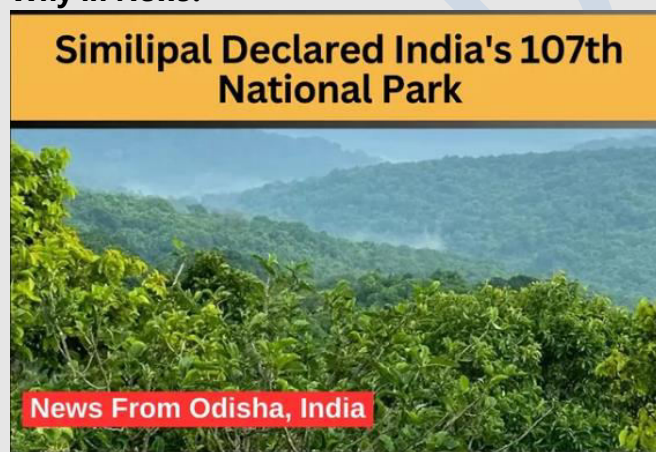
Many other factors contribute to Europe's faster rate of warming, the climate report said. These include changes in atmospheric circulation that favour more frequent summer heatwaves in the European region, the higher than average increase in the sea-surface temperatures around Europe, urban heat island effect, and the melting of glaciers, which has similar consequences as the albedo effect.

Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

6. Simlipal designated Odisha's second national park, after Bhitarkanika

Why in News?



Simlipal is a national park and tiger reserve in the Mayurbhanj district in the Indian state of Odisha covering 2,750 km². Out of the total area, national park spans an area of 845.70 km². The remaining part of the 2,750 km² area will be considered as a wildlife sanctuary.

107th National Park

It is the 107th national park and the second in the eastern state, after the Bhitarkanika. Simlipal National Park

derives its name from the abundance of red silk cotton trees growing in the area.

Part of UNESCO recognised Biosphere Reserve

This protected area is part of the UNESCO World Network of Biosphere Reserves since 2009. Simlipal, located in Odisha's Mayurbhanj district, is home to 40 royal Bengal tiger.

Relevance: GS Prelims; Environment

Source: The Hindu

7. Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules

Emissions intensity targets



The government has notified draft Rules introducing targets for the reduction of greenhouse gas (GHG) emissions by “obligated entities” in energy-intensive sectors and industries.

The Draft Greenhouse Gases Emissions Intensity (GEI) Target Rules, 2025, notified by the Ministry of Environment, Forest

and Climate Change, puts in place a compliance mechanism for the Carbon Credit Trading Scheme, 2023 (CCTS).

The CCTS was launched to create a framework for the trading of carbon credits, to facilitate the reduction of emissions in energy intensive industries, and to support India’s climate commitments under the Paris Climate Agreement of 2015.

The draft Rules are open for objections and suggestions in a 60-day window from the date of their notification.

What is meant by greenhouse gases emissions intensity (GEI)?

GHGs are gases that trap heat in the atmosphere and contribute to the “greenhouse effect” that raises surface temperature on Earth.

GHG emissions intensity, or GEI, is the amount of GHGs that are emitted per unit of product output — the amount of GHGs that are released in the production of, say, 1 tonne of cement, aluminium, or paper, etc.

The draft Rules define GEI as “greenhouse gases emission intensity in tCO₂e/ equivalent output or product”. tCO₂e, or tonnes of carbon dioxide equivalent, is the standard unit used to measure the impact of all GHGs, not just CO₂, based on their potential to warm the planet.

So what do the draft GEI target Rules say?

The Rules set forth baseline emissions for 2023-24 and define gradual reduction targets for the years 2025-26 and 2026-27 as part of the mechanism to make India’s Carbon Credits Trading Scheme, 2023, operational.

GHG intensity reduction targets and benchmarks have been set for the highly energy-intensive aluminium, chlor-alkali, pulp and paper, and cement industries.

These targets, for a two-year period starting 2025-26, cover 282 entities or industrial units in these industries — 13 aluminium plants, 186 cement plants, 53 pulp and paper plants, and 30 chlor-alkali plants.

Among the large corporations that have been assigned targets under the Rules are Vedanta, Hindalco, Bharat Aluminium, JSW Cement, Ultratech, Nalco, JK Cement, Dalmia Cement, Shree Cement, Grasim Industries, and JK Paper.

The Rules also lay down the mechanism for industries to comply with these targets, and specify penalties for their failure to do so.

Why is it important to have the targets?

The introduction of industry-specific targets is crucial to meet India's climate goals. The ultimate objective is to push industries towards a low-carbon growth trajectory through reduction, removal or avoidance of GHG emissions.

A cement plant can, for example, reduce its GEI by adopting cleaner and greener processes in the various stages of production. It could replace the use of coal with biomass, and adopt cleaner, more energy-efficient kilns.

More importantly, the Rules aim to help India meet a key commitment made under the Paris Agreement — to reduce the emissions intensity of its gross domestic product (the amount of energy used per unit of GDP) by 45% by 2030 compared to 2005 levels.

Not all of this is entirely new. While targets have been set for the reduction of GHG emissions intensity for the first time, a scheme to improve energy efficiency, known as PAT — Perform, Achieve, Trade — has been running since 2012.

And how do these draft Rules tie into India's carbon credit trading scheme?

The CCTS established a framework for generating, trading, and using carbon credit certificates.

With the introduction of the GEI targets, industries will know what exactly to achieve in order to earn carbon credits. They will also have to create action plans towards achieving those goals.

Industries will be issued carbon credits for cutting emissions intensity, which they can trade on India's carbon market. Industries that fail to meet their obligations under the carbon trading scheme would have to buy credits to meet their compliance shortfall, or be penalised by the Central Pollution Control Board, as per the Rules.

Carbon credits are traded through the Indian Carbon Market platform, with oversight of the Bureau of Energy Efficiency under the Union Ministry of Power.

The availability of credits provide industries with the incentive to decarbonise. Industries with resources to adopt clean technology can use their credits to earn profits, while those with fewer resources can make the shift gradually by buying carbon credits.

Similar carbon credit markets have been operational elsewhere in the world — in Europe and China since 2005 and 2021 respectively.

Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

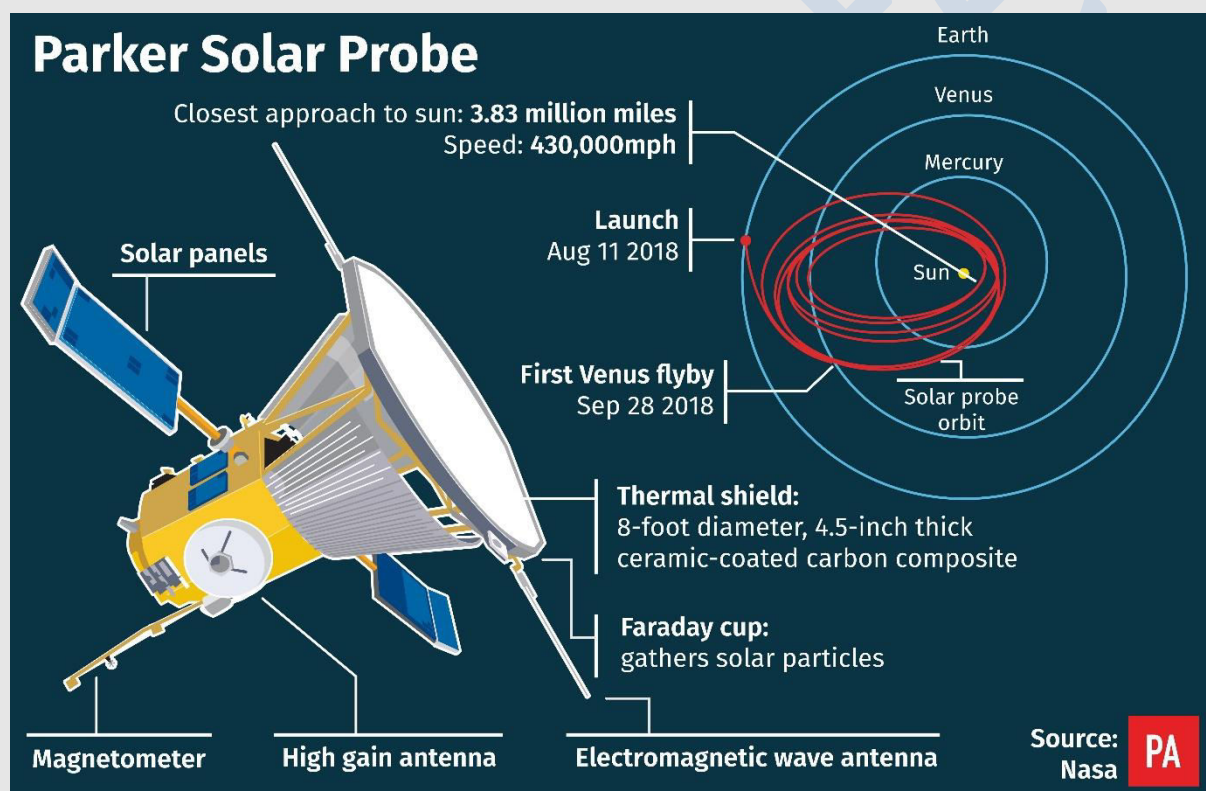
PrepMate

1. Parker Solar Probe

Why in News?

Among the various places humans have aspired to visit in the solar system, the sun remains the most foreboding. NASA's Parker Solar Probe arrived within 6.1 million km of the star's surface. This is a short distance to be from the sun: no spacecraft has ever made such a close approach. Even the Parker Solar Probe took seven years to get here.

The probe is making regular attempts to arrive within 6 million km of Sun's surface.



Naming of Probe

Around six decades ago, a scientist named Eugene Parker predicted the existence of the solar wind: a stream of charged particles flowing out from the sun in all directions. NASA named the Parker Solar Probe in his honour.

Launch

The probe was launched on board a Delta IV rocket from Cape Canaveral in Florida in August 2018. Once in space, the probe's maximum speed was an astounding 692,000 km/hr.

Shield

To protect against the sun's intense heat, the probe has an 8-foot-wide, 4.5-inch thick carbon-carbon composite material shield that can withstand up to 1,370° C while weighing only 73 kg. This shield was built by researchers at the Johns Hopkins Applied Physics Laboratory. It consists of a carbon composite foam sandwiched between two carbon plates. Its sun-facing side is coated with white ceramic paint to reflect as much sunlight as possible instead of absorbing it.

Just a few metres behind the shield, in its shadow, the ambient temperature drops to 29° C, allowing the probe's scientific instruments to operate without special provisions to maintain the temperature.

Solar powered

The probe also has two sets of solar power arrays: one in the shield's shadow that supplies power to the instruments and the other on the sun-facing side, which uses a special fluid pump to cool itself while powering the probe during its close approaches.

Moving around Sun

Curiously, the first obstacle to the mission's success wasn't the sun's heat but its gravity. Since the probe flew through space at a very high speed, it had to decelerate significantly as it got close to the sun. If it didn't, the sun's gravity would have encouraged it to dive right into the star.

The probe used the combined gravitational forces of the earth and Venus to slowly spiral closer to the sun's surface.

Instruments on board

The probe has four scientific instruments: FIELDS, Integrated Science Investigation of the Sun (ISoIS), Wide-Field Imager (WISPR), and Solar Wind Electrons Alphas and Protons (SWEAP). FIELDS measures the electric and magnetic fields of the sun's atmosphere; ISoIS observes the energetic particles that cause solar storms while SWEAP records their properties; and WISPR takes pictures as it passes through the corona.

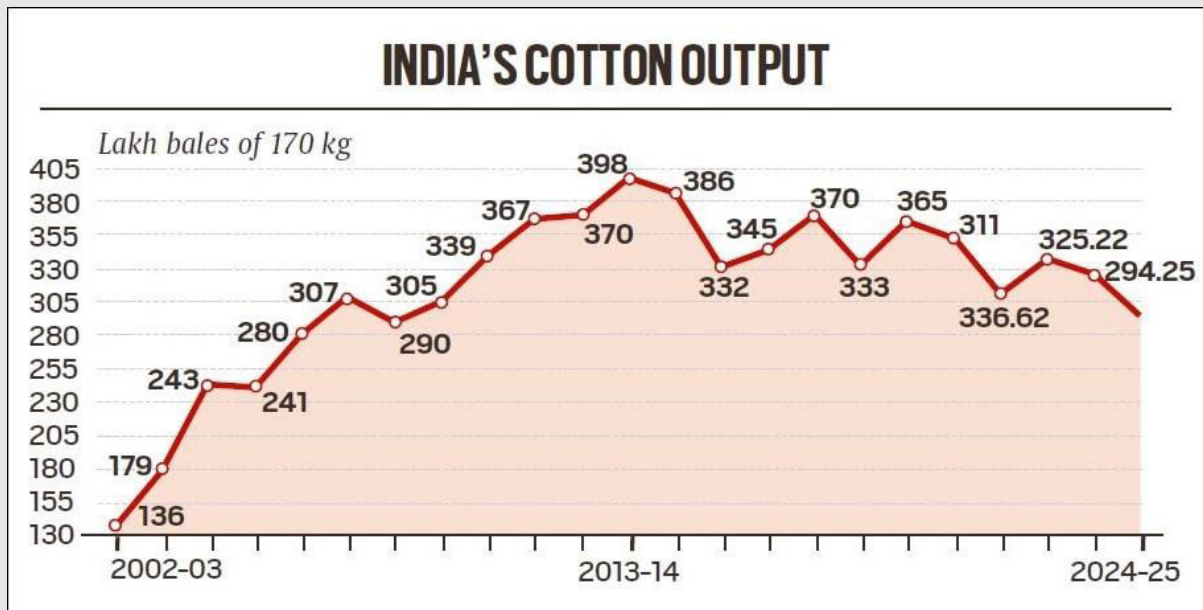
Relevance: GS Prelims; Science & Technology

Source: Indian Express

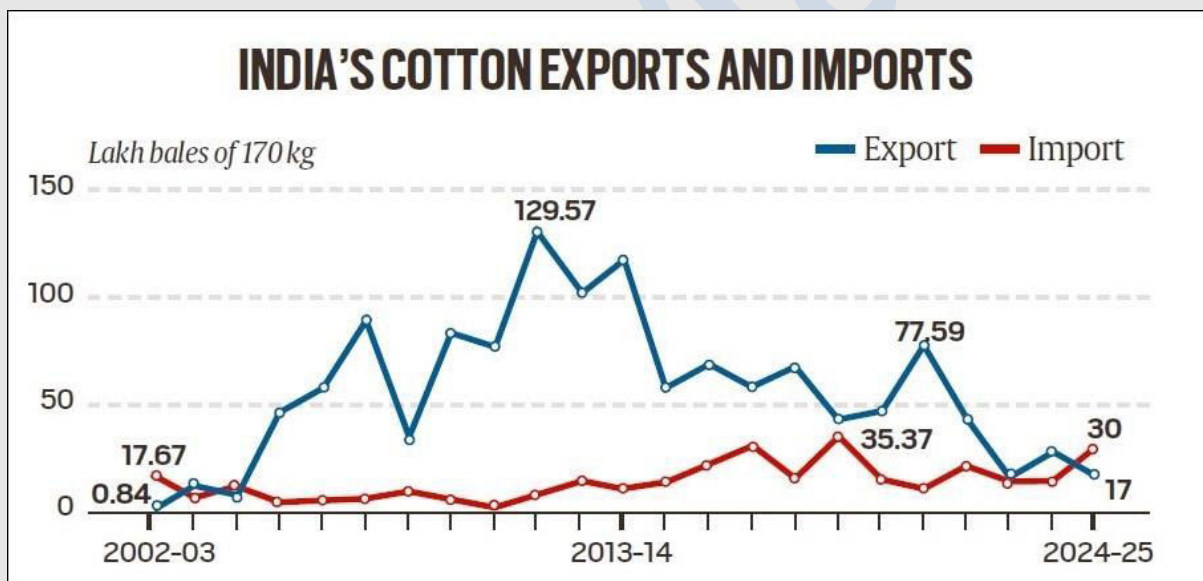
2. Cotton production steep decline in India

Why in News?

