



SIVARAJAVEL IAS ACADEMY
AN IDEAL INSTITUTE FOR **CIVIL SERVICE EXAMS**

the **CATALYST**

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The **CATALYST**

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Sivarajavel IAS Academy

The **CATALYST** is a monthly magazine for current affairs which tries to give aspirants an in-depth comprehension of certain topics which appeared in different sources over the month. The Magazine has been designed in such a way that the reading experience is enriching and insightful for the readers.

The contents have been grouped into a thematic structure to help aspirants focus on the overall GS syllabus.

Inside The Catalyst Magazine

- I. Within the Sub themes first few topics will be Prelims oriented followed by indepth coverage of Mains Topics.
- II. Book Summary Relevant for UPSC Exam.
- III. Fact Sheet and Quotes have also been provided.

**New sections will be added or removed based on the new updates we include in the forthcoming issues.*

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SIVARAJAVEL IAS ACADEMY

AN IDEAL INSTITUTE FOR **CIVIL SERVICE EXAMS**

the **CATALYST**

From the Editor's Desk

Dear Readers,

A New Year, Renewed Focus: Conquering the UPSC Prelims

Dear Aspirants,

As we bid farewell to 2024 and embrace the promise of a new year, I want to extend my warmest wishes for a year filled with success and fulfillment. We acknowledge the past year's challenges, particularly the delays in our publications. We deeply apologize for any inconvenience caused and want to assure you that we've learned from these setbacks. Our team is committed to punctuality and delivering timely insights moving forward.

This new year signifies a fresh start for all of us, especially for UPSC aspirants gearing up for the Prelims. While the date is yet to be announced, remember, preparation is key.

Sharpening Your Sword for the Prelims:

This month, we delve into the insightful book "Why Nations Fail," offering valuable knowledge on factors affecting nations' progress. For this Issue(Nov 1 to 30) we cover crucial current affairs topics, including the Supreme Court's judgment on secularism and socialism, the International Cooperative Alliance, the Health Longevity Report, the contrasting food inflation trends, and India's impressive achievement of 200GW in renewable energy.

Remember these key points for successful Prelims preparation:

Focus on Fundamentals: While staying updated on current affairs is important, ensure a strong foundation in core subjects like history, polity, economy, and geography.

Limited but Thorough Sources: Choose a select set of reliable sources and revise them meticulously.

Multiple revisions will solidify your knowledge and enhance recall.

Practice Makes Perfect: Take mock tests regularly to identify your strengths and weaknesses.

Analyze your performance and work on areas requiring improvement.

We are here to support you on your UPSC journey. Your feedback is invaluable to us. Feel free to share your suggestions at sivarajaveliasacademy@gmail.com.

Let's make this year a year of focused preparation and triumphant success!

Wishing you all the very best,

Sincerely,
P. Mohan

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POLITY & GOVERNANCE

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SUPREME COURT'S JUDGMENT ON AMU'S MINORITY STATUS:

Context: The Supreme Court (SC) by a 4:3 majority, overruled its 1967 decision in *S. Azeez Basha vs. UOI*, which had denied AMU minority status under Article 30(1), ruling that AMU was not established or administered by the Muslim minority.

Background:

The 1967 ruling stated that AMU, founded by the *AMU Act of 1920*, was a central university and not a minority institution.

In 1981, the *AMU (Amendment) Act* restored AMU's minority status, but the *Allahabad High Court* struck it down in 2006, a decision that was later challenged in the SC in 2019.

Key Highlights of the Judgment:

No Need for Minority Control: The court ruled that minority control over administration is not a requirement for proving minority status.

Genesis of the Institution: The institution's origins and the community that established it should be considered when determining its minority status.

Statutory Creation Does Not Affect Minority Status: Even if an institution was created by statute, its minority status remains intact if it was founded by a minority community.

Protection for Pre-Independence Institutions: Communities that were not minorities before the Constitution are still entitled to minority protection for institutions established before independence.

Fundamental Right:

Article 30(1) guarantees minorities the fundamental right to establish and manage educational institutions of their choice.

The *National Commission for Minority Educational Institutions (NCMEI)* Act was enacted to protect these rights.

AFSPA

Why in News?

The Union Home Ministry has reimposed AFSPA in six police station areas in Manipur, citing ongoing ethnic violence and increased insurgent activities. This decision reverses its partial withdrawal in 2022 when the situation was deemed improved.

The affected areas include sections of Imphal West, Imphal East, Bishnupur, Kangpokpi, and Jiribam districts, which are prone to insurgent activities, including abductions and extortion. Over 240 deaths have occurred since ethnic violence erupted in May 2023.

Background

AFSPA was first introduced in 1958 to address insurgency in the Northeast. In Manipur, it has been controversial, linked with allegations of

human rights violations, including the Malom massacre (2000) and Thangjam Manorama case (2004).

Activist Irom Sharmila famously protested against it for 16 years. In April 2022, AFSPA was removed from several police station limits as part of efforts to scale back its application due to improved security.

About AFSPA

The law empowers armed forces to:

Arrest without warrant.

Use force, including lethal force, if necessary, to maintain public order.

Protect themselves from legal prosecution without prior Central government approval.

It applies to areas declared "disturbed" due



to unrest or insurgency, allowing armed forces extensive autonomy in operations.

States with AFSPA

Currently, AFSPA is in effect (in full or part) in:

Northeast India: Assam, Nagaland, Arunachal Pradesh, Manipur.

ONE RANK ONE PENSION (OROP) SCHEME

Context:

The Prime Minister marking ten years of One Rank One Pension (OROP) scheme which was a tribute to the courage and sacrifices of our veterans and ex-service personnel who dedicate their lives to protecting our nation.

About One Rank One Pension (OROP) scheme

OROP ensures that *all armed forces personnel retiring at the same rank receive the same pension*, regardless of their retirement date. Eg, a General who retired in the year 1980 will be receiving the same pension as a General who retired in the year 2015.

OROP addresses long-standing demands from veterans for equitable pension distribution, recognising their sacrifices and service to the nation.

Key Features of OROP:

Pensions are determined by rank and length of service, ensuring fairness among retirees, while also protecting those already receiving above-average amounts.

Pension Revision: The pension will be *re-*

Jammu & Kashmir: Under separate provisions.

Efforts have been made in recent years to reduce its footprint in some areas of the Northeast, reflecting improved security.

Procedure to Enact AFSPA

Declaration of 'Disturbed Area': The Central or State government can declare an area "disturbed" under Section 3 of AFSPA.

Notification: A gazetted notification officially places the area under AFSPA.

Review: Periodic reviews, typically every six months, assess the necessity of its continuance.

This decision is often contentious, balancing security needs with human rights concerns.

fixed every five years to account for changes in salaries and pensions of serving personnel. The first revision took place on *1st July 2019*.

Financial Implications: The estimated cost for implementing OROP revisions is approximately Rs 8,450 crore annually.

Beneficiaries: Over *25.13 lakh armed forces pensioners* and their families will benefit from this scheme.

Includes provisions for *family pensioners, war widows, and disabled pensioners*.

Uttar Pradesh and Punjab have the highest number of OROP beneficiaries.

Supreme Court Ruling on OROP:

The *Supreme Court* in *Indian Ex-Servicemen Movement v Union of India Case*, affirmed the *constitutional validity of the OROP* scheme, determining that different pensions for personnel of the same rank based on their retirement dates are not arbitrary.

It emphasized that differences in pensions arise from various factors such as *Modified Assured Career Progression (MACP)* and base salary calculations.

ELECTRONIC TRACKING OF UNDERTRIAL INMATES

Why in News?

The Supreme Court’s Centre for Research and Planning has proposed launching pilot programs to use electronic tracking devices for undertrial prisoners (UTPs) to address the pressing issue of prison overcrowding in India. The suggestion is part of its report ‘Prisons in India - Mapping Prison Manuals and Measures for Reformation and Decongestion’, released on November 5, 2024

Background:

India’s prison system faces chronic congestion issues, with many prisons operating well beyond capacity. As per the *National Crime Records Bureau (NCRB)*, 75.7% of the prison population comprises undertrial prisoners, highlighting systemic delays in the judicial process. The proposed use of technology is inspired by international practices and previous legal precedents, which have debated electronic tracking devices as an alternative to incarceration.

Present Situation and Data

Occupancy Rate: India’s prisons have an average occupancy of 131%, with a capacity of 4,36,266 inmates but housing 5,73,220 as of December 31, 2022.

Overrepresentation of UTPs: Of the total inmates, 4,34,302 (75.7%) are undertrials

Efforts like the Model Prisons and Correctional Services Act, 2023 have introduced electronic tracking options but lack clear guidelines for their implementation

Benefits of Electronic Tracking:

Decongestion: Reduces the physical strain on prison infrastructure by allowing low- and medium-risk UTPs to serve parole or furlough outside prison.

Cost-Effective: Cuts government expenses associated with housing inmates.

Reform-Oriented: Encourages good conduct and rehabilitation by providing prisoners the opportunity for monitored freedom.

Mental Health: Improves prisoner well-being by increasing family contact and mitigating isolation

Demerits and Concerns:

Civil Liberties: Risk of misuse, undue surveillance, and invasion of privacy.

Lack of Standards: No uniform guidelines on how or when tracking technology should be applied.

Potential Ineffectiveness: Universal implementation may not suit all cases and could undermine its purpose in some instances.

Legal Challenges: Supreme Court and legal experts have expressed concerns about the constitutionality and ethics of tracking conditions for bail.

SECULAR, SOCIALIST’ TO STAY IN CONSTITUTION’S PREAMBLE: SC

Context

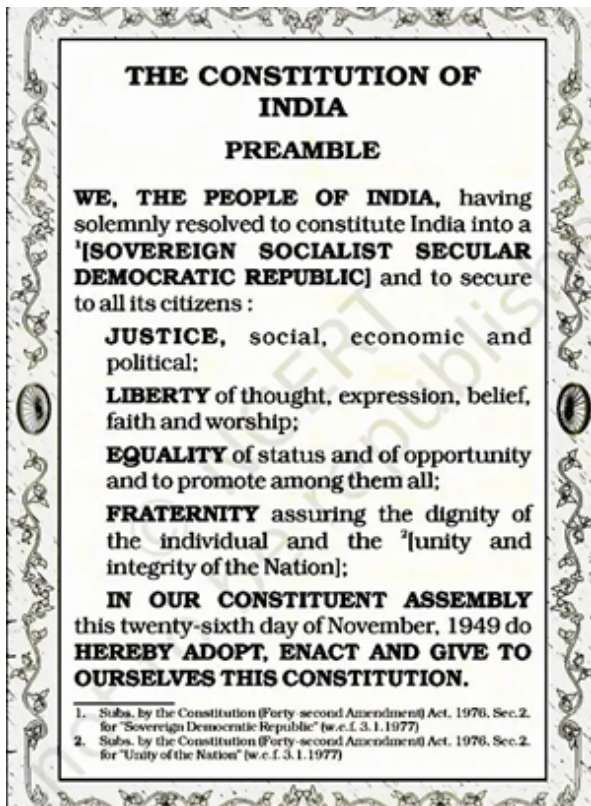
The Supreme Court of India dismissed petitions challenging the constitutional validity of the 42nd Amendment Act, which added the words ‘secular’ and ‘socialist’ to the Preamble of

the Constitution in 1976 during the Emergency.

