

The background of the cover is an illustration of a young boy and a young girl. The boy, on the left, has brown hair and is wearing a blue and white checkered shirt. He is looking towards the right. The girl, on the right, has long brown hair and is wearing a green tank top. She has a surprised or concerned expression on her face, with wide eyes and a slightly open mouth. The background is a blurred, warm-toned setting that appears to be an outdoor area with buildings.

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For Prelims and Mains

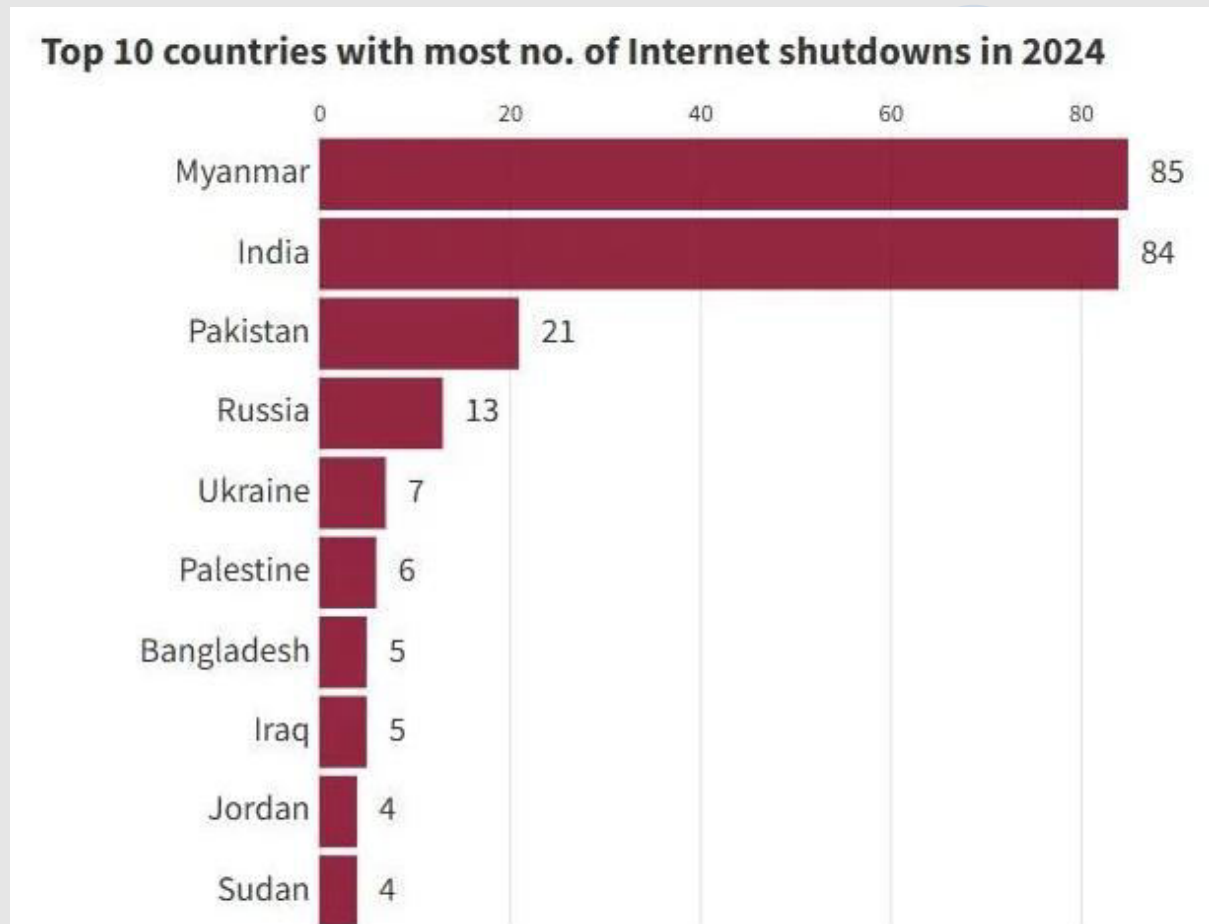
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1. Internet Shutdowns in India

Introduction

In 2024, India experienced 84 internet shutdowns, marking a decrease from 116 in 2023. This reduction led to India being ranked second globally in the number of internet shutdowns, with Myanmar surpassing it with 85 shutdowns in 2024.



Primary Causes for Shutdowns

- Protests: Approximately 41 of the 84 shutdowns were implemented in response to protests.
- Communal Violence: 23 shutdowns were linked to incidents of communal violence.
- Government Examinations: Authorities enforced five internet shutdowns during government job placement examinations to prevent cheating and maintain the integrity of the process.

Regional Distribution

Internet shutdowns were imposed across 16 states and Union Territories in India. The most affected regions included:

- Manipur: 21 shutdowns

- Haryana: 12 shutdowns
- Jammu & Kashmir: 12 shutdowns

Notable Incidents

- Manipur Conflict: The state of Manipur witnessed significant unrest due to ethnic violence between the Meitei and Kuki communities. In September 2024, student protests escalated, leading to clashes with police and subsequent internet suspensions.

Further unrest in November 2024 prompted authorities to impose additional internet shutdowns to control the situation.

Economic Impact

The economic implications of these shutdowns have been significant. In the first half of 2023 alone, India reportedly incurred losses amounting to \$1.9 billion, coupled with a \$118 million decline in foreign investment. Additionally, a single-day shutdown could potentially result in up to 379 individuals facing unemployment.

Since 2016, India has recorded a total of 771 internet shutdowns, accounting for over half of all documented cases globally during this period.

Global Context

In 2024, there was a record number of government-enforced internet shutdowns globally, with at least 296 outages across 54 countries. These shutdowns have been increasingly used to suppress dissent during conflicts, protests, and elections.

While the decrease in the number of shutdowns from 2023 to 2024 is notable, the continued frequency of these disruptions underscores ongoing concerns regarding digital rights, economic impacts, and the balance between national security and freedom of expression in India.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

2. Why Southern States are nervous about delimitation

Introduction

Population growth in South India has been far slower than in the North. Thus, if delimitation were to take place based on latest population data, northern states would receive a much larger number of seats in Parliament compared to the South.

Why delimitation?

Delimitation is a Constitutional mandate, to be carried out after every Census in order to readjust the number of seats in Parliament, and the boundaries of constituencies, based on latest population data. The idea is to ensure that each constituency has roughly the same number of people living in it.

Population-wise seat ratio was broadly equitable after last delimitation

States	1961 Population	1967 Seats	Population/ Seat Ratio	1971 Population	1976 Seats	Population/ Seat Ratio
Uttar Pradesh	7,01,43,635	85	8,25,219	8,38,48,797	85	9,86,456
Bihar	3,48,40,968	53	6,57,377	4,21,26,236	54	7,80,115
Rajasthan	2,01,55,602	23	8,76,331	2,57,65,806	25	10,30,632
Tamil Nadu	3,36,86,953	39	8,63,768	4,11,99,168	39	10,56,389
Kerala	1,69,03,715	19	8,89,669	2,13,47,375	20	10,67,369
India	43,92,34,771	520	8,44,682	54,81,59,652	542	10,11,365

Up until 1976, after every Indian Census, the seats of Lok Sabha, Rajya Sabha and State legislative Assemblies were re-distributed throughout the country. This happened thrice, based on the Censuses of 1951, 1961, and 1971.

The 42nd Amendment to the Constitution, passed during the Emergency, froze the total number of Parliamentary and state Assembly seats till the 2001 Census, which was further frozen by 84th amendment act till year 2026.

Based on projected 2025 population, current seat ratios not equitable

States	Current Seats	2025 Projected Population	Seats at the same ratio as last time #	Seats at 15 lakh ratio	Seats at 20 lakh ratio
UP*	85	25,23,42,000	250	168	126
Bihar*	54	17,08,90,000	169	114	85
Rajasthan	25	8,27,70,000	82	55	41
Tamil Nadu	39	7,73,17,000	76	52	39
Kerala	20	3,60,63,000	36	24	18
India	543	141,33,24,000	1,397	942	707

Why are southern states nervous about delimitation?

States in peninsular India feel that delimitation based on latest population data will reduce their representation in Parliament, and thus diminish their political heft.

What does the data say?

The number of seats each state gets after delimitation will depend upon the base average population that a delimitation commission, as and when constituted, will arrive at.

If the population of each constituency were to be kept at 20 lakh, Parliament would have 707 seats, compared to 543 at present.

Southern states would be at a significant disadvantage. Tamil Nadu would neither gain or lose seats, while Kerala would lose two. But UP (including Uttarakhand) would now have 126 seats, while Bihar (including Jharkhand) would have 85.

Even if the average per constituency population were to be kept at 15 lakh (942 seats in Parliament), Tamil Nadu and Kerala would see modest increases to their tally to 52 and 24 respectively, while the tallies of UP and Bihar would rise to 168 and 114 seats respectively.

How will elections be impacted?

Regional parties from the South feel that delimitation based on population could skew elections in favour of parties, such as the incumbent BJP, with a base in the North. Congress too shares this anxiety.

Following the rise of the BJP through the late 1980s and early 1990s, Congress has been doing poorly in the Hindi heartland.

The party presently has 99 seats in Parliament. Congress has, in total, won 53 seats in Karnataka, Maharashtra, Kerala, Telangana and Tamil Nadu alone. In fact, of the 232 seats won by the INDIA bloc in 2024 polls, a little over 100 came from the more populous northern states.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

3. Law Ministry withdraws Advocates Amendment Bill: The key objections from lawyers, Bar Council

Introduction



The Union Ministry of Law and Justice withdrew the draft Advocates (Amendment) Bill, 2025 following strikes by lawyers and objections from the Bar Council of India (BCI).

The draft Bill proposed sweeping changes, with provisions allowing the Centre to influence the functioning of the BCI, govern the entry of foreign lawyers, and restrict lawyers' right to protest. The major concerns of the Lawyers are as follows:

Concerns over independence of Bar Council of India

Section 4 of the Advocates Act, 1961, established the "Bar Council of India", which has been granted wide authority over matters related to the legal profession. This includes the admission of lawyers, deciding cases of misconduct against lawyers, and many other matters.

Section 4 also dictates who will become a BCI member. The draft Bill proposed amending this provision to allow the Centre to nominate up to three members to the BCI. Several lawyers said this would hamper the BCI and practising lawyers' autonomy. Bar Council has always been a democratically elected body representing the 27 lakh advocates of the country.

Further, the proposed Section 49B said the Central government can direct the BCI "as may appear... to be necessary for carrying into execution any of the provisions of this Act..." Effectively, it would give the Centre the final say on any matter that falls under the Advocates Act and the purview of the BCI. The BCI claimed that this provision would seriously undermine its independence.

Opposition to provisions on foreign law firms

The entry of foreign law firms into India remains a murky issue, even following the Supreme Court's 2018 decision in Bar Council of India v. A K Balaji. The apex court held that foreign law firms and lawyers can be engaged to provide legal advice on a "casual" basis, but cannot "practice" law in the same manner as an advocate registered with the BCI.

In 2023, the BCI notified rules to allow foreign lawyers and firms to practice in certain areas, such as international arbitration, but they remained barred from practising litigation matters before courts. The draft Bill allowed the Centre to create rules governing "the entry of foreign law firms or foreign lawyers in India" under Section 49A. Currently, this power lies with the BCI, which objected to these changes.

Lawyer's protest as a ground for 'misconduct'

One of the most contentious new provisions was Section 35 A, which read: "No association of advocates or any member of the association or any advocate, either individually or collectively, shall give a call for boycott or abstinence from courts' work or boycott or abstain from courts' work or cause obstruction in any form in courts' functioning or in court premises."

A limited exception was provided, allowing participation in a strike "only when it does not impede the administration of justice such as strikes intended to bring attention to legitimate concerns about professional conduct, working conditions, or administrative matters..."

Any violation would be considered misconduct, punishable under Section 35. In response, a senior advocate said "A right to protest is well established and to bring it within the meaning of misconduct is rather atrocious."

Additional grounds for 'misconduct'

Section 45 B on "Liability for misconduct in certain cases" read: "If any person suffers loss either caused deliberately or by the misconduct of the advocate, then, such person may make a

complaint of misconduct against the advocate under appropriate regulations as may be prescribed by the Bar Council of India for deciding the liability of the advocate." This would allow clients to make a complaint against a lawyer if they suffered a "loss".

Lawyers raised concerns about potential misuse. "If any client suffers loss in his case, he can make a complaint of misconduct against the advocate. How can an advocate be held responsible if he loses the case for his client? This has serious legal implications for all advocates practising in the country."

The draft Bill also suggested monetary punishments for "misconduct". Along with the possibility of suspension or removal of the advocate's name from the state roll, the Bill proposed a fine of up to Rs 3 lakhs. On the other hand, a fine of Rs 50,000 will be imposed on the complainant if his case is found to be frivolous.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

4. Pashu Aushadhi Kendras

Introduction

The government will open "Pashu Aushadhi" stores across the country to provide affordable generic veterinary medicines to people engaged in animal husbandry and dairying.



Based on Janaushadhi Kendras

The Pashu Aushadhi initiative has been conceptualised on the lines of the existing Pradhan Mantri Bharatiya Janaushadhi Kendras (PMBJK), which provide "quality generic medicines at affordable prices" to people in order to "bring down the healthcare budget of every citizen of India".

While the PMBJKs provide medicines for humans, Pashu Aushadhi Kendras will provide generic medicines for animals.

More than 10,300 PMBJKs are currently functional across the country. India has begun celebrating Janaushadhi Diwas on March 7 since 2025.

Generic Medicines

"Generic medicines" are basically non-branded drugs, which are marketed under a non-proprietary or approved name rather than a proprietary or brand name.

Why Pashu Aushadhi matters

As per the 20th Livestock Census, India's Livestock population stood at 535.78 million in 2019. This included a total bovine population (including cattle, buffalo, mithun and yak) of 302.79 million.

According to the Ministry of Fisheries, Animal Husbandry & Dairying, the "productivity of livestock is impacted adversely due to diseases like Foot and Mouth Disease (FMD), Brucellosis, Peste des Petits Ruminants (PPR), Cerebrospinal Fluid (CSF), Lumpy Skin Disease, etc."

While measures such as vaccination drives have been taken proactively, a lot remains to be done. A significant portion of the out-of-pocket expenditure of farmers goes into buying medicines to treat their cattle and other animals for illnesses.

Will be run by co-op societies

The Pashu Aushadhi stores will be run by cooperative societies and Pradhan Mantri Kisan Samridhi Kendras (PMKSK). The Department of Animal Husbandry & Dairying will soon release guidelines for the functioning of these stores.

Will also sell traditional medicines

The Pashu Aushadhi Kendras will also sell ethnoveterinary medicines, based on traditional beliefs and indigenous knowledge and practices, to treat animal diseases.

The National Dairy Development Board (NDDB) has compiled a list of ethnoveterinary formulations for important ailments in bovines. These include formulations for the treatment of mastitis, FMD mouth lesions, FMD foot lesions/ wounds, fever, diarrhoea, bloating and indigestion, and worm.

The formulation to treat animal fever includes items such as coriander, garlic, bay leaves, pepper, cumin, turmeric powder, chirata, betel, tulsi, neem, sweet basil, jaggery, and shallots/ onions.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

5. Unique electoral ID numbers being duplicated

Introduction

Opposition cited multiple voters with the same Electors Photo Identity Card (EPIC) numbers. The EC responded that irrespective of the EPIC number, a person can cast a vote only at their designated polling stations in their respective States or UTs. The poll body said it would remove these duplications.

What is an EPIC card?



The EPIC number is a 10-digit voter ID card number issued by the EC to each voter. The number is a unique alphanumeric code assigned to each registered elector to prevent impersonation. It was introduced in 1993 under the Registration of Electors Rules, 1960, to enhance electoral transparency. It is assigned via the ERONET digital platform when a new voter registers, after which it is linked to State and constituency data to ensure regional uniqueness. The ERONET is a web-based platform which was developed for election officials, in multiple languages and scripts, to handle all processes pertaining to registration, migration, and deletion of names from electoral rolls. The platform automates the process of electoral roll management.

What was the EC's response?

The Commission said that the allotment of identical EPIC numbers to some voters from different States or UTs was due to the decentralised and manual mechanism being followed prior to shifting the electoral roll database of all States/UTs to the ERONET platform.

However, it clarified that while EPIC numbers of some of the electors may be identical, the other details including demographic details, constituency and polling booth are different for voters with the same EPIC number. It said that irrespective of the EPIC number, an elector can cast a vote only at their designated polling station in their respective constituency in their State/UT where they are enrolled in the electoral roll and nowhere else. In order to allay any apprehensions, the EC said that it would ensure allotment of unique EPIC numbers to registered electors. "Any case of duplicate EPIC number will be rectified by allotting a unique EPIC number. The ERONET 2.0 platform will be updated to aid and assist in this process".

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

6. What a major new report on the status of Muslims in India has found

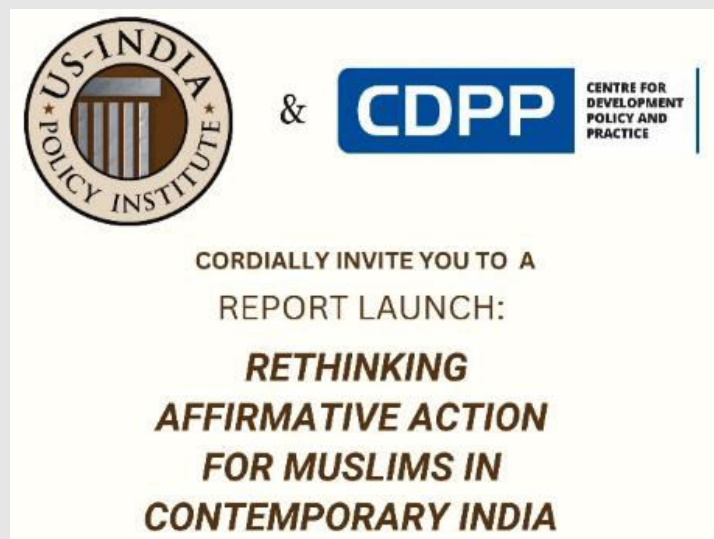
Why now?

The report, 'Rethinking Affirmative Action for Muslims in Contemporary India,' has carried out a stocktake of the government's policies and programs on affirmative action for Muslims. The report has also put forth a roadmap for the future. It is the first comprehensive policy document of its kind in the last 10 years.

The Centre for Development Policy & Practice (CDPP), in collaboration with the US-India Policy Institute (USIPI) launched the report. Centre for Development Policy and Practice is an independent research institution working on economic and public policy issues with a focus on the development on vulnerable populations.

Policy on India's Muslims

In June 2006, the UPA government approved the Prime Minister's 15-point Program for Minorities to initiate a series of minority-centric policies and schemes. That January, a new Ministry of Minority Affairs had been carved out of the Ministry of Social Justice & Empowerment.



Earlier, in October 2004 and March 2005, the government had appointed the National Commission for Religious and Linguistic Minorities (Justice Ranganath Misra Commission) and a High Level Committee on Social, Economic and Educational Status of the Muslim Community of India (Justice Rajinder Sachar Committee) respectively.

Both the Sachar Committee, which submitted its report in 2006, and the Ranganath Misra Commission,

which submitted its report in 2007, strongly recommended that Muslims should be treated as a marginalized community.

Over time, the government introduced several policy initiatives for the socio-economic uplift of Muslim communities.

Change in approach

The BJP led-NDA government that came to power that year adopted the ideal of Sabka Saath Sabka Vikas for the social inclusion of all groups and communities. It initiated significant changes in the policy framework, and restructured existing programmes and schemes led by the Ministry of Minority Affairs. In the post-2014 policy framework, Muslim empowerment is not treated as an exclusive concern.

Approach of new report

The report has four broad themes.

First, it examines the changing nature of the state and its official perspective on social welfare.

Second, it maps out the contemporary policy framework and its implications for Muslims by critically engaging with official documents, mainly those published by NITI Aayog.

Third, it surveys the educational and economic status of Muslim communities by analysing official data collected from different sources.

Fourth, it explores the perceptions, expectations, aspirations, and anxieties of Muslims about their socio-economic backwardness and marginalisation.

What is the present educational status of Muslims?

School-age children from Muslim households are the least likely to participate in upper levels of schooling, although their participation has increased in recent years.

The participation of Muslim youths in the post-secondary level remains the lowest among all socio-religious groups (SRGs). The share of graduates among Muslims remains small.

What is the position of Muslims in the job market?

In terms of the levels of consumption and asset ownership, a large section of Muslims continue to face material deprivation.

While all other disadvantaged SRGs have improved their position in the labour market through a measure of upward mobility in the employment structure over time, the gains have been the least for Muslims.

What can be done to address this situation?

The new report proposes two broad principles for a revised interpretation of affirmative action for Muslims: strong secularization of social policy, and a positive, non-discriminatory official portrayal of Muslim cultural identity. Based on these principles, the report makes seven specific recommendations.

First, there is no need for a religion-based quota under the OBC category. A rational, secular sub-categorization of OBC is needed.

Second, the SC category must include Dalit Muslims and Dalit Christians as well.

Third, the existing 50% cap on reservation must be re-evaluated on a rational basis to accommodate new backward communities in the affirmative action framework.

Four, the convergence of Transformation of Aspirational District Programme (TADP) and the Minority Concentration District (MCD) is one of the main findings of this study. This space-centric approach to affirmative action should be the basis for engaging with a diversified set of local-level programs.

Five, a conscious and proactive policy may be designed to address the problems of those occupations in which Muslims are disproportionately, if not exclusively, represented.

Six, the private sector must be involved in the discussions on community empowerment.

Seven, the capacity-building of Muslim community organisations, charities, and self-help groups must be prioritised. It might help them to establish links with ongoing welfare programs and policies.

7. Why did real money gaming industry come out with a code of ethics?

Why in News?

The real money gaming industry's (RMG) main industry organisations — the Federation of Indian Fantasy Sports (FIFS), the E-Gaming Federation (EGF) and the All India Gaming Federation (AIGF) — all signed a code of ethics earlier this week, setting out standards for RMG firms to conduct business ethically and transparently.

RMG industry

KEY GUIDELINES UNDER THE CODE OF ETHICS

- **Age-Gating and KYC Compliance:** Platforms must implement strict age-verification mechanisms to prevent minors from accessing real-money games.
- **User Protection Measures:** Operators must offer players the ability to self-exclude, set spending limits, and receive regular gaming activity notifications.
- **Ethical Advertising Practices:** All promotions must be transparent and must not mislead users with exaggerated claims.

The RMG industry represents firms like Dream11, PokerBaazi and others who offer games where users can risk money they either lose or win returns on. While many countries would classify the firms as gambling operators, the Indian judiciary has repeatedly upheld games where there are a "preponderance of skill," such as poker, where players can benefit better from playing a game well than those who don't, are not classified as gambling.

As such, these firms are hard to regulate for States though under the Constitution, "betting and gambling" is a State subject. In Andhra Pradesh and Telangana, the industry is fighting a ban on fantasy sports in particular. Fantasy sports services entice player to create own teams in an app with real world

player performance impacting outcomes on the apps. This is somewhat distinct from sports betting, where real world teams are directly wagered upon.

Large Revenues

The RMG industry is very valuable, and has clocked \$3.8 billion revenue in FY2023-24, as per venture capital firm Lumikai. As the cost of providing the service is far cheaper than operating a RMG house, the theoretical returns on this industry are massive. However, the industry has seen a slowdown in growth since a 28% GST rate was applied in 2023 to deposits players make with these platforms.

Why have these firms put out a code of ethics?

While the RMG industry thwarted several legal challenges from States seeking to ban poker and rummy apps — such as in Tamil Nadu — the efforts by State authorities continue. Moreover, Since the Union government's own rules on the RMG industry are yet to be implemented, RMG firms are under pressure to independently demonstrate a sense of responsibility, one industry executive said. Similar codes of conduct have been published before by the industry. For instance, AIGF put out its own charter for games of skill in 2022.

Even the OTT streaming industry, under the aegis of the Internet and Mobile Association of India (IAMAI), put out similar codes of ethics before the government chose to regulate them through the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

Further signals of legitimacy are incredibly important to the industry right now. The RMG industry expressed particular concern about competition from offshore gambling websites which use mule accounts in India and constantly shift domain names to evade capture and blocking. These firms are growing far faster than domestic players, one executive said, because they neither charge the 28% GST nor they comply with ID verification requirements.

Code of ethics

Much of the newly released codes — similar to past commitments by the industry — resemble closely to initiatives already taken by large RMG firms to demonstrate legitimacy: these include disclosures on advertising, age restrictions, identity verification, self lock-out features, warnings when a player has been on the platform for too long, and so on.

The code also requires firms to identify “vulnerable” players and work to block them. Other requirements include making sure “that the claims of total prize money are truthful, verifiable and not exaggerated,” “not imply that playing in online games will help fulfil social obligations or solve personal or financial problems,” and “not suggest online gaming can aid escape from personal/ professional problems”.

The document comes into effect between 6–9 months from now, depending on the size of each firm.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

8. What you need to know about Rajasthan's new coaching centre Bill, why it has been criticised

Introduction

Following years of demands for such legislation, a Bill for regulating coaching centres was tabled in the Rajasthan Legislative Assembly recently.

The creation of a high-pressure academic ecosystem in cities like Kota and Jaipur, with coaching centres and residential schools to aid students in preparing for competitive exams,

had prompted calls for regulation. For more than a decade now, several cases of student suicides have been reported every year.

However, the Rajasthan Coaching Centres (Control and Regulation) Bill, 2025, has received some criticism for diluting certain provisions of earlier drafts and sidestepping some of the Union Education Ministry's guidelines on the issue.

STATE BILL vs UNION GOVT'S 2024 GUIDELINES

HIGHLIGHTS	
<ul style="list-style-type: none"> ➤ Age restriction: Raj removes 16+ minimum enrolment age 	<ul style="list-style-type: none"> ➤ Regulatory authority: 12-member body with civil court-like powers
<ul style="list-style-type: none"> ➤ Aptitude test: Centre wanted it mandatory, Raj makes it optional 	<ul style="list-style-type: none"> ➤ No misleading ads: Institutes can't fake toppers or inflate success rates
<ul style="list-style-type: none"> ➤ Batch segregation rule: Unlike Centre, Raj bill is silent on it 	<ul style="list-style-type: none"> ➤ Public transparency: Mandatory disclosure of faculty, infra, ownership
<ul style="list-style-type: none"> ➤ Holidays: No mandate on local/state/national holidays 	<ul style="list-style-type: none"> ➤ Mandatory fee refunds: Students leaving mid-term get refunds in 10 days
<ul style="list-style-type: none"> ➤ Biometric attendance: Centre recommended it, but Raj omits it 	<ul style="list-style-type: none"> ➤ Mental health focus: Centres must hire psychologists, counsellors, advisors
<ul style="list-style-type: none"> ➤ Disabled-friendly measures: Missing from Raj bill despite central push 	<ul style="list-style-type: none"> ➤ Teacher training: Resilience training for handling student stress
	<ul style="list-style-type: none"> ➤ Strict penalties: ₹2L fine for first violations, ₹5L for repeat offences

What does the Rajasthan Bill say?

The government said the Bill aims to "curb the commercialisation of coaching institutes and ensure that they operate within a framework prioritising the well-being and success of students".

It seeks to mandate minimum quality standards, the registration of coaching centres, and psychological counselling for students. The Centre's January 2024 guidelines for the regulation

of coaching centres proposed a penalty of Rs 25,000 for the first violation of provisions and Rs 1 lakh for a second violation, followed by cancellation of registration for subsequent violation(s).

The tabled version sets the first fine at Rs 2 lakh and Rs 5 lakh for the second offence, followed by cancellation of the centre's registration. This is one aspect where the Bill's provisions are more stringent compared to the draft and guidelines.

And what are the differences?

In line with guidelines, an earlier draft specified that only students who are 16 years of age or have completed secondary school examinations can be enrolled in coaching centres. However, the tabled version has no mention of the age criteria.

Coaching centres could stand to benefit in the absence of such a provision, especially those in Kota. Having become a hub for engineering and medical college aspirants, the city has witnessed a decline in student enrollments recently. The Centre's guidelines, in addition to bad press over student suicides and the emergence of new hubs in other parts of the country, are seen as the likely factors.

Here are some of the other key points of difference:

- In some cases, students went missing from the centres and their families found out much later. An earlier version of the Bill mandated biometric attendance through face recognition technology. If a student was absent for more than two days without prior intimation, the centres were "to inform the parents", it said. The Bill has no such provision for attendance.
- A draft also stated that coaching centres "shall abide by the orders issued by the state government regarding national holidays, local holidays as declared by the District Collector and festivals". While the tabled version states that centres should try to customise leaves to coincide with festivals, it omits mention of national and local holidays.
- The guidelines had pushed for greater inclusivity and accessibility, stating that the coaching centres "shall not discriminate against any applicant/ student on the basis of religion, race, caste, sex, place of birth, descent etc. during the admission and teaching process".
- They also said the centres may make special provisions to encourage greater representation of students from vulnerable communities, including female students and differently abled students. The centre's building and surrounding premises should comply with the Rights of Persons with Disabilities Act, 2016. Both these points were included in the draft, but have been omitted now.

What happens next?

Certain parents' associations have flagged the need for specifying punishment for centres in case of student suicides and demanded measures to curb the arbitrary fees they charge.

The Bill is expected to come up for debate and passage in the ongoing Budget session. Leader of Opposition Tika Ram Jolly from the Congress said that the earlier draft had mentioned the 16-year minimum age criteria "but now the government is again planning to burden the students".

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

9. Punjab police clear farmers' protest sites: How this agitation was different from the one in 2020-21

Introduction

From February 13, 2024 to March 20, 2025 — for 400 days — farmers under the banner of Kisan Mazdoor Morcha (KMM) and Samyukta Kisan Morcha non-political staged a sit-in protest (dharna) at the Shambhu border between Punjab and Haryana. The dharna was then cleared up in a quick operation by the Punjab police.

This was a far cry from the previous farm protest of 2020-21, in which farmers, camping at Delhi's borders, had made the Central government give in to their demands of repealing three new agriculture laws.

What were the similarities and differences between Kisan Aandolan 1.0 and Kisan Aandolan 2.0? Why was one successful and popular, and the other not?



Kisan Aandolan 1

Kisan Aandolan 1 was staged at Singhu, Tikri and Kundli borders of Haryana-Delhi from November 26, 2020- December 9, 2021. The total duration of the protest was 380 days, and the main demand was repealing of three farm laws. Finally, Prime Minister Narendra Modi announced the repeal on November 19, 2021, but the dharna was lifted on December 9, 2021, when the government agreed to the main demand in writing and also gave an assurance about other demands, including a legal guarantee of Minimum Support Price (MSP, or the rate at which the government buys certain crops).

farmers were largely from Punjab, Haryana, Uttar Pradesh, Uttarakhand, and Rajasthan. This protest was held under the banner of Samyukta Kisan Morcha, a flagship organisation of over 500 farmer unions across the country, with the support of trade unions. Farmers had lifted this dharna on their own and they had come home celebrating.

Kisan Aandolan 2.0

Kisan Aandolan 2.0, however, was led by Kisan Mazdoor Morcha (KMM) and SKM non-political. It was at the Shambhu and Khanauri borders on NH-44 and NH-52 between Punjab and Haryana. The main demand was seeking MSP as a legal guarantee, along with 11 other demands. The SKM was not part of this protest, though they extended support.

SKM non-political is an offshoot of SKM led by Jagjit Singh Dallewal while KMM is largely led by Punjab-based organisation Kisan Mazdoor Sangharsh Committee (KMSC). KMSC was not part of SKM even in Kisan Aandolan-1, though they had organised a dharna at Kundli border in 2020-21.