India's cotton economy isn't in great shape. The cause for concern is production. India's cotton output in the 2024-25 marketing year (October-September) is projected at just over 294 lakh bales (lb; 1 lb=170 kg), the lowest since the 290 lb of 2008-09. Production has been on a declining path since the peak of 398 lb in 2013-14. A fall from almost 400 lb to under 300 lb can even be termed catastrophic.



With fall in production, exports have dipped even as imports have risen.



Why Production increased earlier?

The cultivation of genetically modified (GM) cotton hybrids – incorporating alien genes isolated from a soil bacterium, *Bacillus thuringiensis* or Bt – had led to not only a near-trebling of production (from 136 lb to 398 lb) between 2002-03 and 2013-14.

Pink bollworm

The above production slide, and India turning from a large cotton exporter to a net importer, is mainly courtesy of the pink bollworm (PBW). This is an insect pest, whose larvae bore into the bolls (fruits) of the cotton plant. The bolls contain seeds from which the white fluffy cotton

fibres or lint grow. The PBW caterpillars feed on the developing seeds and the lint, causing yield loss as well as lint discolouration.

The GM cotton now grown in India have two Bt genes, 'cry1Ac' and 'cry2Ab', coding for proteins toxic to the American bollworm, spotted bollworm and cotton leafworm pests. The double-gene hybrids initially provided some protection against the PBW too, but that effectiveness has dissipated over time.

Monophagous pest

The reason for it is that the PBW is a monophagous pest, which feeds exclusively on cotton. This is unlike the other three pests that are polyphagous and survive on multiple host crops: The American bollworm larvae infest even maize, jowar (sorghum), tomato, bhindi (okra), chana (chickpea) and lobia (cowpea).

Being monophagous enabled the PBW larvae to gradually build resistance to the toxins from the existing Bt cotton hybrids. The PBW population that became resistant from continuously feeding on these plants eventually overtook and replaced the ones that were susceptible. The pest's short life cycle (25-35 days from egg laying to adult moth stage), allowing it to complete at least 3-4 generations in a single crop season of 180-270 days, further accelerated the resistance breakdown process.

What now?

Leading Indian seed companies have developed GM cotton hybrids deploying new genes from Bt, which they claim confer resistance to PBW. However, these hybrids are yet to pass field trials.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

3. ESA's satellite to monitor forests: Everything you need to know about the upcoming Biomass mission

Why in News?

The European Space Agency's (ESA's) new mission, which will map the world's forests, will launch later this month. Known as the Biomass mission, it will provide information about the state of the planet's forests and how they are changing, which will help expand the knowledge about the role forests play in the carbon cycle.

The mission will be launched by end of April. It will be placed in a sun-synchronous orbit (SSO) — a type of orbit in which satellites are in sync with the Sun — at an altitude of around 666 km. The Biomass is ESA's seventh Earth Explorer mission. Under the Earth Explorer programme, the space agency has launched satellites to observe different aspects of the planet's system.

What will the Biomass mission do?

Forests are an essential part of the world's carbon cycle as they store huge amounts of carbon. Scientists estimate that forests absorb around 16 billion metric tonnes of carbon dioxide (CO₂) per year, and currently hold 861 gigatonnes of carbon in their branches, leaves, roots, and soils.

However, there is a lack of forest above-ground biomass — the total mass of living organisms located above the forest vegetation — and forest height data on a wide geographical scale. As a result, there is a limited understanding of the state of the forests, their contribution and impact on the carbon cycle and climate. The primary aim of the Biomass mission will be to tackle this knowledge gap.

How will the Biomass mission monitor forests?

To fulfil its objectives, the mission will use a synthetic aperture radar (SAR) — a satellite imaging technique which uses radar waves to map the Earth's surface. This SAR sensor will operate in the long-wave P-band frequency range, with a wavelength of 70 cm. Therefore, unlike other shorter-wave SAR sensors, the P-band SAR will be able to peer down through forest canopies to assess how much carbon is stored on the floor and branches of the trees in the world's forests and to assess how levels are changing. The sensor will also estimate the amount of forest biomass.

Notably, Biomass is the first satellite in the world to host a P-band SAR. The satellite is fitted with a huge 12 m antenna which will be deployed as it begins its sweep over the Earth.

Synthetic-Aperture Radar (SAR)



Synthetic-Aperture Radar (SAR) is a form of radar that uses the movement of radar antenna to create a higher resolution images of objects. Such images may be either two-dimensional or three-dimensional. SAR uses the motion of the radar antenna over a target region to provide a higher resolution than conventional beam-scanning radars.

SAR is typically mounted on a moving platform, such as a satellite or an aircraft. This movement of SAR device creates a large synthetic antenna aperture (the size of the antenna).

Typically, the larger the aperture, the higher the image resolution will be, regardless of whether the aperture is physical (a large antenna) or synthetic (a moving antenna) – this allows SAR to create high-resolution images with comparatively small physical antennas.

What is the Earth Explore programme?

The satellites launched under this programme are meant to provide essential information about Earth's interior, cryosphere (frozen parts), hydrosphere, atmosphere, ionosphere (home to all the charged particles in the atmosphere) and land surface.

The first spacecraft — the gravity field and steady-state Ocean Circulation Explorer (GOCE) mission — took off in 2009 and worked till 2013. The mission helped further research in areas of ocean circulation, physics of Earth's interior, etc.

The most recent one was the Earth Cloud Aerosol and Radiation Explorer (EarthCARE) mission, which was launched in May 2024. It contributes to a better understanding of Earth's radiative balance in climate, among other things.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

4. 'De-extinction': American company brought back the dire wolf

De-Extinction



A United States-based bioscience company named Colossal Biosciences recently claimed that it had revived an extinct species of animal, the dire wolf. Colossal Biosciences was founded by billionaire Ben Lamm and geneticist George Church.

A month ago, this same company had announced the birth of "woolly mice" in an effort to bring back the woolly mammoth.

The dire wolf

Dire wolves (*Aenocyon dirus*) were large canines that dominated southern Canada and the US before they went extinct about 13,000 years ago. They resembled

the grey/ gray wolves (*Canis lupus*) of today, but were larger, with white coats. A dire wolf could be 3.5 feet tall, more than 6 feet in length, and weigh up to 68 kg.

Company's claim

The company has reported the birth of three genetically modified grey wolf pups, which it claims are functional copies of dire wolves.

'De-extinction' process

Scientists at Colossal contacted museums and laboratories for dire wolf specimens and got access to a tooth thought to be about 13,000 years old, and a 72,000-year-old skull.

From these two specimens, they were able to recover enough DNA to create two dire wolf genomes — an organism's complete set of genetic information. They then compared these genomes to those of other similar species.

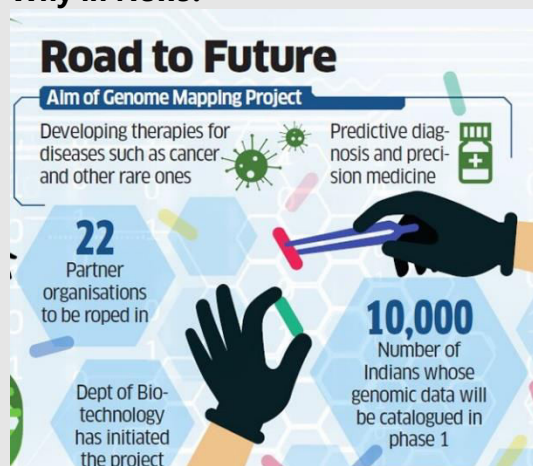
Using the genetic data, researchers could confirm the grey wolf as the closest living relative of the dire wolf — they share 99.5% of their DNA code. The scientists then used gene editing to make 20 unique edits to 14 genes in the grey wolf genome. Of those, 15 were meant to reproduce extinct dire wolf gene variants such as a light-coloured coat, hair length, coat patterning, body size and musculature. Subsequently, fertilised "dire wolf" eggs were implanted into surrogate dog mothers.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

5. Why Genome India Project matters

Why in News?