In its verdict (Dr Balam Singh and ors v Union of India), the court emphasized the widespread acceptance of these terms and their clear understanding by the people of India.

What is the Preamble to the Constitution of India?

The Preamble is an introductory statement of the Constitution that explains its philosophy and objectives. It lays down the basic principles and goals of the Constitution.



The objectives were first laid in the Objective Resolution (adopted in 1947), and after much debate and deliberation, the Preamble was drafted and adopted on November 26, 1949.

The Preamble indicated that the source of authority of the Constitution lies with the “people of India”.

It is an “integral part and scheme” of the Constitution. It is non-justiciable - a violation of any principle mentioned in the Preamble cannot be a reason to go to the courts in India.

However, judges can use it as an additional factor in their reasoning and judgements.

The Terms ‘Socialist’ and ‘Secular’ in the Preamble:

History: The two terms were inserted into the Preamble by the 42nd Amendment of the Constitution in 1976, which is also called “mini-Constitution” because of the number and expanse of the changes introduced.

Meaning:

Socialist:

Western concept: Socialism supports government/ collective ownership of the means of production in order to achieve economic equality.

Indian concept: Emphasises democratic socialism by distributing resources fairly and permitting a mixed economy that includes both the public and private sectors.

Secular:

Western concept: Secularism primarily refers to the absolute separation of religion and state.

Indian concept: No strict division between religion and the state. Highlights the importance of the state in fostering religious harmony and the equal respect for all religions.

Highlights of the SC Judgment in Dr Balram Singh Case:

Context of the 42nd amendment:

The petitioners argued that the amendment was introduced during the Emergency imposed by the Indira Gandhi government, questioning its legitimacy.

The SC pointed out that this issue was deliberated during the Constitution Forty-Fourth Amendment Bill, 1978, which retained the terms after extensive parliamentary discussion.

Parliament’s power to amend the Preamble:

A bench comprising Chief Justice Sanjiv Khanna and Justice Sanjay Kumar ruled that Parliament’s power under Article 368 extends to amending the Preamble.

Hence, the argument against retrospective amendments was rejected.

The bench stated that accepting the

retrospectivity argument would undermine all constitutional amendments, despite Parliament's unquestioned authority to amend the Constitution.

Constitution as a 'Living' document: The court noted that while the Constituent Assembly had initially excluded the terms 'secular' and 'socialist' from the Preamble, their inclusion aligns with India's evolving democratic and social framework.

Delay in filing the petitions: The court questioned the petitions filed in 2020, 44 years after the amendment, noting the widespread acceptance of these terms in India.

Interpretation of key terms:

Secularism: The State remains neutral, neither endorsing nor opposing any religion. This principle is enshrined in Articles 14, 15, and 16 of the Constitution.

Socialism: The term 'socialist' does not constrain economic policies but reflects the State's commitment to being a welfare state.

Significance of addition of 'secular' and 'socialist':

It has not impeded legislation or governance, provided they align with constitutional rights and the basic structure doctrine.

Reinforces India's commitment to democratic principles and inclusive governance.

Conclusion: The Supreme Court's verdict reaffirms the constitutional validity of the 42nd Amendment, emphasising the dynamic nature of the Constitution and the power of Parliament to adapt it to India's evolving societal and democratic needs.

51ST CHIEF JUSTICE OF INDIA

Context:

Recently, President Droupadi Murmu administered the oath of the office of the Chief Justice of India (CJI) to Supreme Court judge justice Sanjiv Khanna. He succeeds Justice D.Y. Chandrachud, who retired on Sunday (Nov. 10), and his term will last until May 13, 2025.

Appointment:

A Supreme Court judge is appointed by the President under Article 124 (2) of the Constitution. As per the convention, the senior-most judge of the Supreme Court is designated as the CJI. The seniority is measured by the length of service on the Supreme Court.

Qualification:

A person to be appointed as a Supreme Court judge, should have the following qualifications:

- He should be a citizen of India.
- He should have been a judge of a High

Court (or high courts in succession) for five years; or

- He should have been an advocate of a High Court (or High Courts in succession) for ten years; or
- He should be a distinguished jurist in the opinion of the president.

Role:

- As the "Master of the Roster," the CJI holds the authority to assign specific cases to particular benches and determine the schedule for their hearings in the Supreme Court.
- CJI (along with collegium of four senior most judges of SC) is consulted by the President for the appointment of judges in the SC and the High Court.
- CJI appoints ad-hoc SC judges under Article 127 of the Constitution.

- With the approval of the President, the CJI can change the seat of the SC from Delhi to any other place.

Removal:

The CJI can be removed by the President only after Parliament presents an address, supported

by a special majority in both Houses (a majority of total members and at least two-thirds of those present and voting).

- It has to be noted that no CJI has been removed yet.

STATE OF UNDERTRIAL PRISONERS IN INDIA

Context:

- Recently, the Union Home Minister emphasized the need for expediting the release of undertrial prisoners who have served more than one-third of their maximum sentence by 26th November.

Undertrial Prisoners:

- An undertrial prisoner is an individual who is in custody while awaiting trial or the conclusion of legal proceedings against them. This category includes those who have not yet been convicted of a crime and are held in judicial custody during the legal process.

Current State of Undertrial Prisoners in India:

- Undertrials: As per the Prison Statistics India 2022 report by the National Crime Records Bureau (NCRB) 75.8% of India's prison population i.e., 4,34,302 out of 5,73,220 are undertrials.
 - Among the 23,772 incarcerated women, 76.33% are undertrials, and 8.6% of all undertrials have been in prison for over three years.
- Overcrowding: According to a report by the Supreme Court's Centre for Research and Planning, Indian prisons operate at 131% occupancy, housing 573,220 inmates against a capacity of 436,266.
 - Notably, 75.7% of these inmates are undertrials, reflecting a substantial judicial backlog.
- Provisions Related to Undertrial Prisoners

in India:

- Section 479 of BNSS: Aims to reduce prolonged detention, focusing on first-time offenders.
- Relaxed Standards for First-Time Offenders: First-time offenders, defined as those without prior convictions, must be released on bond after serving one-third of the maximum sentence.
- General Rule for Bail: Undertrials accused of non-capital offenses (not punishable by death or life imprisonment) are eligible for bail after serving half of the maximum sentence.
- Exceptions: Provisions do not apply to cases involving multiple offenses or ongoing investigations for other crimes.

Section 436A of CrPC:

- Eligibility for Bail: Undertrials who have served half of the maximum imprisonment period for their alleged offense can be released on personal bond (with or without sureties).
- Exclusion: Does not apply to offenses punishable by death or life imprisonment.

Directions by the Judiciary:

- Supreme Court's PIL on Prison Conditions (2013): In Re: Inhuman Conditions in 1382 Prisons, the Court highlighted issues like overcrowding, delayed trials, and prolonged detention of undertrials.
- It directed state governments to ensure timely identification and release of eligible undertrials under Section 436A CrPC.

- The Supreme Court ruled that the relaxed bail provisions under BNSS would apply retrospectively to cases filed before its enactment.
- The court has emphasized that speedy trial is a fundamental right under Article 21, and any unjustified delay in trial could lead to bail being granted.

Implications of the Undertrial Crisis:

- **Violation of Fundamental Rights:** Prolonged detention without trial infringes upon several fundamental rights guaranteed by the Indian Constitution, including the right to a speedy trial (Article 21) and the presumption of innocence until proven guilty (Article 20(3)).
- **Judicial Backlog:** The high number of undertrial prisoners contributes significantly to the backlog of cases in the Indian judicial system. This backlog delays justice for all individuals and undermines public trust in the legal system.
- **Impact of Delayed Justice:** Prolonged detention affects access to justice, rehabilitation, and the socio-economic well-being of undertrial prisoners and their families.
- **Prison overcrowding:** It could often lead to inhumane living conditions, compounding health and psychological challenges.
- **Mental Health Issues:** Long periods of incarceration without conviction can lead to severe psychological distress among undertrials, including anxiety, depression, and a sense of hopelessness.

- **Erosion of Trust:** The high number of undertrials and the resulting delays erode public confidence in the legal system. When justice is delayed or denied, citizens may lose faith in the ability of the legal system to provide timely and fair outcomes.

Initiatives Related to Prison Reforms:

- **Modernization of Prisons Scheme:** The scheme for modernisation of prisons was launched in 2002-03 with the objective of improving the condition of prisons, prisoners and prison personnel.
- **Modernisation of Prisons Project (2021-26):** Government has decided to provide financial assistance to States and UTs, through the Project for using modern-day security equipment in Prisons for enhancing the security of jails and to facilitate the task of reformation and rehabilitation of prisoners through correctional administration programmes.
- **E-Prisons Project:** The E-Prisons project aims to introduce efficiency in prison management through digitization.
- **Model Prison Manual Act, 2016:** The manual provides detailed information about the legal services (including free services) available to prison inmates.
- **National Legal Services Authority (NALSA):** It was constituted under the Legal Services Authorities Act, 1987 which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society.

RESOURCE-EXPENDITURE GAP AND STAFF VACANCY IN URBAN LOCAL BODIES

Context:

- Recently, CAG flags 42% resource-expenditure gap, 37% staff vacancy in

Urban Local Bodies. The Comptroller and Auditor General of India (CAG) has found that city self-governments in 18 states that cater to 241 million residents

are facing a 42 per cent gap between their resources and expenditure and that only 29 per cent of their expenditure goes towards programmatic and development work.

Concerns with Urban Local Bodies:

- The Comptroller and Auditor General of India has found that 31 years after the 74th Constitutional Amendment to empower urban local bodies came into effect, 18 states are yet to fully implement the law in spirit.
- City self-governments in 18 states that cater to 241 million residents are facing a 42 per cent gap between their resources and expenditure and that only 29 per cent of their expenditure goes towards programmatic and development work.
- Audit Report of CAG:
- The CAG released a compendium of audit reports into the implementation of the 74th amendment in 18 states. It covered 393 urban local self-governments (ULSGs) across Andhra Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur,

Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura and Uttarakhand.

Highlights Of the Report:

- On average, 32 per cent of the revenue of the urban bodies was their own, with the rest coming from the Union and state governments.
- The urban local bodies were able to realise 56 per cent of their property tax demand.
- Only 29 per cent of the current expenditure of the urban local bodies was directed towards programmatic and development work.
- There was an average vacancy of 37 per cent against the sanctioned staff strength. On the other hand, urban bodies of 16 states had limited or no power over recruitment.
- Only Nine states – Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Odisha, Punjab and Tripura – had devolved all 18 functions.
- Urban planning and fire services are the least devolved functions by law, out of 18 functions.

SC RULING MAINS PERSPECTIVE COURT RULINGS

Kesavananda Bharati v. State of Kerala (1973): The Court affirmed that socialism is part of the *basic structure* of the Constitution, emphasizing economic reforms to benefit marginalized sections.

State of West Bengal v. Union of India (1962): The Court upheld the state's role in promoting economic justice through *nationalization* and social welfare, reinforcing the socialist objectives of the Constitution.