Here, farmers were evicted from the dharna sites forcefully, thus resulting in loss of their belongings, as the temporary structures were demolished using cranes and tractors were lifted using lifting machines.

Public support

The 2020-21 farmers protest had a wide public support. Punjab's industry had even contributed funds for the protest, while shopkeepers had donated trucks loaded with garments, dry ration and various other things. Doctors, lawyers, etc. too had supported the cause.

However, this time, farmer unions were not getting this support from the masses. Urban people were largely objecting to the closure of highways and the industry was angry with the AAP government for taking no action to lift the dharna.

Punjab Pradesh Beopar Mandal had even called kisan unions a parallel government, and demands were raised for stringent laws to ban protests that block highways.

Also, in the previous aandolan, AAP leaders had extended wide support to the protests. But this time, a protest against the Centre was hurting Punjab's economy, and also damaging the AAP government. Multiple rounds of talks between the government and the farmers had failed.

Mode of protest

Dilli Chalo was the call given in both the protests. And in both protests, farmers had sought a place to protest in Delhi, which was not given to them. The only difference was that this time, they kept on protesting within the jurisdiction of Punjab, and hence hurting Punjab's economy alone.

The inner roads of villages close to Shambhu and Khanauri borders have been damaged. Many dhabhas, petrol pumps were running out of business in Punjab due to this protest.

Jagjit Singh Dallewal, convenor of SKM non-political, has been on a hunger strike from November 26 last year.

What next

Most leaders of KMM and SKM non-political have been arrested by the Punjab police. The union leaders who have been spared have stated their struggle will continue.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

10. Form 17C and details included in it

Background

Opposition Parties demand the publication of the first part of Form 17C, which includes booth-wise voter turnout data, on the Election Commission of India's (EC) website, within 48 hours of polling.

What is Form 17C?

The Conduct of Election Rules, 1961 mandates that a two-part form, recording voter turnout and vote count, is filled for every polling station.

Part 1 of Form 17C

Part 1 of Form 17C is the Account of Votes Recorded, and is filled in by the presiding officer of each polling station, with a true copy to be furnished to every polling agent present at the close of the poll. It includes the identification number of the Electronic Voting Machine (EVM) used in that polling station, the total number of electors assigned to that polling booth, the number of votes cast as per the EVM and so on.

The presiding officer, as well as every polling agent present are required to sign and validate this form, before it is placed in a sealed cover and transported to the returning officer, along with the EVM, to be held until the day of counting.

[FORM 17C
[See rules 49S and 56C(2)]]

PART I.—ACCOUNT OF VOTES RECORDED

Election to House of the People/Legislative Assembly of the State/Union territory.....
fromConstituency.

Number and Name of Polling Station :

Identification Number of voting machine used at the Polling Station :

control unit

balloting unit

Printer (if used)

1. Total number of electors assigned to the Polling Station
2. Total number of voters as entered in the Register for Voters (Form 17A)
3. Number of voters deciding not to record votes under rule 49-O
4. Number of voters not allowed to vote under rule 49M
5. Test votes recorded under rule 49MA (d) required to be deducted—

(a) total number of test votes to be deducted :	Total No.	Sl. No.(s) of elector(s) in Form 17A
(b) candidates(s) for whom test vote(s) cast :	Sl. No.	Name of candidate

1. Ins. by Notifin. No. S.O. 230(E), dated the 24th March, 1992.
2.Subs. by Notifin. No. S.O. 2470(E), dated the 14th August, 2013.

Part 2 of Form 17C

On counting day, Part 2 of Form 17C, titled the Result of Counting, is filled in by the returning officer. It includes the names of each candidate and the number of votes recorded in favour of each of them, as seen when the "result" button is pressed on the EVM. The returning officer must also state "whether the total number of votes shown above tallies with the total number of votes shown against item 5 of Part 1 [which is the number of votes cast as per the EVM on the day of polling] or any discrepancy noticed between the two totals." Part 2 is signed by the returning officer, the counting supervisor, and each candidate or their counting agents.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

11. Lohiaite: Followers of Ram Manohar Lohia

Background

March 23 marked the 115th birth anniversary of one of the tallest leaders of 20th century India, Dr Ram Manohar Lohia (1910-1967). Leaders across political parties, from Prime Minister Narendra Modi to Samajwadi Party leader Akhilesh Yadav, paid their respects.

Hailing from Uttar Pradesh, Lohia completed his higher education in Europe. He returned to India in 1932 and joined the independence movement as part of the Indian National Congress, but later critiqued the party and its leaders for doing little to dismantle caste and class hierarchies.

Many decades after his passing and even in a drastically different political landscape, parties have continued to echo his espousal of social justice and describe themselves as 'Lohiaites'.

What Was Lohia's Ideology?



Lohia formed the Congress Socialist Party (CSP) within the Congress in 1933. It became an independent party in 1947, known as the Socialist Party. Later iterations continued to emphasise democratic socialism as their core philosophy.

He also shared some of Mahatma Gandhi's ideals, including opposition to capitalism, and promoting the village economy. However, their views greatly diverged on the question of caste. While acknowledging the inequalities of the caste system, Gandhi sought to reform it from within, while Lohia staunchly believed that the entire system had to be dismantled.

He propounded "Seven Revolutions" – against gender inequality; against political, economic and spiritual inequalities based on the colour of the skin; against

inequalities between backward and advanced groups or castes and in favour of special opportunities for the backward castes; etc.

In his opposition to foreign rule and Western imperialism, Lohia was arrested more than 25 times, including during the freedom movement and the Goa Liberation Movement.

What Explains Lohia's Continued Political Appeal?

From the late 1960s, the Congress party's hitherto unchallenged dominance of electoral politics began weakening. Leadership struggles post Jawaharlal Nehru's death, increasing factionalism and other factors contributed to the rise of non-Congress leaders and parties.

Veteran socialist leader JP Narayan shared many commonalities with Lohia, including his call for a Total Revolution. He re-emerged as a key figure in the 1970s and criticised the Indira Gandhi government. In the wake of the Emergency rule she imposed in 1975, the first non-Congress government came to power.

Many young leaders who participated in anti-Congress movements were inspired by the likes of JP and Lohia. They came from non-elite backgrounds and emerged as key political figures in multiple states — like Karnataka Chief Minister Siddaramaiah, Bihar Chief Minister Nitish Kumar, and others.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

12. How the judiciary's in-house inquiry against Justice Yashwant Varma will work

Introduction

Chief Justice of India (CJI) Sanjiv Khanna initiated an unprecedented three-member in-house inquiry into the conduct of Delhi High Court judge Justice Yashwant Varma following allegations that wads of currency notes were found in his official residence where a fire broke out on March 14.



The internal inquiry of the judiciary follows a process that is distinct from that of impeachment under the Constitution.

Origin of In-house procedure

The need for an internal mechanism was felt in 1995, after allegations of financial impropriety surfaced against then Bombay High Court Chief Justice A M Bhattacharjee.

While hearing the case, the SC noted there was no process to hold a judge accountable for “bad conduct inconsistent with the high office”, when such conduct did not meet the high bar of removal of judge as given in the Constitution.

To fill what the judges called “a yawning gap between proved misbehaviour and bad conduct inconsistent with the high office”, the SC decided to formulate an in-house procedure.

In House Procedure at Present after Revisions

1. Beginning of Process: Essentially, this process begins when the Chief Justice of a HC, the CJI, or the President of India receives a complaint. The CJ of the HC or the President will forward the complaint to the CJI.

2. Preliminary Report: This complaint can be dropped at any stage, if not found serious enough by the CJI. However, to test the veracity of the complaint, the CJI can seek a preliminary report from the CJ of the HC concerned.

3. Deeper probe: If the CJ of the HC, in the preliminary report, recommends that a “deeper probe” is warranted, the CJI may examine the recommendation and the statement of the judge facing the accusations, and then decide to order a three-member inquiry, comprising two other HC Chief Justices and one HC judge.

This committee has the powers to devise its own procedure “consistent with the rules of natural justice” (which, in this case, would include giving Justice Varma a chance to explain his case).

4. Submission of Report: Once the inquiry has been concluded, the committee will submit its report to the CJI. This report must state whether:

- There is any substance to the allegations against the concerned judge and,

- If there is sufficient substance to the allegations, whether they are serious enough that they require initiation of removal proceedings against the judge.

5. Action against erring judge: If the report finds there is substance to the allegations, it will be sent to the judge concerned as well. If the committee concludes that the misconduct is not serious enough to warrant removal proceedings, the CJI may “advise” the judge concerned, and direct that the committee’s report be placed on record.

If the committee decides that the allegations are serious enough to initiate removal proceedings, the CJI will advise the concerned judge to resign or retire voluntarily.

If the judge does not accept, the CJI will direct the HC Chief Justice not to assign any judicial work to said judge. (In Justice Varma’s situation, CJI Khanna has already asked Chief Justice of Delhi High Court Devendra Kumar Upadhyaya not to assign any judicial work to Justice Varma.)

If the judge does not abide by the CJI’s advice to resign or retire, the CJI will inform the President and the Prime Minister of the committee’s finding that removal proceedings should be initiated.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

13. Sahyog Portal

Objective

‘Sahyog’ Portal has been developed to automate the process of sending notices to intermediaries by the Appropriate Government or its agency under IT Act, 2000 to facilitate the removal or disabling of access to any information, data or communication link being used to commit an unlawful act. This portal will help achieve a clean cyber space for the Citizens of India.

Functioning

It will bring together all Authorized Agencies of the country and all the intermediaries on one platform for ensuring immediate action against the unlawful online information. In its second phase, the portal’s functionality will be extended to also send information requests from law enforcement agencies.

Ministry involved

The SAHYOG portal is being developed by the Union Ministry of Home Affairs. Indian Cybercrime Coordination Centre (I4C) is the nodal agency behind development of SAHYOG portal.

Indian Cybercrime Coordination Centre

Indian Cybercrime Coordination Centre (I4C) was established by MHA, in New Delhi to provide a framework and eco-system for Law Enforcement Agencies (LEAs) for dealing with Cybercrime in a coordinated and comprehensive manner.

I4C is envisaged to act as the nodal point to curb Cybercrime in the country.

Intermediaries on board

So far, 38 intermediaries have already come on board the SAHYOG portal, including Telegram, Apple, Google, LinkedIn, YouTube, Microsoft, Facebook, Instagram, and WhatsApp.

Relevance: GS Prelims; Governance

Source: The Hindu

14. Why activists are worried about Section 44(3) of new data protection law

Section 44(3) of DPDP Act

The Digital Personal Data Protection Act, 2023 (DPDP Act) received the President's assent on August 11, 2023, and will come into force after the Rules under the Act are notified. In January, Vaishnav's ministry invited feedback and comments on the draft Digital Personal Data Protection Rules, 2025. The window for comments on the draft Rules closed on February 18.



The DPDP Act is intended to "provide for the processing of digital personal data in a manner that recognises both the right of individuals to protect their personal data and the need to process such personal data for lawful purposes".

Section 44(3) of the DPDP Act mentions a change that will be made in Section 8(1)(j) of the RTI Act. This change, RTI activists say, will greatly reduce the amount of information that government agencies are obligated to disclose under the 2005 Act.

Section 8(1)(j) of RTI Act

This section states: "...There shall be no obligation to give any citizen...information which relates to personal information the disclosure of which has no relationship to any public activity or interest, or which would cause unwarranted invasion of the privacy of the individual unless the Central Public Information Officer or the State Public Information Officer or the appellate authority...is satisfied that the larger public interest justifies the disclosure of such information."

Section 44(3) of the DPDP Act shortens this clause in the RTI Act to broaden the scope for denying information. It says: "In section 8 of the Right to Information Act, 2005, in sub-section (1), for clause (j), the following clause shall be substituted, namely: — "(j) information which relates to personal information".

Why the change matters

Activists point out that a lot of personal information about public servants such as their assets and liabilities are published because it is seen to serve a public purpose. The blanket exemption now granted to all "information which relates to personal information" could be used to deny the public their right to know, they say.

Relevance: GS Prelims & Mains Paper II; Governance
Source: The Hindu

15. 'Over half of ₹1-lakh crore collected for the welfare of mining districts not spent'

District Mineral Foundations

The DMFs are non-profit trusts set up in mining districts and tasked with ensuring that a portion of the revenues generated from mining is spent on the development of the districts. They have been established in 645 districts across 23 States.



WHAT IS DMF?

The Ministry of Mines has notified the Mines and Minerals (Contribution to District Mineral Foundation) Rules, 2015, on 17.9.2015, which prescribes the rate of contribution to district mineral fund (DMF) from miners as follows:

10%
of royalty in respect of
mining leases granted
on or after 12.1.2015

30%
of royalty in respect of
mining leases granted
before 12.1.2015

In 2015, the Centre launched the Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) to drive change in mining-affected areas through investments in various developmental projects. The PMKKKY is implemented through funds accrued to the DMFs.

Findings of Recent report

The report was prepared by iForest, an independent research group.

A first-of-its-kind analysis of the District Mineral Foundations (DMF) shows that despite collecting about ₹1-lakh crore in the past decade, more than half the funds is unspent.

Moreover, the funds are often diverted to activities that are not directly linked to the welfare of mining districts — a contravention of the Centre's guidelines.

Odisha accounts for the highest share of DMF funds, about 29% (₹30,126 crore) of the country's total, followed by Chhattisgarh (₹14,564 crore) and Jharkhand (₹13,791 crore).

Funds utilised towards infrastructure

The prime focus of DMF and PMKKKY is to alleviate poverty and deprivation, which requires a balanced investment in human resources and infrastructure. However, this balance has not been achieved in any district. Consider the example of Dhanbad. Out of 1,164 projects sanctioned in Dhanbad till 2024, only ₹1.86 crore have been allocated for skill development and livelihood generation. The rest of the amount has been used for development of infrastructure.

Relevance: GS Prelims & Mains Paper II; Governance

Source: PIB

16. Why has X sued the government over SAHYOG?

Why in News?

Social media platform X has sued the Union government in the Karnataka High Court for the SAHYOG portal, which it says is a "censorship portal" that allows local police and different parts of the government to indiscriminately demand takedowns of online content.

What is the SAHYOG portal?

The SAHYOG portal is being developed to automate the process of sending notices to intermediaries by the Appropriate Government or its agency under IT Act, 2000 to facilitate the removal or disabling of access to any information, data or communication link being used to commit an unlawful act. It is run by the Ministry of Home Affairs (MHA) with help from the Ministry of Electronics and Information Technology (MeitY).

The portal is to be given over to the police across the country, MHA officials said at the meeting, and would soon be "expanded" to accommodate data requests from social media firms in such cases. The main mandate, however, remained content takedown notices under


Section 79(3)(b) of the Information Technology (IT) Act, 2000. X considers this illegal, as it argues internet takedowns in India is covered under another legal provision in IT act.

What are the laws?

Section 79(1) of the IT Act gives online platforms a shield from legal liability for content posted by third parties, that is, their users. Section 79(3), however, qualifies this safe harbour by stating that the shield will not apply if social media companies are given notice by any “appropriate Government or its agency,” then they can also be taken to court for a piece of content, just like the user.

X argues — as have civil society groups — that this is an overreach. “Section 79(3)(b) of the IT Act does not authorise the government to issue information blocking orders,” X said in its petition. “That power is governed by Section 69A of the IT Act read with the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009.”

Section 69A allows the government to block content, the IT Ministry says, if it impinges on “(i) interest of sovereignty and integrity of India, (ii) defence of India, (iii) security of the State, (iv) friendly relations with foreign States or (v) public order or (vi) for preventing incitement to the commission of any cognizable offense relating to above.”

<p>X's legal challenge Here are the contentions of Elon Musk's company in the Karnataka High Court:</p> 	<ul style="list-style-type: none">■ Why issue blocking orders under Section 79(3)(b) of the Information Technology (IT) Act, 2000, and not under Section 69A■ Section 79(3)(b) outlines the conditions under which an intermediary loses its 'safe harbour' protection	<ul style="list-style-type: none">■ Section 69A empowers the government to block access to online content, under specific circumstances■ Union Home Ministry's Sahyog portal is a 'censorship portal'
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However, this Section has several safeguards built into it, such as giving users the opportunity to be heard. These safeguards are laid out in the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009. However, even

blockings under Section 69A have been contentious, because there have been instances where a notice has not been issued.

What is the government's stance?

While these legal challenges are being worked out, the SAHYOG portal has seen participation from most social media firms, including those owned by Meta and Google. The government has argued that the "takedown" orders (as they are called even in the model notice the IT Ministry has shared with authorities) are not blocking orders. "Section 79 regime does not envisage any 'blocking orders' and merely issues notice informing intermediaries of their due diligence obligations," the government said in a filing in the case. "In case of non-compliance of the notices, the result is lifting of safe harbour protection to intermediary and consequent action under extant law and the same is fundamentally at a different plane altogether."

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu

1. How Trump's 'Gold Card' US visa could work, what concerns it raises

Introduction



President Donald Trump has announced a visa program called "Gold Card" for foreign investors seeking permanent residency in the United States, and ultimately American citizenship.

The Gold Card would be available for about \$5 million. The scheme would replace the EB-5 immigrant investor visa program. The details of the scheme are yet to come out.

EB-5 vs Gold Card

The EB-5 program, created by Congress in 1990 and administered by the US Citizenship and Immigration Services (USCIS), grants permanent residency (Green Card) to foreigners who invest in American businesses. Investors must put in at least \$1.05 million (\$800,000 in certain specific cases), and create at least 10 jobs for Americans.

While details are not known yet, it appears that the Gold Card will not require an investment in American businesses or the creation of new employment. It could simply be a direct purchase of a Green Card by paying a flat fee of \$5 million to the US government.

Likely benefits to the US...

It could be argued that the "clear and simple" route to residency offered by the scheme will bring high-net-worth individuals to America, whose investments will stimulate the US economy. High-net-worth immigrants often invest in real estate, luxury markets, and businesses.

...And several concerns

While the Gold Card scheme throws up several ethical, legal, and political concerns.

- The program could be seen as putting American citizenship on sale, favouring money over merit, catering to the rich at the expense, perhaps, of talented professionals.
- Immigration programs with an investment component can be vulnerable, in the absence of strong regulatory checks, to possible money laundering and undue foreign influence. Trump was nonchalant when asked whether the program might open America's doors to Russian oligarchs: "Yeah, possibly. Hey, I know some Russian oligarchs that are very nice people."
- If the Gold Card comes without a requirement to invest "in jobs-creating enterprises", passive investors could gain residence in the US with no contribution to its economy.

● The central questions remain whether US citizenship is to be put on sale, and whether US immigration policy should privilege skills, contributions, and diversity. A similar program in Canada, albeit with a much smaller investment amount, was shut down after rampant misuse.

Challenges ahead

IN CONGRESS: Any significant change to immigration policy must be approved by Congress. The Republican party currently has a majority in both houses; however, not all Republicans may want to be accused of selling American citizenship. Democrats will almost certainly oppose the proposal.

IN COURTS: Most legal challenges in visa programs originate from the administration of the program, rather than the program itself. It is too early to guess what legal challenges Trump's Gold Card may face.

Indians and Gold Card

In the 2023 financial year, only 631 Indians obtained US Green Cards through the EB-5 program using consular processing.

Given this small number for a scheme where the investment required is only about \$1 million, it seems unlikely that the idea of buying a Green Card for five times that sum — more than Rs 43 crore at the current exchange rate — will appear attractive to many Indians.

Relevance: GS Prelims & Mains Paper II; Bilateral Relations

Source: Indian Express

2. Hague Service Convention invoked by U.S. Securities and Exchange Commission (SEC) in Adani's case

Introduction



The U.S. Securities and Exchange Commission (SEC) informed a New York court recently that it has sought assistance from the Indian government under the Hague Service Convention — formally known as the Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters,

1965 — to serve summons on billionaire Gautam Adani and his nephew Sagar Adani in a securities and wire fraud case.

What did the SEC say?

The SEC informed the court that it had invoked Article 5(a) of the Convention to request India's Ministry of Law and Justice to facilitate the service of summons on the defendants.

How does the Hague Service Convention operate?

With the rise in cross-border litigation, the need for an effective and reliable mechanism to serve judicial and extrajudicial documents on parties residing in foreign jurisdictions became imperative. As a result, countries adopted the Convention at the Hague Conference on Private International Law in 1965.

Eighty-four states, including India and the U.S., are parties to the Convention. Its procedures apply only when both the sending and receiving countries are signatories. Each member state must also designate a central authority to process requests and facilitate the service of documents from other signatory states.

Signatory states can select the modes of transmission that apply within their jurisdiction. Under the Convention, the primary mode of service is through designated central authorities. However, alternative channels are also available, including postal service, diplomatic and consular channels, direct communication between judicial officers in both states, direct contact between an interested party and judicial authorities in the receiving state, and direct communication between government authorities.

How is service effectuated on defendants in India?

India acceded to the Convention on November 23, 2006, with certain reservations, expressly opposing all alternative service methods under Article 10. It prohibits the service of judicial documents through diplomatic or consular channels, except when the recipient is a national of the requesting country. For instance, a U.S. court cannot serve documents in India through U.S. diplomatic or consular channels, unless the recipient is a U.S. national residing in India. Additionally, all service requests must be in English or accompanied by an English translation. As a result, valid service can only be executed through the Ministry of Law and Justice, India's designated central authority. The Ministry is permitted to reject a service request, but must specify the reasons for such refusal.

What happens if a foreign refuses to cooperate?

A default judgment may be issued under the Convention if a foreign government refuses to cooperate in serving summons on a defendant residing within its jurisdiction.

Relevance: GS Prelims; International Organisations

Source: The Hindu

3. Who are PKK, the Kurdish armed group fighting against Turkey?

Introduction

For more than four decades, Turkey has been fighting an armed insurgency by the Kurdistan Workers' Party, or PKK, a militant group that says it seeks greater rights for the country's Kurdish minority.

Now, PKK's founder, Abdullah Ocalan, has called on Kurdish fighters to lay down their arms. However, it remains unclear how effective his plea will be and what, if anything, the Turkish government is offering the group in exchange for ending the fighting.

Who are the PKK?



The group launched an armed insurgency against the Turkish state in the early 1980s, originally seeking independence for the Kurds, who are believed to make up about 15% or more of Turkey's population.

Who are the Kurds?

The Kurds are an ethnic group of roughly 40 million people — there are widely varying estimates — concentrated in Iran, Iraq, Syria, and Turkey.

They speak multiple dialects of Kurdish, a language not directly related to Turkish or Arabic. Most are Sunni Muslims.

The Kurds were promised a nation of their own by world powers after World War I, but that was never granted. The Kurds have been demanding nationhood and autonomy.

Relevance: GS Prelims; International Issues

Source: Indian Express

4. Russia-Ukraine war: What US pausing aid will mean for Kyiv, Moscow, and Europe

Russia-Ukraine war

For Ukraine, the worst-case scenario, short of an outright defeat against Russia, seems to have come to pass. After a singularly acrimonious White House meeting with Ukraine's President Volodymyr Zelenskyy last week, US President Donald Trump has paused military aid to the war-torn country.

For three years, Ukraine has held out against a much bigger and more powerful Russian army, but that has been possible thanks to considerable support from the US in terms of money, equipment, logistical support, and weapons. Trump has said the aid has been paused (not stopped) till he feels Zelenskyy is ready for ceasefire talks. Europe has promised to rally round Ukraine and make up for the absence of US aid, but it is still unclear what the situation on the ground will be. A reduced US role in the war will have implications for not just Ukraine, but the whole of Europe.

What Trump's aid move means for Ukraine

The Germany-based thinktank, Kiel Institute for the World Economy, has been tracking aid provided to Ukraine from various quarters. According to its data, since 2022, while Europe has given the most money to Ukraine when financial and humanitarian assistance is counted (132 billion euros, as against the USA's 114 billion euros), the US is the single largest military donor.

Moreover, what will hurt Ukraine the most is the absence of US intelligence and reconnaissance abilities. No European power can match US capabilities of intelligence gathering and sharing. Also, Ukraine is heavily dependent on Elon Musk's Starlink for communication services.

For Europe

After enjoying decades of security thanks to the USA's enormous military power, Europe is suddenly waking up to the possibility of having to defend itself. The larger threat is the possibility of an emboldened Russia and the US retreating from its security role. Even if the bigger European countries can beef up their armies, coming together effectively will be a major challenge, as the leadership role in planning and coordination has always been played by the US.

For Russia

The war at present is stuck in a stalemate of attrition, though Russia has a slight advantage. If US support does not come and Russia ends up winning, it is not clear what that victory will look like.



However, Russia has lost a number of personnel, and a ceasefire is in its interests too. For a ceasefire, Russia wants a demilitarised and neutral Ukraine, and for Kyiv to cede territories in Kherson, Zaporizhzhia, Donetsk, and Luhansk.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

5. Egypt's Gaza reconstruction plan endorsed by Arab League, rejected by Israel

Introduction

Members of the Arab League recently welcomed a \$53 billion proposal by Egypt to reconstruct Gaza over the next five years.

The final communique of emergency Arab League summit emphasised the group's commitment to a two-state solution for Israel and Palestine. The statement also emphasised the rights of Palestinian people and ruled out any possibility of displacing the population, as proposed by US President Donald Trump in his contentious "Riviera of the Middle East" plan.



First, what had Trump proposed?

In February 2025, Trump, in a joint press conference with Israeli PM Benjamin Netanyahu, proposed that the US take over the Gaza strip and "own it", clearing the area of unexploded bombs and rubble. In the process, the US would build glass towers and sea-facing property in what would become the "Riviera of the Middle East", inviting the "world's people" to move in.

Trump also asserted the idea of relocating nearly 2 million Palestinians from Gaza to neighbouring Jordan and Egypt, a proposal that both countries and other Arab nations vehemently rejected.

This proposal marked a significant break from the US's long-standing endorsement of the two-state solution.

What Egypt's reconstruction plan for Gaza says

Egypt's Reconstruction Plan for Gaza contains maps detailing how its land would be redeveloped.

The first phase, a recovery stage, is expected to last six months. It would focus on clearing over 50 million tons of rubble, removing mines and unexploded bomb material, and providing temporary housing.

The following reconstruction phase would focus on rebuilding essential infrastructure like roads and public utilities.

The second stage would run until 2030, and would build 200,000 housing units. It also contains plans for a commercial seaport, a technology hub, industrial zones, beach hotels and an airport.

What the plan does not say...

The Plan does not say that who will run Gaza, and which countries will provide the money needed for its reconstruction. The reconstruction would need investment from oil-rich Gulf nations like the UAE and Saudi Arabia, which could supply billions of dollars.

Egypt's plan proposes to replace the Hamas-led Gaza government with a Governance Assistance Mission for an unspecified interim period. The mission would be led by professional Palestinian technocrats and oversee the dispensation of humanitarian aid and the reconstruction process.

It is to be noted that Hamas has controlled Gaza since 2007.

The plan also envisages a stronger role for the Palestinian Authority, Palestine's governing body led by President Mahmoud Abbas, who has been in power since 2005. He stated his readiness to hold presidential and parliamentary elections under the right circumstances. The PA had controlled Gaza until Hamas took over in 2007, while its control of the occupied West Bank has shrunk with expanding Israeli settlement in the region.

Views of Israel on Plan

In a statement, the Israeli foreign ministry called the plan "rooted in outdated perspectives" and complained that it did not acknowledge the October 7, 2023 attack by Hamas or condemn the militant group.

According to Israeli estimates, Hamas's October 7 attack reportedly killed 1,200 and had over 250 people taken as hostages. Israel's retaliatory military onslaught has killed over 48,000 Palestinians, according to the local health ministry, and displaced Gaza's population almost entirely.

An Israeli official who spoke to Reuters said that the war aimed to destroy Hamas's military and governing and military capabilities, and pushed for the group to be demilitarised immediately.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

6. Why Vanuatu boasts one of the most popular 'golden passport' schemes

Introduction

Vanuatu, a South Pacific Ocean, has a popular citizenship by investment (CBI) or "golden passport" program, which allows wealthy individuals to purchase its passport. The CBI program of Vanuatu again came to limelight when Lalit Modi recently acquired citizenship of Vanuatu.



About Lalit Modi

Lalit Modi is an Indian-born Vanuatuan citizen and former cricket administrator. He was the founder, first chairman and League Commissioner of the Indian Premier League (IPL), and ran the tournament for three years until 2010.

Shortly after IPL 2010 ended, Modi was suspended from BCCI after being accused of misconduct, indiscipline and financial irregularities. BCCI launched an investigation against him, and banned him for life in 2013. Modi denied any wrongdoing, and blamed accusations

on political rivalries. Shortly before the Enforcement Directorate (ED) launched an investigation against him for alleged financial irregularities, he moved to London and was labeled a fugitive.

Buying citizenship

CBI or economic citizenship allows individuals to acquire citizenship in a country by making significant financial contributions to its economy. Countries around the world offer foreigners citizenship to attract investment and stimulate economic growth.

Vanuatu's program

Vanuatu's citizenship by investment program is the fastest and most simple citizenship program available. Very few documents are required, and all documentation can be provided digitally, meaning the applicant does not even have to set foot in the country to become a citizen.

The cost of Vanuatu citizenship ranges from \$135,500 to \$155,500 (Rs 1.18 cr to 1.35 cr), with options to also purchase citizenship for a family of four. Processing times vary from 30 to 60 days after the filing of the application. The passport sales account for roughly 30% of the country's revenue.

Specific advantages

Aside from the ease and speed of the process, Vanuatu's program provides some specific benefits.

● As of 2025, a Vanuatu passport allows visa-free entry to 113 countries. The Henley Passport Index ranks the Vanuatu passport as the 51st strongest in the world (out of 199 countries), ahead of Saudi Arabia (57), China (59), and Indonesia (64). India ranks 80th.

Vanuatu's passport was even stronger until March 2022 when the European Council temporarily suspended its visa-free access to the European Union due to security concerns around the golden passport scheme. The suspension was made permanent in February 2023.

● Vanuatu is, for all intents and purposes, a tax haven. It is a zero-tax jurisdiction that is free of personal income tax, capital gains tax, inheritance tax, and wealth tax. While Vanuatu does charge indirect taxes such as VAT, as well as tax on property transactions, rates are typically lower than other countries in the South Pacific.

Criticism

In recent years, Vanuatu has faced multiple corruption scandals and allegations that its citizenship scheme and tax laws are being used by global criminal syndicates.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

7. Story of 26/11 accused Tahawwur Rana, set to be extradited to India from US

Introduction

The United States Supreme Court recently rejected the plea of the 2008 Mumbai terror attack accused Tahawwur Hussain Rana against his extradition to India.



Rana, 64, had filed an "Emergency Application For Stay" after President Donald Trump approved his extradition following his meeting with Prime Minister Narendra Modi last month. Rana will be extradited on the basis of the India-US Extradition Treaty signed by the two countries in 1997.

Rana's story, from 2009

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

Rana was arrested in Chicago in October 2009 for his involvement in the 26/11 attacks and the foiled attack on Danish newspaper Jyllands Posten that same year.

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

Sentence in US: 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 7, 2013, Rana was sentenced to 168 months in prison.

Release and Arrest: On June 9, 2020, he was released on compassionate grounds. 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 a December 2019 extradition request.

Rana opposed his extradition on the ground of "double jeopardy". A Magistrate Judge rejected his arguments on May 16, 2023. Rana then petitioned the US District Court for the Central District of California for a writ of habeas corpus.

After this was rejected on August 10, 2023, he 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. After Trump announced his extradition last month, Rana filed the emergency application in a last-ditch attempt to stay in the US.

India-US extradition treaty

The treaty 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 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.

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.