The first part of India's ambitious programme to map the genetic diversity of its people is now complete, and its data are ready to be used. The Genome India Project (GIP) has catalogued entire gene sequences of 10,000 individuals from 83 population groups. This database will eventually be expanded significantly, but it is already a precious set of information with important implications in health and medicine, and some other areas as well.

The genome database will open up the possibility of personalised medicine, and faster and efficient diagnostics. It will also reveal information about the evolutionary history and migrations of population groups within India, and how they have adapted themselves to local climate and environment.

Getting the genome

Most importantly, the genome database would help improve human health. The genome sequences have been prepared after obtaining blood samples from individuals.

The full genome of an individual means getting the exact order in which four nucleotide molecules in the human DNA are arranged in an approximately three-billion-long sequence. These four nucleotide molecules — adenine, thymine, cytosine, and guanine, or simply A, T, C and G — along with a phosphate molecule and a sugar molecule, form the long double-helix DNA strands which is essentially the genetic blueprint of the individual.

More than 99.9% of the nucleotide sequence is the same in all human beings. It is the 0.1% difference that makes a person unique, not just in outer appearance — height, or facial features

— but also in behavioural tendencies. This means that in every individual, about three to four million nucleotide molecules are uniquely placed in the sequence, and this is what gives rise to the diversity.

People within a closed and isolated population group are likely to have fewer variations in their nucleotide sequences. Whereas, a heterogeneous population will show greater genetic diversity.

Most genetic variations — the out-of-place, or unique, instances of A, T, C or G nucleotides in the full gene sequence — are benign. They do not result in any noticeable difference in the individual. Only a small fraction, 1-2%, are critical, their placement in the sequence affecting appearance, traits or health. It is these critical parts of the sequence that are of maximum interest to scientists.

The GIP database

Through a project like GIP, scientists collect and store what is known as germline sequence — the nucleotide sequence that a person was conceived and born with. Over time, the genetic sequence of a person changes, with every cycle of cell division introducing a few more variations, called mutations.

Germline sequences are obtained from white blood cells that are relatively better at preserving the original sequence during cell division. Among other things, the unique parts of this germline sequence could offer clues about an individual's predisposition towards certain diseases or disorders. It can indicate, for example, not just why a particular person might have developed a certain disorder, but also why some lines of treatment might not be very effective in this case. This could lead to the evolution of personalised medicine, where a patient is not administered a general treatment but gets a tailor-made solution for the disease or disorder.

Sometimes population groups as a whole might be predisposed to certain diseases because all the individuals in the group share the same pattern in the consequential part of the sequence. For example, the widespread prevalence of diabetes in the Indian population is likely linked to the genetic makeup of the population. This kind of information can be handy in developing population-specific drugs.

Mapping the genetic diversity of the entire population, which is what the GIP seeks to do, can help develop health policies and targeted interventions, particularly for rare diseases found only in the Indian population.

Population evolution

The GIP can also contribute to a better understanding of population history and evolution. The germline sequences are what an individual receives from the parents. There is a way to establish ancestry and parentage by studying the sequences. Genetic variations that are more widespread in the population are likely to have emerged much earlier, while those that are found in just a few individuals are quite likely to be new developments. DNA from fossils and

isolated tribes, which have undergone relatively fewer changes over generations, fill up important pieces of the overall puzzle.

By comparing the genomes of a large number of people, over several generations and belonging to different ethnic, geographical, and linguistic groups, scientists can gather a lot of information about the history and evolution of populations. For instance, scientists can get evidence for how populations moved from one place to another, socialised and intermingled with other groups through marriages, and adapted to local conditions. This kind of information helps a great deal in resolving the identity issue — who we are, and where we come from — which is an eternal curiosity of human beings.

The GIP is the Indian equivalent of the Human Genome Project which has tried to map the entire human genome at the global scale. That is a two-decade older project but it did not have enough samples from the Indian region to provide good information about the Indian population. The large number, and the diversity, of Indian population groups demanded a similar exercise focused on this region. The GIP is expected to continue and add many more samples in the coming year to make it a comprehensive gene bank of Indian populations.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

6. Katy Perry, all-female crew go to space: Is space tourism worth it?

Why in News?

Pop star Katy Perry and five other women went to space recently aboard a rocket operated by billionaire Jeff Bezos' private company, Blue Origin. It was the first time since 1963 that an all-women crew has been to space.

The mission, which lasted for around 11 minutes, involved the New Shepard rocket taking the women more than 100 kilometres above Earth, crossing the internationally recognised boundary of space (known as the kármán line), and offering a few minutes of weightlessness before they descended.

Space Tourism rising popularity

The journey that Perry and other women embarked upon, and the attention it garnered showcased the rising popularity of space tourism. While the industry was valued at \$848.28 million in 2023, it reached \$1.3 billion last year, according to a report by Research and Markets. By 2030, the industry is estimated to touch \$6.7 billion, growing at the rate of 31.6% between 2024 and 2030.

What exactly is space tourism?

Space tourism is a section of the aviation sector which seeks to provide tourists with the opportunity to become astronauts and experience space travel for recreational, leisure, or business purposes.

OUTLOOK BUSINESS

Katy Perry Joins Historic All-Female Crew on Blue Origin's Space Mission

Gayle King –
Emmy awarded Journalist
& CBS Mornings co-anchor,
known for her powerful
storytelling, authenticity
and journalistic integrity

Lauren Sánchez –
Licensed Pilot, journalist,
and fiancé of Jeff Bezos,
she is leading the mission

Katy Perry –
Pop star & Philanthropist,
she sees the mission as a
symbol of "progress for
women in space & beyond

Aisha Bowe –
NASA-recognized aerospace
engineer & tech founder,
championing STEM &
breaking barriers as a Black
woman in engineering

Amanda Nguyen –
Nobel Peace Prize
nominee & civil rights
leader, symbolizing
advocacy & equality
in space exploration

Kerianne Flynn –
Socially responsible film
producer, bringing a
visionary perspective to
the mission's story



There are two main types of space tourism, sub-orbital and orbital. The sub-orbital spacecraft takes passengers just beyond the Kármán line. The passengers get to spend a few minutes in space and then come back to Earth.

The orbital spacecraft, on the other hand, takes passengers much further than the Kármán line. Usually, passengers can spend from a couple of days to more than a week at an altitude of nearly 1.3 million feet.

There are three major private players in the industry, Virgin Galactic, Blue Origin, and SpaceX. All of them executed their first missions in 2021.

What are the concerns around space tourism?

As the space tourism industry has grown by leaps and bounds, the concerns — from how expensive the ticket to space is to environmental impacts — around it have also increased.

1. **LACK OF ACCESSIBILITY:** Currently, space tourism is accessible to only the super-rich. A passenger generally has to pay at least a million dollars to reach outer space. For instance, Blue Origin has not released full ticket prices, a \$150,000 deposit is required to reserve a seat. A journey to space on a Virgin Galactic spacecraft costs about \$450,000, according to space.com.

2. **NOT A DRIVER OF INNOVATION:** Over the years, supporters of space tourism have argued that the industry can provide several benefits. For example, space tourists can carry out experiments such as the effects of microgravity on human health, plant growth, and material properties. This can help scientists prepare for future space missions.

However, so far, experiments conducted during space tourism missions have not been able to provide any breakthrough innovation.

Also, technologies being developed by private companies for space tourism are unlikely to be useful for other space-related activities such as industrial and scientific applications.

3. **ENVIRONMENTAL IMPACT:** Several studies have pointed out that space tourism may lead to environmental damage as rockets emit gaseous and solid chemicals directly into the upper atmosphere.