Secularism in India: A Guiding Principle

Secularism means the *state's neutrality* in religious matters, ensuring equal treatment for all religions.

The Constitution mandates that the state should not favor any religion but treat all faiths equally.

Key Court Rulings on Secularism

S.R. Bommai v. Union of India (1994): The Court ruled that secularism is part of the basic structure of the Constitution, emphasizing that the state must remain neutral and not endorse any religion.

Mohd. Ahmad Khan v. Shah Bano Begum (1985): The Court emphasized that *personal laws* should not violate

the *secular values* of the state, protecting individual rights over religious practices.

Recent Developments and the Court's Role

Secularism has been challenged by growing *religious identities* in politics, but the Court has consistently reaffirmed the *neutral stance* of the state.

Sabarimala Case (2018): The Court ruled that *secularism* protects individual rights even when they conflict with traditional religious practices.

The Court's interpretation of *socialism* has evolved with India's changing *economic policies*, especially after economic liberalization.

R.C. Cooper v. Union of India (1970): This case emphasized the importance of *economic reforms* that align with *socialist goals* of equity and welfare for all.

Challenges in Upholding Socialism and Secularism

Secularism has faced challenges due to the rise of *religious politics*, which often influences political decisions. The *Supreme Court* has had to maintain a delicate balance, reaffirming that the state must

remain neutral in religious matters.

Ayodhya Dispute: The Court's decision was a key moment in safeguarding *secularism*, emphasizing the state's responsibility to uphold neutrality.

Economic disparities continue to be a challenge in implementing socialist policies, despite efforts to ensure *economic equality*.

The Court has frequently reviewed *economic policies* to determine whether they are aligned with the socialist ideals of justice and fairness, especially when inequality persists.

Conclusion

The Supreme Court continues to be the guardian of socialism and secularism in India, interpreting these constitutional principles in light of the nation's evolving social, political, and economic landscape. The Court's rulings have reinforced the significance of these values, ensuring they remain fundamental to India's democracy. While challenges persist in fully implementing these ideals, the Court remains central in safeguarding them and addressing emerging issues that may threaten their application.

IS SOCIAL MEDIA DOING MORE HARM THAN GOOD TO DEMOCRACY?

Context:

The role of social media in democracy is debated, with its ability to empower citizens countered by concerns over misinformation, hate speech, and manipulation. Recently, The Guardian labelled Twitter (X) as a “toxic media platform” under Elon Musk’s ownership.

Key issues associated with the Impact of Social Media in democracy

Political Bias and Discourse Manipulation: For instance, Elon Musk’s control has allowed the prioritization of his posts and specific narratives through algorithmic adjustments, shaping public discourse and potentially skewing democratic debates.

Centralized Control and Government Censorship: The monopolistic power of a few tech giants facilitates easier government censorship.

Platforms like X often align with government demands, restricting the free flow of diverse opinions and stifling dissent.

Insufficient Moderation Infrastructure

Removal of Trust and Safety Teams: X’s decision to eliminate teams responsible for addressing harmful content has led to *unchecked hate speech, misinformation, and dangerous narratives*.

Underinvestment in Localization: Platforms like Facebook and WhatsApp lack adequate local language moderators, especially in linguistically diverse regions like India.

For example, during the Sri Lankan riots, moderation was outsourced to an office in India, leading to delays and contextual misinterpretations.

The absence of region-specific moderation exacerbates issues such as “*dog whistling*,” where *coded language incites violence or hatred*.

Virality of Fake News: Apps like WhatsApp amplify the rapid spread of misinformation,

leveraging features like large group messaging. This unchecked virality has significant consequences in shaping public opinion, often without accountability or fact-checking mechanisms.

Algorithmic Manipulation: Algorithms on platforms like X prioritize content that aligns with the owner’s interests or specific narratives.

This not only influences user perception but also undermines the democratic principle of impartial access to information.

Note:

While social media presents challenges to democracy, it is not entirely negative. For example:

- In recent conflicts like the Palestinian crisis, social media has enabled real-time coverage and allowed people worldwide to witness the atrocities, spreading awareness that was harder to achieve in the past.
- However, the Iraq War (2003) saw significantly higher casualties, but at the time, social media was not as widespread.

The Role of Social Media in Democracy

Positive Effects

Voice to the People: For instance, the Anna Hazare Movement effectively mobilized public support for anti-corruption reforms, enabling direct communication of public demands to the government.

Rapid Information Sharing: Platforms facilitate real-time updates, especially in crises.

During COVID-19, social media disseminated critical information on oxygen supplies and hospital resources, helping individuals respond swiftly to emergencies.

Community Mobilization: Social media fosters grassroots organization during disasters.

For example, during the Chennai floods, the hashtag #ChennaiRains coordinated relief efforts, mobilizing over 25,000 volunteers to support affected communities.

Enhanced Government Accountability: Viral social media posts often compel authorities to act. For instance, widespread sharing of police misconduct incidents has led to prompt disciplinary actions, ensuring increased accountability and transparency.

Negative Effects

Spread of Misinformation: Social media facilitates rapid dissemination of fake news.

During **COVID-19**, **misinformation about treatments and vaccines** caused panic and harmful behaviors due to inadequate moderation.

Echo Chambers and Polarization: Algorithms create echo chambers, exposing users only to like-minded views, reinforcing biases, and fueling political and ideological polarization, reducing exposure to balanced perspectives.

Political Manipulation: The Cambridge Analytica scandal highlighted the misuse of personal data for targeted political ads, distorting electoral processes and misleading voters.

Hate Speech and Violence: Unchecked inflammatory content often incites real-world violence, as seen in riots and communal unrest triggered by social media posts.

Digital Divide: Limited internet access in rural areas and developing regions exacerbates inequality, restricting access to information and opportunities.

Mental Health Issues: Excessive exposure to negative content, cyberbullying, and comparisons on social media increase anxiety, depression, and stress, lowering well-being.

Time Wastage: Prolonged, unproductive scrolling reduces productivity and time for meaningful activities like education or social interaction.

Foreign Interference: Cases like the 2016 US elections show how foreign entities use social media to spread propaganda, manipulate public

opinion, and undermine democratic processes.

Alternatives and Solutions to Address Social Media Issues

Individual Level

Fact-Checking: Actively engage in fact-checking and verify information before sharing.

Increased Awareness: Stay informed and critically evaluate content.

Platform Choices: Opt for platforms like Bluesky, which prioritise ethical management and civil discourse.

Explore decentralised systems like Mastodon, though they need further user-friendly improvements to increase adoption.

Platform Level

Transparent Algorithms: Platforms must ensure algorithm transparency to avoid bias and manipulation.

Quick Action on Violations: Swift enforcement against content violations to maintain trust.

Local Language Support: Offer moderation and content options in regional languages.

Better Content Moderation: Invest in human moderators and AI systems to handle diverse languages and cultural nuances.

Policies on Hate Speech: Implement uniform, effective policies to combat hate speech and harmful content.

Government Level

Stronger Laws: Enforce stronger regulations to govern online content and behavior.

Clear Guidelines: Set clear guidelines for platform accountability.

Promote Digital Literacy: Strengthen digital literacy programs to help users navigate online content responsibly.

Fair Access Policies: Ensure equal access to information and prevent monopolistic control over digital spaces.

Community Level

Promote Positive Content: Encourage the sharing of constructive and informative content.

Flag Harmful Content: Empower users to report harmful or false content to ensure safer online environments.

Better Fact checking units: Establishing better fact-checking units that are politically neutral, transparent, and independent.

Conclusion

Social media, a vital pillar of democracy, empowers citizens and fosters communication, yet poses risks like misinformation and manipulation. To harness its potential, transparent algorithms, effective moderation, and robust regulations are essential for safeguarding democratic values.

SUPREME COURT'S GUIDELINES ON PROPERTY DEMOLITIONS: ENSURING LEGAL SAFEGUARDS

Context:

The *Supreme Court* recently intervened in the ongoing practice of demolishing properties accused of being linked to criminal or communal activities. This move follows several incidents across states like UP, MP, Rajasthan, and Uttarakhand, where property demolitions were used as punitive actions without following proper legal procedures. The Court, under Article 142 of the Constitution, issued a set of guidelines to ensure a fair process in such cases, commonly referred to as “bulldozer justice.”

Background of the Case:

The Supreme Court heard petitions challenging the practice of demolishing the homes of individuals accused of criminal acts. This practice, prevalent in certain states, has often been criticized for lack of transparency, fairness, and due process. The Court's ruling was influenced by high-profile cases like those in Ratlam (MP) and Udaipur (Rajasthan), where

properties were demolished following accusations against family members involved in criminal or communal incidents.

Key Guidelines for Demolition Procedures

Mandatory Advance Notice: The Court mandated that authorities must issue at least a 15-day notice to property owners before carrying out any demolition. This notice should clearly state the reasons for the demolition and provide the owner an opportunity for a personal hearing to contest the order.

Fair Hearing and Documentation: Authorities are required to conduct a hearing and maintain a record of all proceedings. The final demolition order must include the reasons for the action, any arguments put forward by the property owner, and the specifics of the demolition (whether it is partial or full).

Post-Order Process and Appeals: After a final demolition order is issued, a 15-day window will be given

to the owner to either appeal or remove the structure. In addition, authorities must record a video of the demolition process and provide a detailed report of the personnel involved, ensuring accountability.

Court's Rationale Behind the Guidelines

Separation of Powers and Fairness: The Court emphasized that determining guilt or punishment is the responsibility of the judiciary, not the executive. It stressed that demolitions cannot replace a legal trial or be used as a form of punishment without judicial intervention.

Transparency and Accountability: The Court stressed the importance of transparency in the demolition process, holding public officials accountable to prevent abuse of power. It argued that demolishing properties of individuals merely accused of crimes, without proper legal procedures, undermines public trust.

Protection of Constitutional Rights: Highlighting the

fundamental right to shelter under Article 21, the Court pointed out that demolitions not only affect the accused but also their family members who are entitled to a home. The guidelines aim to protect citizens from losing their homes unjustly.

Demolition Laws and Practices Across States: Different states have their own regulations regarding demolitions:

Rajasthan: Demolitions can only occur after issuing a written notice, with the property owner given a chance to respond.

Madhya Pradesh: The MP Municipalities Act allows demolition of unauthorized constructions, but only after a notice is served to the property owner.

Uttar Pradesh: The

UP Urban Planning and Development Act requires a minimum 15-day notice before demolition of unauthorized structures. Once the final order is made, the owner has limited recourse.

Delhi and Haryana: Both states have similar regulations allowing the removal of unauthorized constructions, but with varying opportunities for appeal.

Potential Impact of the SC's Ruling

Providing Redress to Affected Families: The SC's decision is seen as a step toward providing restitution for families whose properties were demolished unjustly. Compensation or property restoration could be possible outcomes for those affected.

Challenges in Enforcement: Despite the Court's efforts to

promote transparency and accountability, there remain challenges in ensuring that compensation reaches those impacted. Addressing these issues effectively will require policy changes and better implementation of restitution measures.