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

The case in India

In 2011, the NIA completed its investigation of the Mumbai attacks and filed a chargesheet against Rana, Headley, and seven others. According to the case page on the NIA website, all nine have been charged with murder and conspiracy to wage war against the Government of India under the Indian Penal Code, 1860, along with charges of conspiracy to commit terrorist acts under the Unlawful Activities (Prevention) Act, 1967.

The charge sheet was filed before an NIA Special Court judge in Delhi, which declared the accused persons as absconding in 2014, and issued fresh arrest warrants.

The proceedings in India are stalled as the IPC does not allow a trial or conviction to take place in absentia, that is, without the accused present and available (though provisions for such a trial have now been introduced in the Bharatiya Nyaya Suraksha Sanhita, 2023).

If and when Rana does land in India, his trial can begin in earnest. An NIA team is waiting for a final go-ahead to fly to the US to take custody of Rana.

Other extraditions from US

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

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 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

8. Bitcoin as a US strategic reserve: Does it make sense?

Introduction

While central banks worldwide keep large reserves of the dollar and gold, until now, only one country — El Salvador — has created a strategic reserve of cryptocurrencies. Several governments do hold them, mostly seized from criminal activities or to circumvent international sanctions.

Recently US President Donald Trump signed an executive order to create a strategic reserve of bitcoin, having previously said he wants the United States to be a leader in digital money.

What do we know about Trump's plan?

Under Trump's order, the federal government will retain the nearly 200,000 bitcoin seized in criminal and civil proceedings. The US will not sell any bitcoin deposited into the Reserve. The executive order calls for a "full accounting" of the government's bitcoin holdings.

US agencies hold 198.109 bitcoins, worth around \$18.1 billion (€16.7 billion).

Most of the holdings are the seized proceeds of crime, including drug trafficking, money laundering, and hacking. The government also holds millions of dollars of seized ethereum, tether and other smaller digital coins.

What is a strategic reserve?

A strategic reserve is a stockpile of vital resources kept by governments or large organisations to provide a safety net during hard times.

Examples include the US Strategic Petroleum Reserve, which helps ensure a regular supply of oil during crises, food reserves, including stockpiles of grain, to protect against hunger, and the stockpiling of vaccines by the US and European Union during the COVID-19 pandemic.

Countries also maintain monetary reserves, like foreign currencies or gold, to stabilize their economies and facilitate trade. The US government, for example, holds around 8,133 metric tonnes of gold.

Increasingly, reserves of critical minerals needed for technology, the energy transition and defense are also being established.

Will a crypto stockpile work?

Proponents say a crypto strategic reserve could help financial stability by diversifying US national reserves beyond traditional assets like gold and foreign currencies.

Such a stockpile would also help legitimise cryptocurrencies, encouraging more financial institutions to hold them.

But some analysts think the value of the stockpile could vanish in a market crash. Other critics accused Trump of favoritism toward a highly speculative investment, without providing clear strategic benefits for the nation.

Some observers pointed to the contradiction between creating a government stockpile of an asset that is deemed anti-establishment. Bitcoin was originally designed as a way to bypass government and central bank control.

Others were worried that if more governments began stockpiling the likes of bitcoin, they could potentially start to manipulate the crypto market, just as they do with gold and currencies.

The gold price last month reached a record high of \$2,956, much of it down to large purchases by Poland, Turkey, India and China.

Trump now faces significant legal and political hurdles before the stockpile becomes a reality as the idea still lacks congressional support and as large amounts of the crypto seized by US authorities once had legitimate owners.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

9. Why Trump withdrew from the Iran nuclear deal in 2018, and why he wants to renegotiate now

Introduction

US President Donald Trump said that he has written to Iran's Supreme Leader Ali Khamenei about renegotiating a nuclear deal. "I've written them a letter, saying I hope you're going to negotiate, because if we have to go in militarily it's going to be a terrible thing for them," Trump said.



What happened earlier?

In 2015, the five permanent members of the UN Security Council, Germany, the European Union, and Iran signed the 'Joint Comprehensive Plan of Action' (JCPOA), more commonly known as the Iran nuclear deal. The Obama-era deal provided Iran with sanctions relief in return for Tehran severely limiting the scope of its nuclear program — Iran agreed to not enrich its uranium beyond 3.67%, a level suitable for peaceful nuclear power applications but

not for weapons production — and signing a roadmap agreement with the International Atomic Energy Agency (IAEA).

Trump unilaterally withdrew the US from the deal in 2018, during his first term as president.

Why did Trump withdraw from the deal in 2018?

Having deemed the JCPOA one of “the worst and most one-sided transactions” for the US. But the withdrawal was met with strong international backlash. The IAEA said that Iran was complying with JCPOA-linked restrictions and UNSC Resolution 2231.

This led to Iran, by 2019, beginning a significant roll-back of its commitments, even though it formally remained in the deal.

How has the deal fared since then?

The technical expiry of the JCPOA is in October 2025. But the European failure to lobby a US re-entry, new American sanctions, and Iran’s incremental rollback of its commitments in response has ensured the deal’s progressive weakening.

In recent times, the IAEA has repeatedly warned of Iran’s continued production of near-weapons-grade uranium.

Why would Iran re-enter?

By late 2024, the Iranian economy was in dire straits. Newly-elected President Masoud Pezeshkian said that the country faced “very dire imbalances in gas, electricity, energy, water, money and environment.”

This is likely the principal trigger for Iran’s openness to engage with the US. All this said, there remains a strong trust deficit between Washington and Tehran.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

10. Why has India promised to buy more U.S. oil?

Introduction

India committed to procure more oil and natural gas from the U.S. when Prime Minister Narendra Modi met U.S. President Donald Trump in February in Washington amid tariff threats. Foreign Secretary Vikram Misri said India’s energy purchases from the U.S. could increase from last year’s \$15 billion to \$25 billion in the near future.

What has India agreed on?

India is the world’s third-largest oil importer and consumer. For a country which relies on imports for more than 85% of its crude oil requirements, any step to secure hydrocarbon supplies is crucial. The country has promised to enhance oil and gas purchase from the U.S., which will bolster energy ties, and also help, to an extent, in achieving the ambitious doubling

of bilateral trade to \$500 billion over the next five years. At present, the bilateral trade is in India's favour. The statistics of the Office of the United States Trade Representative show that the goods trade deficit with India was \$45.7 billion in 2024.

What are India's needs on oil and gas?

India imported a total of 234.26 million tonnes of crude oil in 2023-24. Import dependence touched 87.8% against 87.4% in the previous financial year. Domestic production corresponds to less than 13% of the requirement, with domestic crude oil production remaining almost unchanged at 29.36 million tonnes last fiscal (2023-24). In volume terms, the imports were almost similar, but the import bill in 2023-24 declined year-on-year to \$133.37 billion on the back of lower international rates. In 2022-23, the oil import bill was \$157.53 billion.

Additionally, India spent \$22.93 billion on the import of 48.69 million tonnes of petroleum products like LPG, fuel oil and petcoke. It also exported 62.59 million tonnes of products for \$47.72 billion.

India also imports LNG. In 2023-24, the country imported 31.80 billion cubic metres (bcm) for \$13.405 billion. In recent years, the U.S. has emerged as one of the largest suppliers of LNG to India.

What are India's plans on LNG?

The IEA, in its India Gas Market Report: Outlook to 2030, says the country's gas consumption is set to reach 103 bcm annually by the end of the decade. Emerging from a decade of slow growth and periodic declines, the country's natural gas demand increased by more than 10% in both 2023 and 2024, indicating an inflection point. India's domestic gas production, which met 50% of demand in 2023, is projected to grow, reaching just under 38 bcm by 2030.

Broadly, what is India's energy roadmap?

The government is pursuing a multi-pronged strategy to reduce import dependency and substituting demand for crude oil. It is also pushing renewable and alternative fuels such as ethanol, compressed biogas and biodiesel, alongside the establishment of electric vehicle charging infrastructure.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Hindu

11. Over 1,000 killed in Syria in two days: Who is fighting whom, and why

Introduction

More than 1,000 people have been killed in Syria amid clashes between anti-government groups and security forces and a spate of "revenge killings", in one of the deadliest episodes of violence in the country since its civil war erupted 14 years ago.

In December, Syria's long-time leader Bashar al-Assad was unseated by rebel groups. The violence coming months after has cast a shadow on the hopes of a stable future for Syria. Who is fighting whom now, and why?



Distrust among Groups

Bashar al-Assad belongs to the Alawite community, a Shia sect of Islam. The Alawites, a minority, had dominated government posts under Assad, and are still loyal to him.

The group that has come to power after his fall, Hayat Tahrir al-Sham (HTS), is an al-Qaeda offshoot. Alawites and other Syrian minorities, such as Christians and the Druze, fear they will face persecution under this hardline Sunni regime, although interim President Ahmed al-Sharaa has pledged to carry everyone along.

What has happened in the past three days?

On March 6, pro-Assad militias attacked government forces in the coastal area of Jableh, dominated by Alawites. The militias targeted security patrols and checkpoints, killing 13 personnel.

In the government crackdown that followed, scores of civilians were killed. The government forces were joined by armed Sunni fighters, who are reported to have targeted and killed Alawite people in revenge for atrocities under the Assad regime.

Why has Syria been in the middle of a civil war?

From 1971, Syria was in the control of Hafez al-Assad, Bashar's father and all-powerful President, seen by many as a dictator. Bashar took over in 2000 after Hafez died. In 2011, when the Arab Spring saw dictators being toppled across West Asia, protests began against Assad too.

Many in Syria believed that while Sunnis were the majority, power and resources were concentrated in the hands of the Alawites. After coming to power, Assad had opened up the economy, but the gains had largely been limited to the elites. Thus, when protests began — initially peacefully — price rise and unemployment were among the major issues.

Assad's regime cracked down on the protesters, and the agitation soon spiralled into armed civil war.

Relevance: GS Prelims & Mains Paper II; International Issues

Source: The Hindu

12. As Prime Minister Modi lands in Mauritius, why the island country matters to India

Introduction

Prime Minister Narendra Modi is in Mauritius for a two-day State visit, his second since 2015. He is the Chief Guest at Mauritius' National Day Celebrations on March 12.

Close ties with India

Mauritius, a strategically located island nation in the western Indian Ocean, is an important neighbour for India. A key reason for the special ties is that people of Indian-origin comprise nearly 70% of the island's population of 1.2 million.

Mauritius was once a French colony, before being taken over by the British. Under the nearly century-long French rule (in the 1700s), Indians were first brought to Mauritius from the Puducherry region to work as artisans and masons. Under British rule, about half a million Indian indentured workers came to Mauritius between 1834 and the early 1900s. About two-thirds of these workers settled in Mauritius.



National Day

The National Day of Mauritius has an interesting Indian connection. Mahatma Gandhi had briefly stopped in Mauritius on his way to India from South Africa in 1901. He inspired the Indian workers in Mauritius for their rights and welfare. As tribute to Gandhi, the National Day of Mauritius is celebrated on March 12, the date of the Mahatma's Dandi march.

History of ties

Mauritius was among the first few countries with which independent India established diplomatic relations in 1948. Since its independence from the British in 1968, Mauritius has mainly been ruled by two major political families, the Ramgoolams (Seewoosagur Ramgoolam and his son, Navin) and the Jugnauths (Anerood Jugnauth and son, Pravind). Navin Ramgoolam, who won the elections last year, has been the PM of Mauritius twice before (from 1995 to 2000, and from 2005 to 2014).

His father led the country's freedom struggle and was the first PM of independent Mauritius. He worked closely with many Indian freedom fighters, including Gandhi, Jawaharlal Nehru, and Sarojini Naidu. He had strong links with Netaji Subhash Chandra Bose and even proofread one of Bose's books, *The Indian Struggle* (1934).

Ties today: Infra, China factor

In March 2015, when PM Modi visited Mauritius, India signed a Memorandum of Understanding to improve transport facilities at Agaléga island.

Agaléga island is located 1,100 km north of Mauritius and is closer to the Indian southern coast. It is spread over an area of 70 sq km. In February 2024, India and Mauritius jointly inaugurated the air strip and the jetty projects.

For India, China's increasing footprint in the Indian Ocean region has been a cause of concern. It thus wants to work closely with island countries like Mauritius.

Trade

India is amongst the largest trading partners of Mauritius. Mauritius is the second largest source of Foreign Direct Investment (FDI) into India for FY 2023-24, after Singapore. Mauritius and India signed the Comprehensive Economic Cooperation and Partnership Agreement on February 22, 2021, after nearly 15 years of negotiations. It is the first trade agreement signed by India with an African country.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

13. Why former Philippine President Rodrigo Duterte was arrested

Introduction

Former Philippine President Rodrigo Duterte was arrested on a warrant issued by the International Criminal Court (ICC), which was investigating allegations that "crimes against humanity" were committed during his so-called "war on drugs".

Allegations against Duterte

Duterte became President of Philippines in 2016. During his six-year term, which ended in 2022, more than 6,000 suspects were killed by police or unknown assailants as part of his "war on drugs" campaign. A UN report subsequently revealed that most of the victims were young, poor urban males, and that the police who do not need search or arrest warrants to conduct

house raids, systematically forced suspects to make self-incriminating statements or risk facing lethal force.



The ICC

Headquartered in The Hague, Netherlands, the ICC was established on July 17, 1998, under the Rome Statute, an international treaty, and came into force in July 2002. The international court aims to help “end impunity for the perpetrators of the most serious crimes of concern to the international community.”

ICC is composed of 18 judges who are elected by the member states and serve 9-year, non-renewable terms.

As of January 2025, 125 countries are party to the Rome Statute, including Britain, Japan, Afghanistan,

and Germany. India, China, and the United States are not members.

Crimes that ICC focuses on

The ICC has international jurisdiction over four types of crimes: crimes against humanity, genocide, crimes of aggression, and war crimes. It can step in when countries are unwilling or unable to prosecute suspects for these crimes.

Notably, the court, which prosecutes only individuals, does not have its own policing body and relies on other countries for support in making arrests, transferring arrested persons to the ICC detention centre in The Hague, freezing suspects’ assets, and enforcing sentences.

Additionally, the offences should be committed either in a country that ratified the Roman Statute or by a national of a ratifying country. The ICC can also practise its jurisdiction over cases referred by the UN Security Council to it.

Relevance: GS Prelims; International Organisations

Source: Indian Express

14. Mark Carney: Canada’s New Prime Minister and Liberal Party Leader

Who is Mark Carney?

Mark Carney, a former central banker, has been elected as the leader of Canada’s Liberal Party with 86% of the vote. He now takes over as Prime Minister, following Justin Trudeau’s resignation in January.

Challenges Facing Canada

Carney steps into leadership during a tough time for Canada. The country is dealing with a major trade war with the United States. Under President Donald Trump, the US has imposed tariffs on Canada and even made threats to absorb it as the "51st state."

Why Did Trudeau Step Down?

After leading for 10 years (2 consecutive terms), Justin Trudeau faced declining popularity due to rising unemployment, inflation, and a housing crisis. Internal pressure within the party also mounted, with party members calling for his resignation. The situation worsened when the New Democratic Party (NDP) withdrew from the minority coalition government.

Upcoming Elections

Canada's next parliamentary election is officially due by October 2025, but it may be called earlier.

Impact on Politics

Before Carney's victory, the Conservative Party, led by Pierre Poilievre, was expected to win easily. However, Carney's leadership could change the game, potentially securing an unprecedented third term for the Liberals.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: The Hindu

15. Behind train hijacking in Pakistan, history of Baloch insurgency and a spate of recent attacks

What happened on Tuesday?



The Jaffar Express runs from Quetta, the capital of Balochistan, to Peshawar in the north. The train comprised nine coaches and had around 500 passengers on board. The train was stopped by armed men, insurgents of the Balochistan Liberation Army (BLA).

The BLA has claimed that civilian passengers, particularly women, children, the elderly, and Baloch people, "were released safely". Those taken hostage include active-duty personnel from the Pakistani Army, the Inter-Services Intelligence and Anti-Terrorism Force, all of whom were travelling on leave.

What is the BLA?

The BLA emerged in the early 2000s, aimed at achieving Baloch independence. Pakistan banned the organisation in 2006 and the US designated it as a global terrorist organisation in 2019. The State Department then described it as "an armed group that targets security forces and civilians, mainly in Baloch areas of Pakistan."

What is behind the Baloch insurgency?

Lack of Economic Development: Balochistan is the largest but least populated of Pakistan's four provinces – Balochistan, Sindh, Punjab and Khyber Pakhtunkhwa. It has substantial oil and gas reserves, alongside gold and copper deposits, but has lagged in terms of economic growth compared to other regions.

Many members of the ethnic Baloch minority have long criticised the central government for the region's economic backwardness, as well as the domination of Punjab over the country's resources. Punjabis are also overrepresented in the military, the bureaucracy and in industries.

Demand for Autonomy: Some have also questioned the terms of the province's inclusion in the State of Pakistan, following independence from colonial rule. Balochistan remained independent until March 1948 under a friendship treaty with Pakistan, but the local ruler faced great political pressure. For one, the British were wary of the Russians extending their geopolitical influence if it remained independent. Further, there were demands in some parts to accede to Pakistan. He thus signed the instrument of accession, but demands for independence have continued in Balochistan.

Relevance: GS Prelims; International Relations

Source: The Hindu

16. The story of Chagos, the Indian Ocean archipelago that Mauritius claims, UK controls

Introduction

Ahead of Prime Minister Narendra Modi's two-day visit to Mauritius this week, India affirmed its support for the island country's claim over the Chagos archipelago.

Chagos has long been the subject of a dispute between Mauritius and the UK, which held on to these islands for decades after granting independence to Mauritius in 1968.

It was only last year that London officially recognised Mauritius' sovereign rights over all of Chagos, although it retained control over Diego Garcia, the largest island in the archipelago and home to a strategically important joint UK-US military base.

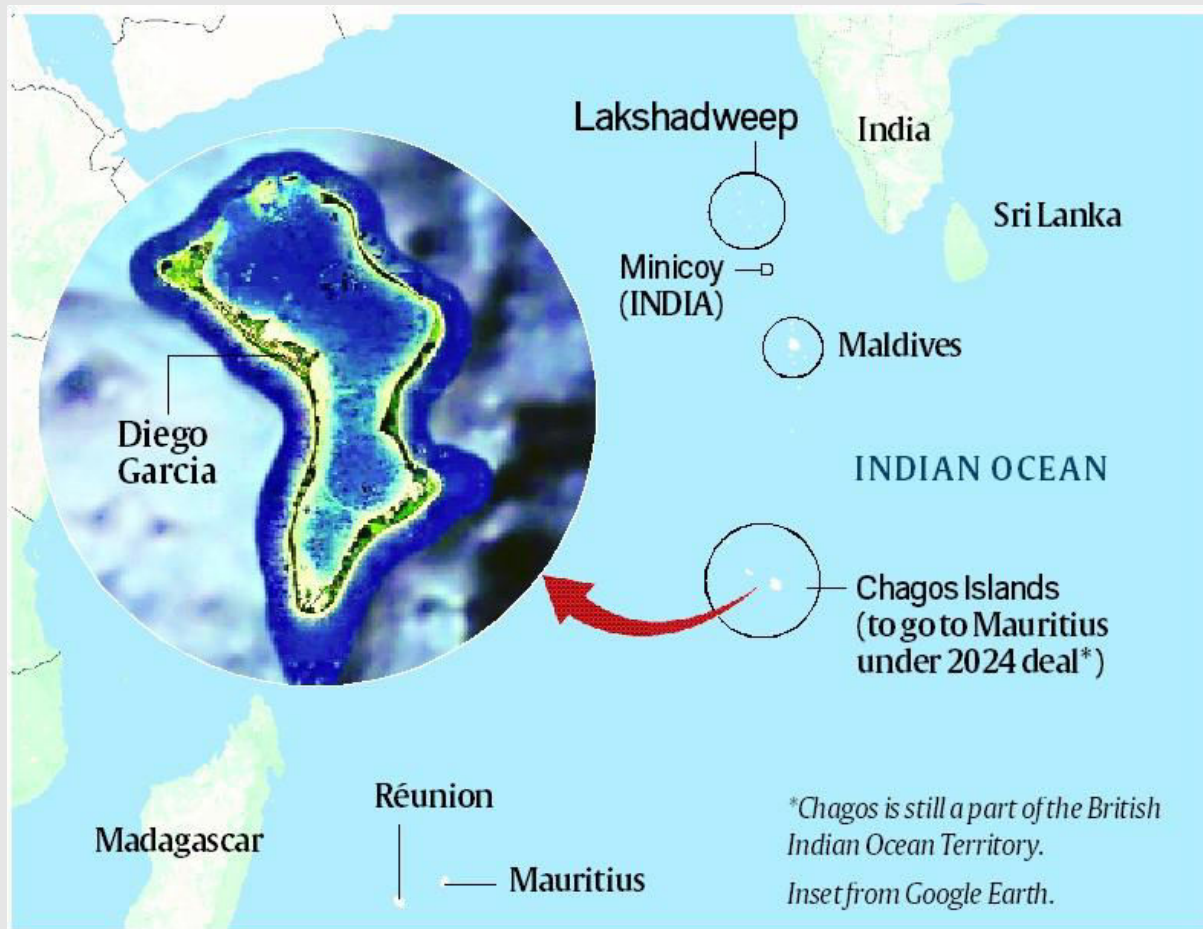
The deal — which awaits final confirmation from Washington — has its critics not only in the US and the UK, but also in Mauritius, and among native Chagossians.

Chagos & Chagossians

The Chagos archipelago comprises more than 60 low-lying islands in the Indian about 500 kilometres (310 mi) south of the Maldives archipelago.

Chagos has a land area of only 56.1 sq km, with Diego Garcia alone spread over 32.5 sq km — which is about the same as the land area of Lakshadweep.

Chagos was uninhabited for most of its history. But it was only in the 18th century that the first permanent settlements emerged on the islands. The Chagossian population today traces its origins to freed African slaves, and the Indian and Malayan labourers who arrived in the 18th and 19th centuries. Under international law, they are the indigenous people of the Chagos archipelago.



BIOT & Diego Garcia base

After a decades-long struggle for self-determination, Mauritius became independent on March 12, 1968. But Britain kept control of Chagos, which had administratively been under the government in Port Louis for more than a century.

In 1965, the UK had created a new administrative entity — the British Indian Ocean Territory (BIOT) — which included the Chagos islands from Mauritius. The BIOT was meant to provide the British (and by extension their Cold War allies, the Americans) with an overseas base in the Indian Ocean. Mauritius was paid a settlement of 3 million pounds for the detachment of Chagos.

In 1966, the UK and the US signed a secret agreement to establish a military base in Diego Garcia. The agreement included a provision that barred civilians from staying on the islands.

The Diego Garcia base became fully operational in 1986, in time to serve as a hub for American air operations in the Gulf War of 1990-91. It also served this purpose in the subsequent American wars in Iraq and Afghanistan. Today, it is a crucial British-American outpost from which the two countries project power across Asia and the Indian Ocean, where China has become increasingly assertive.

The 2024 agreement

Mauritius had long claimed sovereignty over the Chagos islands, and raised the “illegal” British occupation at various international fora.

In 2017, the UN General Assembly voted to ask the International Court of Justice to examine the legal status of the archipelago. In 2019, the ICJ concluded that “the UK is under an obligation to bring to an end its administration of the Chagos Archipelago as rapidly as possible”.

The UNGA subsequently adopted a resolution welcoming the ICJ’s ruling, and demanded that the UK “unconditionally withdraw its colonial administration from the area within six months”.

But negotiations between the UK and Mauritius began only in 2022. A deal was struck in October 2024. Britain recognised Mauritius’ claim over all of Chagos, including Diego Garcia — however, the deal said that the UK would, for a 99-year initial period, exercise “the sovereign rights [over Diego Garcia] and authorities of Mauritius are required to ensure the continued operation of the base well into the next century”.

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

17. PM receives the highest Civilian Award of Mauritius at the National Day Celebrations

Introduction

Prime Minister Shri Narendra Modi attended the 57th National Day celebrations of the Republic of Mauritius as the Chief Guest. During the National Day celebrations, an Indian Navy marching contingent participated in the parade.

Highest civilian award of Mauritius

During the celebrations, President of the Republic of Mauritius H.E. Mr. Dharambeer Gokhool conferred the Grand Commander of the Order of the Star and Key of the Indian Ocean (G.C.S.K) award, the highest civilian award of Mauritius, on Prime Minister Modi. This is the first time that an Indian leader is receiving this honour.



INDIA'S PM MODI RECEIVES HIGHEST CIVILIAN AWARD OF MAURITIUS

Relevance: GS Prelims; International Relations

Source: PIB

18. Global intelligence chiefs converge in Delhi meet



Fourth conference of global intelligence and security chiefs

Global challenges and intelligence-sharing mechanisms, as well as immigration and extradition, were among a host of issues discussed at the fourth conference of global intelligence and security chiefs hosted by National Security Adviser Ajit Doval. The meeting had over 28 attendees, according to official sources.

Participation

Around 20 countries were represented at the conference. The chiefs of the Five Eyes countries, comprising Australia, Canada, New Zealand, the United Kingdom, and the U.S., were all present.

The visit of Canadian spy chief Daniel Rogers has come as India looks to reset its with Ottawa after a deep freeze in bilateral relationship over Hardeep Singh Nijjar murder case.

About the Conference

The conference is organised by the country's external intelligence agency, the Research and Analysis Wing (RAW) and the National Security Council Secretariat (NSCS) that reports to Mr. Doval.

The meet was held for the first time in April 2022 a day before the start of the Raisina Dialogue, India's flagship conference on geopolitics and geo-strategy, organised by the Ministry of External Affairs in collaboration with the Observer Research Foundation. This year annual three-day Raisina Dialogue is scheduled from March 17 to 19.

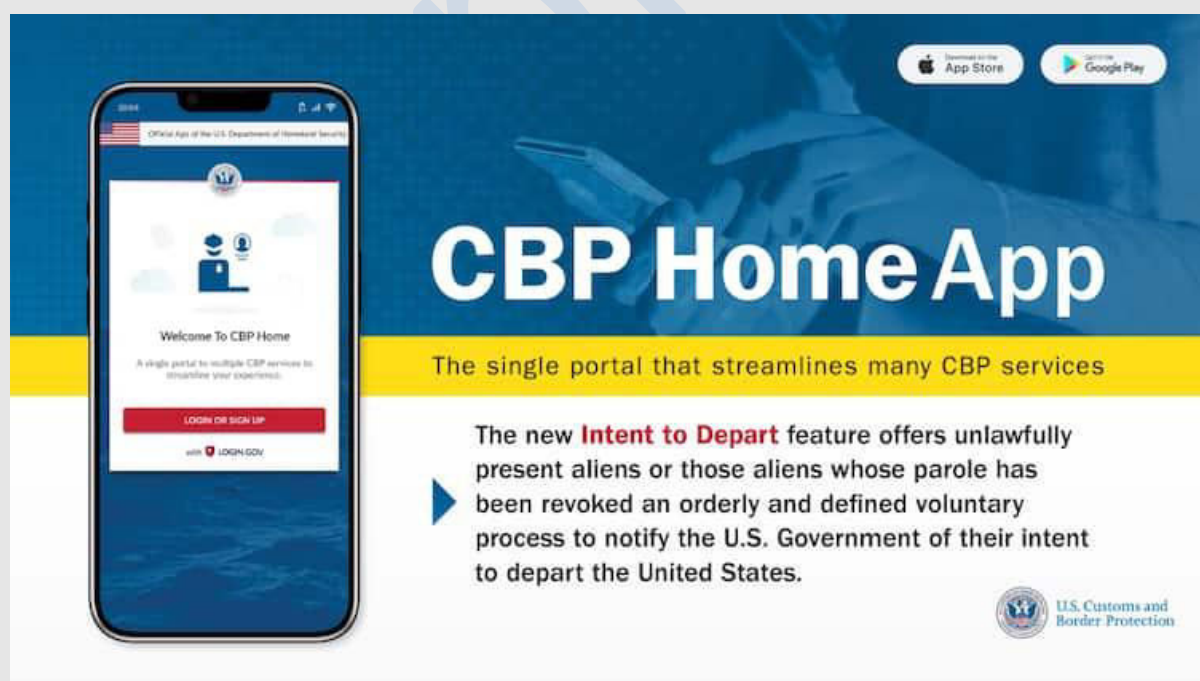
Relevance: GS Prelims; International Organisations
Source: The Hindu

19. Why the US wants undocumented immigrants to 'self-deport'

Why now?

An Indian doctoral student "self-deported" from the US recently. Her F-1 student visa revoked for allegedly "advocating for violence and terrorism" and supporting Hamas. Fearing action by the authorities, she voluntarily left the country using the self-deportation feature in the newly-launched Customs and Border Protection (CBP) Home App.

A part of President Donald Trump's crackdown on immigration, self-deportation is pegged by US authorities as the safest option for undocumented immigrants, one that allows them to exit the country voluntarily without facing legal action.



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Official App of the U.S. Department of Homeland Security

CBP Home App

The single portal that streamlines many CBP services

The new **Intent to Depart** feature offers unlawfully present aliens or those aliens whose parole has been revoked an orderly and defined voluntary process to notify the U.S. Government of their intent to depart the United States.

U.S. Customs and Border Protection

What is the self-deport feature?

The Department of Homeland Security (DHS) re-launched the CBP Home App — it was originally launched as the CBP One App in 2020, whose functionality was expanded in 2023, but taken offline by the Trump administration soon after he was sworn in — with a new self-deportation reporting feature.

This allows those living illegally in the US to officially submit “their intent to depart”, and then leave the country voluntarily, without facing legal action. Authorities will track the departure, with users also required to upload information to verify their exit.

Why was the feature introduced?

With ads beaming across media platforms, warning undocumented individuals living in the US to voluntarily leave to avoid stricter action, the feature is meant to give people an easy out. This would also save millions of dollars of US taxpayers’ money, which would otherwise go into holding individuals in detention and then deporting them.

Since Trump entered the White House, several military planes have been sent all over the world — including three to India — to deport those staying in the US without necessary documentation. Sending shackled deportees on military planes and chartered flights was a statement of Trump’s intent.

What are the concerns with this feature?

In 2023, the Joe Biden administration had launched a similar self-reporting feature on the CBP One App, although that was primarily meant for those seeking asylum to register themselves. The CBP One app allowed non-citizens without appropriate documents to upload relevant information on the app, thus streamlining their application for entry into the US.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

20. Alien Enemies Act

Why Now?

US President Donald Trump signed an executive order recently, ordering the removal of hundreds of Venezuelans from the United States for their alleged links to a designated Foreign Terrorist Organisation named Tren de Aragua. In doing so, Trump invoked the centuries-old Alien Enemies Act.

What Does the Alien Enemies Act Say?

The Alien Enemies Act of 1798 Act empowers the US President to order “all such aliens as he shall judge dangerous to the peace and safety of the United States, or shall have reasonable grounds to suspect are concerned in any treasonable or secret machinations against the government” to be deported.

Media reports say Trump has cited it because, unlike a more conventional path, it would allow him to bypass immigration courts – where those accused of violating immigration law can argue their case. Relief is also granted in certain cases (such as asylum).



Why is the Invocation Contentious?

Because of the context in which it is now being used. The Act has been previously invoked thrice, all during wartime – the War of 1812 between the US and the UK, World War I, and World War II. The law was previously used for detentions, expulsions and restrictions that targeted German, Austro-Hungarian, Japanese, and Italian immigrants based solely on their ancestry.

Apart from direct conflict, it can also be invoked against an attempted or threatened “invasion or predatory incursion” by any foreign nation or government. When questioned about the timing of his invocation by the press, Trump said, “This is a time of war,” describing the influx of criminal migrants as “an invasion.”