For instance, nitrogen oxides emitted during rocket launches can deplete the ozone layer by converting ozone into oxygen. This could threaten the recovery of the ozone layer which took place after the phasing out of chlorofluorocarbons.

The soot emissions from rocket launches are far more effective at warming the atmosphere compared to other sources.

It is for these reasons why most experts remain skeptical about space tourism and its so-called benefits. They have repeatedly highlighted that the money and resources spent on such recreational trips could be better used to push climate and environmental action on Earth.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

7. Type 5 diabetes recognised as distinct form of disease: why is this significant?

Why in News?

Type 5 diabetes, which affects lean and undernourished young adults in low- and middle-income countries, has at last been officially recognised as a distinct form of the disease by the International Diabetes Federation (IDF).

Neglected for decades in research, and frequently misdiagnosed, it has taken a long time for Type 5 diabetes, caused by malnutrition-induced lowering of insulin production, to gain official recognition.

What Is Type 5 Diabetes Connected To Malnutrition?



What is Type 5 diabetes?

Type 5 diabetes is a form of diabetes affecting lean and malnourished teenagers and young adults in low- and middle-income countries. The disease causes pancreas to function abnormally, leading to insufficient production of insulin.

This is unlike Type 2 diabetes, the most prevalent form of the disease, where the main problem is insulin resistance — while the pancreas continues to produce insulin, the body does not respond properly to the hormone.

So, what causes Type 5 diabetes?

Malnutrition. And it all begins in the womb. If a baby does not get the right amount of nutrition while growing in the womb, it can increase the risk of diabetes later in life. For a long time, many Indians were undernourished due to hard labour, colonisation, and famines. But in the past 50 years, with rapid urban growth and development, overeating has also become a problem. When a baby is under or over nourished before birth and then gains too much weight later, it can lead to Type 2 diabetes. But if the baby stays undernourished both before and after birth, it can lead to this malnutrition-related diabetes, or as now christened, Type 5 diabetes.

How can Type 5 diabetes be treated?

Given it has only now been officially recognised, specific diagnostic criteria and therapeutic guidelines are yet to be finalised. This is what the aforementioned Working Group will be doing over the next two years, by looking at diverse populations, especially in low-income, low-resource settings.

According to doctors, a high protein diet is important. Depending on the person's low BMI and physical activity levels, an adequate amount of carbs and fats are also needed to ensure weight gain.

Relevance: GS Prelims & Mains Paper III; Science & Technology

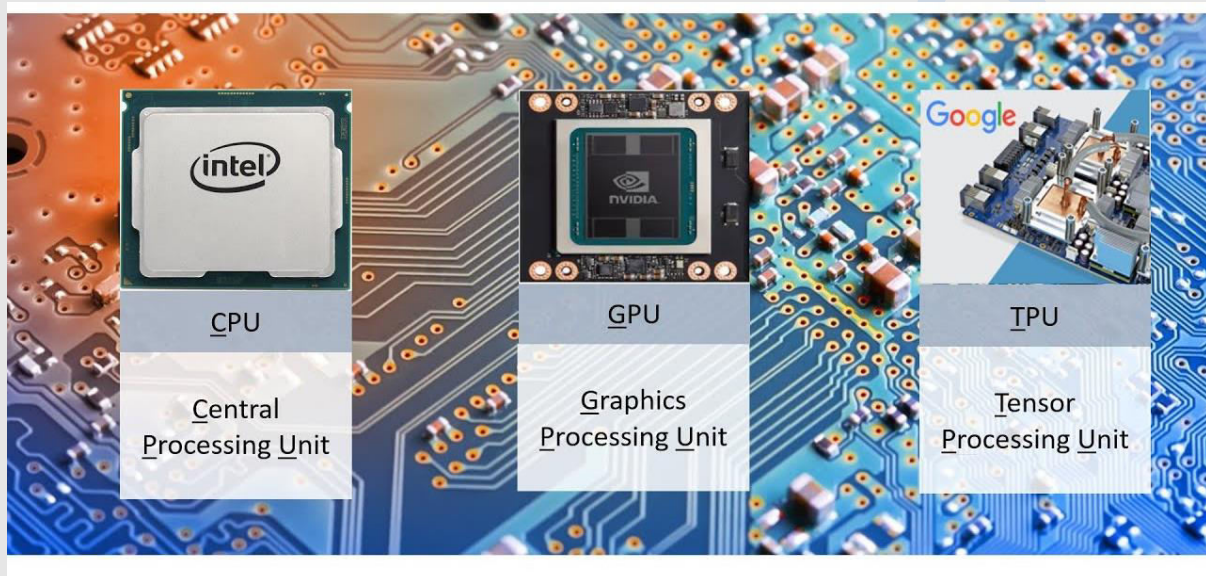
Source: Indian Express

8. AI basics: How TPU is different from CPU and GPU

Why Now?

Google last week launched a new computer chip, called Ironwood. It is the company's seventh-generation TPU, or tensor processing unit, which has been designed to run artificial intelligence (AI) models.

Here is a look at what TPU is and how it is different from other processors such as the central processing unit (CPU), and graphics processing unit (GPU).



But first, what are processing units?

Processing units are essentially hardware units that are the brain of a computer. Like the human brain handles tasks such as reading and solving a math problem, processing units also perform tasks. These could be doing calculations, taking a picture, or sending a text.

What is a CPU?

Developed in the 1950s, a CPU is a general-purpose processor that can handle various tasks. It is like a conductor in an orchestra, controlling all the other components of the computer — from GPUs to disk drives and screens — to perform different tasks.

A CPU has at least a single core — the processing unit within the CPU that can execute instructions. In the initial years, CPUs used to have just one core but today, they can contain from two to up to 16 cores. As each core of the CPU can handle one task at a time, the ability to multitask is determined by the number of cores in the hardware.

What is a GPU?

Unlike a CPU, a GPU is a specialised processor (it is a type of application-specific integrated circuit, or ASIC) which has been designed to perform multiple tasks concurrently rather than

sequentially (like in a CPU). Modern GPUs comprise thousands of cores which break down complex problems into thousands or millions of separate tasks and work them out in parallel, a concept known as parallel processing. This makes GPUs far more efficient than CPUs.

Initially developed for graphics rendering in gaming and animation, GPUs today are far more flexible and have become the bedrock of machine learning.

This does not mean that GPUs have replaced CPUs. That is because, in certain situations, it is more efficient to perform a task sequentially rather than opting for parallel processing. Therefore, today, GPUs are used as a co-processor to increase performance.

What is a TPU?

A TPU is also a type of ASIC, meaning it is designed to perform a narrow scope of intended tasks. First used by Google in 2015, TPUs were specially built to accelerate machine learning workloads.

TPUs are engineered to handle tensor — a generic name for the data structures used for machine learning — operations. They excel in processing large volumes of data and executing complex neural networks efficiently, enabling fast training of AI models. While AI models can take weeks to be trained with the help of GPUs, the same process can be executed within hours using TPUs.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

9. Water Bears or Tardigrades in Space

Why now?



INTERESTING FACTS

www.weeklyrecess.com

Tardigrades (Water Bears), tiny microscopic creatures, are nearly indestructible. They can survive extreme temperatures, radiation, dehydration, and even the vacuum of space. In 2007, tardigrades were sent into space and survived exposure to outer space for 10 days.

The Axiom Mission 4 will see India, Poland, and Hungary's first government-sponsored human spaceflight in more than 40 years next month. With the addition of an American astronaut, the four-person crew will conduct various studies and activities in Space while docked at the International Space Station (ISS) for two weeks.

Group Captain Shubhanshu Shukla, a distinguished pilot in the Indian Air Force (IAF), has been selected for the Indian Space Research Organisation (ISRO). Among the studies set to be carried out is ISRO's Voyager Tardigrades project, which

will investigate the revival, survival, and reproduction of tardigrades – creatures that have long fascinated scientists.

What Are Water Bears or Tardigrades?