Conclusion

The Supreme Court's ruling aims to curtail the misuse of power by state authorities and safeguard citizens' constitutional rights, particularly the right to shelter. However, challenges remain, especially for families who have already suffered from unjust demolitions. The focus now shifts to ensuring proper restitution and addressing gaps in policy to prevent future abuses of the process.



INTERNATIONAL RELATIONS



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November 2024

INTERNATIONAL COOPERATIVE ALLIANCE (ICA): A GLOBAL PILLAR FOR COOPERATIVE DEVELOPMENT

Overview



Established: 1895, London, England, during the 1st Cooperative Congress.

Mission: To unite, represent, and serve cooperatives globally.

Scale: Represents 1 billion cooperative members through approximately 3 million cooperatives worldwide.

Membership: 306 member organizations across 105 countries, spanning diverse sectors like agriculture, banking, consumer goods, health, housing, insurance, and industry.

Role and Contributions

Apex Body for Cooperatives:

Serves as a global platform for collaboration and knowledge exchange among cooperatives.

Advocates for cooperative interests and promotes expertise sharing across sectors.

Support for Developing Countries:

Expanded into the Asia-Pacific region in 1960 with a Regional Office & Education Centre in New Delhi.

Emphasis on cooperation as a tool for social and economic development, especially in underdeveloped nations.

Initiated actionable programs to foster economic growth and provide financial assistance.

Key Milestones

1954: ICA's 19th Congress in Paris highlighted the need for developed cooperative movements to support pioneers in underdeveloped regions.

1960: Establishment of the Asia-Pacific regional office in New Delhi, marking a significant step in integrating developing nations into the cooperative network.

India's Role in ICA-Asia Pacific Development

India has been instrumental in shaping ICA's Asia-Pacific initiatives since hosting the regional office in New Delhi.

The country continues to influence cooperative models across the region, contributing to their global success.

2024 ICA Global Conference

Location: New Delhi, India (for the first time in ICA's 130-year history).

Theme: "Cooperatives Build Prosperity for All".

How does India's current tariff structure affect its competitiveness in global trade?

India's current tariff structure is characterized by relatively high average tariffs compared to other major economies. For instance:

Average Tariffs: India has an average applied tariff of approximately 13.8%, which is higher than that of China (9.8%) and the U.S. (3.4%) but lower than some other countries when considering trade-weighted averages.

High Bound Tariffs: Many of India's bound tariff rates on agricultural products are among the highest globally, ranging from 100% to 300%, creating significant barriers for foreign exporters.

Highlights the people-centered and purpose-driven nature of cooperatives.

Focuses on cooperatives' role in creating a collective, peaceful, and prosperous future.

Significance: A historic event, reinforcing India's prominence in the global cooperative movement.

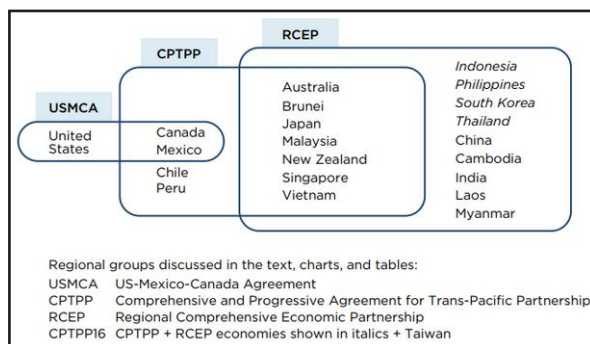
Conclusion

The International Cooperative Alliance remains a cornerstone of global cooperative development, fostering collaboration, innovation, and inclusivity. With India's pivotal role and the upcoming ICA Global Conference in 2024, the cooperative movement is poised to further drive sustainable and equitable progress worldwide.

INDIA SHOULD BE PART OF RCEP AND CPTPP

Context:

According to NITI Aayog CEO, India should join the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).



What are the implications of India joining RCEP and CPTPP?

Enhanced Trade Opportunities: Joining RCEP and CPTPP could significantly boost India's trade by providing access to larger markets, particularly in Asia-Pacific regions.

These agreements encompass a wide range of goods and services, potentially increasing India's exports, especially from its **Micro, Small & Medium Enterprises (MSMEs)**, which account for 40% of exports.

Integration into Global Supply Chains: Participation in these trade blocs would facilitate India's integration into global supply chains, allowing it to benefit from the

'China plus one' strategy that many countries are adopting to diversify their supply sources away from China.

This could enhance India's manufacturing sector and attract foreign investment.

Regulatory Alignment: Being part of these agreements would necessitate aligning India's regulatory frameworks with international standards, which could improve the business environment and attract more foreign direct investment (FDI).

What are the risks associated with joining RCEP, particularly concerning competition with China?

Increased Competition with China: One of the primary risks of joining RCEP is the potential for increased competition with Chinese firms, which may have cost advantages due to economies of scale and established supply chains.

Pressure on Domestic Industries: Opening up to international competition might pressure local industries, particularly in sectors where they are less competitive compared to their counterparts in member countries.

This could lead to job losses and require significant adjustments within certain sectors.

Easy geopolitical Impact on the economy: Increased reliance on trade agreements may expose India to external

economic fluctuations, particularly if global demand shifts or if geopolitical tensions impact trade dynamics within these blocs.

Way forward:

Selective Tariff Reductions and Safeguards for Sensitive Sectors: India should negotiate phased tariff reductions and secure safeguards for vulnerable sectors like agriculture and small manufacturing.

This approach would protect local industries while allowing gradual integration into RCEP

and CPTPP markets.

Strengthening Domestic Industries and MSMEs: India can boost competitiveness by enhancing MSME support through targeted subsidies, infrastructure improvements, and technology upgrades. Strengthening these sectors will help India leverage new market access and build resilience against foreign competition.

INDIA MUST TAKE FORWARD ITS COMMITMENT TO AFRICA, THE GLOBAL SOUTH

Context:

During her visit to Mauritius, President Droupadi Murmu emphasised the importance of India's relations with African countries, highlighting Mauritius as a key partner in the Indian Ocean Region.

This visit underscores India's growing engagement with Africa, marked by collaborative efforts in community development and the inauguration of essential projects.

As India aims to strengthen its position within the Global South, it is crucial to understand the multifaceted relationship between India and Africa, examining the opportunities it presents and the imperatives for deeper engagement.

An Analysis of the Depth and Significance of India's Engagement with Africa

Investments and Trade

India's investments in Africa have witnessed significant growth, reaching \$98 billion in 2023.

This substantial investment reflects India's confidence in Africa's economic potential and its commitment to fostering long-term partnerships.

Similarly, bilateral trade between India and Africa has surged, totalling \$100 billion.

This trade encompasses a wide range of sectors, including agriculture, manufacturing, technology, and services, contributing to economic growth and diversification in both regions.

Developmental Projects

These projects cover a diverse array of areas, such as infrastructure development, healthcare, education, agriculture, and renewable energy.

By investing in such projects, India not only promotes economic development in Africa but also strengthens diplomatic ties and goodwill between the two regions.

Export of Scalable Solutions

India's expertise in developing and implementing cost-effective, scalable solutions has been instrumental in addressing various challenges faced by African nations.

Indian social enterprises, NGOs, and government agencies have exported innovative solutions ranging from eco-friendly housing to solar energy technology.

These initiatives not only contribute to poverty alleviation and sustainable development but also enhance India's reputation as a reliable

partner committed to sharing knowledge and resources for mutual benefit.

Mutual Prosperity and Development

By leveraging each other's strengths and resources, both regions stand to benefit economically and socially.

India's investments create employment opportunities, stimulate economic growth, and facilitate technology transfer in Africa, while African markets provide India with access to natural resources, new markets, and strategic partnerships.

This symbiotic relationship fosters economic resilience, innovation, and inclusive growth in both India and Africa.

The Strategic Importance of India's Advocacy for Africa's Representation in Global Forums

To Amplify Africa's Representation and Voice

India's advocacy for Africa's representation in global governance structures underscores its commitment to amplifying the voices of developing nations.

With Africa housing a significant portion of the world's population and contributing a substantial share of global GDP, ensuring its representation is essential for fostering a more inclusive and equitable international order.

India's support for initiatives like the African Union's representation in the G20 demonstrates its recognition of Africa's importance in shaping global agendas and policies.

A Push for Reform and Adaptation

As the international landscape undergoes rapid transformation, there is a growing recognition of the need to adapt governance mechanisms to address emerging challenges and promote

sustainable development.

India's advocacy for Africa's inclusion in global forums reflects its commitment to reforming institutions like the United Nations, International Monetary Fund, and World Bank to better represent the interests of developing nations.

To Build Strategic Partnerships

India's advocacy for Africa's representation in global governance is not merely altruistic but also strategic.

Recognising Africa's growing influence in international affairs, India seeks to cultivate strategic partnerships with African nations to advance its own interests on the global stage.

By supporting Africa's participation in decision-making processes, India enhances its diplomatic leverage and strengthens its position as a leading voice within the Global South.

This strategic alignment of interests offers mutual cooperation and solidarity between India and Africa, amplifying their collective influence in shaping global agendas.

Development Agenda

India's advocacy for Africa's representation in global governance is closely aligned with its broader development agenda, which prioritises poverty alleviation, sustainable development, and inclusive growth.

By advocating for Africa's interests in global forums, India seeks to address systemic inequalities and promote policies that benefit the most vulnerable populations.

This advocacy encompasses a wide range of issues, including trade, finance, climate change, and peace and security, reflecting India's commitment to fostering a more just and equitable world order.

INDIA-CANADA RELATIONS:

Context

India and Canada share a rich history of diplomatic, cultural, and economic cooperation. However, tensions have escalated due to the assassination of Khalistani separatist Hardeep Singh Nijjar in Canada, which has triggered a significant diplomatic dispute between the two nations.

Historical Connections

Colonial Ties: Both countries were part of the British Empire, establishing early diplomatic links.

Freedom Struggle: Many Indian migrants, especially Sikhs, settled in Canada during the Indian freedom struggle, contributing to anti-colonial activism, such as the efforts at the Swadesh Sevak Home in Vancouver.

Diplomatic Relations: Established in 1947 after India's independence.

Diaspora and Migration: A significant Indian diaspora, particularly from Punjab, strengthens people-to-people ties between India and Canada.

Commonwealth Membership: Both nations are part of the Commonwealth, promoting cooperation on a variety of issues.

Present-Day Issues

Nijjar Assassination Allegations: Canadian Prime Minister Justin Trudeau

accused Indian intelligence of involvement in the assassination of Hardeep Singh Nijjar, a pro-Khalistan activist in Canada, escalating tensions.

Diplomatic Fallout: The allegations led to the expulsion of senior diplomats by both countries, causing a major diplomatic crisis.

Visa Suspension: India suspended the issuance of new visas to Canadian nationals, while Canada withdrew crucial consular services from Indian cities.

Key Areas of Cooperation

Trade and Investment: Bilateral trade stood at \$8.4 billion in 2024, with India importing natural resources from Canada and exporting textiles, pharmaceuticals, and IT services.

Energy: Canada supplies uranium to India for its nuclear energy programs.

Education: Canada is home to over 300,000 Indian students, making it a leading destination for higher education.

Technology and Innovation: India and Canada collaborate on initiatives in IT and AI through the Canada-India Joint Science and Technology Cooperation Agreement.