Relevance: GS Prelims; International Relations

Source: Indian Express

21. Can Donald Trump undo Biden-era presidential pardons allegedly signed with ‘autopen’?

Introduction

US President Donald Trump recently declared that pardons signed by his predecessor Joe Biden were “void, vacant and of no further force and effect” because they were signed with an autopen.

What is an autopen and is its use contentious? Can Trump really void past presidential pardons?

First, what is an autopen?

An autopen is essentially a printer-size machine that duplicates signatures using real ink, allowing public figures to autograph thousands of items, from posters to memorabilia. The

machine has an arm that can hold a standard pen or pencil and can reproduce the programmed signature on paper.



Have autopens been used by Presidents before?

The device is not a new concept. With progress in technology, a robot arm could be used to duplicate a signature without user involvement. The documents recognise Harry Truman as the first President post World War II to use an autopen in office.

More recently, Barack Obama courted controversy in 2011 when he used the autopen to sign an extension of the Patriot Act while attending the G8 summit in France. He did this again in 2013, using an autopen to sign the Fiscal Cliff Bill, while he was on holiday in Hawaii.

Why has Trump targeted Biden's pardons?

The issue was raised by the conservative thinktank, Heritage Foundation, responsible for the Project 2025 conservative policy wishlist. The foundation's Oversight Project tweeted last week that it had analysed thousands of pages of documents with Biden's signatures, including pardons, which it claimed was signed by an autopen.

The president then picked up on conservative media outlets amplifying these claims.

The pardons themselves have long been a bone of contention for Trump. As the outgoing president, Joe Biden had issued a series of pre-emptive pardons for the committee that prosecuted the rioters who stormed the US Capitol on January 6, 2021. In a statement, he then justified this action, saying these persons were being "threatened with criminal prosecutions" by Trump, and that he "cannot in good conscience do nothing." Trump called this committee "the Unselect Committee of Political Thugs".

And can Trump overturn Biden's pardons?

Quite simply, no. According to the US Constitution, the President does not have the authority to overturn a predecessor's pardons.

Article II Section 2 of the Constitution simply says that the President "shall have Power to grant Reprieves and Pardons for Offences against the United States, except in Cases of Impeachment."

This is boosted by a 2005 Department of Justice (DoJ) memo, which says the President need not "personally perform the physical act of affixing his signature to a bill he approves and decides to sign" into law. He may "sign a bill within the meaning of Article I, Section 7 by directing a subordinate to affix the President's signature to such a bill, for example by autopen."

Further, a 1929 DoJ opinion said that "neither the Constitution nor statute prescribed the method by which executive clemency shall be exercised or evidenced. It is wholly for the president to decide."

Then what can Trump do?

According to legal experts, if Trump were to try and prosecute anyone pardoned by Biden, the case would likely be taken to court and ruled against him.

However, the President seems intent on subjecting the pardoned person to the tedious legal process regardless of the clemency they were awarded.

Relevance: GS Prelims; International Issues

Source: Indian Express

22. Significance of Donald Trump's funding cuts to Voice of America & Radio Free Asia

Introduction

US President Donald Trump announced significant spending cuts for several government agencies in an executive order recently, under his stated goal of making the bureaucracy more efficient. The resulting gutting of two publicly funded media organisations, Voice of America (VOA) and Radio Free Asia (RFA), marks a notable break from decades of US policy, with ramifications for its relationship with the rest of the world.

It has also drawn a positive response in China, a country which both organisations extensively covered.

Voice of America and Radio Free Asia

VOA and RFA have historically played important roles in keeping the world abreast of US policies and perspectives, as well as providing news in countries lacking a free press, respectively.



VOA was set up in 1942 to broadcast American views and counter Nazi propaganda during World War 2 (1939-45). It is now the largest US international broadcaster, providing news in nearly 50 languages to an estimated weekly audience of more than 354 million people.

Meanwhile, Radio Free Asia went on air for the first time in 1996, broadcasting into China in Mandarin. RFA has today expanded to languages such as Tibetan, Korean, Burmese, Vietnamese, Khmer, Lao, Cantonese and Uyghur. In many countries with autocratic regimes and a restricted media landscape, RFA broadcasts are seen as important sources of local news. It has an audience of around 60 million, with many listeners bypassing restrictions imposed by governments to access it.

VOA and RFA are part of the US Agency for Global Media (USAGM), the government agency that oversees all non-military, US international broadcasting. Funded by the US Congress, it was mentioned in Trump's order alongside some other agencies. According to its website, VOA and RFA have annual budgets of \$267.5 million and \$63 million respectively.

What is the significance of Trump's move?

Across the world, the two organisations have helped the US broaden the reach of its policies and ideals through the means of soft power. Simultaneously, the global presence of reporters and bureaus provided the US direct information about the state of the world and prevailing politics.

For example, RFA has an extensive Chinese-language service and frequently reports on human rights issues, including the detention of activists and repression of ethnic groups in Xinjiang and Tibet. VOA also has a Chinese-language website that often publishes stories not covered by Chinese media. Backed by the Communist Party, Chinese media does not critically report on its government.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

23. Mar-a-Lago Accord and dollar devaluation

Why Now?

The US posted an over \$1 trillion trade deficit in 2024. In other words, the total value of goods imported (from the rest of the world) by the US was \$1 trillion more than the value of the goods exported (to the rest of the world) by the US. Further, 2024 was reportedly the fourth consecutive year when the US clocked a trillion-dollar trade deficit.

This weakness in trade is not a new thing for the US; indeed, the US has run a trade deficit for decades, albeit not always this large.

How to become a manufacturing giant, reduce deficit?

There are two main ways in which Trump could have gone about these goals.

1. Slap punitive tariffs on all its trade partners.

Either the higher prices of imports will reduce the demand for imports, thus bringing down the deficit or it would force foreign companies to set up manufacturing inside the US, thus boosting domestic manufacturing and reducing deficits.

This is the approach Trump has been following but as the events of the past few weeks have shown, it could lead to several undesirable outcomes as well.

For one, even if the foreign nations don't retaliate, costlier imports are costlier for US citizens, not the foreign citizens or companies.

If the tariffed nations retaliate and start a full-fledged tariff war, the hurt becomes manifold and is spread all around with everything becoming more costly and supply chains being disrupted.

2. The US convinces the other countries to allow the dollar to lose value (devalue) relative to other currencies.

Imagine a scenario where other countries sold the dollars that they had in the open market and bought up their own currencies from the market. Dollar's supply in the market will rise and its relative value (exchange rate) will fall. A cheaper dollar will allow US exporters to get back into the game.

This may sound too good to be true but it has happened in the past. In 1985, the US signed the Plaza Accord — named after the Plaza Hotel in New York that was the venue — with the other top economies of that time: Japan, Germany, France and the UK (the G-5).

In a coordinated manner, the exchange rate of the dollar was brought down sharply. The US exchange rate is again reaching very high levels and that explains the chorus for some kind of remedy.

The rumoured Mar-a-Lago Accord essentially refers to a Plaza Accord-like agreement that Trump may sign at a later stage.

Why G-5 signed the Plaza Accord

A fall in the US exchange rate meant a rise in the exchange rates of all the other currencies (German Mark, Japanese Yen, British Pound, French Franc).

These countries knew that a high exchange rate would immediately hurt their exports competitiveness but the US convinced them to accept dollar devaluation as against facing the uglier option: High tariffs — something that Trump is doing now.

The fact is that in the run up to the Plaza Accord of 1985, US dollar had strengthened to historic high, and the US Congress was on the verge of legislating deeply protectionist measures such as tariffs. That would have been bad for all concerned. So the rest of the G5 decided to swallow a bitter pill in the short term in the hope that it will allow for free flow of trade in the longer term.

APOLLO

What is the Mar-a-Lago Accord?

The US gives the rest of the world: <ol style="list-style-type: none">1. Security2. Access to US markets/US consumers	The US gets from the rest of the world: <ol style="list-style-type: none">1. A weaker dollar2. A bigger manufacturing sector3. Existing US Treasury debt swapped to new Treasury century bonds
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Two tools to achieve such an outcome:

1. Tariffs to grow the US manufacturing sector and to exert pressure on countries to sign the Mar-a-Lago Accord
2. A US sovereign wealth fund that can be used to buy foreign currencies to depreciate the dollar

Mar-a-Lago Accord: How likely?

Far more difficult than 1985. Unlike 1985, there are far more countries involved today. The G-5 has given way to G20.

Even more crucially, the nature of alignment has changed. In 1985, US's trade adversaries (Germany and Japan) were its military allies. Today, its trade adversary is China, which is also its chief military adversary.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

24. Death sentences to Indian nationals abroad and the role of Indian government in seeking their commutation

Introduction

On March 3, the Ministry of External Affairs (MEA) informed that the execution of Shahzadi Khan, an Indian national sentenced to death in the UAE for the alleged murder of an infant, was already carried out. The Ministry's confirmation came as a response to a petition filed by her father Shabbir Khan. In less than a week, the Ministry confirmed that two more Indian nationals, convicted in separate cases, were also executed in the UAE.

SHE WAS PRESSURED: DAD; DID OUR BEST: GOVT

➤ MEA said **Shahzadi Khan (pic)**, was handed over to Abu Dhabi police on Feb 10, 2023, and was sentenced to death on July 31, 2023. Since then, she was lodged in Al Wathba jail

➤ **Father's Petition In Court:**



Shahzadi's father Shabbir Khan, a resident of UP's Banda, claimed she was inadequately represented in local courts & that she was pressured into confessing to murder

CENTRE'S RESPONSE

“ We did our best. We hired a law firm there to represent her in court. But the laws there treat the death of an infant very severely — **Addl SG**

“ Embassy provided all possible legal assistance to her, including sending mercy petitions & pardon requests to UAE — **MEA**

How many are on death row abroad?

As per the data disclosed by the MEA in Rajya Sabha on March 20, a total of 49 Indians are currently on death row. The number of Indians awarded death sentences by foreign courts is the highest in the UAE with 25 Indian nationals awaiting their sentences, followed by 11 in Saudi Arabia.

What has been India's response?

The MEA, in its reply to the Rajya Sabha, mentioned that Indian Missions abroad provide all possible assistance to Indian citizens sentenced by foreign courts.

Explaining the MEA's approach to such cases, Talmiz Ahmad, India's former Ambassador to Oman, the UAE, and Saudi Arabia, said, "There are three processes. First is the arrest and the indictment by the police authorities. Second is the prolonged judicial process. There is a third element — pardon by the ruler or the head of the state. When you say someone is on death row, it means the first and second processes have been completed. The judicial process has been completed and the judge has pronounced that sentence. After that, the only thing that is available to the embassy or the person concerned is to appeal to the ruler." The appeal for pardon is made by a family member of the accused and if the family is located in India, they

are guided to submit the petition. The Indian embassy then forwards the petition to the foreign office requesting that it be brought to the ruler's attention.

In many Gulf countries, sentences can also be commuted in exchange for blood money. Blood money refers to the compensation paid to the victim's family as an alternative for retribution. But, it has to be accepted by both the state and the aggrieved family. In some cases, the state may refuse to commute the sentence in exchange for blood money based on the nature of the crime.

Can the embassy do more?

Death sentences are given in very exceptional cases such as murder, rape and treason. In countries which have authoritarian systems with nearly non-transparent judicial processes such as Saudi Arabia, the Indian embassy is not informed about the arrest or judicial processes or the pronouncement of the death sentence. The Embassy receives a formal note about the details of the Indian national only after the execution. The embassy's role is further limited when the accused confesses to the crime — circumstances of which often remain unknown. On the other hand, in countries with relatively open judicial systems, the embassy can nominate a lawyer. Whenever required, it also uses welfare funds to provide legal services to those who need it.

Has India intervened successfully in the past?

The government has successfully intervened in several cases. In February last year, eight Indian navy veterans who were sentenced to death by the Qatari government were released following the Indian government's diplomatic efforts and appeals at a higher court. Gurdip Singh, an Indian national arrested on charges of drug trafficking in Indonesia, was sentenced to death in 2005 by the Tangerang court. Singh's appeal was turned down by the High Court of Banten and later the Supreme Court. However, he was spared due to the Indian government's intervention.

Relevance: GS Prelims & Mains Paper II; Indian Diaspora

Source: The Hindu

25. Behind Nepal's violent street protests: popular discontent with corruption

Why in News?

A monarch driven out of his throne 19 years ago has suddenly turned into a rallying point for citizens angry and frustrated with the system, the constitution, and the leaders at the helm in the democratic republic of Nepal.

Recently, the army was called out as supporters of the restoration of the constitutional monarchy swarmed the streets of Kathmandu, outnumbering the attendees of a rally of the Left Front, and clashing violently with police.

Three individuals were killed, and 110 arrested. At a meeting of the cabinet late in the evening, at least one prominent minister asked for the arrest of former King Gyanendra Shah.

But Prime Minister K P Sharma Oli was in favour of caution in view of warnings from security agencies about the likely fallout of harsh action.



16 years on, why thousands in Nepal are calling for return to Hindu monarchy under an ousted king

Genesis: The King's call

The former King has not given any clear indications of his desire to return. He has confined his activities to issuing messages expressing concern over the state of affairs in Nepal, the worsening economic scenario, and the flight of youths abroad in search of livelihood opportunities.

However, he has remained in constant touch with the people, and has mingled with them during pilgrimage tours in the country, and occasionally to India – perhaps trying to assess the extent of the support for him on the ground.

Street violence and arrests

Two former Prime Ministers, Pushpa Kamal Dahal Prachanda of the Maoist Centre and Madhav Kumar Nepal of the United Socialists, warned Shah not to dream of reclaiming the throne, and advised Prime Minister Oli to arrest him.

Police, who had taken up positions at a private house, dealt a harsh hand to the royalist rally. The mob attacked the party offices of Prachanda and Madhav Nepal after they demanded the arrest of the former king. Following the cabinet meeting in the evening, police put Subedi under house arrest, and arrested three other stalwarts of the movement, Dhawal Shumsher Rana, Rabindra Mishra, and Swagat Nepal.

Anger against corruption

The public unrest and anger against widespread corruption and the mega scams in which almost every Prime Minister and senior politician is boiling over.

It has been a practice since 2006 to grant immunity to politicians against investigation if a "policy decision", which is essentially a decision by the cabinet, is taken to that effect.

Prime Minister Oli faces a contempt case in the Supreme Court for violating its order against converting a tea estate into commercial plots.

Three other former PMs, Madhav Nepal (2009-11), Baburam Bhattarai (2011-13), and Khil Raj Regmi (2013-14), are accused of making money in scams to give government land to private individuals.

Complaints are pending against three-time PM Prachanda for allegedly making billions by diverting money meant for Maoist guerrillas when they were kept in UN-monitored cantonments during the peace process that began in late 2006.

Five-time PM Sher Bahadur Deuba is accused of taking illegal commissions in the purchase of aircraft, and his wife Arzu Rana Deuba, currently the foreign affairs minister of Nepal, has often faced questions in Parliament about her alleged role in fraudulently turning Nepali citizens into Bhutanese nationals on paper, and sending them to the United States as "refugees".

What would return to Monarchy mean?

It is widely believed that the collapse of the republican experiment and a return to Nepal's former monarchical system could lead to an investigation of the alleged misdeeds of all these politicians, and likely trials and convictions.

This would then be a likely reason for politicians belonging to both the ruling coalition as well as the Maoist opposition to come together to resist a dialogue or conciliation with Shah.

However, the royalist street protests are evidence that shutting the monarchy and traditional forces out of the negotiations may not help in the ultimate resolution of the social conflict that has wracked Nepal since the mid-1990s. The pro-republic forces may be forced at some point to course-correct and hold a dialogue with these groups.

Relevance: GS Prelims & Mains Paper II; International Relations

Source: Indian Express

1. India racing to secure supplies of copper

Introduction

On February 27, the government announced the securing of a 9,000-sq-km block to explore copper and cobalt in a region in Zambia known for high-grade deposits. With production in domestic mines faltering, the project is a crucial step for India to establish overseas mining operations.

Why copper mining matters

With the demand for copper, led by electric vehicle (EV) batteries and clean energy technologies, projected to outstrip supply from mines by 2035, countries are scrambling to secure supply chains and strengthen domestic capabilities. The race for copper will only intensify over the next decade.

Stagnant Domestic Production

Copper is listed as a critical mineral in India. Domestic ore production in 2023-24 was 3.78 million tonnes (mt), 8% lower than in 2018-19. Government-owned Hindustan Copper Ltd (HCL) is the sole domestic copper miner.

Due to stagnant domestic ore production, India's copper concentrate imports have doubled in value terms to Rs 26,000 crore in 2023-24 from 2018-19.

While India has large copper deposits, they require extensive exploration before mining can commence. Globally it takes up to 17 years on average to operationalise a copper mine.

India's overseas focus

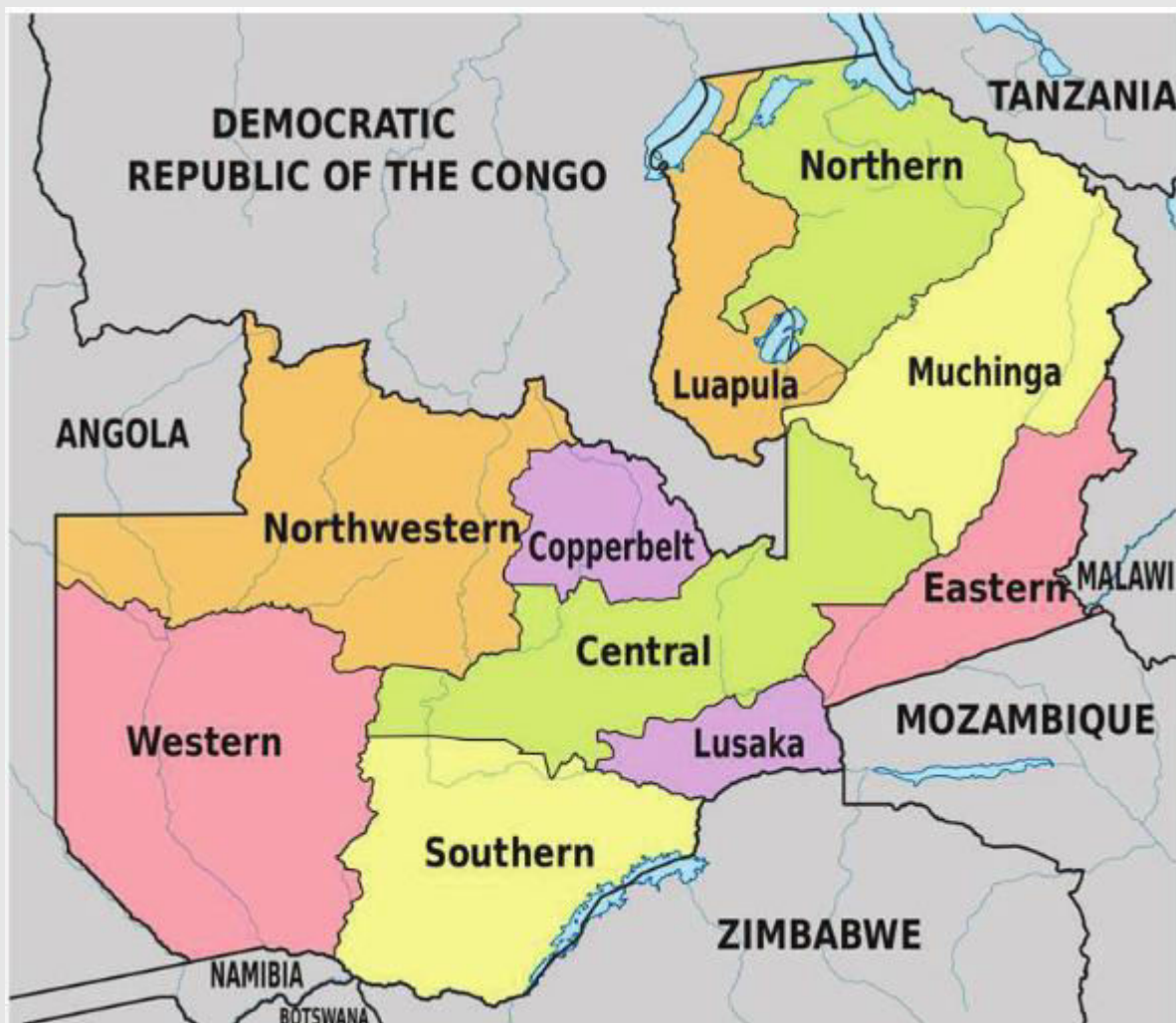
To meet demand in the short term, India has been looking to secure both greenfield and brownfield mineral assets in copper-rich countries such as Zambia, Chile, and the DRC.

Deposits in these countries are typically of higher grade than in India – and because of their extensive focus on mining, projects could develop faster. However, investments in overseas mineral assets carry significant geopolitical risks.

Spotlight on Africa

The share of Africa in the production of critical minerals such as copper, lithium, and natural graphite is rising.

The continent already accounts for 70% of global cobalt production and 16% of global copper production. The DRC is on course to become the world's second-largest copper supplier by 2030.



India has got the 9,000-sq-km block in Zambia's Northwestern province on a government-to-government basis. The Geological Survey of India (GSI) will explore the land, which is roughly six times the size of Delhi. In the neighbouring Copperbelt province, the Vedanta Group owns a large copper mine.

Zambia is the seventh largest producer of copper in the world. (Chile, Peru and DRC are numbers 1, 2, and 3 respectively.) Canada-based First Quantum Minerals and China's state-owned Nonferrous Metal Mining are among the largest producers of copper in the country.

India's Ministry of Mines is working through nodal officers in the DRC, Tanzania, Mozambique, and Rwanda to acquire more critical mineral assets for exploration, but competition from other countries will remain fierce.

Relevance: GS Prelims; Economics

Source: Indian Express

2. Centre's Agriculture Infrastructure Fund (AIF) scheme- Punjab Rank's No. 1

Punjab ranks at number 1 in the country in implementing the Agriculture Infrastructure Fund (AIF) scheme.

What is AIF?

The Agriculture Infrastructure Fund (AIF) was started in July 2020 with an aim to provide medium to long-term financing for agriculture infrastructure projects at the post-harvest stage.

Wastage of post-harvest produce hurts the farmer and causes a lot of damage to the country. The new scheme was launched to help in creating better storage and modern cold storage chains in villages.

The infographic features a green header with the text 'AGRICULTURE INFRASTRUCTURE FUND' and a circular logo on the left. Below the header, there are four bullet points, each with a green icon: '3% Interest subvention for loan upto Rs. 2 Crore till 7 years', 'Credit Guarantee for upto Rs. 2 Crore under CGTMSE scheme', 'Upto 25 projects of Rs. 2 crore per entity. *', and 'Benefits under AIF can be combined with other government subsidies.' To the right of the text is a circular image showing a green conveyor belt pouring golden grain into a pile.

How the AIF scheme works

This scheme offers credit guarantees and interest subvention. The scheme provides 3% interest subvention on eligible loans. Maximum interest rate is capped at 9% for 7 years, for loans up to Rs 2 crore.

Under the AIF, one can take benefits of other state and central subsidies as well. Credit guarantee support is through the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) and National Bank for

Agriculture and Rural Development (NABSanrakshan) Scheme.

What has Punjab achieved?

Punjab is at the No.1 position in the country for the highest number of sanctioned projects under the AIF Scheme. Punjab is followed by Madhya Pradesh, Maharashtra, Uttar Pradesh and Tamil Nadu. Notably, nine out of the top 10 districts in the country under this scheme are from Punjab.

What sort of projects have been taken up under the AIF scheme?

Projects as diverse as cashews processing, oil extraction units, drone projects, flour mills, kinnow processing units, solar projects, cold stores, customer hiring centres, etc. have been taken up.

Relevance: GS Prelims; Economy

Source: The Hindu

3. What does Navratna status for IRCTC and IRFC mean?

New Navratna Companies

The Centre recently approved the upgradation of Indian Railway Catering and Tourism Corporation (IRCTC) and Indian Railway Finance Corporation (IRFC) as the country's 25th and 26th Navratna companies respectively.

All seven listed Central Public Sector Enterprises (CPSEs) of the Indian Railways now have Navratna status. The Indian Railways have a total 12 CPSEs.

When and how does a company get Navratna status?

Navratnas are the second category of the central government-owned 'Ratna' companies, placed between the Maharatnas and the Miniratnas, based on criteria including profitability, net worth, earning, inter-sectoral performance, etc.



The Department of Public Enterprises (DPE) of the Ministry of Finance picks the CPSEs for Navratna status. Six indicators are considered: (i) ratio of net profit to net worth, (ii) ratio of manpower cost to total cost of production or services, (iii) ratio of profit before depreciation, interest, and tax (PBDIT) to capital employed or return on capital employed, (iv) ratio of profit before interest and taxes (PBIT) to turnover, (v) earning per share, and (vi) inter-sectoral performance of the company.

The six indicators carry weights from 10 (for earning per share) to 25 (for ratio of

net profit to net worth).

If a CPSE has a composite score of 60 or higher for all six indicators, and has obtained an Excellent or Very Good MOU rating in three of the last five years, it is eligible to be considered for Navratna status.

How does securing Navratna status help a company?

Having got Navratna status, IRCTC and IRFC can invest up to Rs 1,000 crore or 15% of their net worth in a single project without government approval. It makes them more financially autonomous.

The companies can form joint ventures and subsidiaries, and enter into mergers or acquisitions without direct government intervention. They can also make independent business and investment decisions to compete with private sector companies.

These companies will also be able to enter the international market. They can form strategic alliances and expand globally without strict bureaucratic hurdles. Navratna companies are

considered financially stable, which helps them attract more investors and provide better returns to shareholders.

What are the other Navratnas of the Indian Railways?

Five other Indian Railways companies had Navratna status before IRCTC and IRFC – Container Corporation of India (CONCOR), Rail Vikas Nigam Ltd (RVNL), RITES Ltd, IRCON International Ltd, and RailTel Corporation of India Ltd.

CONCOR became the first Railways Navratna in July 2014. RVNL, IRCON, RITES followed in 2023, and RailTel in August 2024.

CONCOR is a multimodal logistics company for freight transport, and RailTel provides connectivity services such as IP-based video surveillance systems at stations and NIC 'e-Office' services. IRCON specialises in building railways and highways projects in India and abroad.

RITES is a multidisciplinary transport infrastructure consultancy organisation, and RVNL implements projects relating to creation and augmentation of capacities of rail infrastructure on a fast-track basis.

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

4. Actor Ranya Rao case: What laws govern import of gold into India

Introduction

A Special Court of Economic Offences in Bengaluru rejected the bail plea of Kannada actor Harshavardhini Ranya alias Ranya Rao, who was arrested for allegedly smuggling over 14 kilograms of gold on a flight from Dubai to Bengaluru earlier this month.

The DRI is investigating whether this was an isolated incident or a part of a series of gold-smuggling trips, noting that Rao travelled to Dubai frequently. The case has also raised questions on possible police involvement as local officers would escort Rao home from the airport after she returned from her frequent trips to Dubai.

Laws on gold smuggling in India

Until its repeal in 1990, the Gold (Control) Act, 1968, curbed gold imports and placed heavy restrictions on the acquisition, possession, and disposal of gold in India. However, with economic liberalisation in the 1990s, the government modified its approach, imposing an import duty on gold at the rate of Rs 250 for every 10 grams, leading to a boom in gold imports in the following years.

Now, gold imports are largely governed under the Customs Act, 1962, and by the Central Board of Indirect Taxes and Customs (CBIC). The customs duty for gold may differ depending on the amount of gold carried by a passenger and the duration spent abroad before traveling back to India, as per the Baggage Rules, 2016 (issued under the Customs Act).

Under these rules, a man residing abroad for over a year may carry up to 20 grams of jewellery duty free (with a value cap of Rs 50,000) and a woman may similarly carry up to 40 grams (with a cap of Rs 1 lakh). The CBIC also has specific guidelines for Indian passengers returning from Dubai after residing there for over six months, allowing them to carry up to 1 kg of gold as long as the applicable customs duty is paid.

The customs duty for gold is:

3% customs duty: for men carrying 20-50 grams of gold and women carrying 40-100 grams;

6% customs duty: for men carrying 50-100 grams and women carrying 100-200 grams;

10% customs duty: For men carrying over 100 grams and women carrying over 200 grams.

In 2003, the Supreme Court held that any article imported without complying with the relevant conditions or restrictions must be considered a "prohibited good". Such goods are liable to be confiscated under Section 111 and punished under Section 112 of the Customs Act. The punishment may include a fine of up to the value of the goods. Section 135 provides a punishment of up to 7 years imprisonment if the market price of the smuggled goods exceeds Rs. 1 lakh.

Smuggling is also punishable under Section 111 (Organised Crime) of the Bharatiya Nyaya Sanhita, 2023, which punishes "trafficking in...illicit goods" with imprisonment of at least five years, extendable to life imprisonment. The UAPA also carries the same punishment for smuggling as a "terrorist act" under Section 15 if it causes "damage to the monetary stability of India".

Ranya Rao's arrest



In a statement issued on March 5, the DRI said, "Acting on specific intelligence, DRI officers intercepted an Indian lady passenger aged around 33 years, who had arrived from Dubai to Bengaluru via Emirates flight on March 3, 2025. Upon examination, gold bars weighing 14.2 kg were found ingeniously concealed on (her) person".

The DRI claims Rao travelled to Dubai 27 times over six months. The DRI searched Rao's residence and according to their statement, "The search resulted in the seizure of gold jewellery worth Rs 2.06 crore and Indian currency amounting to Rs 2.67 crore", placing the total seizure in the case at Rs. 17.29 crore.

Rao used VIP channels to exit the Bengaluru airport whenever she arrived. A protocol official would escort her to the exit where local police would receive her and take her home, bypassing the extensive checks for regular passengers. Rao's stepfather, a senior IPS officer and DGP, was linked to a robbery of a gold consignment from Kerala to Karnataka over a decade ago. He was later transferred, though no official action was taken against him.

On March 10, the Department of Personnel and Administrative Reforms in Karnataka ordered Additional Chief Secretary Gaurav Gupta to probe the alleged misuse of official privileges and protocol benefits by Rao, with her stepfather being the focus of the investigation.

Relevance: GS Prelims; Economics

Source: Indian Express

5. Load shedding fears Rise as Summer Approaches

Load Shedding

Load shedding (loadshedding) is a way to distribute demand for electrical power across multiple power sources. Load shedding is used to relieve stress on a primary energy source when demand for electricity is greater than the primary power source can supply.

The goal of load shedding is to prevent a power grid or power source from overloading. As a type of load management, load shedding works by rotating power outages or reducing power consumption from primary sources until demand decreases and more capacity becomes available.

Load shedding vs. power outages

Load shedding	Power outages
Planned and scheduled reduction of electricity supply.	Sudden and unexpected loss of electricity.
Implemented to balance demand and available supply.	Typically caused by technical problems, equipment failures or severe weather.
Prevents overloading the power grid.	Electricity is completely unavailable during the outage.
Can affect specific areas or sections of the grid.	Can affect large areas or specific locations.
Lasts from seconds to hours.	Duration varies depending on cause and time needed for repairs.

Load Shedding issue in Peak Summers

India's focus on rapid expansion of renewables in the absence of energy storage systems, especially over the last decade, is now resulting in increasing instability in the country's electricity grid, with power shortages projected to surge sharply in May and June. The issue is compounded by a policy decision from roughly 10 years ago to scale down thermal expansion, which provides critical baseload support to the grid during evenings in summer months, when solar generation dips and demand remains high.

Non Solar hours pose a challenge

India has been adding renewable energy at a rapid pace — over 21 gigawatt (GW) of renewable capacity, excluding large hydro, was added between April and January of the ongoing fiscal, more than doubling year-on-year. Total capacity has touched 165 GW, and with large hydro, it is a little over 212 GW. In comparison, coal-based thermal capacity stands at 220 GW.