“Water bear” is a bit of a misnomer for these microscopic eight-legged animals, which don’t just live in water. Measuring between 0.1 and 0.5 millimetres, they are known for surviving the most dire physical environments, from arid regions to high up in the Himalayas. They can also go without food or water for up to years, although their average lifespan is not more than a decade.

This incredible resilience is why the animals have been on Earth for around 600 million years, and will likely withstand any major changes to the Earth’s climate in the near future as well.

How are they able to do this?

Scientists are still trying to understand the complex mechanisms involved, but one part of the equation is a process resembling hibernation. For instance, amid a lack of water, they can theoretically shut down all the life processes happening inside them.

The animals pull their eight little legs and head inside their cuticle, which is an exoskeleton. They essentially curl into tiny ball-like structures known as tuns. When their physical environment improves, they can return to their normal selves.

But why is ISRO taking Tardigrades to Space?

Tardigrades are the only known animals capable of surviving even in the cold vacuum of Space. In 2007, a crewless Russian capsule on a European Space Agency (ESA) mission exposed some 3,000 tardigrades to the vacuum of space for 10 days, and they were left out there in low-Earth orbit (altitude under 2,000 km). Over two-thirds of the animals survived the mission and even gave birth to offspring upon returning to Earth.

The ISRO project will examine the revival of dormant tardigrades, count the number of eggs laid and hatched during a mission, and compare the gene expression patterns of spaceflown vs. ground control populations. The research seeks to identify molecular mechanisms of resilience, potentially furthering understanding about the limits of life in extreme environments.

This knowledge could inform future space exploration and help develop biotechnology applications on Earth, at a time when governments and private companies are lining up to carry out Space missions.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

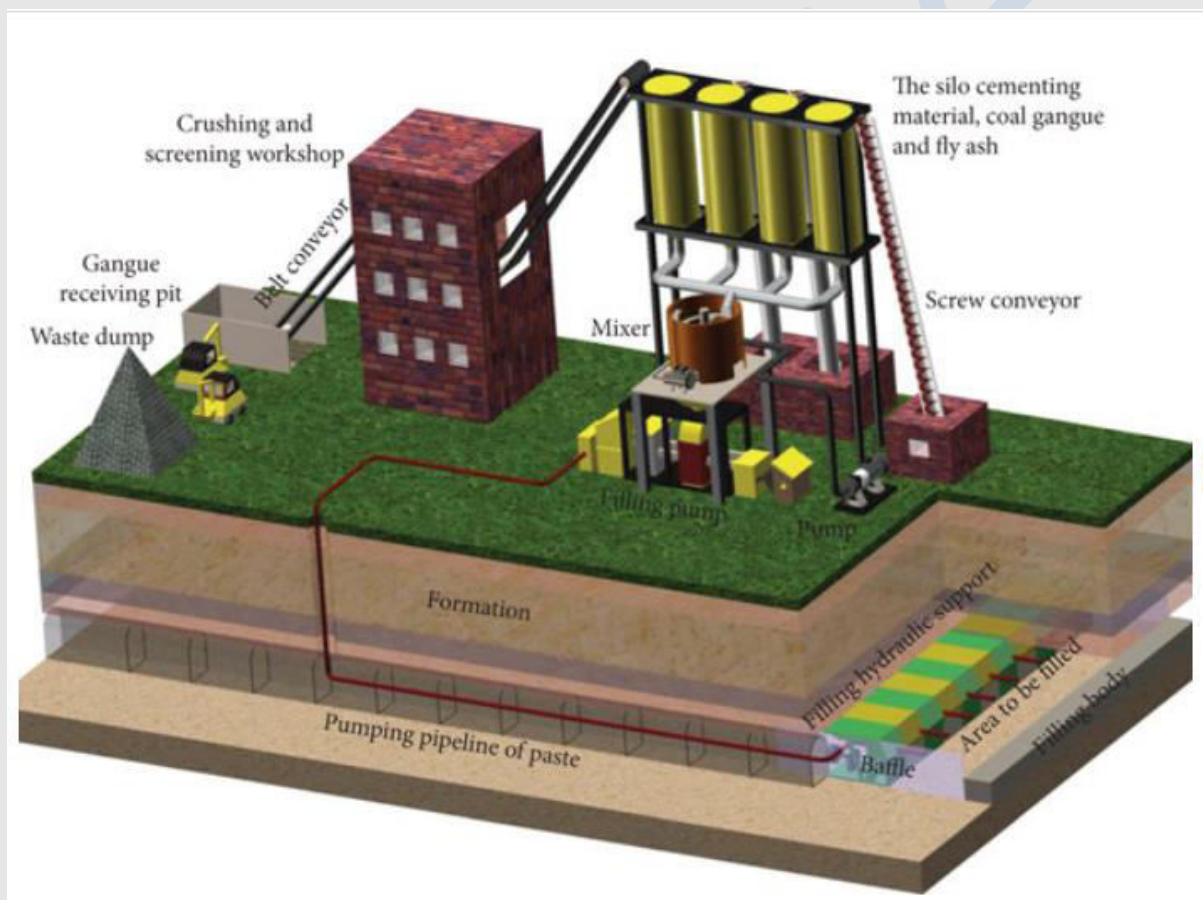
10. Paste Fill Technology for Mining

Why now?

South Eastern Coalfields Limited (SECL) is set to become the first coal PSU in India to adopt paste fill technology for coal mining—marking a major step toward sustainable and environmentally friendly mining practices.

To implement this innovative underground mining technology, SECL has signed a ₹7040 crore agreement with TMC Mineral Resources Private Limited.

Under this agreement, large-scale coal production will be undertaken using paste fill technology in the Singhali underground coal mine located in SECL's Korba area. Over a period of 25 years, the project is expected to produce approximately 8.4 million tonnes (84.5 lakh tonnes) of coal.



What is Paste Fill Technology?

Paste filling is a modern underground mining method that eliminates the need to acquire surface land. After coal extraction, the mined-out voids are filled with a specially prepared paste made from fly ash, crushed overburden from opencast mines, cement, water, and binding chemicals. This process prevents land subsidence and ensures the structural stability of the mine.

Importantly, the paste utilizes industrial waste materials, making the process environmentally sustainable and promoting waste recycling.

Background of Singhali Mine

The Singhali underground mine was approved in 1989 for a production capacity of 0.24 million tonnes per year and commenced operations in 1993. Presently, the mine has 8.45 million tonnes of extractable reserves of G-7 grade non-coking coal.

However, the surface area above the mine is densely occupied—with villages, high-tension electricity lines, and a Public Works Department (PWD) road—rendering traditional caving methods unfeasible due to safety and environmental concerns.

New Opportunity for Singhali Mine

With the introduction of paste fill technology, mining activities in this area can now proceed without disturbing the surface infrastructure.

The successful implementation of this technology in Singhali is expected to pave the way for resuming operations in other underground mines where similar land constraints exist.

A Step Towards Green Mining

With a total investment of ₹7040 crore, the project is a major initiative to promote green mining technologies in India. It aims to enhance coal production while significantly reducing environmental impact.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: PIB

11. Does the planet K2-18b show signs of life?

Why in News?

On April 16, an international research team uploaded a paper in which it reported that the distant exoplanet K2-18b may be habitable. The claim was met with cautious excitement by astronomers. While finding places in the universe that could harbour life is a vital quest in the field, experts—including the team that made the finding—are cautious because many similar claims in the past have had to be retracted after closer inspection.

What is K2-18b?

K2-18b is an exoplanet—a planet outside the solar system. It's located 124 lightyears away from the earth in the constellation Leo, orbiting the star K2-18. It is 5.2-times wider and roughly nine-times more massive than the earth, dimensions that suggest it likely possesses a hydrogen-rich atmosphere. The amount of stellar radiation it receives from its star is comparable to what the earth receives from the sun. It was discovered by the Kepler telescope in 2015.

In 2019, the Hubble Space Telescope found that its atmosphere contains signs of water vapour. Four years later, the James Webb Space Telescope (JWST) also detected signs of carbon dioxide and methane. Scientists had previously shown in modelling studies that it's possible

to find methane and carbon dioxide and no ammonia in a hydrogen-rich atmosphere if (but not only if) there is a liquid water ocean on a planet's surface.