Environment and Climate Change: Both countries are committed to the Paris Agreement, focusing on

technology exchange to combat climate change.

Agriculture: Canada exports lentils and pulses to India, and both nations collaborate on agricultural research.

Importance of the Relationship

Economic Potential: The Early Progress Trade Agreement (EPTA), currently stalled, could enhance trade relations further.

Strategic Interests: As democracies, India and Canada align on global platforms like the G20, G7, and the UN.

Cultural Ties: The Indian diaspora, especially from Punjab, plays a crucial role in shaping bilateral relations.

Geopolitical Leverage: Strengthening India-Canada relations helps India gain allies within the global north, notably within strategic forums like the Five Eyes alliance.

Technology and Innovation: Canada's leadership in sectors like AI and clean energy presents opportunities for growth in India's technology sector.

Obstacles in the Relationship

Khalistan Movement: The rise of pro-Khalistan sentiment in Canada is a significant concern for India, which views it as a threat to its national security. This includes

glorification of Indira Gandhi's assassination.

Diplomatic Tensions: Mutual allegations and ongoing investigations have led to a breakdown in trust between the two countries.

Economic Disruption: Suspension of trade talks and visa services has disrupted business and people-to-people connections.

Diaspora Politics: Canadian domestic politics and the Sikh community's involvement in shaping foreign policy add complexity to bilateral relations.

Security Concerns: India's concern over Canada's perceived support for extremist groups remains unresolved.

Path Forward

Regular High-Level Meetings: Holding regular meetings between foreign ministers or bilateral summits can help rebuild trust between the two nations. A third-party mediator could facilitate these discussions.

Enhancing Trade: Reviving talks on the Early Progress Trade Agreement (EPTA) and focusing on sectors like clean energy and digital technologies could bolster trade relations.

Addressing Security Concerns: Canada could enhance cooperation with Indian intelligence agencies to address concerns over Khalistani groups. Initiating joint counter-terrorism efforts could help resolve tensions.

Multilateral Engagement: Both countries can collaborate in international forums like the G20 and UN to tackle global challenges such as climate change, terrorism, and trade regulations.

Diaspora as a Bridge: The Indian diaspora can play a key role in cultural diplomacy, fostering business partnerships and promoting soft power exchange to alleviate negative perceptions.

Environmental Collaboration: Strengthening partnerships in renewable

energy projects and technology transfer, such as through the International Solar Alliance, can help both nations meet their climate goals.

Conclusion

The India-Canada relationship is at a critical juncture. Despite challenges, including Khalistani activism, diplomatic fallout, and economic disruptions, both nations have significant opportunities for collaboration in trade, energy, education, and technology. With concerted efforts, particularly through diplomatic channels and mutual cooperation in international forums, the bilateral relationship can be repaired and strengthened.

Mains Practice Questions: "Discuss the historical context, current issues, and areas of cooperation in India-Canada relations. What steps can both nations take to strengthen their ties moving forward?" (250 words)

INDIA- IRAN TIES

Why in News?

At the 16th BRICS Summit (October 22-24, 2024) in Kazan, Russia, Indian Prime Minister Narendra Modi and Iranian President Masoud Pezeshkian held a bilateral meeting to strengthen their partnership. The discussions focused on addressing regional crises like the Gaza conflict and enhancing bilateral cooperation in energy, connectivity, and trade.

Background of India-Iran Ties

India and Iran share civilizational and historical connections, rooted in cultural, linguistic, and religious exchanges over centuries. The relationship gained strategic importance post-1990s with a focus on connectivity (Chabahar Port), energy imports, and counterterrorism cooperation.

Economic Ties

Energy Supplies: Before 2019, Iran supplied nearly 12% of India's crude oil needs.

Chabahar Port: A critical project enhancing India's connectivity to Afghanistan and Central Asia.

International North-South Transport Corridor (INSTC): A trade corridor through Iran connecting India to Eurasia.

Iran-Oman-India Gas Pipeline: A proposed undersea pipeline to diversify India's energy imports.

Trade Percentage

In 2018-19, bilateral trade stood at \$17 billion, with crude oil dominating imports.

Following U.S. sanctions, trade dropped sharply, with 2021-22 figures at \$2 billion, dominated by non-oil goods like basmati rice and pharmaceuticals.

Defence Ties

A Defence Cooperation Agreement (2001) was signed but remained inactive due to Western sanctions on Iran.

Iran's growing capabilities in drones, hypersonic missiles, and naval platforms offer potential avenues for cooperation in

India's primary imports from Iran include crude oil, which constituted a major portion of the trade before U.S. sanctions.

India exports rice, tea, sugar, and pharmaceuticals to Iran.

counterterrorism, intelligence sharing, and technology transfer.

Joint naval exercises and logistical collaboration in the Persian Gulf could enhance maritime security.

Traditional Ties

Cultural exchanges date back to the Persian Empire, influencing Indian art, architecture, and language (e.g.,

Persian words in Hindi/Urdu).

Shared heritage through literature, music, and Sufi traditions reflects deep-rooted historical links.

Issues Disrupting India-Iran Ties

U.S. Sanctions: Severely impacted India's energy imports and investments in Iranian infrastructure.

It dropped from approximately \$17 billion in 2018-19 to less than \$2 billion in 2023-24s and Imports.

Geopolitical Sensitivities: India balances ties with Israel, Saudi Arabia, and the U.S., which sometimes complicates relations with Iran.

Stray Comments: Statements like Iran's Supreme Leader criticizing India's treatment of Muslims strain diplomatic ties.

Gaza Conflict: Differences in approach to Middle East crises occasionally create friction.

Iran's Importance to India

Energy Security: Iran holds 24% of West Asia's oil reserves and 12% of global natural gas reserves.

Strategic Connectivity: The Chabahar Port and INSTC provide India access to Central Asia, bypassing Pakistan.

Regional Stability: Iran is

a key player in West Asia and Central Asia, vital for India's extended neighbourhood strategy.

Counter-terrorism: Iran shares concerns about terrorist activities in Pakistan and Afghanistan.

Ways to improve India-Iran Ties

Energy Cooperation: Resume crude oil and natural gas imports, leverage discounted pricing due to sanctions, and expedite the Iran-Oman-India pipeline.

Chabahar and INSTC: Strengthen port operations, rail, and road links for seamless connectivity to Afghanistan and beyond.

Defence Engagement: Revisit the 2001 defence pact for joint exercises, technology transfers, and maritime security.

Diplomatic Dialogue: Build mechanisms to defuse tensions caused by stray political remarks.

Cultural Diplomacy: Enhance people-to-people ties through educational exchanges, cultural festivals, and tourism.

Scope for Future Improvement

Energy Alternatives: Collaborate on renewable energy and hydrogen projects in addition to hydrocarbons.

Trade Diversification: Expand non-oil trade,

particularly in pharmaceuticals, IT, and textiles.

Technology Partnerships: Collaborate on artificial intelligence, space research, and defence technologies.

Geopolitical Coordination: Foster trilateral partnerships with countries like Russia and Central Asian nations for greater regional influence.

Humanitarian Cooperation: Use Chabahar to deliver humanitarian aid to Afghanistan and other conflict zones.

By addressing challenges and capitalizing on shared interests, India and Iran can build a stronger, multifaceted partnership that benefits both nations strategically and economically.



SOCIETY & SOCIAL JUSTICE

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PM VIDYALAXMI SCHEME

Context:

The Union Cabinet, chaired by Prime Minister Shri Narendra Modi, has approved PM Vidyalaxmi, a new Central Sector scheme that seeks to provide financial support to meritorious students so that financial constraints do not prevent anyone from pursuing higher studies.

About PM Vidyalaxmi Scheme:

PM Vidyalaxmi is another key initiative stemming out of the National Education Policy, 2020, which had recommended that financial assistance should be made available to meritorious students through various measures in both public and private HEIs.

Under the PM Vidyalaxmi scheme, any student who gets admission in quality Higher Education Institution (QHEIs) will be eligible to get collateral free, guarantor free loan from banks and financial institutions to cover full amount of tuition fees and other expenses related to the course.

The scheme will be administered through a simple, transparent and student-friendly system that will be inter-operable and entirely digital.

The scheme will be applicable to the top quality higher educational institutions of the nation, as determined by the NIRF rankings - including all HEIs, government and private, that are ranked within the top 100 in NIRF in overall, category-specific and domain specific rankings; state government HEIs ranked in 101-200 in NIRF and all central government governed institutions.

This list will be updated every year using the latest NIRF ranking, and to begin starts with 860 qualifying QHEIs, covering more than 22 lakh students to be able to potentially avail benefits of PM-Vidyalaxmi; if they so desire.

For loan amount up to ₹ 7.5 lakhs, the student will also be eligible for a credit guarantee of

75% of outstanding default. This will give support to banks in making education loans available to students under the scheme.

In addition to the above, for students having an annual family income of up to ₹ 8 lakhs, and not eligible for benefits under any other government scholarship or interest subvention schemes, 3 percent interest subvention for loan up to ₹ 10 lakhs will also be provided during moratorium period.

The interest subvention support will be given to one lakh students every year. Preference will be given to students who are from government institutions and have opted for technical/ professional courses. An outlay of ₹ 3,600 Crore has been made during 2024-25 to 2030-31, and 7 lakh fresh students are expected to get the benefit of this interest subvention during the period.

The Department of Higher Education will have a unified portal "PM-Vidyalaxmi" on which students will be able to apply for the education loan as well as interest subvention, through a simplified application process to be used by all banks.

Payment of interest subvention will be made through E-voucher and Central Bank Digital Currency (CBDC) wallets.

PM Vidyalaxmi will build on and further enhance the scope and reach of the range of initiatives undertaken by the Government of India over the past decade in the domains of education and financial inclusion, for maximizing access to quality higher education for the youth of India.

This will supplement the Central Sector Interest Subsidy (CSIS) and Credit Guarantee Fund Scheme for Education Loans (CGFSEL), the two component schemes of PM-USP, being implemented by the Department of Higher Education.

Under the PM-USP CSIS, students with

annual family income up to ₹ 4.5 lakhs and pursuing technical/ professional courses from approved institutions get full interest subvention during moratorium period for education loans up to ₹ 10 lakhs.

Thus, PM Vidyalaxmi and PM-USP will

together provide holistic support to all deserving students to pursue higher education in quality HEIs and technical/ professional education in approved HEIs.

SC'S JUDGMENT ON DISABILITY RIGHTS

Context

The Supreme Court affirmed that accessibility to environments, services, and opportunities is an essential human and fundamental right for persons with disabilities, yet this right is largely unfulfilled.

Disability rights in India

Disability rights in India are undergoing a transformative shift, propelled by the government's commitment to inclusivity and empowerment for persons with disabilities (PwDs).

This movement is supported by various policies and initiatives aimed at ensuring that every individual, regardless of ability, can access opportunities and participate fully in society.

Recently, the Supreme Court directed the government to update the Rights of Persons with Disabilities Rules to enforce mandatory standards within three months.

Key efforts Taken

Rights of Persons with Disabilities Act, 2016 (RPwD): Replaces the 1995 Act, aligning with the UNCRPD to promote dignity, non-discrimination, and equal opportunities for PwDs.