However, unlike thermal capacities, which can be ramped up and down as per requirements, renewable energy sources like solar and wind rely on specific atmospheric conditions to generate power. They produce electricity only when weather conditions permit — solar during the day, wind when speeds are sufficiently high.

During summers, solar generation typically peaks in the afternoon but drops off by evening, leaving a supply gap at a time when temperatures are high and households across north India switch on air conditioners.

Then, to meet high demand in non-solar hours, baseload capacities like thermal are ramped up. However, since India's coal-based thermal capacity has barely grown, just 7 per cent from 205 GW in 2019-20, it is increasingly unavailable to bridge the shortfall in non-solar hours.

Energy storage systems

Recognising the grid stability challenges posed by intermittent renewables, the Central Electricity Authority (CEA) — a state-owned planning body for the power sector — issued an urgent advisory on February 18, calling for energy storage systems to be co-located with solar projects. Battery energy storage systems (BESS) and pumped storage plants (PSP) can store surplus solar power during the day and release it when demand surges outside daylight hours.

While the country's total renewable energy capacity has crossed 200 GW, the installed energy storage capacity till end-2024 was just under 5 GW (4.75 GW of PSP and 0.11 GW of BESS).

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

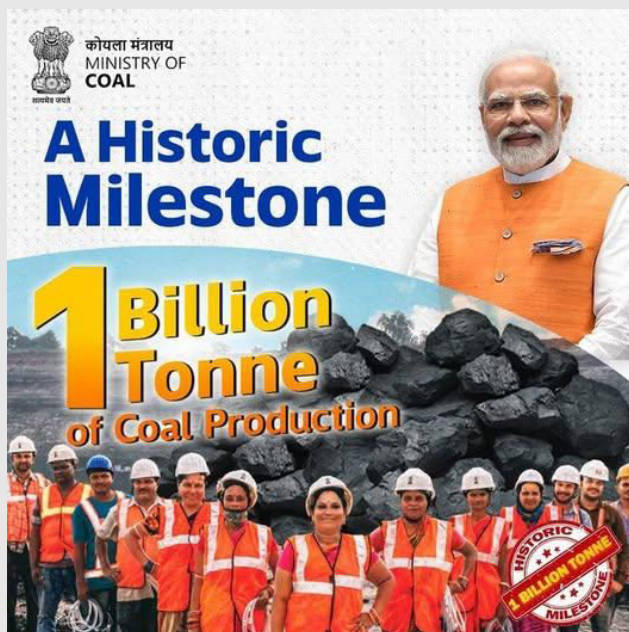
6. Coal Production in the Country Crosses One Billion Tonne Mark

Introduction

India has achieved a momentous milestone in coal production, surpassing one billion tonnes (BT) on March 20, 2025, in the fiscal year 2024-25. This remarkable achievement comes 11 days ahead of last fiscal year's coal production of 997.83 million tonnes (MT). Apart from China, India is the only country to cross 1 billion tonnes mark in annual coal output.

Importance of Coal

India relies on coal for approximately 55% of its energy mix, and around 74% of the country's electricity is generated by coal-based power plants. This underscores the critical importance of coal in powering India's economy and sustaining energy security.



Entry of Private Sector

The record-breaking coal production reflects the Government's strategic reforms and policies, such as amendments to the Mines and Minerals (Development and Regulation) Act and the opening of the coal sector to private players through the commercial auctioning of coal blocks.

Less Reliance on imports

These initiatives have led to a marked increase in the availability of domestic coal, progressively substituting imports and significantly contributing to foreign exchange savings. From April to December 2024, India's coal imports declined by 8.4%, resulting in forex savings of around \$5.43

billion (₹42,315.7 crore) as compared to the same period of last year.

Relevance: GS Prelims; Economics

Source: PIB

7. Dumping of Chinese Goods

Why Now?

The Central Board of Indirect Taxes and Customs (CBIC) recently imposed anti-dumping duty on five Chinese goods, including vacuum-insulated flasks of a certain thickness and aluminium foil.



What Is Dumping

It's when a country sells goods in another country's market at a lower price than its own market.

To determine "dumping", the prices of the same goods are compared in both markets. However, WTO notes, "The situation is rarely, if ever, that simple, and in most cases it is necessary to undertake

a series of complex analytical steps in order to determine the appropriate price in the market of the exporting country (known as the 'normal value') and the appropriate price in the market of the importing country (known as the 'export price'."

Anti-Dumping Duties

Under WTO rules, a country has the option to impose anti-dumping countermeasures to balance the effects of dumping. To do so, the investigating authorities of the importing country must determine the “injury” suffered due to dumping. This includes financial losses to the domestic industry.

Countries can impose duties up to the margin of dumping – the difference between the normal value and the export price. Further, the anti-dumping duty is levied over and above the normal customs duty chargeable on importing the goods.

Administrative Bodies

In India, while the Directorate General of Trade Remedies (in the Department of Commerce) recommends the anti-dumping duty, the Ministry of Finance levies them. The CBIC (under Ministry of Finance) has to accept or refuse DGTR’s anti-dumping duty recommendation within three months from the date of the final hearing in such cases.

The national authority of a country also has the remedy to terminate or suspend the investigation after the preliminary findings, if the exporter concerned furnishes an undertaking to revise her price to remove the dumping.

Relevance: GS Prelims; Economics

Source: Indian Express

8. How India’s bioeconomy is faring, the road ahead

Recent Report

A new government report has pegged the value of India’s bioeconomy in 2024 at more than \$165 billion, accounting for over 4.2% of the country’s GDP.

The India BioEconomy Report, released by the Department of Biotechnology, says there is ample opportunity for this sector to grow to about \$300 billion by 2030, and to \$1 trillion by 2047.

Bioeconomy Meaning

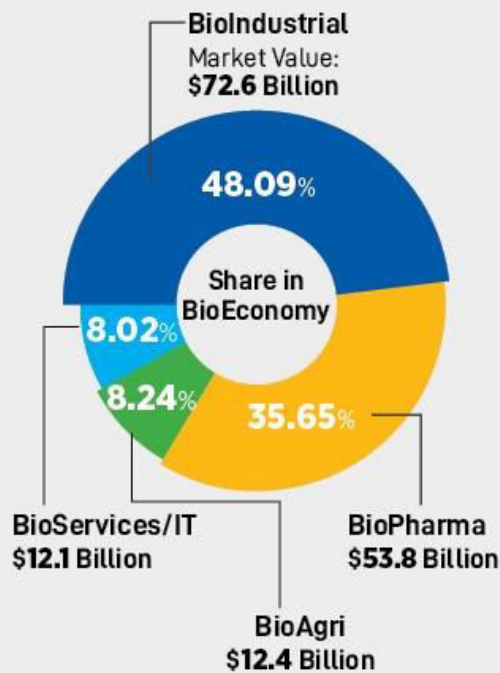
Bioeconomy refers to the industrial use of biological resources (plants, animals, and microorganisms), and the replication of natural biological processes in the production of goods and services.

This is not new in itself. Biological resources and natural processes have been integral to the healthcare, pharmaceutical, and agriculture sectors for a long time. But their use is now expanding to many other areas. Bioresources like plants or microorganisms are renewable, relatively cheap, and locally available, while natural processes are more sustainable and eco-friendly.

Example

A prime example of this is the growing use of ethanol, which is produced through fermentation of crops like sugarcane or corn by microorganisms, as a biological alternative to fuels traditionally derived from hydrocarbons. Modern biology offers sustainable alternatives to clothes, plastics, construction materials, medicines, and a wide variety of chemicals.

Key contributors to India's bioeconomy



Growing Bioeconomy

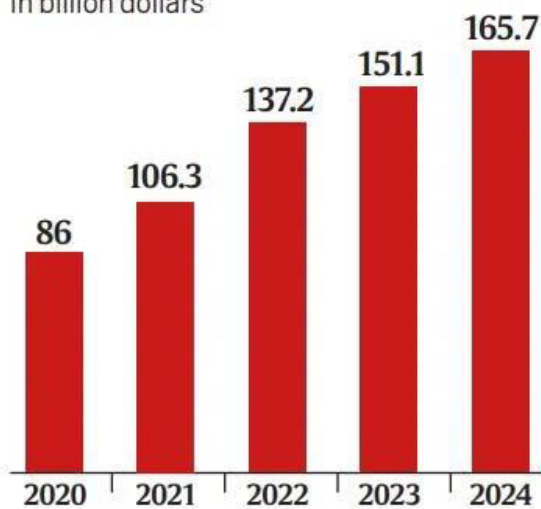
The report shows that the value of India's bioeconomy nearly doubled in the last five years, from around \$86 billion in 2020 to \$165 billion in 2024.

The report showed that only five states — Maharashtra, Karnataka, Telangana, Gujarat and Andhra Pradesh — accounted for more than two-thirds of the value generated in the bioeconomy. The entire eastern and northeastern region generated less than 6% of the total value.

While the 4.2% share in the overall GDP was comparable to figures in the United States and China, the bioeconomy of countries like Spain and Italy accounts for more than 20% of their GDP.

VALUE OF INDIA'S BIOECONOMY

in billion dollars



TOP CONTRIBUTING STATES (IN 2024)

State	Value*	Share of total value
Maharashtra	35.45	21.4%
Karnataka	32.4	19.5%
Telangana	19.9	12%
Gujarat	12.9	7.8%
Andhra Pradesh	11.1	6.7%
Tamil Nadu	9.9	6%
Uttar Pradesh	7.7	4.6%

*in billion \$. Source: India BioEconomy Report

BioE3 push

Realising the potential for greater use of biotechnology in economic processes, the government in 2024 unveiled the BioE3 policy (Biotechnology for Economy, Environment and Employment).

Its main objective is to establish India as a global hub for bio-manufacturing, and a major centre for research and development in biotechnology.

The report also recommends the creation of a National BioEconomy Mission, and single-window regulatory mechanisms for biotech innovations.

Relevance: GS Prelims & Mains Paper III; Economics

Source: PIB

1. Record number of Olive Ridley's came to nest in Odisha this year

Introduction



Nearly seven lakh Olive ridley turtles laid eggs at the Rushikulya 'rookery' or nesting ground in Odisha's Ganjam district during a mass nesting between February 16 and February 25. The development came after the region did not witness any mass nesting in 2024. In 2023, around 6.37 lakh Olive ridleys, an endangered marine species, laid eggs at the same spot.

What are Olive ridley turtles?

Olive ridley turtles are the smallest and most abundant of all sea turtles in the world. They get their name from the olive green colour of their heart-shaped shell, and inhabit warm waters of the Pacific, Atlantic, and Indian oceans.

Olive ridleys can grow about two feet in length, and 50 kg in weight. Scientists do not know exactly how long they live, but like other sea turtles, Olive ridleys are likely long-lived — they reach maturity around 14 years of age.

Reduction in Population

According to International Union for the Conservation of Nature (IUCN), there has been a 50% reduction in population size of these sea turtles since the 1960s. The main reasons behind their decline include long-term collection of eggs and mass killing of adult females on nesting beaches, and unintended capture in fishing gear which can lead to drowning or cause injuries that result in death.

Arribada

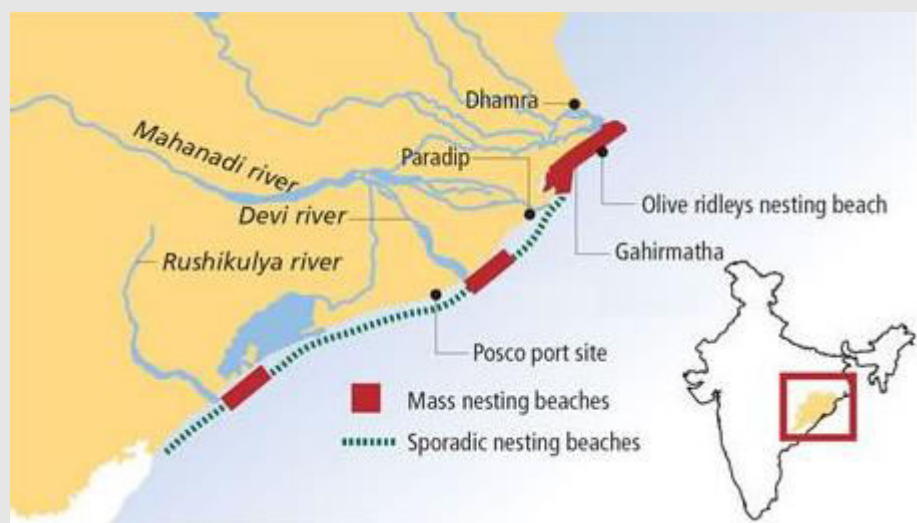
These marine reptiles are best known for their unique mass nesting — also called arribada, Spanish for "arrival" — during which thousands of females come together on the same beach to lay eggs. Arribada nesting is a behaviour found only in Kemp's ridley and olive ridley sea turtles. Although other turtles have been documented nesting in groups, no other turtles (marine or land) have been observed nesting in such mass numbers and synchrony.

During nesting, more than 600,000 females emerge from the waters, over a period of five to seven days, to lay eggs. They lay their eggs in conical nests which they dig with their hind flippers and are one and a half feet deep.

Where does arribada occur?

While solitary nesting by Olive ridleys is known to take place in approximately 40 countries worldwide, arribada nesting occurs on only a few beaches. The coast of Odisha (where

Rushikulya and Gahirmatha rookeries are situated) is the largest mass nesting site for the Olive ridley, followed by the coasts of Mexico and Costa Rica.



Experts say Rushikulya and Gahirmatha make for an ideal mass nesting site due to favourable weather conditions, warm sandy beaches, and an undisturbed coastal ecosystem.

The coast in Odisha typically witnesses arribada in the first

quarter of every year.

Why did Odisha see the arrival of so many Olive ridley turtles this year?

According to experts, a range of factors could be responsible for a large number of Olive ridleys arriving for nesting at Rushikulya this year.

One could be favourable weather conditions. Less rain means that there is no erosion in the beach, which, in turn, provides sufficient space near the river mouth for Olive ridleys to nest in large numbers.

The second reason is the beach gradient, the slope of a beach from the top to the water's edge, which is less this year compared to previous years.

Further, Rushikulya beach provided enough space for a large number of Olive ridleys to nest this year.

Relevance: GS Prelims; Environment

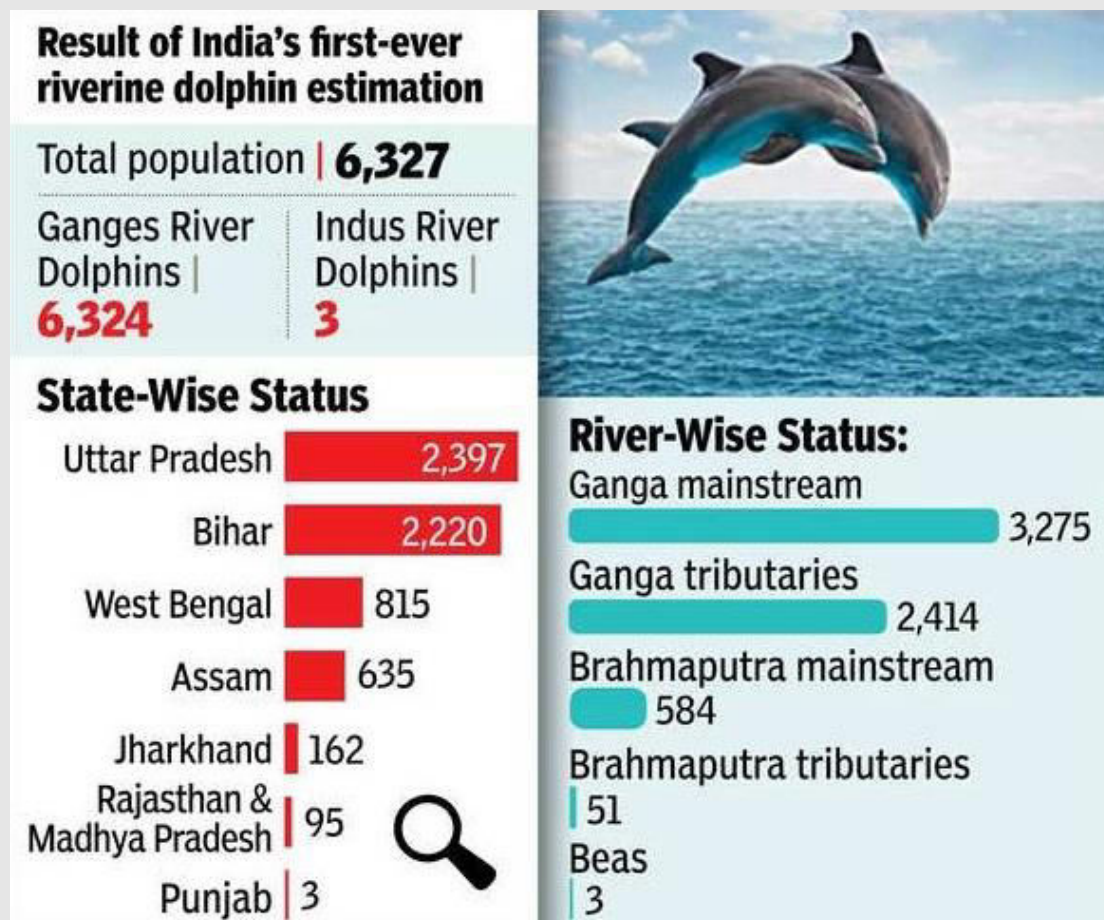
Source: Indian Express

2. Study finds 6,327 dolphins across four States in India

Study Findings

The first estimate of riverine dolphins in India has found 6,327 of them in the Ganga and its tributaries. A press report by the Environment Ministry said there were 6,324 Ganges river dolphins, and three Indus river dolphins (a related species). There were an average 3,275 dolphins in the main stem of the Ganga; 2,414 in the Ganga tributaries; 584 in the Brahmaputra main stem; 412 in the Brahmaputra tributaries; and 101 in the Beas river.

The highest number of dolphins were reported in Uttar Pradesh, followed by Bihar, West Bengal, and Assam.



Counting Dolphins is Challenging

Unlike the counting of tigers, elephants and other land animals in the forest, counting dolphins is challenging. For one, the animals are under water and surface only sporadically to breathe. Second, unlike the tiger's stripes and the elephants' ears that can be caught on camera and used to distinguish one animal from the other, individual dolphins cannot be uniquely identified this way.

Survey Methodology

For their survey, the researchers travelled by boat at a constant speed using acoustic hydrophones — essentially underwater microphones — that pick up sounds emitted by the dolphins. The animals are blind and rely on echolocation to communicate and move.

Comparison from previous findings not possible

Previous attempts at mapping the population have relied on vastly different methods, and so the latest number is not useful for insight on whether their numbers have changed over time, experts associated with the study told.

Dolphin 'hotspots' and 'coldspots' and encounter rates

While a major stretch of the Ganga's main stem flows through Uttar Pradesh, dolphins are sparse or absent in certain stretches of the river called 'coldspots'. In the 366-kilometre stretch from Narora to Kanpur, dolphins are almost non-existent with an encounter rate of 0.1 per km, according to the population estimation report.

Moreover, the estimation exercise found several hotspots or stretches where dolphins were abundant. As against an encounter rate of 0.62 dolphins/km in Uttar Pradesh, the encounter rate in Bihar was 1.62/km. The estimation survey attributed high dolphin occurrence in Bihar to a higher river depth, particularly at the confluence of tributaries such as Ghaghara, Gandak, Kosi and Son.

Relevance: GS Prelims; Environment

Source: The Hindu

3. Vantara

About Vantara

Vantara is a large-scale animal rescue centre, care, conservation and rehabilitation centre established by Reliance Industries with Reliance Foundation. It is located within the Reliance Jamnagar Refinery Complex in Jamnagar, Gujarat, India. This over 3,500-acre sanctuary focuses on animal welfare and conservation. It was initiated by Anant Ambani, director on the boards of Reliance Industries and Reliance Foundation. Vantara was officially inaugurated by Indian prime minister Narendra Modi on 4th March 2025.



Controversy

Vantara claims to have since "rescued over 200 elephants, and thousands of other animals, reptiles and birds from unsafe situations, including rhinos, leopards and crocodiles". Despite the program's endeavors in conservation, i.e., protecting threatened and exploited species and animals, some animal rights groups in India have expressed skepticism over the privatization of the animals, along with the remote, over-developed, polluted and unsuitable nature of the reservation's location, as Jamnagar is located in a hot, arid climate and the Jamnagar Refinery, the largest oil refinery in the world, is owned by the same company and is

located only a short distance away.

Management

Vantara is managed under the direction of Anant Ambani. The facility is equipped with modern veterinary technology, including ICU, MRI, CT scan, X-ray, ultrasound, and endoscopy units.

Notable achievements

Vantara received the 'Prani Mitra' National Award in the corporate category from the Animal Welfare Board of India. This award is presented by the Government of India to recognize contributions in the field of animal welfare.

Relevance: GS Prelims & Mains Paper III; Environment

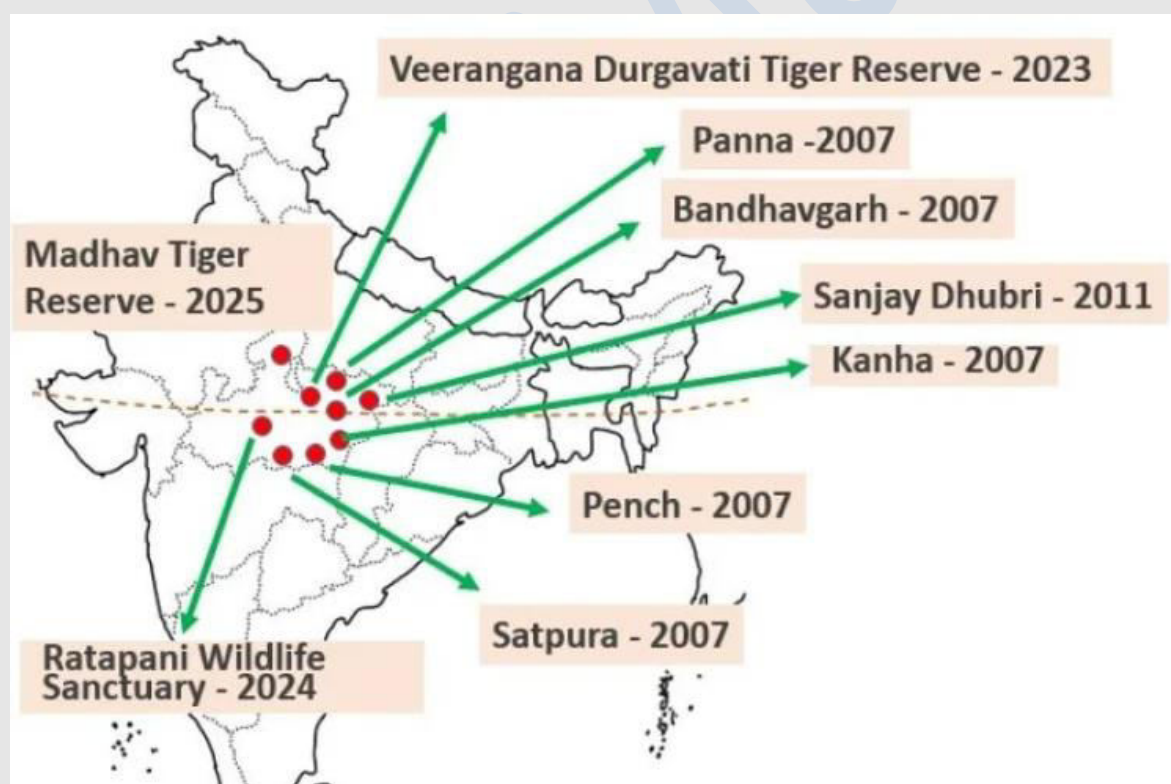
Source: The Hindu

4. Madhav National Park becomes India's 58th Tiger Reserve

Introduction

The Centre declared the Madhav National Park in Madhya Pradesh as the country's 58th tiger reserve. The newly added Tiger Reserve is also the ninth from the State to get the recognition, highest in any State.

Located in Shivpuri district in the Chambal region of Madhya Pradesh, the reserve has a population of five tigers at present, including two cubs born recently. Three tigers, including two females, were introduced to the Madhav National Park in 2023 as part of the tiger reintroduction project in the State. More tigers are expected to be introduced in the future.



Past Recognitions

- The Ratapani Tiger Reserve, located in Madhya Pradesh, was recognized as the 57th Tiger Reserve in India.

- In 2024, Dholpur – Karauli Tiger Reserve in Rajasthan has become the 55th Tiger Reserve in India and the Guru Ghasidas Tamor Pingla Tiger Reserve in Chhattisgarh has become the 56th tiger reserve in India.
- Veerangana Durgavati Tiger Reserve in Madhya Pradesh was the 54th Tiger Reserve in India.
- The Ranipur Tiger Reserve in Uttar Pradesh had become the 53rd tiger reserve in India.

Relevance: GS Prelims; Environment

Source: The Hindu

5. Delhi's air worst among capitals, Byrnihat's the world's most foul, finds new report

World Air Quality Report

IQAir is a Swiss company that tracks global air quality. It releases an annual report called World Air Quality Report. For compiling data for World Air Quality Report 2024, IQAir examined data collected from 40,000 air quality monitoring stations in 138 countries.

Focus on Fine Particulate Matter

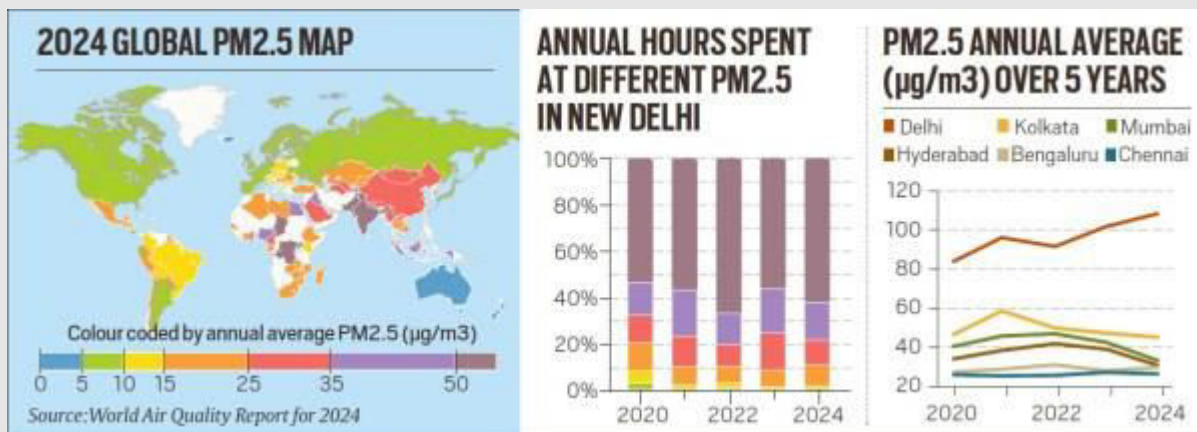
The report looked specifically at concentrations of fine particulate matter, or PM2.5, one of the smallest but most dangerous of pollutants.

PM2.5 comes from sources such as the combustion of fossil fuels, and can cause respiratory problems, chronic kidney disease, cancer, and stroke or heart attacks.

Main Findings of 2024 report

Polluted Cities in India

1. 13 of the world's 20 most polluted cities are in India. 6 Indian cities made it to the list of the world's 10 most polluted.
2. Delhi is the world's most polluted national capital for the sixth straight year.
3. The most polluted city in the world is Byrnihat on the border of Assam and Meghalaya.
4. Only 17% of the 8,954 cities around the world recorded air quality that met WHO PM2.5 guidelines. The 20 most polluted cities – located in India, Kazakhstan, Chad, Pakistan, and China – exceeded these guidelines by more than 10 times.



Country wise Findings

1. In 2024, most of the global population was breathing dirty air, the report shows.
2. Only 12 countries, regions, and territories recorded PM2.5 concentrations below the World Health Organization's (WHO) recommended average annual limit of $5 \mu\text{g}/\text{m}^3$.
3. The five most polluted countries, according to the report, were Chad, Bangladesh, Pakistan, Congo, and India, with annual average PM2.5 concentrations of $91.8 \mu\text{g}/\text{m}^3$, $78 \mu\text{g}/\text{m}^3$, $73.7 \mu\text{g}/\text{m}^3$, $58.2 \mu\text{g}/\text{m}^3$, and $50.6 \mu\text{g}/\text{m}^3$ respectively.
4. India's average PM2.5 concentration was at $50.6 \mu\text{g}/\text{m}^3$ in 2024, more than 10 times higher than WHO recommended $5 \mu\text{g}/\text{m}^3$.

Byrnihat on Assam-Meghalaya border has 'world's worst air'



Byrnihat is located around 20 km from Guwahati and 65 km from Shillong, in Meghalaya's Ri-Bhoi district, where the hills of Meghalaya descend into Guwahati.

Over the years, Byrnihat has developed into a regional industrial hub. The residential town is in Meghalaya, and the industrial units surrounding it are in both Meghalaya and Assam.

Relevance: GS Prelims; Environment

6. PM Modi chairs his first Wildlife Board meeting

Why in News?

More than 10 years after assuming office, Prime Minister Narendra Modi chaired his first-ever meeting of the National Board for Wildlife (NBWL) last week, on World Wildlife Day on March 3.

The last full-body NBWL meeting was held on September 5, 2012, chaired by then PM Manmohan Singh. The PM is the ex officio chairman of the NBWL.



Formation of NBWL

The present-day National Board for Wildlife was created in 2003 after amending The Wild Life (Protection) Act, 1972.

The NBWL basically restructured the Indian Board for Wildlife (IBWL), established in 1952. The intent was to give it more teeth by making it a statutory body and giving it a more regulatory character to implement the Wild Life Protection Act.

The NBWL is the country's apex body on matters of framing wildlife policy, conservation of wildlife and forests, and on giving recommendations to set up new national parks and sanctuaries.

Large Membership

The NBWL consists of 47 members with the Prime Minister as its chairperson and the Union environment minister its vice-chairperson. Senior members include Chief of the Army Staff; secretaries of the Ministry of Information and Broadcasting, Ministry of Defence, Ministry of Tribal Affairs and the Department of Expenditure of the Ministry of Finance; three Lok Sabha MPs; one Rajya Sabha MP; and the Director General of Forest.

Ten eminent conservationists, ecologists and environmentalists and five persons from the non-governmental sector are also appointed to the board.

Standing Committee

The NBWL has a standing committee, to which are delegated key tasks such as appraising projects situated on forest lands inside and around national parks and sanctuaries as well as projects within 10-km of protected areas. The standing committee's decisions are recommendatory, which the environment ministry can overrule.

Why has the board recently faced criticism?

1. Clearance to Projects: Over the past decade, the NBWL has cleared several development projects in and around wildlife habitats, leading to controversy and protests from ecologists.

These include the Ken-Betwa river linking project's Daudhan Dam, which will submerge nearly 100 sqkm of Panna National Park and Tiger Reserve, and an oil exploration project of Vedanta in the eco-sensitive zone of the Hollongapar Gibbon sanctuary, home to the endangered Hoolock Gibbon, India's only ape species. Also, in 2021, the Galathea Bay Sanctuary in Andaman and Nicobar Islands, a nesting site of leatherback sea turtles, was denotified.

2. Change in Composition: After the BJP government came to power in 2014, the NBWL was reconstituted. The move faced allegations of dilution of powers, as only three non-governmental members were appointed.

3. Lack of Quorum: Since 2014, the standing committee has held 50 meetings without the requisite number of conservation experts and non-governmental members.