What kind of planet might K2-18b be?

According to the new work, K2-18b might be a Hycean world: covered with an ocean overlaid by a hydrogen-rich atmosphere. The JWST is designed to study such planets better than other telescopes can, although K2-18b itself isn't confirmed to be Hycean. Some computer models suggest it may also have a stratosphere and some carbon oxides and cyanide in the middle atmosphere. Researchers have also said its surface conditions may be close to the runaway greenhouse threshold — when the concentration of greenhouse gases in the atmosphere prevents any heat from escaping the surface. This is why Venus is a hellscape.

In the new paper, the team reported the presence of two compounds — either dimethyl sulphide (DMS) or dimethyl disulphide (DMDS) — in K2-18b's atmosphere. Scientists have suggested that DMS could be a biomarker, a sign of life, on exoplanets. DMS on earth is made mostly in the oceans. Phytoplankton produce a molecule called dimethylsulphoniopropionate. When they die, enzymes break up the molecule to release DMS. It's also emitted when bacteria break up plant matter. In 2015, researchers reported that 76% of soil bacteria contain a gene that allows them to produce DMS.

Is K2-18b really habitable?

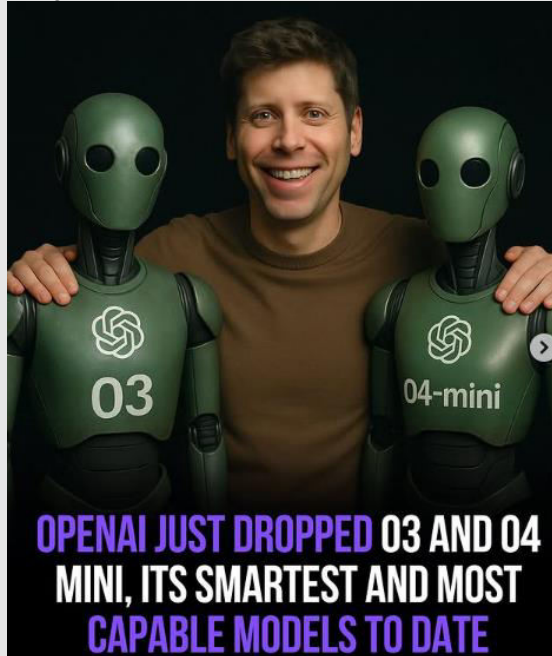
Experts have said the only way to find extraterrestrial life is for them to directly detect it. This is why NASA launched its Clipper mission in 2024 to study Jupiter's moon Europa. Attempts to look for conditions suitable for life (that too only life as we know it) and the presence of specific molecules from a distance can only be suggestive of habitable conditions.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: The Hindu

12. OpenAI Launches Its "Smartest" Reasoning Models: o3 and o4-mini

Why now?



OpenAI has introduced two new AI models, o3 and o4-mini, calling them the "smartest models" it has released so far. These are part of a new series designed to "think for longer before responding."

Both models use reinforcement learning, a training method also employed by other companies like China's DeepSeek. OpenAI says these models offer more natural and personalized conversations, remembering past interactions to improve responses.

Why is Reasoning Important in AI?

When large language models (LLMs) like ChatGPT and Google Gemini first launched, their main strength was quick, coherent replies based

on recognizing patterns in massive datasets. These datasets came mostly from the internet, including Wikipedia, books, and articles.

Initially, AI development focused on feeding more data into these models to improve performance. But by 2024, AI companies had exhausted most of the usable text on the internet. This raised a critical question: what's next?

Enter Reasoning Models: A New Step Forward

In September 2024, OpenAI introduced the o1 model, the first of its kind trained to "think before it answers." Unlike earlier models that respond instantly, reasoning models process internally first—forming a chain of thought before giving an answer.

What is Reinforcement Learning?

Reinforcement learning (RL) is a training method inspired by how humans and animals learn from experience. It involves rewarding desirable actions and discouraging undesired ones—much like training a dog.

AI pioneers Richard Sutton and Andrew Barto developed RL algorithms in the 1980s. In RL, "rewards" guide the model toward better decisions and smarter behavior. For their contributions, Sutton and Barto won the prestigious Turing Award in 2024.

How Are Reasoning Models Different?

Reasoning models like o3 and o4-mini approach questions in more thoughtful and complex ways. As OpenAI's chief scientist Jakub Pachocki explained, older models start answering immediately, but these newer models pause to think—breaking down the problem and exploring different angles.

OpenAI says the o3 model is especially good at handling complex queries, where the answer isn't immediately clear.

Do These Models Really "Think"?

Whether these AI models truly "reason" like humans remains uncertain. Still, reasoning models represent the next step in the evolution of AI, as companies aim to make machines smarter, more adaptable, and more useful.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

13. Starlink in India: Challenges of Connectivity, Law, and Security

Why Is This Important?

Many rural areas in India still lack reliable internet access. Starlink, a satellite internet project by SpaceX, wants to solve this problem by beaming high-speed internet to remote places — even where there are no mobile towers or broadband cables.

But bringing this technology to India is proving difficult due to legal, security, and regulatory challenges.

What Rules Does Starlink Need to Follow?

To operate in India, Starlink must follow several laws and get multiple permissions from different government bodies:

1. VSAT Licence

VSAT (Very Small Aperture Terminal): A small satellite dish that provides internet by connecting directly to satellites.

Starlink must get this licence from the Department of Telecommunications (DoT) under the Indian Telegraph Act, 1885.

This old law gives the government control over all communications and the right to issue licences.

2. Telecom Regulatory Authority of India (TRAI)

Created by the TRAI Act, 1997, it regulates telecom services.

TRAI advises on who can get licences, how much spectrum should cost, and ensures fair competition.

3. Telecommunications Act, 2023

This newer law governs satellite spectrum — the radio frequencies used to send signals from space.

Starlink uses Ku-band and Ka-band frequencies (types of satellite radio waves), which must not interfere with other services.

India follows International Telecommunication Union (ITU) rules for these.

4. Satellite Communications Policy, 2000 & IN-SPACe

IN-SPACe is an Indian government body that manages space-based communication permissions.

Starlink must coordinate with ISRO (India's space agency) to avoid clashing with Indian satellites.

5. IT Act, 2000 & Data Protection Act, 2023

These laws ensure that:

Internet services are secure.

Data of Indian users is protected.

Encryption (scrambling data to prevent hacking) is used properly.

Starlink can help the government track illegal use if needed (lawful interception).

Why Hasn't Starlink Launched in India Yet?

Starlink is facing several hurdles:

1. Complicated Licensing

Getting a VSAT licence needs technical checks and often takes coordination between different ministries.

2. Spectrum Pricing

The government and TRAI are still deciding how much Starlink should pay to use certain frequency bands (Ku and Ka).

3. Security Concerns

The Home Ministry is closely reviewing Starlink's ownership and technology to ensure it doesn't pose a threat to national security. They want guarantees on data safety and tracking systems.

4. Space Coordination

Starlink must work with IN-SPACe to avoid conflicts with India's space systems.

These delays increase Starlink's costs and postpone its launch, which could discourage investors.

Did Security Issues Delay Approval?

Yes, possibly. There have been allegations that Starlink devices were misused for illegal activities in other countries. This has made Indian security agencies more cautious.

They now want:

1. Better data encryption.
2. Real-time user tracking (for legal reasons).
3. Verified user identities.

Until Starlink provides full cooperation and transparency, approval may be delayed.

How Much Will Starlink Cost in India?

Prices are not confirmed yet, but likely to be high at the start because:

1. Building and launching satellites is expensive.
2. Regulatory costs in India (licences, spectrum charges) add to the cost.
3. User kits (dish + router) are also costly.

As a result, initial users may be businesses, schools, or wealthier individuals in rural areas. Poorer households may need government subsidies to afford it.

Over time, prices might drop as the service scales up.