National Trust Act, 1999: Establishes a body dedicated to the welfare of individuals with Autism, Cerebral Palsy, Mental Retardation, and Multiple Disabilities.

Rehabilitation Council of India Act, 1992: Regulates rehabilitation services, standardizes syllabi, and maintains a Central Rehabilitation Register for qualified professionals.

Scheme for Implementation of RPwD Act (SIPDA): Aims to provide skill development training to PwDs aged 15-59, particularly for those with hearing and speech impairments.

ADIP Scheme: Provides aids and assistive devices, including cochlear implants for children with hearing impairments, through funding to agencies.

SAMARTH Respite Care: Offers temporary housing support for orphans, crisis-affected families, and PwDs from low-income groups.

Deendayal Divyangjan Rehabilitation Scheme (DDRS): Provides grants to NGOs running special schools, early intervention programs, and community-based rehabilitation projects for PwDs.

National Divyangjan Finance and Development Corporation (NDFDC): Offers concessional loans for PwDs' socio-economic empowerment via Divyangjan Swavalamban Yojana and Vishesh Microfinance Yojana.

PM-DAKSH-DEPwD Portal: Offers two modules: Skill Training for PwDs and Divyangjan Rozgar Setu, which connects PwDs to employment opportunities.

Accessible India Campaign: This initiative aims to create a barrier-free environment in education, transportation, and public spaces to enhance accessibility for everyone.

Divya Kala Mela: This event celebrates the craftsmanship of differently-abled artisans, promoting economic self-reliance and showcasing their talents.

Issues and Concerns

Ground-Level Disparities: There are

inconsistencies in accessible infrastructure across regions, such as Delhi having 3,775 wheelchair-accessible buses versus Tamil Nadu's 1,917, and highlighted that newer facilities, like Andheri Metro Station, meet standards, while older ones, like the Bombay Art Gallery, lack basic accessibility features.

Overlooked Right to Relationships: society often neglects the emotional and relational rights of PWDs, including the need for love, privacy, and intimacy, which are often denied due to inadequate private spaces.

Mandatory Accessibility Standards: There are concerns for the lack of mandatory accessibility standards.

Social Model of Disability: The “social model of disability,” which shifts the focus from “fixing” individuals to removing physical, organizational, and attitudinal barriers that create disability in society.

Role of Society: Disability becomes a tragedy only if society fails to provide adequate resources and support to PWDs.

Suggestions and Way Forward

Built Environment Accessibility: There is a need to ensure accessible indoor and outdoor facilities, such as schools, medical centers, and workplaces.

Remove physical barriers to create inclusive environments benefiting everyone, including persons with disabilities (PwDs).

Transportation System Accessibility: Enable accessible transportation options across air travel, buses, taxis, and trains.

Information and Communication Accessibility: Provide accessible information to enable informed decision-making in daily life (e.g., reading price tags, event participation, healthcare info, train schedules).

Increasing Sign Language Interpreters: Expand the number of sign language interpreters to support individuals relying on sign language.

WHAT ARE THE COSTS OF POPULATION DECLINE?

Context:

The Chief Ministers of both Andhra Pradesh and Tamil Nadu expressed concerns about the low fertility rates in their States recently. Andhra Pradesh Chief Minister N. Chandrababu Naidu has said that he planned to introduce legislation to incentivise more children per family.

Demographic Trends in India

Total Fertility Rate (TFR): Between 2019 and 2021, Andhra Pradesh, Telangana, Kerala, Punjab, and Himachal Pradesh recorded a TFR of 1.5.

Conversely, Bihar (3), Uttar Pradesh (2.7), and Madhya Pradesh (2.6) had higher fertility rates.

A TFR of 2.1 is considered the replacement level needed to maintain a stable population.

Aging Population Concerns: According to India Ageing Report (UNFPA) the elderly population in India is projected to increase from 10.1% in 2021 to 15% by 2036.

In Kerala the elderly population is 16.5% whereas in Bihar it is 7.7%, in 2021.

Implications of Aging Population

Economic implications;

Increased Public Spending on Pensions with growth in elderly population.

Old Age Dependency Ratio: Indicates the number of older adults for every 100 people of working age (18-59 years). A ratio exceeding 15% signals an aging crisis. Some southern states have already crossed this benchmark.

Reduced Consumer Demand: An aging population tends to consume less compared to a younger, more active demographic.

Pressure on Healthcare Infrastructure: In 2017-18, southern states accounted for 32% of India's total out-of-pocket spending on cardiovascular diseases despite having only one-fifth of the population.

Political Implications;

Interstate Resource Tensions: Southern states, despite contributing significantly to tax revenue, receive a diminishing share of central resources due to slower population growth.

Delimitation and Representation: The expiration of the freeze on parliamentary seats in 2026 will lead to a new delimitation exercise that will alter state representation in the Lok Sabha, influenced by population changes.

Social implications: The burden of supporting a growing elderly population can create tension between generations.

Also there will be more requirements for alternative

support systems such as community-based care.

Global scenario

In Japan the median age is over 48 years. This demographic shift has led to prolonged economic stagnation, shrinking workforce, and increased public spending on pensions and healthcare.

China's one-child policy, enforced from 1979 to 2015, significantly lowered the birth rate, leading to a rapidly aging population.

South Korea has one of the world's lowest fertility rates, at 0.78 as of 2022.

Way Ahead

Policy Adjustments:

Policies should focus on supporting families through paid maternity and paternity leave, and employment practices that mitigate the "motherhood penalty."

Gender Equity:

States and countries with better gender equity maintain more sustainable fertility rates, as women are more willing to have children if they retain economic independence.

Strategic Support:

Implementing work-family policies that align with modern socio-economic expectations will support fertility rates and ensure balanced demographic and economic growth.

DEBATING THE 'HEALTHY LONGEVITY INITIATIVE' REPORT

Context

*In September 2024, the World Bank released a report titled **Unlocking the Power of Healthy Longevity: Demographic Change, Non-communicable Diseases, and Human Capital.***

The report shed light on a pressing issue: the impact of demographic shifts and the rise of non-communicable diseases (NCDs) on global health.

The Rising Burden of NCDs in LMICs and Implications for Human Capital

The demographic transition in LMICs reflects a rapidly aging population, which presents new health and economic challenges.

According to the World Bank, projections indicate that global deaths could rise from 61 million in 2023 to 92 million by 2050, primarily due to NCDs.

This rise in mortality also entails increased demand for hospitalisations, long-term care, and treatment resources, putting pressure on already strained healthcare systems.

For LMICs, including India, this health burden hinders development goals and economic stability, as avoidable deaths and disabilities drain human capital and financial resources.

If these countries can achieve feasible progress rates in health policies, the World Bank estimates that around 25 million annual deaths could be avoided by 2050, meeting the related Sustainable Development Goals (SDGs).

In response, the World Bank's report advocates a HLI, emphasising a life-course approach to minimise avoidable mortality and serious disability, thereby enabling individuals to maintain physical, mental, and social well-being into older age.

India's Aging Population and the Growing NCD Crisis: Causes and Consequences

The Growing NCD Crisis

India is witnessing an unprecedented demographic shift characterised by rapid aging.

With approximately 140 million individuals aged 60 and above, India now has the second-largest elderly population globally, second only to China.

Projections indicate that this population segment will continue to grow rapidly, with its annual growth rate nearly three times that of the general population.

This demographic shift is accompanied by a steep rise in the prevalence of NCDs like cardiovascular diseases, cancer,

chronic respiratory illnesses, and diabetes.

These conditions have already become the leading causes of death and disability, presenting a multifaceted challenge to India's healthcare system, economy, and social structures.

Lifestyle and Environmental Factors Driving the NCD Crisis

A major contributor to the rising incidence of NCDs in India is the significant shift in lifestyle and environmental factors.

Rapid urbanisation, economic growth, and changing dietary habits have led to increased consumption of calorie-dense, processed foods high in refined sugars and saturated fats.

These dietary changes are associated with a higher risk of developing conditions such as cardiovascular diseases, diabetes, and obesity, all of which are primary NCDs affecting India's elderly.

Moreover, a sedentary lifestyle, exacerbated by modern urban living, has contributed to the rise of obesity and related health conditions among both younger and older generations.

Limited access to recreational spaces and a culture that prioritises sedentary work,

especially in urban settings, further limits physical activity levels among the population.

Health and Socio-Economic Consequences of an Aging Population

As people live longer, they become more susceptible to NCDs, which require sustained medical attention, ongoing treatments, and, often, expensive interventions.

The surge in NCDs among India's elderly population results not only in rising mortality rates but also in increased disability, impacting individuals' ability to work and contribute economically.

This demographic health shift places immense pressure on family resources, especially in a country where healthcare expenses are often borne by families due to limited public health funding and insurance coverage.

Families of elderly individuals with chronic NCDs may face severe financial hardship, potentially leading to impoverishment, indebtedness, and reduced household consumption as resources are diverted toward medical care.

The economic repercussions of this growing NCD crisis are far-reaching. The increased burden of NCDs could lower national productivity, as more people

become unable to participate in the workforce due to illness.

Evaluating Social Security and Health Policies

Evaluation of Social Security Schemes

In India, social security schemes could play a crucial role in managing the NCD burden among vulnerable populations.

For instance, it is crucial to examine whether participation in social security programs reduces the prevalence of two prominent NCDs: diabetes and heart disease.

Findings indicate that even modest pension benefits help elderly people afford healthcare expenses, thereby reducing NCD risks.

However, challenges remain: travel costs, hospital fees, and high-priced medications impose financial strain, often leading to debt and impoverishment.

Health insurance, while beneficial, remains underutilized due to limited public awareness, bureaucratic hurdles, and delays in claim processing.

Ayushman Bharat Scheme: Impact and Limitations

The Ayushman Bharat Scheme, introduced to provide health insurance to the most

vulnerable 40% of households, illustrates the potential of social security but also its limitations.

While the scheme offers essential coverage, it is undermined by corruption and inefficiencies, as noted by the Comptroller and Auditor General of India (CAG) in 2023.

Issues include the ineligibility of beneficiaries, delays in hospital registration, improper procedures, and lack of proper documentation.

Such systemic flaws reveal that insurance alone is insufficient without improvements in healthcare infrastructure, workforce availability, and healthcare delivery.

Policy Recommendations and Behavioural Interventions to Address NCD Crisis

Promoting Behavioural Changes

Addressing India's NCD crisis requires policy reforms and individual lifestyle changes.

The Supreme Court's recent mandate to regulate healthcare costs highlights the importance of making healthcare affordable.

Yet, as observed, price regulation requires robust enforcement to ensure compliance.

Furthermore, promoting behavioural changes, such as increasing physical activity

and adopting balanced diets, is crucial to managing obesity and, consequently, reducing risks of cardiovascular diseases and diabetes.

Taxation on Unhealthy Products

Policy measures, such as taxation on unhealthy products, could help address the root causes of NCDs and reduce multi-morbidity prevalence.

Tobacco consumption remains a significant health threat, particularly in India, where smoking is prevalent.

Policies aimed at reducing tobacco use, combined with public health campaigns, could mitigate the incidence of respiratory and cardiovascular conditions.