4. Only 7th full body meeting: Modi's meeting at Gir was the 7th full-body NBWL meeting. Of the previous six, five were chaired by Manmohan Singh and the first one was chaired by Atal Bihari Vajpayee on October 15, 2003.

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

7. Why scientists were surprised to find life under Antarctic ice shelf

Why Now?

A team of scientists has discovered dozens of new species, including giant sea spiders, octopi, and corals on the newly exposed seafloor left behind by the enormous A-84 iceberg that broke away from the George VI Ice Shelf on January 13.

The break-away of the 510-sq-km iceberg — around two-and-a-half times the size of Kolkata — gave access to an underwater world that was previously beyond human reach. A remotely-operated submersible got to the seafloor on January 25, where it captured photos and videos, and collected specimens.

Challenger 150

The mission was part of Challenger 150, a UNESCO-endorsed global initiative for deep-sea research. The discoveries were announced recently. The findings provide new insights into how ecosystems function beneath floating sections of the Antarctic ice.



Life under the ice

Using the remotely operated vehicle (ROV) SuBastian, scientists explored the seafloor for eight days, and found flourishing ecosystems at depths of up to 1,300 metres.

Their observations include large corals and sponges supporting an array of animal life such as icefish, giant sea spiders, and octopi. They also found a giant phantom jelly, a species of jellyfish that can grow up to a metre wide, and a vase-shaped sponge that might be hundreds of years old. Scientists said they may have discovered several new species.

Mystery behind Life's Existence

The reason scientists were surprised to find diverse ecosystems under the ice shelf is that deep-sea communities typically depend on photosynthesising organisms to rain down nutrients from the surface to the seafloor. However, these Antarctic ecosystems have been covered by 150-metre-thick ice for centuries, completely cut off from surface nutrients.

Scientists have hypothesized that ocean currents, glacial meltwater or something else could be transporting essential nutrients, sustaining life beneath the ice shelf. The precise mechanism fueling these ecosystems is yet to be understood.

Relevance: GS Prelims & Mains Paper III; Environment

Source: Indian Express

1. SPHEREx, NASA's new space telescope

Introduction



National Aeronautics and Space Administration (NASA) is tentatively scheduled to launch its new megaphone-shaped space telescope aboard a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California.

During its short two-year mission, the observatory will help better understand things about the formation of the universe, the growth of all galaxies across cosmic history, and the location of water and life-forming molecules in the Milky Way galaxy.

Will make the “most colourful” map of cosmos ever

SPHEREx will map the universe while detecting two kinds of cosmic light, optical and infrared. While the human eye can see optical light, infrared light is invisible to it. That is an issue when it comes to studying the cosmos as it is the infrared light that contains information about the farthest reaches of space, the stars being born, and the details of galactic structures.

To overcome this problem, scientists use specialised cameras and telescopes to study infrared which has a heat signature. One such instrument is the James Webb Space Telescope (JWST) whose speciality is infrared and it helps show things in the universe that have remained hidden so far. Notably, the Hubble Space Telescope's speciality is optical, not infrared light. Hubble Space Telescope is the predecessor of James Webb Space Telescope.

While JWST is great at observing highly localised regions of the universe, SPHEREx will image the entire sky as seen from Earth.

Will shed light on a cosmic phenomenon called inflation

One of the primary aims of SPHEREx will be to measure something called cosmic inflation. It refers to a period which took place around 14 billion years ago, during which the universe expanded faster than the speed of light for a fraction of a second. Cosmic inflation remains poorly understood.

Will explore the Milky Way galaxy to identify water- and life-forming molecules

SPHEREx will identify water- and life-forming molecules, also known as biogenic molecules (such as carbon, hydrogen, and oxygen), in the Milky Way galaxy, where the Earth is located. These molecules are frozen in icy particles which are located in some of the coldest parts of the galaxy. For life to form on Earth, the biogenic molecules would have to somehow travel

from these regions to the planet. However, scientists are yet to know exactly how this process happened.

The new telescope will help resolve the mystery as it will provide a complete census of the icy biogenic molecules in the Milky Way galaxy. SPHEREx will locate these molecules not only in this galaxy but also in nearby systems.

Relevance: GS Prelims; Science & Technology
Source: Indian Express

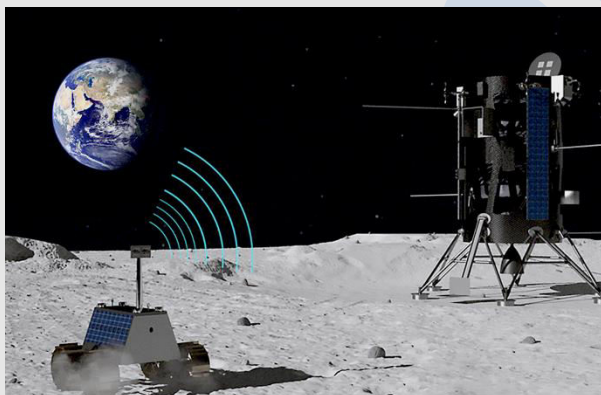
2. NASA's bid to put a lunar Nokia cellular network

Introduction

The Athena moon lander, built by Intuitive Machines (IM), launched through SpaceX Falcon 9 rocket is expected to reach the moon on March 6.

The present mission (Second moon mission by Intuitive Machines called IM -2) is primarily focused on mining for precious resources on the far side of the moon. It will also attempt to deploy the first lunar surface cellular network.

The mobile network was developed as a partnership between NASA and Finnish telecom company Nokia.



Lunar cellular connectivity

Until now, the mode of communication from the moon has been via radio waves. Building a lunar communications network would allow for real-time viewing of high-resolution video.

Cellular technology was thus mooted as an alternative. This January, Nokia announced that it had fully integrated its Lunar Surface Communication System (LSCS) into the

Athena lander. The LSCS will reportedly use the 4G/LTE technology widely used on Earth.

The LSCS comprises two device modules – a lunar rover and a hopper. Once Athena makes its landing, these devices will attempt to connect to its cellular network while exploring the lunar surface. Athena will also be connected to the Earth, enabling high-definition video streaming and command and control operations.

The 4G cell network is expected to work only for a few days on the present mission.

What to know about the IM-2 Mission

The Texas-based Intuitive Machines became the first private company to complete a successful moon landing in February 2024, carrying six NASA payloads, including one at the moon's south pole.

Its second mission, IM-2, intends to build on its 2024 success and land on Mons Mouton, a mountain at the moon's south pole. The moon's south pole has been of interest to space agencies worldwide as it is believed to contain ice and rare minerals, seen as crucial for further space exploration.

The IM-2 will explore this in part, deploying a pair of NASA instruments which will drill three feet into the lunar surface to specifically look for water and carbon dioxide. The presence of water could help to establish a permanent lunar base, or at least assist manned missions to the moon.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

3. NASA's PUNCH set to lift off: Why there has been an increase in the launch of solar missions

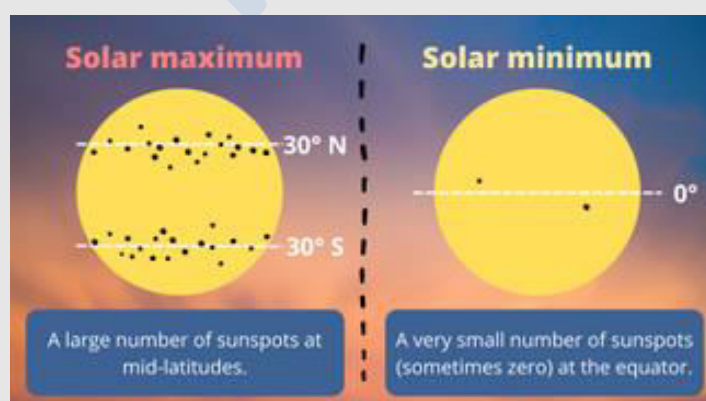
Introduction

The National Aeronautics and Space Administration (NASA) is set to launch its latest solar mission from Vandenberg Space Force Base in California. The mission, known as Polarimeter to Unify the Corona and Heliosphere (PUNCH), will be the third major solar mission to be launched in the past 18 months.

The increase in the number of solar missions is no coincidence. The reason behind this has to do with the solar cycle.

What is the solar cycle?

Like a bar magnet, the Sun also has a magnetic field with north and south poles. The magnetic field exists due to the constant movement of electrically charged particles within the Sun. Every 11 years or so, the Sun's magnetic field completely flips, meaning its north and south poles switch places. This periodic change is known as the solar cycle.



Impact on Sun's activity

The solar cycle affects activity on the surface of the Sun. For instance, the Sun is at its most active when the magnetic field flips. This phase is called the solar maximum. During this period, the star can send out more frequent and intense bursts of radiation and particles into space.

After the flip, the star calms down until it reaches the solar minimum, and a new cycle begins.

During the solar maximum, the Sun's surface has the most number of sunspots — small, dark and cooler areas where the magnetic field is particularly strong. During the solar minimum, the Sun has the least sunspots. Scientists track the solar cycle by counting the number of sunspots.

Moreover, giant eruptions on the Sun, such as solar flares and coronal mass ejections, also increase during the solar cycle. These eruptions send powerful bursts of energy and material into space. The bursts are significant as they can have an impact on Earth — they can disrupt satellite communication, and even affect electricity grids on the planet. That's the reason why scientists keep a tab on the solar cycle.

Why are so many solar missions getting launched now?

The present solar activity and number of sunspots suggest that this cycle may be nearing its maxima, though the official confirmation of the same is yet to be made. According to the National Oceanic and Atmospheric Administration (NOAA), which is one of the organisations that track solar cycles, solar activities in this cycle picked up momentum around May 2022 and has continued to remain above normal through most of 2024.

The solar maximum is the best possible window available for physicists to both launch and observe the sun. This is precisely why there has been a spike in the missions to observe the star. Solar physicists are well aware if they miss this window, the next possible intense solar activity will not be before 2035-2036.

Which missions have been launched?

Since September 2023, two solar missions by India and the European Space Agency have been launched. These are

Aditya L1, India: Launched on September 2, 2023

In September 2023, the Indian Space Research Organisation (ISRO) launched Aditya L1, the country's first solar mission.

Proba-3, European Space Agency: Launched on December 4, 2024

ISRO launched Proba-3, which has a unique design to study solar winds and solar storms.

PUNCH, NASA: Launch on March 06, 2025

PUNCH is a first-of-its-kind solar mission that will study the solar corona — the outermost layer of the Sun's atmosphere. Four identical suitcase-sized satellites will continuously image the Sun's inner corona and provide origins of solar flares, etc.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express


4. Cotton crisis in Punjab: How regulatory hurdles might be making things worse

Introduction

In recent years, whiteflies and pink bollworms have wreaked havoc on the cotton crop in North India. Cotton yields are down, as is the area under cotton cultivation — the crop was cultivated in only one lakh hectares in Punjab in 2024, down from nearly eight lakh hectares three decades back. The drop in acreage has in turn harmed the ginning industry — only 22 ginning units remain operational in Punjab today, down from 422 in 2004.

COTTON SCENE IN PB IN LAST 10 YRS

Year	Area*	MSP	Production
2014-15	4.21	₹3,950	13L bales
2015-16	3.98	₹4,000	7L bales
2016-17	2.56	₹4,060	7.5L bales
2017-18	2.91	₹4,220	8.8L bales
2018-19	2.68	₹5,350	8.50L bales
2019-20	2.48	₹5,450	9.50L bales
2020-21	2.52	₹5,825	10.23L bales
2021-22	2.51	₹5,925	6.46L bales
2022-23	2.48	₹6,280	4.44L bales
2023-24	2.14	₹6,920	6.29L bales
2024-25	0.997	₹7,421	—



Area in lakh hectares

Ahead of the cotton sowing season, farmers are thus calling for the swift approval of Bollgard-3, a new pest-resistant genetically-modified (GM) cotton variety developed by Monsanto.

Bollgard-3, a Bt cotton variety

Bollgard-3 was developed by Monsanto more than a decade ago, and shows remarkable resistance to pests. It contains three Bt proteins Cry1Ac, Cry2Ab and Vip3A that cause insect death by disrupting their normal gut function. This in turn allows for the growth of a healthier cotton crop, and increases yield.

Bacillus thuringiensis

Bacillus thuringiensis (Bt) is a soil-dwelling bacterium with potent insecticidal properties. In the past few decades, researchers have successfully inserted certain genes from Bt in various crops, like cotton, providing these with insect-repellent properties.

Problems with Bollgard-1 and Bollgard-2

Bollgard-1 was a Monsanto-developed Bt cotton introduced in India in 2002, followed by Bollgard-2 in 2006. The latter remains prevalent today. And although these do have some pest-repellent properties, they are not effective against the whitefly and the pink bollworm, which arrived in Punjab in 2015-16 and 2018-19 respectively.

This is why farmers are demanding the introduction of Bollgard-3, which is particularly effective against pests like pink bollworm and whitefly.

However, Bollgard-3 is not available in India at the moment, although it is being used in other cotton-growing countries around the world.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

5. Blue Ghost lands on Moon: More and More Private players Landing on Moon

Introduction



An American private space company called Firefly Aerospace successfully landed its spacecraft on the Moon recently. Firefly's Blue Ghost mission is just the second time that a private space company has landed on the Moon, and the first such almost flawless landing.

Last year, Intuitive Machines had landed its Odysseus spacecraft. Intuitive Machines is also a private company based in USA. These private space missions have been facilitated by NASA, US space agency.

The first rounds of the private space missions are carrying a variety of scientific instruments, mostly those of NASA, to further our understanding of the Moon's surface and its surroundings.

Blue Ghost Mission

Blue Ghost has taken instruments that will test robotic drilling technology, carry out studies of the surface and sub-surface characteristics and composition.

The spacecraft has landed about 20 degrees north of the Moon's equator on the nearside, the side of the Moon that always faces the Earth. The site is known to have been impacted by a large asteroid about three billion years ago.

The payloads would be operational for one lunar day, or about 14 Earth days. The lander is equipped with some additional supplies of battery power, which will enable the functioning of

the payloads for some time during the lunar night too. Lunar nights are very cold, making it difficult for most machines to survive.

The Blue Ghost mission does not have a rover to walk over the Moon's surface. The payloads will be deployed from the lander and remain static.

Commercial Lunar Payload Services

Firefly is the third private operator to have sent a Moon mission under a special NASA programme called Commercial Lunar Payload Services, or CLPS. More than a dozen space companies have been contracted by NASA so far to do sorties to the Moon with scientific instruments on a commercial basis and carry out experiments.

While NASA would be their main customers, sending a variety of payloads, the companies are free to take payloads of other interested parties, like universities, research institutions, private corporations or other countries.

Part of Larger Artemis Programme

CLPS is aimed at expediting the exploration of the Moon, and building capacities in the private sector to undertake complex space missions. This is part of NASA's larger, and more ambitious, Artemis programme that aims to establish a long-term human presence on the Moon, exploit its natural resources, and use it as a base for further exploration of deep space.

Previous Launch

The Odysseus spacecraft by Intuitive Machines became the first private mission to reach the Moon, but its landing was not perfect. The spacecraft was unable to slow down adequately before landing, because of which at least one of its landing legs broke down on impact. The spacecraft managed to stay upright, though slightly tilted, and was able to relay data back to the control station.

Landing of the Black Ghost mission was almost flawless, which prompted Firefly Aerospace to claim that it had become the first private company to "successfully" land on the Moon.

All these have been fairly straightforward lander-only missions, but future missions are planned to have rovers and return modules as well.

Japanese private mission

A Japanese private mission is also on its way to the Moon right now. The Hakuto-R Mission 2, by a company called ispace, was launched from the same SpaceX rocket as Blue Ghost in a unique double moonshot on January 15. It is taking a different, more energy-efficient route to the Moon and is scheduled to land in May or June. Japan's first and only successful moon landing mission, called SLIM, had also taken a similar extended route last year. Hakuto-R has a lander called Resilience and a rover called Micro. Hakuto-R's first mission in 2023 had been unsuccessful.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

6. Could Europe's Eutelsat help to replace Starlink in Ukraine?

Introduction

Suggestions that Ukraine could lose access to Elon Musk's Starlink satellite Internet system, which has been vital in maintaining its military communications, have focused investor interest on Starlink's smaller European rival Eutelsat.

The stock price of Eutelsat, a Franco-British company, has more than quadrupled since the February 28 public showdown between Ukrainian President Volodymyr Zelenskyy and US President Donald Trump.

EU eyes Eutelsat's OneWeb as Starlink replacement in Ukraine

Wednesday, March 5, 2025 10:08:54 AM



Reports from various media indicate that the Franco-British satellite services firm, Eutelsat, is in talks with the European Union to potentially replace Starlink in Ukraine with its OneWeb satellites. This development, reported by Reuters on Tuesday, March 4, points to the growing strategic alternatives considered in the region.

How crucial is Starlink to Ukraine?

Starlink users access the Internet for data or voice communication by using a small satellite dish to bounce signals off a constellation of satellites overhead.

Ukraine's fixed-line and mobile networks have been badly damaged by bombing since Russia invaded in February 2022, and Starlink has helped Kyiv fill the void by sending tens of thousands of its dishes with terminals.

How does Eutelsat compare with Starlink?

Eutelsat already supports government and institutional communications in Ukraine, and can provide an alternative for certain government and defence applications, according to the company.

Since its merger in 2023 with Britain's OneWeb, Eutelsat controls the only operational global-coverage constellation, besides Starlink, of satellites in low earth orbit (LEO).

Starlink's more than 7,000 LEO satellites, suited to real-time communication, allow it to reach more users around the world and offer higher data speeds.

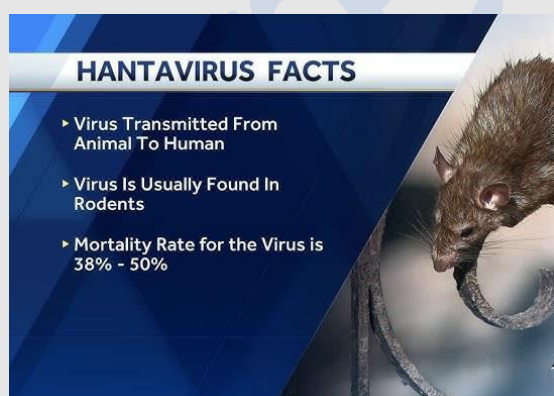
But Eutelsat says that even with only 630 or so LEO satellites, backed up by 35 linked satellites in higher, geostationary orbit, it offers the same capabilities as Starlink in Europe.

Starlink promises broadband at up to 200 megabits per second, Eutelsat 150.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

7. Hantavirus in News



Introduction

Oscar-winning actor Gene Hackman, his pianist wife, Betsy Arakawa and their dog were found dead in their apartment in the US on February 26. As the investigation unfolded, it became clear that all three had been dead for days, with their deaths ruled "suspicious enough in nature" to warrant a thorough investigation.

Officials concluded that Arakawa likely died first, around February 11, the last time she was known to be alive. The autopsy concluded that she had died from hantavirus pulmonary syndrome (HPS), with no other diseases or trauma being detected.

Hackman likely succumbed to heart disease about a week later, based on his pacemaker's last record of activity. Given how advanced his Alzheimer's disease was, he may not have known that his wife had passed.

WHAT IS HANTAVIRUS?

A family of rodent-borne viruses that can cause serious illness and death in humans. Infected rodents spread the viruses through their urine, faeces, and saliva. However, these viruses do not spread between people.

ARE ALL HANTAVIRUS DISEASES ALIKE?

No. There are different types of hantavirus depending on the region, and each hantavirus is specific to a different rodent host.

HPS is endemic to the Western Hemisphere. The most common HPS-causing hantavirus is carried by the deer mouse.

Haemorrhagic fever with renal syndrome (HFRS) is another group of illnesses caused by hantaviruses found primarily in Europe and Asia.

WHAT ARE THE SYMPTOMS OF HPS?

Flu-like symptoms present within one to eight weeks of exposure. The patient may experience fatigue, fever, and muscle aches early on. As the disease advances, they may experience respiratory difficulties such as shortness of breath and a tightness in the chest as the lungs fill with fluid.

IS THERE A CURE?

There is no known cure or treatment for HPS. Early detection and treatment are crucial. However, some antivirals may help manage the symptoms. Some patients experiencing breathing difficulties may need respiratory support like breathing tubes.

Scientists advise people living in areas known to house hantavirus-infected rodents to clean any excrement with a wet paper towel, gloves and a tight-fitting N95 mask. One should avoid using a vacuum or a broom as the aerosols from the droppings may be stirred up. They also advise the use of bleach solution or commercial disinfectant to sanitise the area, and wiping it down with paper towels that are carefully disposed of.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

8. IndiaAI Mission News Pillars: AI Kosha and Common Compute facility

Introduction

On March 6, the Ministry of Electronics and Information Technology's IndiaAI Mission launched AI Kosha and Common Compute facility.

What is the IndiaAI Mission?

Union government has announced in March 2024 an IndiaAI Mission with an outlay of ₹10,371.92 crore. The key objectives of the mission were: "Making AI in India and Making AI Work for India".



While the mission works on many interventions and resources for private companies and academia to research and build AI, a key one that has emerged in recent weeks has been the Common Compute facility to provide GPUs to startups that may not be able to buy them independently in a large volume. Thus, Common Compute facility allows startups and academia to access a shared pool of Graphics Processing Units (GPUs) to build and run AI models and tools.

What are GPU?

GPUs, also known as graphics cards, are a key component in many PCs and phones that allow these devices to render images and graphics. However, AI researchers have long used GPUs to run enormously complex calculations involving massive volumes of data.

This is what has enabled firms like Nvidia to foray far beyond video gaming to become an essential component of AI infrastructure around the world. However, GPUs are expensive.

The IndiaAI Mission has started empanelling data centres in India that have GPUs to provide access to their computing resources to startups and researchers. This access will be handled by the mission, which will decide which entities will get how much computing resource access, and for how long.

What is AI Kosha?

AI Kosha is the implementation of another pillar of the mission: the IndiaAI Datasets Platform. One of the main issues with building AI models is that AI requires large data for training purposes. AI Kosha is a national dataset platform that will gather non-personal data from various ministries and departments in order to develop Artificial Intelligence models and tools.

What else does the IndiaAI Mission work on?

The mission has seven pillars overall. While the Common Compute facility and AI Kosha have been under particular focus, there are other aspects that policymakers have targeted.

AI Safety Institute of India: One is the AI Safety Institute of India, which is yet to be formally launched. Such institutes are being created or accredited around the world to develop guardrails around unintended consequences of AI deployments, and to study the risks of the mushrooming use of AI across the industry and government. These include everything from making sure that a chatbot doesn't give away a recipe for a bomb (for example), to making sure that specialised AI tools, like those used in biomedical research, are reliable and can "explain" their output.

IndiaAI Innovation Centre: IndiaAI Innovation Centre aims to create "domain-specific foundation models"; an application development initiative to help develop use-cases that can be commercialised or put to productive use.

Futureskills: Futureskills is an initiative to develop AI labs in smaller cities; and startup financing.

Relevance: GS Prelims & Mains Paper III; Science & Technology

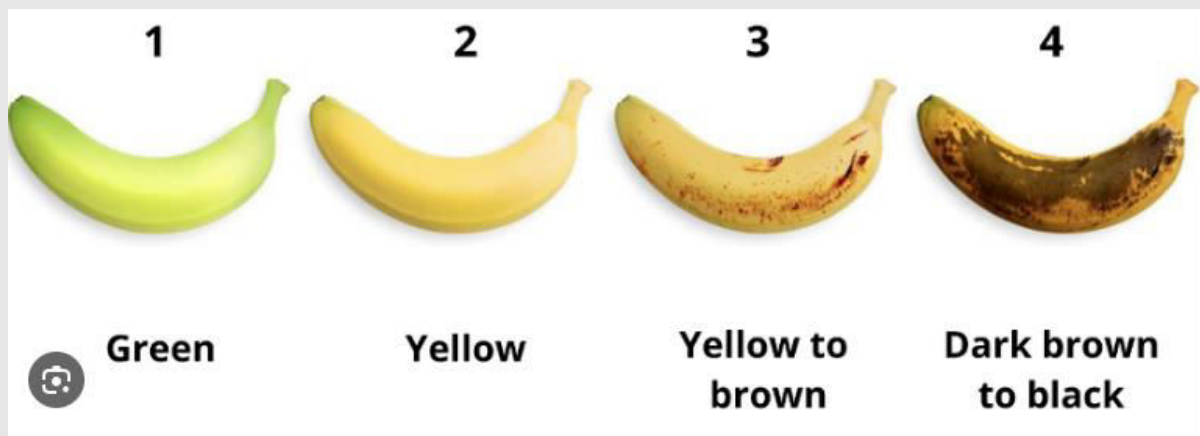
Source: Indian Express

9. How a gene-edited banana may help reduce food waste

Introduction

Brown, over-ripe bananas often end up in dustbins, even when they are perfectly edible. This has led to scientists developing a new genetically-engineered banana which has a longer shelf-life, and does not brown as much.

Tropic, the UK-based biotech company which has developed these bananas, claims that their fruit remains fresh and yellow for 12 hours after being peeled, and is also less likely to turn brown when bumped during harvesting and transportation.



Why do bananas turn brown?

Bananas boast a colourful life cycle — they start at a deep green, change to a delicious yellow, and end (if not consumed beforehand) as brown. These changes are a product of their ripening process, which is caused by a hormone called ethylene.

Although many fruits produce ethylene, bananas produce a lot of it. And unlike melons and citrus fruits, they keep producing ethylene even after being harvested. Contact with ethylene triggers the activity of a number of genes, including one which linked to the production of the enzyme polyphenol oxidase (PPO).

It is this enzyme that makes bananas turn brown. PPO coming in contact with oxygen breaks down the yellow pigment in bananas to a brown hue.

Bruising of the fruit — as is common during its handling — leads to the production of higher quantities of ethylene, and thus speeds up the ripening and browning process.

How was a non-browning banana produced?

The company made precise changes to existing banana genes such that the production of PPO is disabled. This does not stop a banana from ripening, but helps keep up appearances so that the fruit continues to look appetising for longer.

Why does this matter?

Bananas are extremely perishable, with some estimates saying that as much as 50% of the crop goes to waste each year. Preventing bananas from browning may reduce food waste by encouraging people to eat older but edible fruit.

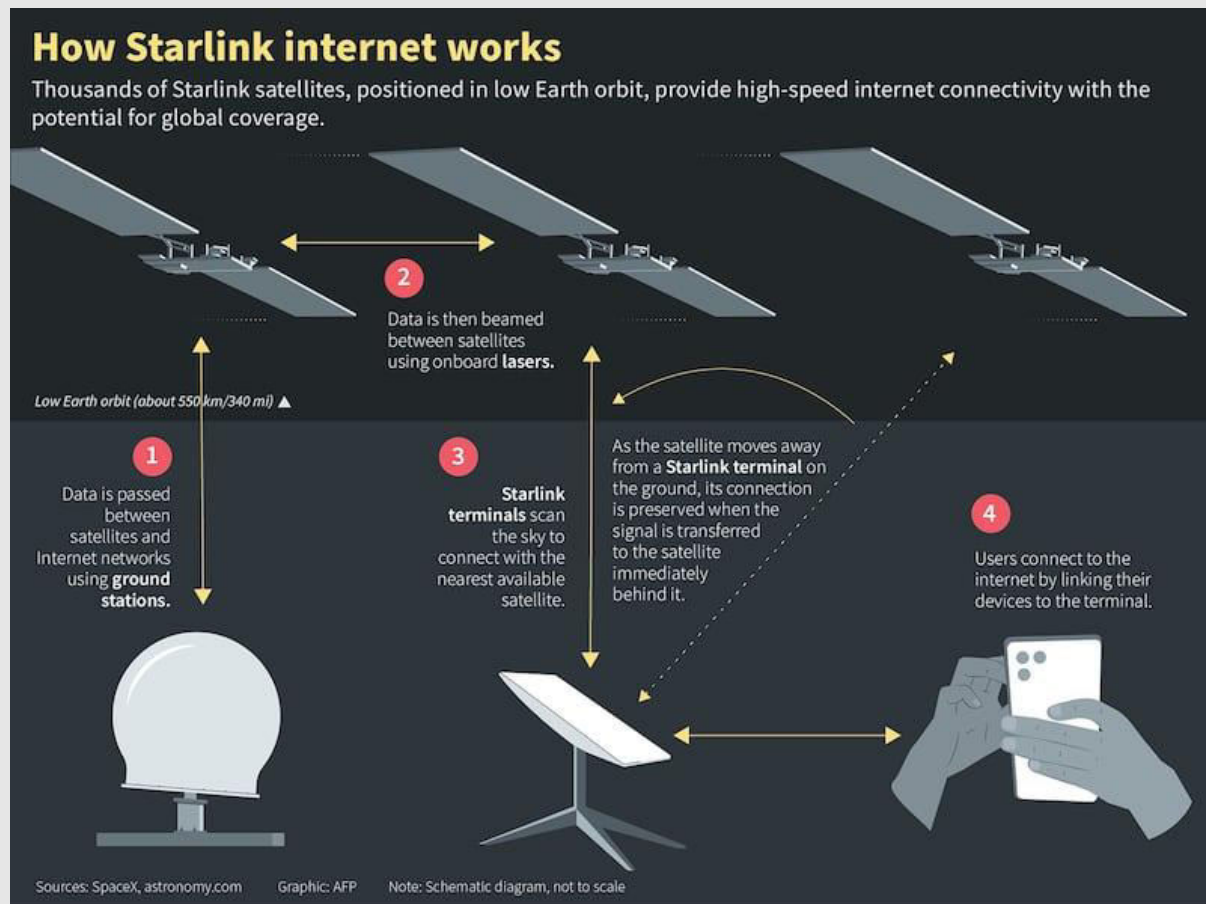
Relevance: GS Prelims; Science & Technology

Source: Indian Express

10. Starlink internet service in India

Why now?

Bharti Airtel and Reliance Jio have signed separate deals with Elon Musk's SpaceX to bring the Starlink internet service to India. SpaceX has applied for a security clearance with the Indian government, but its application is currently undergoing review at the Home Ministry.



What is it?

Starlink is a network of satellites that provides internet. It is operated by SpaceX, which is Musk's aerospace company. Launched in 2019, Starlink aims to shoot 42,000 small satellites into space, forming a globe-encircling ring just 547 km overhead. Currently, the telecommunication project has around 7,000 mass-produced small satellites in low Earth orbit (LEO) — an orbit that is under altitudes of 2,000 km. By the end of 2024, Starlink had more than 4.6 million users in over 100 countries.

In the United States, Starlink offers speeds up to 220 Mbps. However, the service is quite expensive. It starts with "\$120 monthly for the standard home internet service, plus \$349, give or take a hundred bucks, for the equipment needed to get started. The monthly rate on mobile service is cheaper but the expected speeds are slower.

How does satellite Internet work?

Satellite Internet operates by sending signals from the user's device to a satellite in space, which then passes on the data to a ground station connected to the Internet. The ground

station retrieves the requested data and sends it back through the satellite to the user's dish, completing the connection.

This whole process does not require cable, fibre or phone lines. The user just needs a modem and a satellite dish. The modem needs to be connected to that dish to translate the incoming signal into a workable internet connection.

Why are the Starlink deals significant?

Starlink can provide a practical solution for broadband in underserved areas in India, where the traditional ways to deliver the Internet — fibre-optic cables or wireless networks — are scarce or unavailable. It can help bridge the digital divide by bringing high-speed Internet to the remotest corners of the country.

Although India is the world's second-largest Internet market, more than 670 million of its 1.4 billion people have no access to the Internet.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

11. Space Docking and Undocking

Why now?

Nearly two months after ISRO successfully docked two satellites in space, it carried out an undocking procedure recently. This makes India the fourth country — after the US, Russia, and China — to boast docking-undocking capabilities.