Why Starlink Matters for India

Starlink's journey shows the importance of balancing innovation with national interests:

India wants to lead in digital growth. But it must ensure security, privacy, and fair use of resources like spectrum. Companies like Starlink must adapt to India's laws and space policies.

Most importantly, Starlink could bridge India's rural-urban digital divide, helping rural communities access: Education, Healthcare, Jobs and Government services.

Key Takeaway

Starlink's case is not just about internet from space. It's about bringing opportunity to the most disconnected parts of India, while making sure it's done safely and lawfully.

Relevance: GS Prelims & Mains Paper III; Science & Technology

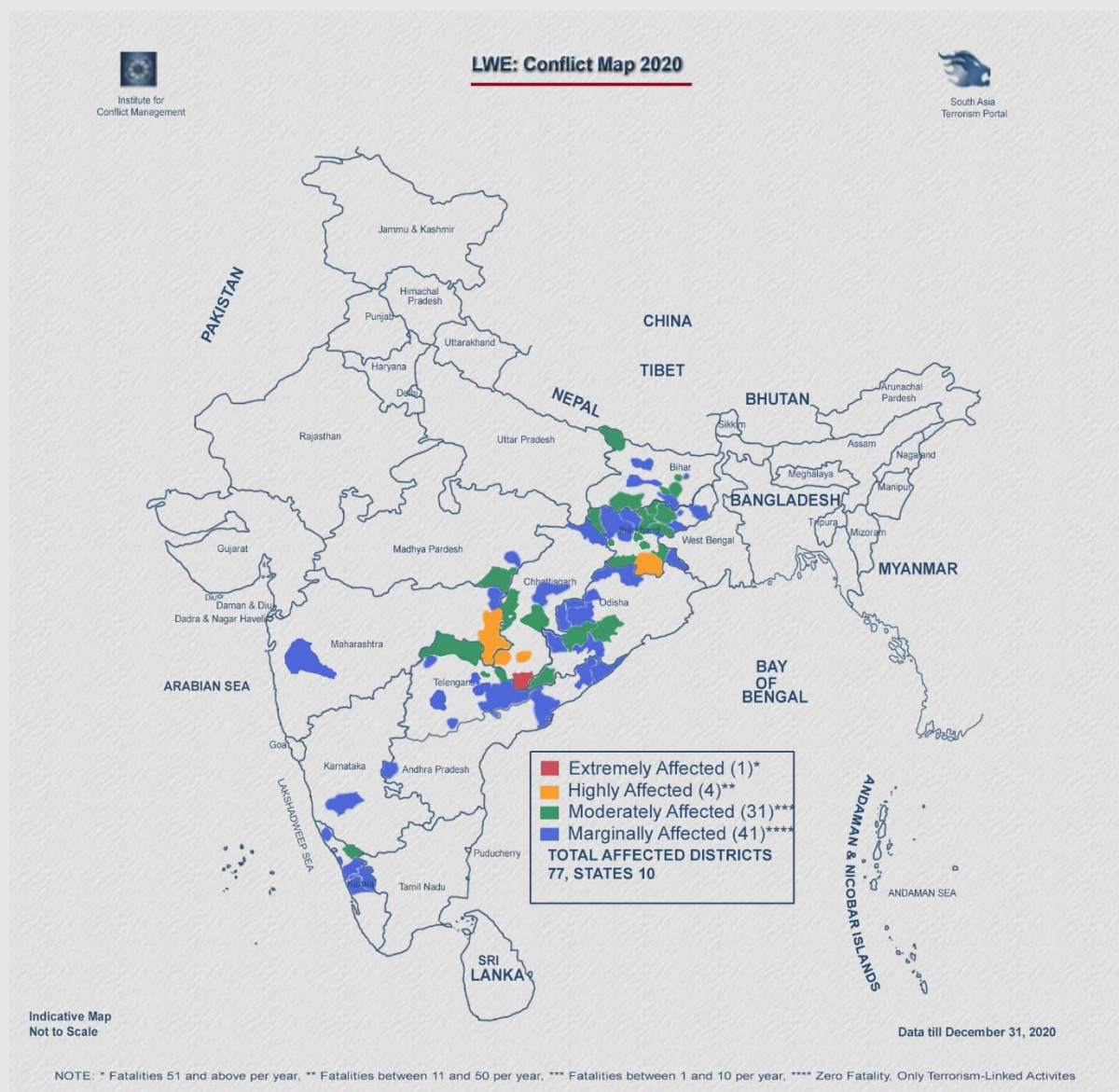
Source: Indian Express

Miscellaneous

1. Fifty Maoists surrender in Bijapur; CM hails State policy

Why in News?

Fifty alleged Maoists — 14 of whom carried a cumulative bounty of ₹68 lakh on their heads — surrendered before the security forces in Bijapur district of Chhattisgarh recently.



Inspector-General of Police said that this was the highest number in terms of surrenders in large numbers, adding that 26 Maoists surrendered on an occasion last month, also in Bijapur.

Surrender-cum-rehabilitation policy

Chief Minister Vishnu Deo Sai credited the State government's recently announced surrender-cum-rehabilitation policy for the surrenders. The policy includes financial incentives in addition to provision for housing and healthcare for surrendering Maoists.

Maoists in India

The Communist Party of India (Maoist) is a banned Marxist-Leninist-Maoist communist political party and militant organization in India which aims to overthrow the Republic of India through protracted people's war. It was founded on 21 September 2004, through the merger of the CPIML People's War and the MCCI. The party has been designated as a terrorist organisation in India under the Unlawful Activities (Prevention) Act since 2009.

In 2006, Prime Minister Manmohan Singh referred to the Maoists as "the single biggest internal security challenge" for India, and said that the "deprived and alienated sections of the population" form the backbone of the Maoist movement in India. The government officials have declared that, in 2013, 76 districts in the country were affected by "left wing extremism", with another 106 districts in ideological influence. In 2020, the activities of the party began to increase again in Telangana and other areas. Chhattisgarh is often affected by the party's militant activities.

In 2024, the party faced a major setback when the government increased their counterinsurgency operations in states affected by the insurgency.

Relevance: GS Prelims & Mains Paper III; Internal Security

Source: The Hindu

2. Why WTA's maternity and fertility initiative is historic

Why in News?



For years, top-level woman athletes have faced the conundrum of choosing between sustained sporting excellence and the joy of parenthood. In a move hailed as transformative, the Women's Tennis Association (WTA) announced in March a new maternity policy that includes grants for initiatives such as egg-freezing and IVF (in-vitro fertilisation). With the WTA leading the way, other sports are also beginning to rethink how they can support their woman athletes through every phase of their lives.

What is the policy?

The WTA has launched a maternity and fertility initiative in partnership with Saudi Arabia's Public Investment Fund. The programme provides up to 12 months of paid maternity leave and financial support for fertility treatments, including egg-freezing and IVF. Over 320 players are eligible for assistance.

Challenges

Egg-freezing is a physically demanding process. It involves hormone injections, frequent monitoring and surgery for egg-retrieval. For tennis players, this can clash with training and competition.

Is there ranking protection?

While the WTA currently provides protected rankings for players returning from maternity leave, it does not yet extend that to players undergoing fertility preservation.

Mothers on tour

Recent years have seen several players returning to elite competition after becoming mothers. Elina Svitolina, who won a WTA title in Rouen in 2024 after giving birth, spoke about the journey.

Her return, and those of Serena Williams, Kim Clijsters and several others, shows that motherhood and professional tennis need not be mutually exclusive.

What does this mean for the future of women's tennis?

The WTA policy not only helps preserve players' fertility but also normalises conversations around family planning. With top athletes now leading by example, this could inspire wider change across sport.

Cultural shift

Beyond the policies, what's changing is the culture. Players now speak openly about fertility, not just as a private matter but as part of career planning.

Maria Sharapova, now retired, has become an advocate and investor in fertility-focused start-ups.

"When women have the opportunity to navigate their careers on their own terms by freezing their eggs, they unlock more autonomy in all aspects of their lives," she has said.

Relevance: GS Prelims & Mains; Miscellaneous

Source: The Hindu