Although these interventions are challenging to implement, they are necessary for long-term health improvement.

Conclusion

The World Bank's 2024 report presents a vital perspective on the urgent need to address the growing burden

of NCDs and demographic changes in LMICs.

While the Healthy Longevity Initiative offers a visionary approach, the realities in countries like India reveal substantial barriers to achieving this ideal.

India's rapidly aging population, compounded by the prevalence of NCDs, demands targeted interventions in healthcare policy, social security programs, and individual behaviours

TB FREE INDIA

Context:

India's dedicated journey towards tuberculosis (TB) elimination has been recognized globally, with a noteworthy 17.7% decline in TB incidence from 2015 to 2023, a rate that is over twice the global average decline of 8.3%, as reported by the World Health Organization (WHO) in its Global Tuberculosis Report 2024.

Strategies and Goals:

The SDG target 3.3 aims to "End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases, and combat hepatitis, water-borne diseases, and other communicable diseases by 2030." India, as a signatory to the United Nations Sustainable Development Goals (UNSDGs), has pledged to achieve the "End TB" targets by 2025,

five years ahead of the SDG deadline of 2030.

The indicators for TB under this target include:

An 80% reduction in the TB incidence rate (new cases per lakh population) compared to 2015 levels.

A 90% reduction in the TB mortality rate compared to 2015 levels.

Zero TB-affected households experiencing catastrophic expenses due to the disease.

End TB by 2025:

The Government's commitment to "End TB by 2025" was first articulated by Prime Minister Narendra Modi during the "End TB Summit" held in New Delhi in March 2018 and was reaffirmed at the "One World TB Summit" in Varanasi on World TB Day 2023. At this summit, the Prime Minister emphasized the need for a decisive and revitalized response to TB. Additionally, India is a signatory to the Gandhinagar Declaration, the joint declaration by the Health Ministers and WHO South-East Asian Regional Office (SEARO), which was signed at the high-level ministerial meeting on "Sustain, Accelerate and Innovate to End TB" in the South-East Asia Region by 2030 in August 2023.



In line with the strong political commitment shown by the Government of India, the National Tuberculosis Elimination Program (NTEP) has been implementing the National Strategic Plan (NSP) for TB Elimination. The NSP 2017–2025 has made significant progress in narrowing the gap between targets and achievements, and India is one of the first countries to develop a mathematical model for burden estimation.

National Tuberculosis Elimination Programme:

Following the COVID-19 pandemic, India intensified its efforts to eliminate TB through the NTEP, a programme aligned with the National Strategic Plan (NSP) 2017–25. Key achievements in 2023 include around 1.89 crore sputum smear tests and 68.3 lakh nucleic acid amplification tests, which reflect the programme's commitment to expanding access to diagnosis at all healthcare levels.

In response to evolving medical insights, the National Tuberculosis Elimination Programme (NTEP) introduced comprehensive care packages and decentralized TB services, which include an expanded rollout of shorter oral regimens for patients with drug-resistant TB (DR-TB). The program prioritized minimizing treatment delays and enhancing the quality of TB care, with a specific focus on addressing coexisting health conditions such as

malnutrition, diabetes, HIV, and substance abuse through a differentiated care approach and by encouraging early diagnosis. Preventive measures remain a central focus of the NTEP's approach, as the program significantly expanded access to TB preventive treatment (TPT). With a strong commitment from various states, demonstrated a collective resolution to prevent the emergence of TB disease in vulnerable populations. This led to an overall increase to approximately 15 lakhs beneficiaries being provided with TPT including the shorter regimen.

Acknowledging the impact of additional health issues on TB outcomes, the NTEP launched initiatives to tackle these conditions particularly malnutrition, diabetes, HIV, and substance abuse by collaborating with other ministries and departments. These efforts aimed to provide TB patients with more holistic support, thereby improving their overall treatment outcomes.

Pradhan Mantri TB Mukh Bharat Abhiyaan (PMTBMBA):

The launch of the Pradhan Mantri TB Mukh Bharat Abhiyaan (PMTBMBA) in September 2022 marked a pivotal step toward strengthening community involvement and ownership in the fight against tuberculosis. This initiative received extensive support, with political leaders, government officials, and NGOs actively participating in awareness campaigns and events to amplify its reach. Notably, over 1.5 lakh Ni-kshay Mitras have committed to supporting individuals affected by TB. Advocacy, communication, social mobilization, and community engagement continue to be fundamental aspects of the National Tuberculosis Elimination Programme (NTEP), which has been further solidified through PMTBMBA to drive community-based efforts in TB elimination.

Initiatives to enhance Patient Support System:

Direct Benefit Transfer (DBT) under the Ni-kshay Poshan Yojana provides financial support for TB patients by disbursing nearly Rs. 2,781 crores to around 1 crore beneficiaries. New initiatives, including incentivizing treatment supporters and ASHA (Accredited Social Health Activist) workers, TB Vijeta's (TB champions) and Ni-kshay SAATHI (Family caregiver model) were aimed to further enhance patient support systems.



Advancing towards TB Elimination:

To sustain the momentum in the fight towards TB elimination, a variety of interventions are being implemented and are in development for the coming years, including:

- Conducting studies on adult BCG vaccination
- Expanding and rapidly scaling up Tuberculosis Preventive Therapy (TPT), including new and shorter treatment regimens
- Increasing access to molecular diagnostic testing for all

individuals suspected of having TB, along with comprehensive recording and reporting mechanisms

- Decentralizing TB service delivery to “Ayushman Arogya Mandirs”
- Enhancing community-based patient support systems through the PMTB MBA initiative.
- India’s comprehensive TB elimination approach is showing positive results, with significant declines in incidence and a strengthened

health response framework. With continued emphasis on cross-sector partnerships, innovative care solutions, and community engagement, India is well-positioned to meet its goal of a TB-free nation by 2025. This progress underscores the country’s commitment to global health initiatives and the power of collaborative, innovative, and patient-centered healthcare strategies in tackling TB on a national scale.

Economic Development & Agriculture

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WHY RBI IS MOVING ITS GOLD BACK FROM ENGLAND

Why in the News?

The Reserve Bank of India (RBI) has repatriated a significant portion of its gold reserves over the last two years, increasing domestic storage to over 500 tonnes. This strategic move aims to enhance control over national assets amidst global uncertainties.

Key Highlights

Increased Domestic Storage: The majority of RBI's gold reserves are now stored in India, with a steady rise in repatriation over the past two years.

Gold Held Abroad: A portion of the reserves remains with foreign institutions such as the Bank of England, the Bank for International Settlements, and in gold deposits.

Gold Accumulation: The RBI has also been actively increasing its total gold holdings through international purchases.

Importance of Gold Repatriation

Economic Stability: Gold provides a hedge against inflation and currency devaluation.

National Wealth Security: Storing reserves locally ensures complete control and availability during crises.

Risk Mitigation: Diversifying storage locations minimizes exposure to geopolitical and economic risks.

Cost Efficiency: Domestic storage eliminates high insurance and storage fees incurred abroad.

Factors Driving Repatriation

Geopolitical Uncertainties:

Freezing of Russian assets after the Ukraine conflict raised concerns over asset safety abroad.

Israel's ongoing conflicts highlight the vulnerabilities of assets in foreign vaults.

Economic Risks:

The fragile British economy has led to doubts about the security of reserves stored there.

Strategic Considerations:

Gold stored domestically avoids exposure to foreign policies and logistical delays.

Gold acts as a financial tool for inflation hedging and stabilizing the rupee during economic turmoil.

Logistical and Cost Benefits:

Savings on insurance and storage fees run into millions annually.

Implications

Enhanced Control: Domestic storage ensures immediate access to reserves during emergencies.

Geopolitical Independence: Reduced reliance on foreign vaults shields assets from international conflicts or policy shifts.

Diversified Risk Management: Spreading reserves across locations minimizes risks from localized instability.

Economic Resilience: Gold reserves bolster India's ability to stabilize its economy during uncertain times.

Additional Information:

India's Forex Reserve include:

- Foreign Currency Assets
- Gold reserves
- Special Drawing Rights
- Reserve position with the International Monetary Fund (IMF).

It should be noted that most foreign exchange reserves are held in US dollars.

URBAN INFRASTRUCTURE DEVELOPMENT FUND (UIDF)

Overview

The UIDF is an initiative managed by the National Housing Bank (NHB) aimed at supporting infrastructure development in Tier 2 and Tier 3 cities. It provides a stable and predictable financing mechanism to address the challenges of skewed regional development and enhance urban growth in mid-sized cities.

Key Features

Management and Allocation:

Managed by NHB, with loans sanctioned to states based on normative allocations derived from the population of eligible cities.

State-wise allocation is based on urban population as per Census 2011.

Governance:

Borrowings under UIDF adhere to Article 293(3) of the Indian Constitution.

The Finance Departments of respective states serve as nodal agencies.

Utilization:

States must ensure at least 5% of allocated corpus is used for revenue-generating projects to cover operation and maintenance (O&M) costs.

Target Cities:

Focused on Tier 2 (459 towns with a population of 1 lakh to 9,99,999) and Tier 3 (580 towns with a population of 50,000 to 99,999) cities.

Excludes metropolitan and mega cities, concentrating on mid-sized cities to develop them into regional economic hubs.

Objective:

Supplement state efforts in urban infrastructure development.

Promote holistic planning for future-ready cities to drive economic growth.

Enable pooling of resources and expertise for tailored infrastructure solutions.

Eligible Activities Under UIDF

UIDF supports activities aligned with the missions of the Ministry of Housing and Urban Affairs, including:

Water Supply & Sanitation: New, augmentation, and rehabilitation projects.

Drainage Systems: Construction of drains and stormwater systems.

Sewerage Systems: Network and treatment plants.

Solid Waste Management: New and augmentation projects.

Transportation Infrastructure: Roads, overbridges, underpasses, and utilities within underground conduits.

Urban Development Projects:

- Local area decongestion plans.
- Heritage conservation.
- Transit-oriented developments.
- Town planning schemes for greenfield development.
- Parks with open gyms (excluding major construction).

Miscellaneous: Electric/gas crematoriums and pay-and-use toilet facilities managed by the private sector.

Exclusions: Proceeds cannot be used for maintenance works or administrative expenses.

Significance

The UIDF is a transformative initiative aimed at developing underserved cities into vibrant economic hubs. It ensures sustainable infrastructure development, enhances the quality of life, and promotes balanced regional growth.

RBI'S UPDATED RULES FOR FPI TO FDI RECLASSIFICATION

Context:

The Reserve Bank of India (RBI) has introduced an updated framework for the reclassification of investments made by Foreign Portfolio Investors (FPIs) to Foreign Direct Investment (FDI) if their equity holdings exceed the 10% limit in Indian companies.

Background Information:

FPI Holding Limit: Currently, FPIs are permitted to hold up to 10% of an Indian company's total paid-up equity capital.

Options After Breaching the Limit: If this threshold is surpassed, FPIs previously had the choice to either sell the excess shares or convert them into FDI.

Key Aspects of FPI:

FPI comprises assets such as stocks, ADRs, GDRs, bonds, ETFs, and mutual funds held by foreign investors.