What is space docking?

As the name suggests, space docking is essentially a process by which two fast-moving spacecraft are put into the same orbit, progressively brought closer, and finally joined together. It is an extremely complicated process.

To demonstrate this capability, ISRO launched the experimental Spadex mission on December 30, 2024. This comprised launching two 220-kg satellites — SDX01 (Chaser) and SDX02 (Target) — in a 470 km circular orbit. From an initial distance of 20 km in space, these two were progressively brought together and then joined using their extended locking mechanism.

After docking, ISRO scientists demonstrated power sharing capabilities between the two satellites, and were able to command it as a single composite structure.

The undocking manoeuvre was carried out after two months following extensive on-ground simulations. It also went off without a hitch.

Why does this matter?

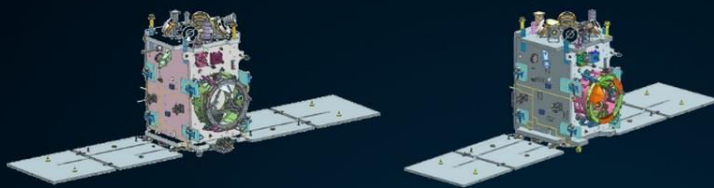
This capability is essential for missions with heavy spacecraft that cannot be launched from Earth in one go. Weight is among the biggest limiting factors in what we can or cannot send

to space. This is why things are often sent to space in parts, to be assembled while in space. This is how the International Space Station (ISS) was built.

The docking-undocking process is also essential to carry astronauts and supplies to a space station.

ISRO's SpaDeX mission successful

ISRO's successful execution of the Space Docking Experiment (SpaDeX) marks a historic accomplishment, making India the fourth country, following the USA, Russia, and China, to achieve this feat.

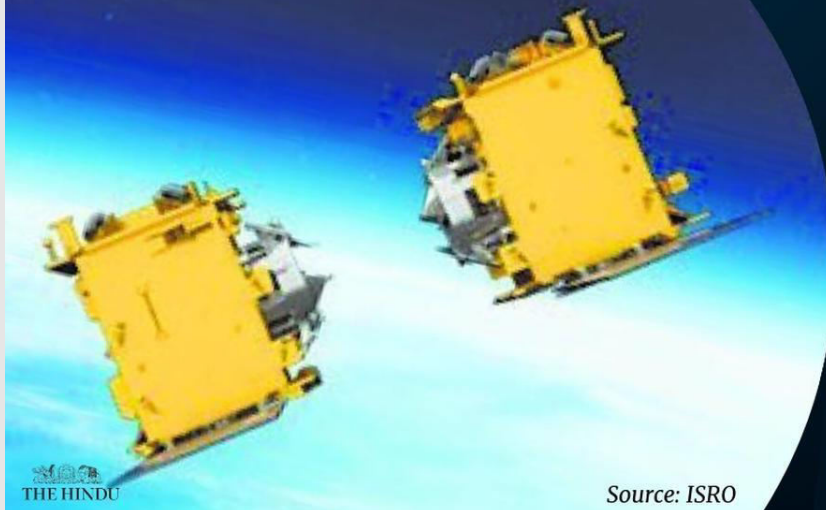


- SDX01 (Chaser)
- SDX02 (Target)

Two satellites used for the Space Docking Experiment (SpaDeX)

Mission objective:

Develop and demonstrate the technology needed for spacecraft rendezvous, docking and undocking using two small satellites in a low-Earth circular orbit.



THE HINDU

Source: ISRO

PSLV C60:
Lunch vehicle



When was the first space docking carried out? By whom?

Amidst the Cold War era Space Race, the United States became the first country to demonstrate space docking capabilities in 1966. The first autonomous docking — where a spacecraft finds its target and attaches by itself without any astronauts or commands from the ground — was demonstrated by the erstwhile USSR, when it brought together Kosmos 186 and Kosmos 188 spacecraft in 1967.

China, the only other country to have the capability, demonstrated unmanned docking in 2011, and a crewed docking capability a year later.

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

12. Chandrayaan-5 has received Centre's approval, will carry 250-kg rover

Why in News?



The Centre recently accorded approval for the ambitious Chandrayaan-5 mission to study the moon. Unlike the Chandrayaan-3 mission which carried the 25-kilogram rover 'Prayagyaan', the Chandrayaan-5 mission would carry a 250-kg rover to study the moon's surface.

Chandrayaan-1

The Chandrayaan mission consists of studying the lunar surface. Chandrayaan-1, successfully launched in 2008, took chemical, mineralogical and photo-geologic mapping of the Moon.

Chandrayaan-2

The Chandrayaan-2 mission (2019) was 98% successful, but just two per cent of the Mission could not be achieved in the final stages. This mission failed to make soft

landing on the surface of the moon. However, the moon orbiter Chandrayaan-2 is functioning perfectly. Still, the onboard high-resolution camera on Chandrayaan-2 is sending hundreds of images.

Chandrayaan-3

Chandrayaan-3 Mission is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface.

ISRO successfully launched the Chandrayaan-3 mission with the Lander Vikram successfully 'soft-landing' on the South pole of the Moon on August 23, 2023.

Chandrayaan-4

The Chandrayaan-4 Mission, expected to be launched in 2027, aims to bring samples collected from the moon.

Relevance: GS Prelims; Science & Technology

Source: The Hindu

13. Truth Social

Why Today?

Prime Minister Narendra Modi joined the social media platform Truth Social on March 17.



What is it?

Truth Social is a social media platform owned by Trump Media & Technology Group. US President Donald Trump is the biggest shareholder in this company (though he later put his shares in a trust controlled by his oldest son, Donald Trump Jr).

Truth Social was launched in 2022, after Trump was banned from sites like Twitter

(now X) and Facebook following the January 6, 2021 attack on the US Capitol by his supporters (his accounts were later reinstated).

In terms of user interface, it is similar to X, where users can post 'truths' that can be reshared and replied to.

How is Truth Social different from other social media platforms?

Truth Social positions itself as a 'Big Tent' platform where all sorts of views can be expressed with minimal censorship from the platform, but is dominated by conservative voices. Also, it is the only social media platform whose owner holds a tremendously powerful political position.

His position as President of the United States and owner of the social media site has also raised concerns of conflict of interest — the more attention-grabbing his posts are, the more money the platform makes. Also, everyone who buys shares in the platform is adding to the US President's personal wealth.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

14. Why Sunita Williams's unscheduled nine months long space stay may be a blessing in disguise for researchers

Why Now?

American astronauts Sunita Williams and Butch Wilmore have returned to Earth after the longest-ever unscheduled stay in space. The astronauts had travelled to the International Space Station (ISS) in June last year and were supposed to return in a week. However, the space vehicle that had taken them there, a Boeing spacecraft called Starliner, developed problems after which it was considered unsafe for the astronauts' return.

While Starliner itself returned safely to Earth in September 2024, the two astronauts were stranded on the ISS, waiting for an alternative travel arrangement. Now, a SpaceX Dragon spacecraft, which carried four astronauts to the ISS on a routine assignment, is bringing back Williams and Wilmore on its return journey. Two other astronauts, Nick Hague and Aleksandr Gorbunov, who have completed their time on the ISS, are also returning with Williams and Wilmore.

Nine months in space



Williams and Wilmore will come back after more than nine months — 286 days — in space. Their stay is not the longest — several astronauts, both from the US and Russia, have remained in space for longer. Soviet cosmonaut Valeri Polyakov holds the record — he spent 438 days at the Mir space station between January 1994 and March 1995. Mir predated the ISS, and had been operational for 15 years between 1986 and 2001 before it was brought down.

Between September 2022 and September 2023, US astronaut Frank Rubio completed 371 days at the ISS.

Others have spent even more time in space cumulatively over multiple missions. Russia's Oleg Kononenko has made five trips to space, spending a total of 1,111 days. On his last journey, which was completed last year, he returned to Earth after 374 days.

Peggy Whitson of the US has gone three times, and spent 675 days in all, the longest stay in space for a woman astronaut.

This is the third time for both Williams and Wilmore as well. Williams, 59, spent 196 days on her first visit in 2006-2007, and then another 127 days in 2012. Wilmore, 62, spent a total of 178 days at the ISS during his two previous visits in 2014 and 2015.

Boeing's test mission

Williams and Wilmore were on a very short visit to the ISS this time. The main aim of their travel was to validate the capability of Boeing Starliner in taking crewed missions to the ISS. The Starliner CST-100 is a new spacecraft developed specifically for the National Aeronautics and Space Administration's (NASA's) Commercial Crew Program, which seeks to enable private aerospace companies to transport astronauts to and from the ISS. With space travel expected to expand greatly in the coming years, this program is intended to free up NASA to focus on building spacecraft and rockets for deep space missions.

SpaceX was the first company to be certified to carry astronauts to the ISS under this program. Boeing came next. The flight that took Williams and Wilmore to the space station was Starliner's first attempt to carry humans in space.

The spacecraft developed problems even before the launch — there was a helium leak in its propulsion system. It was not a serious enough problem for NASA to abandon the journey, but on its way to the ISS, the spacecraft developed more problems. However, it was able to reach its destination safely.

The ISS, which is used primarily by the US and Russia, has never been without an astronaut since November 2000. Astronauts usually spend a few weeks to a few months carrying out experiments and studies before being replaced by another set.

Missions to the ISS are planned well in advance, and spacecraft and rockets are built to meet the schedule. That is why an alternative space vehicle to bring back Williams and Wilmore could not be arranged immediately. The next spacecraft was scheduled to go to the ISS only by February 2025.

Williams and Wilmore are experienced astronauts, and were in no discernible discomfort. Thus, NASA did not rush to bring them back either. The ISS is large enough to accommodate 10-12 astronauts at any given time. It usually has fewer people — it is only during times of changeover that it is occupied to near-full capacity.

Blessing in disguise

Williams and Wilmore could be very useful in NASA's ongoing study to assess the response of human bodies to long stays in space. They had not trained to spend so much time at the ISS and their bodies might have reacted differently compared to others who prepare sufficiently for extended stays.

NASA and other space agencies are preparing to set up a permanent science facility on the Moon that will require humans to remain in space for extended periods. As such, it has been running a program to study the health impacts of long-period stays in space. US astronauts flying to the ISS can now volunteer to be part of such experiments.

Past studies have shown that bone density and muscle quality deteriorate faster in space than on Earth. Low gravity impacts brain fluids, and extended stays can potentially alter brain structure. Extended stays can also increase the risk of heart disease.

Williams and Wilmore can provide the opportunity for researchers to also study the mental and psychological impacts of being stranded in space, with their return to Earth uncertain.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

15. Serbia's govt accused of using a sonic weapon against protestors: What is this device?

Why Now?

Serbia is currently witnessing mass protests against Vucic and his government over several issues, including allegations of widespread corruption and nepotism.

According to some military experts, the authorities used a sonic weapon to produce a piercing noise to curb the protests. Under the country's police law, the use of such a weapon is illegal.

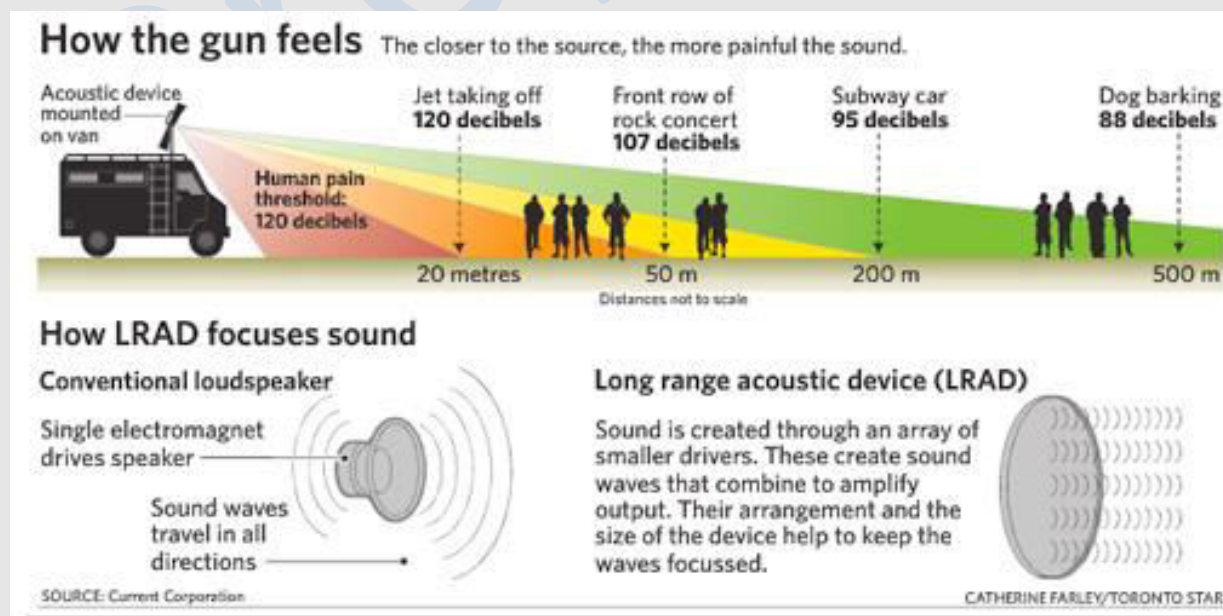
What is a sonic weapon?

Acoustic or sonic weapons are devices that deliver very loud sounds over long distances. They can be designed to emit painful audible or inaudible sound waves. These devices can also be used to act like voice amplifiers to deliver voice messages or other sounds.

Although sound amplifiers have been around for centuries, the use of this technology for crowd-control purposes goes back to the early 1990s.

How do sonic weapons work?

Such weapons usually comprise hundreds of modern transducers — an electronic device that converts energy from one form to another — to create highly concentrated and amplified sound.



What are the health effects of sonic weapons?

These weapons can cause significant harm to the eardrums and delicate organs of the ears and/or hearing loss. Although using earplugs can reduce the sound by 20–30 dB, this may not be enough to avoid significant injury. The impact depends on a person's distance from the sound, duration of exposure, and preexisting bodily conditions.

Loud noises can cause a sensation of ringing ears, also called tinnitus, which can last for minutes after the exposure or for days.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

16. Splashdown of Spacecraft

Why Now?

NASA astronauts Butch Wilmore and Sunita Williams returned to Earth on March 18 after a nine-month-long stay at the International Space Station (ISS). The SpaceX Dragon capsule sent to bring them back to Earth splashed down off the Florida coast, also carrying NASA astronaut Nick Hague and Russian cosmonaut Aleksandr Gorbunov.



Splashdown is when a spacecraft lands in water using parachutes. It's a common and safe way to bring astronauts back to Earth.

So what is a Splashdown?

It is the method favoured by American spacecraft – such as NASA's Mercury, Gemini, and Apollo – to re-enter Earth.

In a splashdown, the Space vehicle parachutes into an ocean or a large water body upon re-entering Earth. The low density and viscosity of water cushions the spacecraft against the impact of re-entry.

But Why Splash Down?

One is the high speed at which the spacecraft is travelling. Landing in water results in a gentler impact compared to a terrestrial landing.

Secondly, due to the friction experienced upon re-entry, the spacecraft may experience up to 3,500° F of extreme heat.

There is also the matter of convenience. Landing in a large water body removes the need to identify a suitable area and eliminates the risk of landing in a populated region. Many American launch sites are located along the coastline, with Space launches made close to water bodies as well.

In comparison, Russian cosmonauts do not splash down but descend on land, since their launch sites, such as the Baikonur Cosmodrome, are located inland.

Simplifying Spacecraft Design

Water landings also reduce the complexity of spacecraft design.

The Russian Soyuz capsule, designed for terrestrial landings, deploys a heat shield to prevent the spacecraft from burning up on re-entry. Braking parachutes, which help decelerate aircraft speeds, and other systems are also required.

On Tuesday, the Dragon enabled its heat shield to prevent the craft from burning up. It deployed two sets of parachutes, called drogue chutes or drag chutes, to slow it down further after re-entry. These were deployed at about 18,000 feet as the vehicle travelled at about 350 miles per hour (563 kmph).

To stick the landing, the Dragon deployed its four main parachutes at about 6,000 feet while slowing down to 15 miles per hour (about 24 kmph) before splashing down.

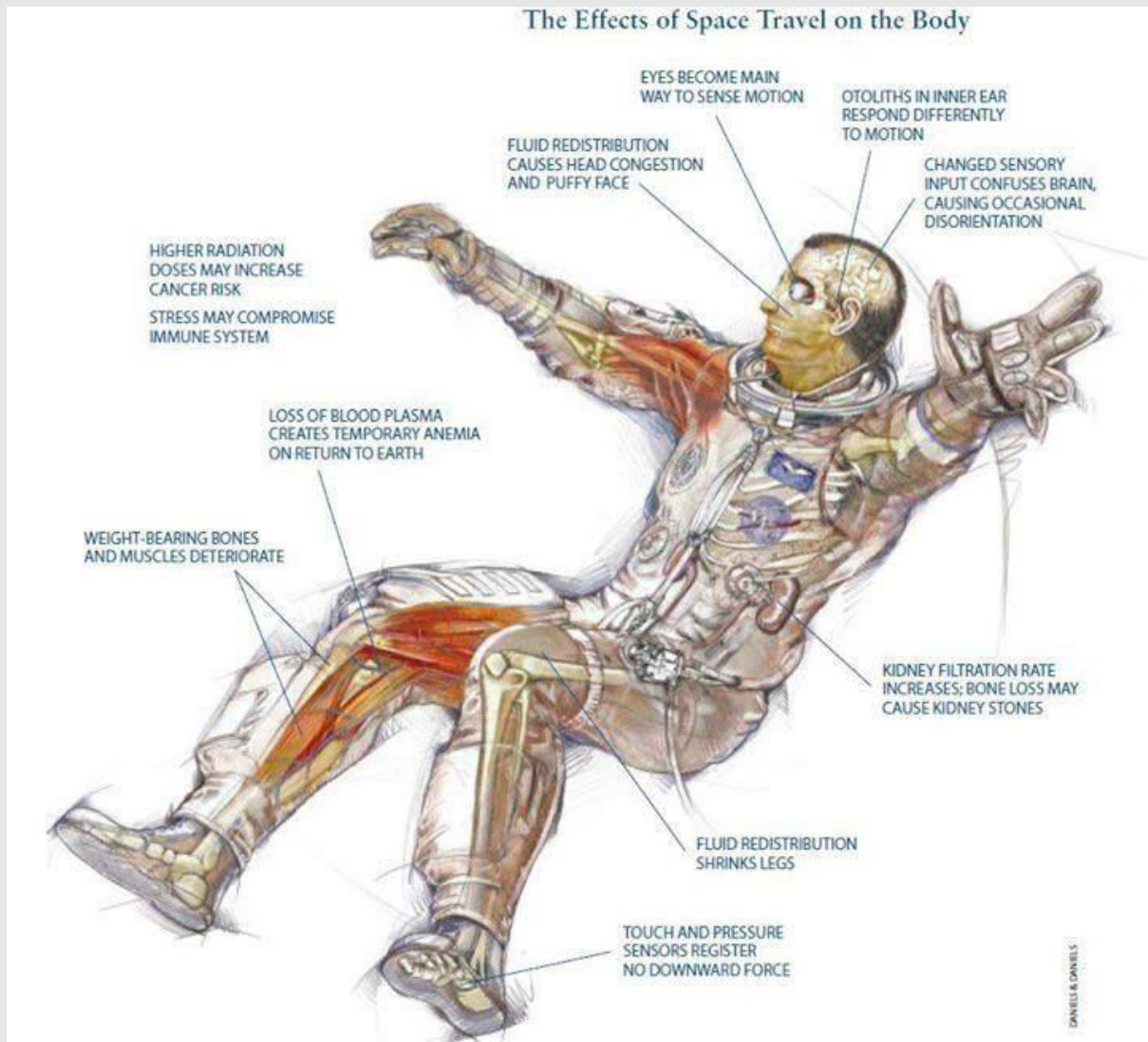
Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

17. Impact of Space Stay and How do astronauts recoup from it?

Why Now?

On March 19, a SpaceX capsule bearing astronauts Sunita Williams, Barry Wilmore, Aleksandr Gorbunov (Mr. Gorbunov is from Russia's Roscosmos), and Nick Hague splashed down in the Gulf of Mexico. The four were returning from the International Space Station (ISS). Of them, Ms. Williams and Mr. Wilmore stayed for nine-month on the ISS. NASA — which employs Mr. Hague, Ms. Williams, and Mr. Wilmore — has a regimen in place for the trio to help re-adapt to gravity.



How does extended spaceflight affect humans?

Microgravity affects the body in many ways as mentioned in the diagram above, including allowing fluids to flow more easily towards the brain, reducing muscle tension, and lowering bone density. Astronauts thus maintain a strict routine of exercises and dieting onboard the ISS, tailored among other things to help work the body and engage the brain.

Impact varies

While more and more people have gone to space with each new decade, the data about the effects of spaceflight on their bodies and minds is insufficient to make proper conclusions. This is because the number of spacefaring individuals is still relatively small; human bodies differ on a variety of parameters; and missions have different spaceflight profiles. There are also indications that extended spaceflight can affect parts of male and female bodies differently, but researchers have said they don't yet have enough data to confirm.

What does physical rehabilitation entail?

Physical therapy ensures crew members' bodies are able to readjust to the earth's gravity without injury.

Physiotherapist may assess the need for massage therapy for crew members from the day of their return. In the subsequent week, crew members undergo "physical reconditioning" exercises for two hours every day: warm-up exercises on elliptical, rowing, and bicycle trainers; tasks to exercise the back and lower limbs and to improve gait; and stretching. In the week after, the exercises expand to include jogging and playing ball-games in water.

Relevance: GS Prelims; Science & Technology
Source: The Hindu

18. Grok AI

Elon Musk Grok AI

The social media platform X (formerly Twitter) has been abuzz in India for the past week over the responses its built-in AI chatbot, Grok 3, has been giving. Apart from its politically colourful replies, Grok is also getting attention for its sarcastic tone.



The name, Grok

Grok means "to understand profoundly and intuitively". It comes from American writer Robert A Heinlein's 1961 novel *Stranger in a Strange Land*. The book's protagonist, Valentine Michael Smith, was born on Mars and raised by Martians. When he comes to Earth as an adult, he brings in words from the Martian language — one of

which was 'Grok'.

The tone

Grok was created by X.AI, a start-up launched by Musk. On November 3, 2023 X.AI put out a blog post announcing Grok, and saying that those who "hate humour" should not use it.

Grok has also come under scrutiny for some of its 'woke' replies (taking positions loosely considered left-liberal), despite Musk criticising AI rival ChatGPT for alleged wokeness. Musk has said this is tough to remove, because there is so much woke content on the internet.

Relevance: GS Prelims; Science & Technology
Source: Indian Express

19. Signal: encrypted messaging application

What is Signal?

Signal is an end-to-end encrypted messaging application, regarded as one of the most secure in its category. Experts have lauded the app for its openly available code, allowing them to verify its security in real time.

In theory, all private conversations and calls made by its users cannot be accessed by the service provider. The app collects limited user data. It also has a feature that allows for automated message deletion within a certain time frame. All a user has to do is register with their phone number.



Why in news?

Recently, Editor in Chief of The Atlantic magazine, Jeffrey Goldberg, said he was accidentally added to a group chat on the app with top leaders of the Trump administration.

In an essay, he described how he became privy to sensitive communications about the government's plans to attack the

Houthis of Yemen earlier this month. The group chat included US Vice President JD Vance, Defence Secretary Pete Hegseth and National Security Adviser (NSA) Michael Waltz.

How did such a thing even happen?

Goldberg recounted that he received a connection request on the app from Waltz on March 11, and accepted it. Two days later, he was added to the "Houthi small group" on Signal.

While he doubted its authenticity and suspected a larger disinformation campaign was at play, he received classified information about the details of the attack and the targets on the chat. Following news reports of the first attack on Yemen, Goldberg realised the group chat was, in fact, very real.

Why is this a big deal?

Sensitive information should have been relayed in person in a Secure Compartmented Information Facility (SCIF) devoid of the use of any electronic devices. Alternately, a secure official communication channel should have been designated for the task.

The use of Signal bypasses a 2023 memo issued by the US Department of Defense, which had designated Signal as an "unmanaged" messaging app. Unmanaged apps are those "NOT authorized to access, transmit, process non-public DoD information."

Managed apps, as designated by the memo, run on enterprise management systems, which "can enforce controls on the application and data in a way that can reduce the risk of data compromise or exposure/spillage of data to unmanaged applications."

The use of Signal also exposes officials to the threat of hacks. In February, Mandiant, a Google-owned security firm, reported that Russian-linked spies tried to hack into the Signal accounts of Ukrainian military officials by posing as trusted Signal contacts.

Since Signal cannot be downloaded on official devices, personal devices were likely used. The issue of data storage also matters: Signal, like other messaging apps, can be accessed on other devices, allowing data to be stored locally on them. These devices face the risk of hacking and malware, regardless of the app's own security.

Relevance: GS Prelims; Science & Technology
Source: Indian Express

20. Why India needs to develop its deep sea capabilities

Matsya-6000 submersible



Last month, India completed wet testing of its Matsya-6000 submersible, capable of diving up to 6 km below the surface to look for underwater minerals off the coast. The launch of the first deep-sea manned vehicle is planned for later this year — it will put India in a select group of nations with the capability to send humans to these depths.

Last week, China unveiled a compact deep sea cable-cutting device that can be mounted on certain submersibles — and which is capable of severing the world's most fortified underwater communication or power lines. China reportedly operates the largest fleet of submersibles in the world.

India's EEZ Depth

Average depth in the Indian Exclusive Economic Zone (EEZ) is 3,741 metres — this is more than four-and-a-half times the height of Burj Khalifa, the world's tallest building. But it is shallow compared to the deepest ocean — the bottom of the Challenger Deep in the Mariana Trench in the western Pacific lies more than 10 km under the surface, more than the cruising altitude of most aircraft.

Need of Distinct Technology

Operating in the deep sea requires a distinct technology and extremely specific capabilities that are challenging and expensive to develop. Consider:

* While sound can travel long distances underwater, its propagation is seriously affected by hydrological conditions such as temperature, pressure, and salinity. Generally speaking, the lower the frequency of the sound wave, the better the propagation of sound underwater.

Very low frequency (VLF) and extremely low frequency (ELF) sound technologies represent the cutting edge of science, and require deep research and enormous funding to develop.

* Pressure underwater increases by approximately one atmosphere (atm) for every 10 metres of ocean depth. One atm is roughly equivalent to the mean sea-level atmospheric pressure on Earth. The pressure at the ocean bed in the Indian EEZ is upwards of 380 atm, or 380 times that on the surface of the Earth.

Vessels that descend to such depths need to be constructed using particular material and processes in order for them to operate safely.

Need for such technology

It is, however, imperative that India overcomes the challenge posed by the deep sea. To be able to ride on the blue economy in the future, India must have the technologies to harness the resources of the ocean and the seabed.

The ocean is a storehouse of resources, from fish, minerals, gas hydrates, oil and gas, and nutraceuticals to oceanographic data that may help in combating climate change and contribute to meteorological research. It is essential to harness these resources to maximise India's economic potential.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

21. Studio Ghibli

Why Now?

AI chatbot ChatGPT upgraded its 4o model to include native image generation capabilities, featuring a "natively multimodal model capable of precise, accurate, photorealistic outputs." Users have replicated various popular artistic styles, most notably the distinctive animation of Studio Ghibli.

What Is Studio Ghibli?

Studio Ghibli is a Japanese animation studio founded in 1985 by legendary animators Hayao Miyazaki, director Isao Takahata, and producer Toshio Suzuki. Its films feature hand-drawn, vivid frames with a rich colour palette and acrylic paints, with minimal use of computer techniques.

The word 'ghibli' is Italian for "hot wind blowing through the Sahara Desert". It refers to Italian scouting aeroplanes during World War II. Miyazaki, named the studio after his love of planes and Italy.

Two films from the studio – Spirited Away (2001) and The Boy and The Heron (2023) won the Academy Award for Best Animated Feature. Five other films have also been nominated for the Oscars.

The studio has worked on 25 films (production and/or animation) and created TV specials, commercials, short films and video games.



Who Is Hayao Miyazaki?

Hayao Miyazaki is a Japanese animator and filmmaker, known as the face of Studio Ghibli.

Born in 1941 in Tokyo, he witnessed the effects of World War II. He studied economics and political science before embarking on a career as an animator in 1963. Miyazaki initially struggled to draw people and spent years drawing planes, battleships and tanks, all of which have found their way into his films.

WHAT HAS MIYAZAKI SAID ABOUT AI?

Miyazaki has expressed strong reservations about using AI to create art. In 2016, Miyazaki said he was disgusted by AI-generated animation and called it an “insult to life itself”.

The animator was shown a clip of an AI-animated zombie, which the presenter described as a form of grotesque dancing. “Artificial intelligence could present us (with) grotesque movements that we humans can’t imagine,” the presenter said.

Miyazaki responded by saying the clip reminded him of a disabled friend who could not move his muscles without experiencing severe pain, or give him a high-five.

"Thinking of him, I can't watch this stuff and find (it) interesting. Whoever creates this stuff has no idea what pain is whatsoever. I am utterly disgusted. If you really want to make creepy stuff, you can go ahead and do it. I would never wish to incorporate this technology into my work at all. I strongly feel that this is an insult to life itself," he said.

With rapid developments in AI, questions of creativity and ownership have also emerged. Questions on what it means for a studio to have a particular style, and what happens when thousands of people may use technology to re-create it, are yet to receive definitive answers.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

22. Europe's space agency retires Gaia, the cartographer of the cosmos: Its mission & significance

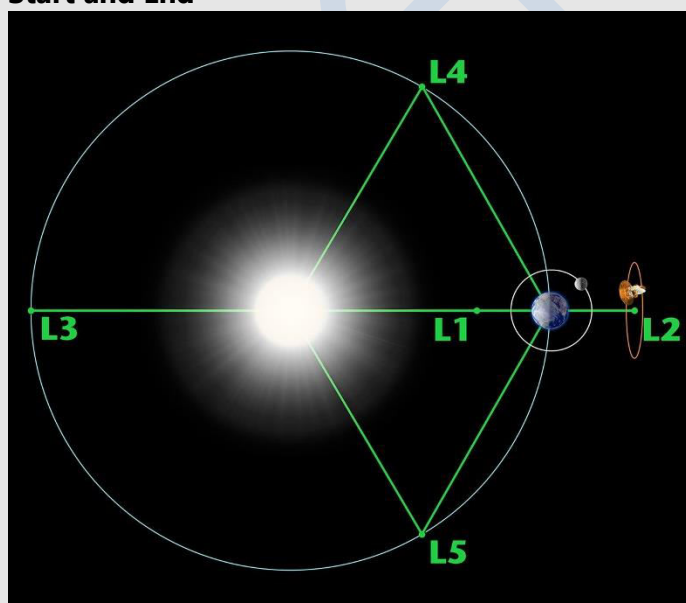
Why in News?

The European Space Agency (ESA) shut down its space observatory mission, Gaia on March 27. Launched into space over a decade ago, Gaia has been instrumental in charting the Milky Way galaxy, revealing its past and estimating its future.

Naming

Originally named Global Astrometric Interferometer for Astrophysics (GAIA), the mission was renamed Gaia. Gaia was designed for astrometry, the science of mapping the cosmos, through precise measurement of the location and movement of stars and other celestial bodies.

Start and End



Gaia was launched in December 2013 aiming to create the most precise, three-dimensional map of the galaxy. It began taking observations on July 24, 2014, finally shutting its eyes on January 15, 2025. Over the last decade, Gaia has taken 3 trillion observations of 2 billion stars and objects and helped inform at least 13,000 scientific publications.

Positioning in space

Gaia was positioned in the Lagrange point 2 (L2), around 1.5 million kilometres 'behind' the Earth, when viewed from the Sun. This effectively allows the spacecraft to view the larger cosmos unhindered by the planet, the Sun and the Moon.

Achievement

Gaia has transformed the way the Milky Way galaxy is viewed. Its data allowed scientists to recreate not just a 3-D map of the galaxy, but also how it will change over time.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

1. Revenue Secretary Tuhin Kanta Pandey appointed SEBI chief

Introduction



The government recently appointed Finance and Revenue Secretary Tuhin Kanta Pandey as the new chairman of the Securities and Exchange Board of India (SEBI).

Mr. Pandey would replace Madhabi Puri Buch, who completed her three-year tenure.

Appointment Process

The Appointments Committee of the Cabinet (ACC) has approved the appointment of Mr. Pandey.

According to a government order, his appointment is initially for a period of three years from the day he assumes charge.

Relevance: GS Prelims

Source: The Hindu

2. Planetary parade

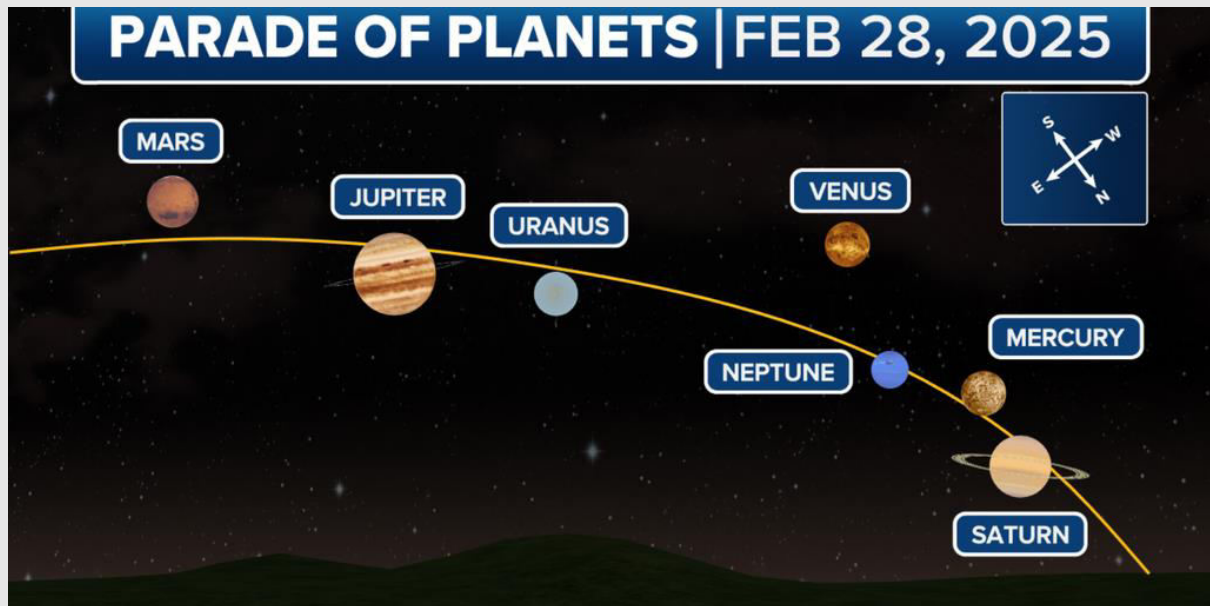
Planetary parade

Planetary parade refers to the lining up of the planets, one behind the other. Depending on the number of planets involved, planetary parades can be common or rare. For example, a parade of three or four planets occurs once every few years, whereas a parade of seven or eight planets is very rare.

Recent Parade

The parade around February 28 was of the latter variety, involving seven planets: Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune. Seven planets to be visible in night sky for last time until 2040.

The closer planets were visible to the naked eye, but the farther ones, especially Uranus and Neptune, required telescopes to see.



Reason for occurrence

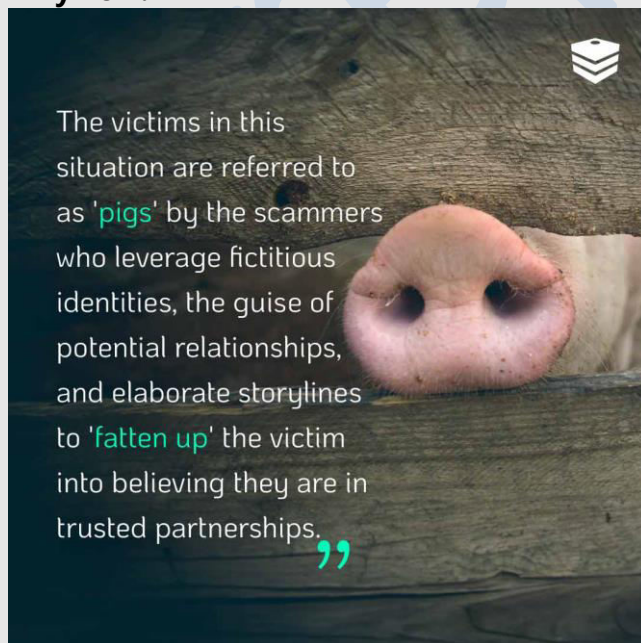
The reason why they happen is simple: the planets of the solar system all orbit the sun in roughly the same plane, called the ecliptic plane. So as they move in their orbits, every once in a while some of them will be visible together from the earth. This wouldn't have been possible if the planets were moving around in different orbits.

Relevance: GS Prelims; Geography

Source: The Hindu

3. Pig butchering scams

Why now?



Earlier this week, the Indian government brought home 549 citizens who had been deceived with fake job offers and forced into cybercrime activities in Southeast Asia. Many had been trafficked to scam centres operating in Myanmar, Thailand, Cambodia, and Laos.

The manner in which people are lured into doing such work is described as “Pig butchering scams”.

What does it have to do with pigs?

“Pig butchering” intends to convey how the potential victims are first “fattened up” before “slaughter”. Scammers approach

them and make enticing offers – of a job, a romantic relationship, or extraordinary amounts of money to be made through cryptocurrency or other investments.

Initially, the offer seems real and some returns are given in the case of monetary scams. This builds trust but eventually, the scammer asks the victim to click on malicious links or record objectionable photos or videos that are later used to blackmail them.

In the recent case, the victims claimed they were approached by a placement agency, which offered data entry operator jobs and good salary packages. They accepted the offer letter, but got shocked after reaching the place where they were forced to commit online fraud by their employers. In many cases, scammers seize their victims' passports and ID cards to prevent their escape.

Indians Stuck

According to data from the Indian Cyber Crime Coordination Centre (I4C), a division under the MHA, about 45% of the cybercrimes targeted at India originate from the Southeast Asia region. As on March 28, 2024, more than 5,000 Indians are suspected of being stuck in Cambodia and forced to carry out cyber fraud.

Relevance: GS Prelims & Mains Paper III; Internal Security

Source: Indian Express

4. Mudumal megalithic menhirs

Why in News?

The Mudumal megalithic menhirs in Telangana's Narayanpet district will soon be the second UNESCO World Heritage Site in the state, after being one six Indian sites to be added to the tentative list by the World Heritage Centre in 2025.

What are menhirs?

A menhir is a standing or an upright stone, which is usually tapered at the top. It is man-made, in that it is sculpted and placed by humans, and usually quite large — the largest surviving menhir, the Grand Menhir Brisé or the Great Broken Menhir in Brittany, France, once stood at 20.6 m tall.

The term 'menhir' is derived from the Brittonic "maen" meaning "stone", and "hîr" meaning "long".

How old are menhirs? Why were they erected?

The ones in Europe were originally associated with the Beaker culture who lived during the late Neolithic and early Bronze Age — roughly 4,800 to 3,800 before present (BP). But the oldest European menhirs are today dated to as early as 7,000 BP. The ones in Mudumal, dated to roughly 3,500 to 4,000 before present (BP), are the oldest known menhirs in India.

Menhirs can either be found alone, or as a part of a larger complex of prehistoric megaliths, simply, large stone structures. While the exact purpose of many megalithic sites is debated, they likely served ceremonial functions. Some were markers of graves, while others might have served some astronomical purposes.



Telangana's 3,000-year-old Menhirs now on UNESCO list

Mudumal Megalithic Menhirs in Narayanpet district have been officially included in India's Tentative List for UNESCO World Heritage recognition, announced on recently.

The Mudumal site has been described as a "megalithic astronomical observatory" by the UNESCO dossier. "Some menhirs are aligned with the rising and setting sun during the summer and winter solstices, suggesting their use as an ancient observatory."

Why do some old stones deserve UNESCO recognition?

Two reasons.

First, they give us insight into the ingenuity of early humans. Not only do these tonnes-heavy stones need a solid understanding of physics to be sculpted and move to precise locations, the precision of their

placement itself tells us how much our ancestors knew about astronomy and solstices.

Second, they give us insight into how the cultures who built them saw and understood the world. The effort taken to build these megalithic structures tells us that they were undoubtedly meaningful to the people who built them. This in turn can help us better understand these cultures who have left no written material for the historical record.

Relevance: GS Prelims; Culture

Source: Indian Express

5. What is Sikhs for Justice, the group India wants designated as Foreign Terrorist Organisation in the US

Why in News?

The Indian government has asked the United States to designate the pro-Khalistan outfit Sikhs for Justice (SFJ) as a Foreign Terrorist Organisation (FTO).

What is Sikhs for Justice?



SFJ was founded in 2007 by Gurpatwant Singh Pannun, a US-based attorney believed to be in his early 50s. According to its website, SFJ seeks to achieve “self-determination for the Sikh people in their historic homeland” in “Indian held Punjab”, and “establish a sovereign state, popularly known as Khalistan”.

Gurpatwant Singh Pannun

Born in the 1960s in the village of Khankot, on the outskirts of Amritsar, Pannun grew up in Punjab during the heyday of the Khalistan movement and militancy in the state. He graduated in law from Panjab University sometime in the 1990s, and then moved to the US.

He has been active in the movement for Khalistan in the Sikh diaspora in the US and Canada since the early 2000s.

What is the significance of a possible FTO designation?

India refers to Pannun as a terrorist, and has banned SFJ under the UAPA. There are dozens of cases against Pannun and his organisation in India, including three sedition cases in Punjab. But given Pannun is a foreign citizen on foreign soil, New Delhi has been unable to impede SFJ's activities. This is why the FTO designation by the US could be significant.

Put simply, such a designation would cripple Pannun's US-based organisation. It is not only unlawful for a person in the US to provide “material support or resources” to a designated FTO, American financial institutions may be required to block all transactions involving assets held or controlled by an FTO.

There are some 77 listed FTOs at the moment, including the likes of Al Qaeda, ISIS (and its multiple offshoots), Hamas, Indian Mujahideen, and Jamat ud Dawa.

Relevance: GS Prelims & Mains Paper III; Internal Security

Source: The Hindu

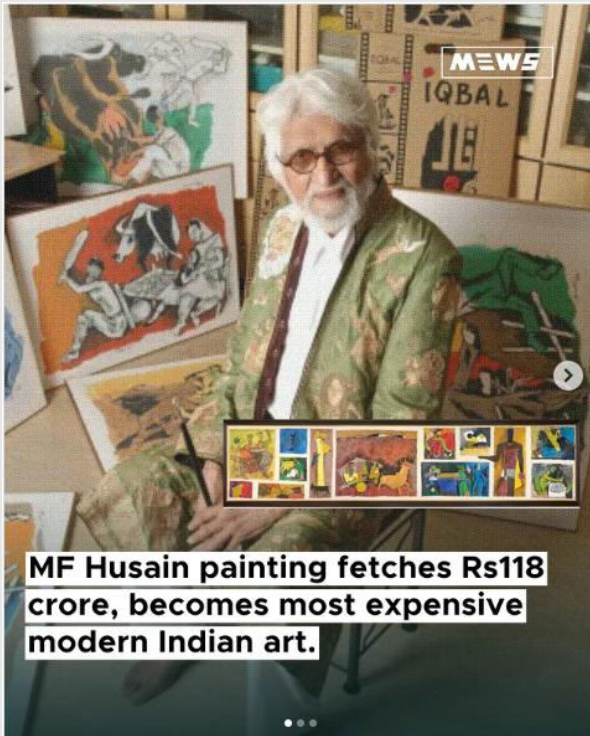
6. From Delhi to Oslo, story of M F Husain's painting that has been sold for a record Rs 118 crore

Introduction

M.F. Husain's painting was sold for \$13.8 million (more than Rs 118 crore) at a Christie's auction in New York on March 19, becoming the most expensive Indian artwork to be auctioned, and the first to cross the Rs 100-crore mark.

'Untitled (Gram Yatra)', a monumental oil-on-canvas measuring nearly 14 feet x 3 feet, comprises 13 vignettes that appear as a celebration of rural life in India.

It had remained in the collection of Oslo University Hospital, Oslo for several decades, largely away from the public eye. How did the painting travel to Norway; what is the story of its 'rediscovery' and sale?



Story of the painting

Husain painted the work in 1954, and displayed it that same year at an exhibition titled 'M F Husain and Krishen Khanna' at the All India Fine Arts & Crafts Society (AIFACS) in Delhi.

In the city at the time was Leon Elias Volodarsky (1894-1962), a Ukrainian-born surgeon based in Norway. An avid art collector, Volodarsky would often visit museums and art galleries in India. He reportedly bought the painting from Husain for his home in Oslo.

In 1964, Dr Volodarsky's estate donated the painting to the collection of Oslo University Hospital, where it was exhibited in a private corridor, mostly hidden from public view.

Some 13 years ago, the existence of the painting was brought to the attention of Nishad Avari, Head of the Department, Indian Art, at Christie's. Avari brought the painting to Christie's auction in New York.

Last highest sold Indian Painting

Prior to last week's sale, the most expensive work of Indian art to be sold at an auction was Amrita Sher-Gil's 1937 'The Story Teller' that fetched \$7.4 million (Rs 61.8 crore) at a Saffronart auction in India in 2023.

The work, its significance

The first decade after Independence was a time of intense artistic development in the country. Through the 1950s, Husain produced several of his seminal works, including the iconic 'Zameen' (1954-55), which is now in the collection of the National Gallery of Modern Art in New Delhi.

His modernism was deeply rooted in India, and is in evidence in the 1954 work sold last week. Its 13 vignettes include varied scenes from village life – a man and a woman riding a bullock cart, a woman dancing with a drummer, another woman pounding wheat, etc.

An open field rendered with expressive brushstrokes was ostensibly inspired by Husain's visit to China in 1952, where he was impressed by the calligraphic strokes; another landscape shows a more fragmented cubist approach.

Last years of Husain's life

While his work received wide acclaim, it also provoked anger among some who saw his art as insulting to Hindu deities and the motherland. Husain received multiple death threats, and hundreds of cases were registered against him. He finally left India on self-imposed exile in 2006, and accepted Qatari citizenship in 2010. While still in exile, he passed away in London in 2011.

Relevance: GS Prelims

Source: Indian Express

7. National Pest Surveillance System

Introduction

The National Pest Surveillance System (NPSS) has been launched on 15th August, 2024 by the Hon'ble Union Minister of Agriculture and Farmers Welfare to enhance the surveillance and management of pest diseases across the country.

How does System work?

The system utilizes latest digital technologies such as Artificial Intelligence and Machine Learning (AI and ML) to provide quick and instant solution regarding pest attacks, crop diseases, crop damages etc. by issuing real time crop protection advisory to the farmers. It includes a user-friendly mobile app and a portal for identification of pests and disease mitigation.

Use of NPSS

NPSS is being used by the farmers across the country for identification of pests and diseases in 61 crops and pest management advisories for 15 major crops namely cotton, paddy,

wheat, maize, pigeon pea, moong, soyabean, sugarcane, brinjal, tomato, apple, banana, grapes, pomegranate. NPSS is currently available in four languages namely English, Hindi, Marathi and Punjabi. So far, 10154 pest management advisories have been issued through NPSS for the benefit of farmers.

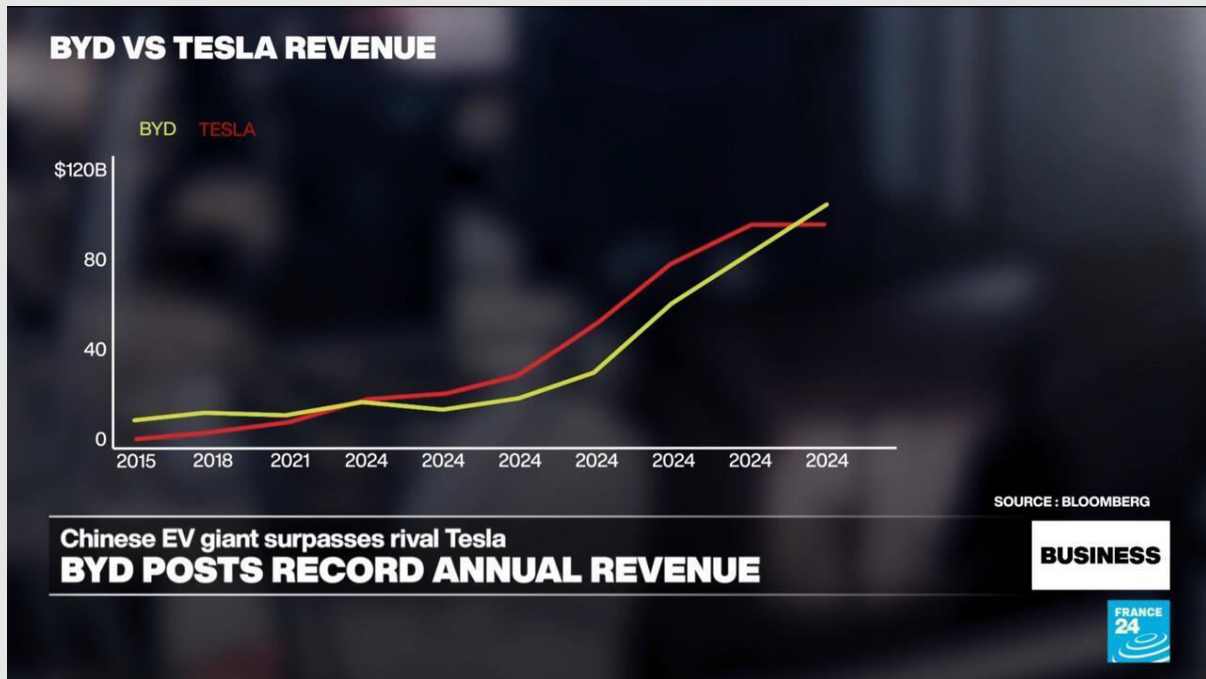
Relevance: GS Prelims

Source: PIB

8. Rise of Chinese carmaker BYD

Why in News?

Wang Chuanfu's BYD — literally "Build Your Dream" — has become one of the largest auto companies in the world. The Shenzhen-based carmaker reported revenue of \$107 billion for 2024, beating Tesla's revenue of \$97.7 billion for the year. And by selling 4.3 million electric and hybrid cars, it edged out Honda to become the sixth-largest automaker in the world by vehicle sales. Only Toyota, Volkswagen, Hyundai-Kia, General Motors and Stellantis (the parent-company of brands like Jeep, Chrysler, and Fiat) were ahead.



Started as Battery maker

BYD was established in 1995 by chemist Wang Chuanfu who saw an opportunity to start a rechargeable battery company to challenge Japan's dominance in the industry. Wang founded the firm after taking a \$350,000 loan from his cousin, and the company initially built batteries for mobile phones and power tools.

Its first success came in 2000 when it started to supply batteries to Motorola, one of the biggest mobile phone companies of the time.

Beginning of car manufacturing

It was not until 2003 that BYD decided to manufacture cars as well. That year, it bought a majority stake in a failing state-run car company, Xi'an Qinchuan Auto Co. Although investors of BYD were not happy about the development, Wang — who did not even know how to drive at the time — saw cars as a natural extension of the company's battery business.

The company got a boost after Warren Buffett's Berkshire Hathaway made a \$230 million investment in BYD in 2008.

Today, the company manufactures both full EVs and plug-in hybrids, and does what no other car manufacturer has managed to do yet: sell (relatively) affordable electric cars at a profit. It exports its cars to around 95 countries, including India.

Hurdles

With its increasing dominance in the global market, BYD has already started to face some new hurdles.

The United States and European Union have put protectionist tariffs on the company's cars being exported from China, fearing BYD and other Chinese will severely impact local automakers. While the US has imposed a 100% tariff on Chinese EV imports, the EU has put a 17% tariff. It remains to be seen how BYD tackles these tariffs to expand its market in these regions.

Another issue has been the company's unimpressive sales in India. Last year, BYD had a 3% market share and a 40% increase in sales, reaching 2,818 units.

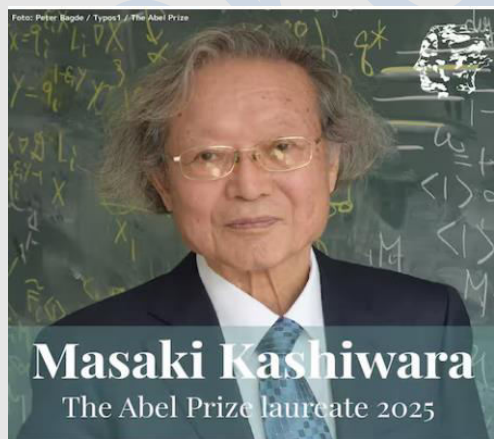
One reason for BYD's underperformance has been the absence of its manufacturing plant in India. As a result, its cars come with a hefty 110% import duty. The government is currently mulling over reducing this duty, but there has been no official announcement about the matter.

Relevance: GS Prelims; Miscellaneous

Source: Indian Express

9. 2025 Abel Prize

About Abel Prize



First awarded in 2003, the Abel prize is often considered to be an equivalent of the Nobel prize, which does not have a category for mathematics. It has been modelled as such.

The prize includes a monetary award of 7.5 million kroner (roughly \$720,000) and a glass plaque designed by Norwegian artist Henrik Haugan.

The Abel Prize "recognises pioneering scientific achievements in mathematics". It is named after Norwegian mathematician Niels Henrik Abel (1802-

29), who in his short life made pioneering contributions to multiple fields.

Establishment of Prize

The prize was established by the Norwegian Parliament in 2002, on Abel's 200th anniversary. The Abel Prize is awarded and administered by the Norwegian Academy of Science and Letters on behalf of the Norwegian government. The recipients are chosen by an expert committee appointed by the Academy under the advice of the International Mathematical Union (IMU) and the European Mathematical Society (EMS).

2025 Abel Prize

Japanese mathematician Masaki Kashiwara was awarded this year's Abel Prize.

Relevance: GS Prelims; Miscellaneous

Source: Indian Express

10. Zo People

Why now?

Violent clashes broke out in Churachandpur last week between individuals belonging to the Zomi community on one side, and those belonging to the Hmar and Kuki communities on the other. All three communities fall under the larger Zo umbrella.



Who are the Zo people?

The Zo people are an ethnolinguistic group who speak the Kuki-Chin languages. Although there is no universally accepted origin story, the scholarly consensus is that the Zo people settled in what is today Myanmar thousands of years ago, travelling from China via Tibet.

Constant feuds among various tribal clans drove many westward to modern-day Mizoram and parts of Manipur in the 17th century. There they settled in new villages, but remained socially and emotionally enmeshed with the Chin tribes of Myanmar.

Present status

Today, a majority of the Zo population lives in “Manipur and Mizoram in Northeast India, Bangladesh, and Chin State of Myanmar”.

The Zo people comprise various sub-tribes and clans such as the Chin, Kuki, Mizo, Lushei, Zomi, Paitei, Hmar, Ralte, Pawi, Lai, Mara, Gangte, Thadou, etc.

What are the dynamics between various Zo tribes?

At the heart of the clash last week is a long power struggle over the representation of various small tribes, with their unique identity, that are clubbed together as the Zo. Notably, tribes identifying as Zomi reject the term Kuki, pointing to its colonial origin, and oppose “assimilation” under Kuki identity.

Relevance: GS Prelims; Miscellaneous

Source: Indian Express

11. R K Shriramkumar, violin maestro chosen for this year’s prestigious Sangita Kalanidhi award

Why in News?

Violinist RK Shriramkumar Honoured With Sangita Kalanidhi Award



The Music Academy, Chennai, has chosen violinist and composer Rudrapatna Krishnamurthy Shriramkumar for this year’s prestigious Sangita Kalanidhi Award.

Who is R K Shriramkumar?

Shriramkumar belongs to an illustrious Sankethi Brahmin family of musicians from Rudrapatna, a village on the bank of the Cauvery in Karnataka’s Hassan district, which is known as Sangeet Grama, or Village of Music.

The village and family have produced some of the biggest names in Carnatic music.

Sangita Kalanidhi and Music Academy

Sangita Kalanidhi, which translates as ‘Treasure of Music and Art’, is the highest honour in Carnatic music. It is awarded annually by the Madras Music Academy, one of the oldest academies of Carnatic music in India.

The Music Academy was established in 1928, following a decision taken at the Indian National Congress session in Chennai in December 1927 to promote Carnatic music and Bharatanatyam. The lawyer, freedom fighter, and artiste E Krishna Aiyar was trying at the time to revive Bharatanatyam, which had suffered from the stigma of association with devadasis.

Carnatic Music

It is the music of South India. It is indigenous in nature with no external influences. Under Carnatic music, vocalists are expected to sing fixed ragas/ragam and not make any improvisation. The role of instruments is secondary in Carnatic music.

Difference between Hindustani Music and Carnatic Music

Hindustani Music	Carnatic Music
It is prevalent in North India.	It is prevalent in South India.
It has Persian, Afghan, and Turk influence.	It is Indigenous. There are no external influences.
Under this, artists were given freedom to improvise, and thus sub-styles/gharanas emerged.	Under this, fixed style of music was followed, and thus there is only one particular prescribed style of singing.
Instruments play an equal role in this music.	Vocals play a larger role in this music.

Relevance: GS Prelims; Awards and Honours

Source: Indian Express

12. Why Myanmar is frequently rocked by earthquakes

Why Now?

A powerful earthquake of magnitude 7.7 and at least six aftershocks struck central Myanmar recently, bringing buildings down in the country's second-largest city, Mandalay, and killing at least 1600.

Neighbouring Thailand was also affected: an under-construction skyscraper in the capital Bangkok collapsed, killing at least nine people. Parts of Northeast India too felt the shake, although no casualties or significant damage to property has been reported.

The quake's epicentre (point of origin of earthquake) was located 17.2 km from Mandalay, a metropolis with a population of around 1.5 million people. It was a shallow earthquake, with a depth of only 10 km, and the strongest one anywhere in the world in the last two years.

Myanmar sits on a tectonic fault line



- 1 The Indian plate collides with the Eurasian plate
- 2 Friction builds up along the Sagaing fault
- 3 The fault slips along a 200km section, which releases energy felt as an earthquake

Source: USGS, Advancing Earth and Space Sciences

BBC

What caused the earthquake?

Earth's lithosphere, the rigid outermost rocky shell of the planet, is made up of a number of tectonic plates. These plates have been slowly moving.

The Myanmar earthquake took place due to the "strike slip faulting" between the Indian and Eurasian plates, meaning these two plates rubbed sideways against each other.

The quake took place on the Sagaing Fault, which runs north to south through the centre of Myanmar, and is prone to earthquakes. A fault is a fracture or zone of fractures between two blocks of rock, which allows the blocks to move relative to each other, sometimes leading to earthquakes.

Why are shallow earthquakes dangerous?

Shallow quakes are generally more dangerous as they carry more energy when they emerge to the surface when compared to quakes that occur deeper underneath the surface. While

deeper quakes do indeed spread farther as seismic waves move radially upwards to the surface, they lose energy while travelling greater distances.

Apart from the depth, the magnitude of an earthquake is also an indicator of how destructive a quake could be. Magnitude tells how big the seismic waves are, while strength refers to the energy they carry. While each whole number increase in magnitude represents a tenfold increase in the measured amplitude, it represents 32 times more energy release.

Put simply, the seismic waves produced by a magnitude 6 earthquake have 10 times higher amplitude than the ones produced by a magnitude 5 earthquake. The energy differential is even higher, 32 times for every change of 1 in magnitude.

How frequently do quakes occur in Myanmar?

Myanmar frequently experiences earthquakes due to the Sagaing fault. Since 1900, at least six quakes of magnitude greater than 7 have occurred near the Sagaing Fault.

India's 'Operation Brahma' kicks off

India has immediately started 'Operation Brahma' to assist Myanmar, where over 1,600 people have died, and many are trapped in the debris. The Ministry of External Affairs said that no Indian citizen was among the casualties.

India has been playing the role of first responder in such situations. Last year when Cyclone Yagi had struck, India had responded to assist the government and people of Myanmar.

Relevance: GS Prelims; Geography

Source: The Hindu

13. PM Modi to visit RSS headquarters: All about Sangh's two main centres in Nagpur

Why in News?

Narendra Modi has become the first sitting Prime Minister to visit the Dr Hedgewar Smruti Mandir in Reshimbagh in Nagpur, the administrative headquarters of the Rashtriya Swayamsevak Sangh which also houses memorials dedicated to its founder K B Hedgewar, and second sarsanghchalak (chief) M S Golwalkar.



Minutes away is the RSS Karyalaya, the official residence of the organisation's senior leaders, including sarsanghchalak Mohan Bhagwat, which also contains a museum telling the story of the many travails of the once-banned outfit.

RSS has been banned thrice in Independent India: after the killing of Mahatma Gandhi in 1948, during the Emergency in 1975-77, and after the demolition of the Babri Masjid in 1992.

Memorial of founder, organisation's HQ

Away from the hustle and bustle of the Nagpur traffic, there is a modest but meticulously maintained structure surrounded by green trees and flowering plants: the memorial of RSS founder Dr Keshav Baliram Hedgewar, popularly known as Doctorji.

Once a Congress activist, Hedgewar grew disillusioned with the party in the 1920s. Following Hindu-Muslim riots that rocked Nagpur (as well as many other cities) in 1923, Hedgewar on vijayadasami day in 1925 launched the RSS, an organisation dedicated towards establishing a Hindu Rashtra.

He led the organisation till his death in 1940. Hedgewar was cremated at the then-open grounds of Reshmibagh where a samadhi (memorial) was erected in his honour in 1962, inaugurated by his successor Golwalkar. After Golwalkar's passing in 1973, the RSS built a memorial for him at the same site.

Apart from housing memorials of Hedgewar and Golwalkar, the premises also have a number of administrative offices, training centres, and a state-of-the-art auditorium which make up the headquarters of the RSS. All meetings and training camps take place at this location.

Residence of sarsanghchalak, museum

The Sangh's top leadership, including sarsanghchalak Mohan Bhagwat, lives at the Karyalaya when in Nagpur. The Karyalaya has been with the RSS since its founding in 1925.

Inside the Karyala are rows of spartan rooms, equipped only with some basic necessities and with very little furniture. They are equipped with water coolers — not air-conditioners — to beat the oppressive Nagpur summer.

The second floor of the Karyalaya has been converted into a museum, displaying belongings, memoirs, letters, gifts, citations of various RSS chiefs, and senior leaders. It is designed to be a walk down the memory lane — one that tells the story of the Sangh, and the many travails faced by the once-banned organisation.

Security concerns

Although both the Karyalaya and the Dr Hedgewar Smruti Mandir are open to the public, they are heavily guarded, especially since the Lashkar-e-Taiba of 2006, when the police gunned down three terrorists targeting the Sangh's two main centres.

Today, the RSS chief is provided Z+ security — the highest category of armed VIP protection in India.

Relevance: GS Prelims; Culture

Source: Indian Express