Unlike FDI, which involves direct control and ownership in foreign companies, FPI does not provide any control over the assets of the company.

Updated Framework:

Government Approval Requirement: If an FPI's equity holding exceeds 10%, the investor

must seek government approval, triggering the reclassification to FDI.

Timely Reclassification Process: The reclassification must be completed within five trading days from the date the limit is breached.

Compliance Conditions: FPIs must follow the standard FDI regulations on entry routes, sectoral caps, investment limits, pricing guidelines, and other conditions.

Reporting Procedures: FPIs are required to report the reclassification as per the Foreign Exchange Management (Mode of Payment and Reporting of Non-Debt Instruments) Regulations, 2019.

SEBI's Role: As per SEBI's revised guidelines, FPIs must inform their custodian, who will temporarily freeze further transactions in the company until the reclassification is finalized.

Importance of the New Framework:

Regulatory Adherence: The updated framework streamlines the reclassification process, minimizing the potential for regulatory violations.

Investment Oversight: It enhances supervision of foreign investments in Indian equity, ensuring a balanced approach between attracting foreign capital and protecting national economic interests.

CENVAT CREDIT

Why in news?

The Supreme Court delivered a landmark judgment allowing telecom companies to claim CENVAT credit for mobile towers and pre-fabricated buildings (PFBs).

Key Highlights of the Judgment:

1. Recognition of Mobile Towers and Shelters as Capital Goods: Mobile towers and PFBs fall under the definition of "capital goods" or

"inputs" as per CENVAT Rules. These structures provide critical support for efficient mobile signal transmission, enabling telecommunication services.

2. Functional Utility Test: The court applied the "functional utility test" to determine that:

- i) Mobile towers and PFBs are indispensable for the provision of telecommunication services.
- ii) These items are integral to the functioning

of the Base Transceiver Station (BTS), antenna, and other components of the telecom system.

3. Entitlement to CENVAT Credit: As per Rule 3(1)(i) of the CENVAT Rules, MSPs can claim credit for excise duties paid on goods used to provide telecommunication services. Mobile towers and PFBs, as part of the telecom infrastructure, qualify as “goods” under Rule 2(k).

About CENVAT Credit (Central Value Added Tax Credit)

CENVAT credit (Central Value Added Tax Credit) is a mechanism in Indian taxation that allows manufacturers and service providers to

avail a credit of the taxes paid on inputs, input services, and capital goods used in the production of goods or provision of services.

- It aims to reduce the cascading effect of taxes, ensuring that only the value addition is taxed at each stage.
- Applicability: It applies to excise duties and service taxes (relevant before the introduction of GST in India). Manufacturers and service providers registered under the Central Excise or Service Tax laws could avail the credit.

TEA INDUSTRY FACES STRESS

Why in News?

The Tea Board of India has sought a ₹1,000 crore financial package from the Centre to support the tea industry, particularly Darjeeling Tea.

The Standing Committee of Parliament has recommended revisiting the Indo-Nepal Trade Treaty to address the influx of substandard Nepali tea.

Background:

Darjeeling Tea, known as the “Champagne of Teas,” was the first Indian product to receive a GI tag in 2004 for its distinctive flavor and aroma.

The Darjeeling tea industry employs 55,000 workers across 87 gardens and produces about 7 million kg of tea annually, with a significant share exported.

In 2017, a prolonged shutdown in Darjeeling caused a sharp decline in production, from which the industry has yet to recover.

Areas of immediate concern:

Nepal produces tea at a significantly lower cost due to reduced input costs, including cheaper labor and minimal quality control requirements.

These imports have increased since the 2017 Darjeeling shutdown, when production in India halted and exporters turned to Nepali tea as a

substitute.

Under the 2009 Indo-Nepal Treaty of Trade, tea imports from Nepal are exempt from customs duty and quantitative restrictions.

Favourable Climatic Conditions for Tea Production:

Temperature: A cool, subtropical climate with temperatures between 18°C and 30°C is ideal.

Rainfall: Tea requires 150-300 cm of well-distributed annual rainfall.

Soil: Well-drained, slightly acidic soil rich in organic matter supports healthy tea plants.

Altitude: Higher altitudes (up to 2,000 meters) like those in Darjeeling produce tea with unique flavor profiles.

Shade: Partial shade promotes optimal growth, often provided naturally by surrounding forest cover or artificial means.

Tea Production in India:

Key Regions: Assam, West Bengal (Darjeeling, Dooars), Tamil Nadu, Kerala, and the Northeast.

Global Standing: India is the second-largest tea producer in the world, after China.

Production Data (2021): Approximately 1.3 billion kg of tea was produced in India.

Exports: Indian tea is a significant export commodity, with major markets including Russia, the U.K., and the Middle East.

Issues with Tea Production in India:

Economic Challenges: Rising input costs (10-12% CAGR) outpace stagnant tea prices (1.7% CAGR over six years).

Competition from Imports: Low-cost Nepali tea undermines the premium value of Darjeeling Tea.

Climate Change: Reduced rainfall and

unpredictable weather patterns have lowered yields and increased production difficulties.

Aging Infrastructure: Many tea gardens, especially in Darjeeling, have aging bushes requiring replantation, which is costly and time-consuming.

Labour Problems: High absenteeism and increasing labour costs further strain the industry.

Declining Exports: Factors like the Russia-Ukraine war have reduced demand from key markets, further affecting profitability.

ESTABLISHMENT OF URBAN INFRASTRUCTURE DEVELOPMENT FUND

Context:

Recently, the Minister of State in the Ministry of Housing and Urban Affairs informed in Lok Sabha that the government has set up the Urban Infrastructure Development Fund (UIDF) through use of priority sector lending shortfall for creating urban infrastructure in Tier 2 and Tier 3 cities.

Aim And Purpose:

The purpose of the Fund will be used by public agencies to create urban infrastructure in tier-2 and tier-3 cities.

UIDF aims to supplement the efforts of the State Governments / UTs for urban infrastructure development works implemented through Public/ State Agencies, Municipal Corporations and Urban Local Bodies, by providing a stable and predictable source of financing for providing basic services like Sewerage and Solid Waste Management, Water Supply and Sanitation, construction and improvement of drains/ storm water drains, etc.

About Urban Infrastructure Development Fund:

1. It is established through the use of priority sector lending shortfall.
2. It is managed by the National Housing Bank.
3. The initial corpus for this Fund is ₹10,000 crore.
4. It is established on the lines of the Rural Infrastructure Development Fund (RIDF).
5. States will be encouraged to leverage resources from the grants of the 15th Finance Commission, as well as existing schemes, to adopt appropriate user charges while accessing the UIDF. It currently covers 459 tier-2 cities and 580 tier-3 cities.

INDIA'S URBAN INFRASTRUCTURE FINANCING, NEEDS, AND REALITY

Context

India is on the brink of an urban revolution and over the next three decades, its urban population is expected to double, increasing from 400 million in the last decade to 800 million.

While this demographic shift offers a unique opportunity to reshape India's urban landscape, it also presents a formidable challenge; financing the massive infrastructure required to support this growth.

The Financial Gap

According to a recent World Bank report, India will need approximately ₹70 lakh crore by 2036 to meet its urban infrastructure needs.

This translates to a requirement of ₹4.6 lakh crore annually; however, current government investment stands at just ₹1.3 lakh crore annually, barely a quarter of the required amount.

Broadly, about half of this investment is earmarked for basic urban services, while the other half is designated for urban transport projects.

An Assessment of Challenges at the Local Level

Stagnation in Municipal Finances

For two decades, municipal finances have remained stagnant at just 1% of the GDP, a

clear indication of the systemic neglect of urban local bodies (ULBs).

Despite their significant role in urban development, municipalities contribute only 45% of urban investments, with the rest being managed by parastatal agencies.

This limited fiscal capacity restricts their ability to plan and execute large-scale infrastructure projects effectively.

Dependency on Central and State Transfers

While central and state transfers to municipalities have increased marginally from 37% to 44% of their total revenue, this has not translated into robust financial health.

Municipalities' dependence on external funding has reduced their ability to operate autonomously.

Compounding this, the share of municipalities' own revenue sources has declined from 51% to 43%, further weakening their financial independence.

Low Revenue Generation and Collection Inefficiencies

Municipal tax revenues have shown only modest growth, rising by 8% between 2010 and 2018, while grants increased by 14%, and non-tax

revenue grew by 10.5%.

However, inefficiencies in tax collection severely limit revenue potential; for instance, ULBs in cities like Bengaluru and Jaipur collect only 5%-20% of their potential tax revenue.

Nationally, property tax collection stands at a mere ₹25,000 crore annually, amounting to just 0.15% of GDP, a figure significantly lower than global benchmarks.

Poor Cost Recovery for Services

Urban local bodies also struggle with cost recovery for essential services.

Across the country, the recovery rates for urban services like water supply and waste management range from 20% to 50%.

This mismatch between the costs of providing services and the revenues generated not only worsens the financial strain on ULBs but also leads to substandard service delivery.

Under utilisation of Funds

One of the paradoxical challenges faced by municipalities is their inability to utilise allocated funds effectively.

The Fifteenth Finance Commission reported that approximately 23% of total

municipal revenue remains unspent.

Even in major cities like Hyderabad and Chennai, only 50% of capital expenditure budgets were utilized in 2018-19.

This under utilization points to systemic inefficiencies, such as delays in project approvals, lack of skilled manpower, and bureaucratic hurdles.

Suboptimal Utilization of Central Schemes

Flagship urban development schemes like the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the Smart Cities Mission have also faced implementation challenges.

AMRUT achieved 80% fund utilisation, while the Smart Cities Mission managed 70%.

These figures, though reasonable, fall short of the full potential of these initiatives and highlight gaps in project execution and management.

Decline in Public-Private Partnerships (PPPs)

PPPs, which were once seen as a promising avenue for augmenting urban infrastructure investment, have witnessed a sharp decline.

Investment in urban PPP projects peaked at ₹8,353 crore in 2012 but plummeted to ₹467 crore by 2018.

Several factors contribute

to this decline, including inadequate project-specific revenues, weak financial viability of projects, and the lack of institutional mechanisms to attract private players.

Pathways to Reform

Long-term Reforms

Structural reforms are crucial for strengthening municipal financial autonomy and capacity.

Empowering municipal governments to manage and allocate resources more effectively is essential.

This includes enhancing the role of State Finance Commissions and enabling municipalities to raise funds through mechanisms such as debt borrowing and municipal bonds.

These reforms will attract much-needed private capital, fostering sustainable urban development.

Medium-term Strategies

Developing a Robust Project Pipeline

To meet the ₹70 lakh crore urban investment requirement, India needs a steady pipeline of 600-800 projects annually, with about 15% of investments potentially coming through PPPs.

This involves meticulous planning and preparation to ensure projects are viable and impactful.

Decoupling Project

Preparation from Financial Assistance

Hastily prepared projects often fail to meet financial, social, and environmental sustainability criteria.

Separating project preparation from financial assistance will allow for better planning and execution, particularly in the face of climate change vulnerabilities

Leveraging Digital Public Infrastructure (DPI)

Digital innovations can revolutionise urban service delivery, particularly in sectors like public transport.

By adopting DPI, India can enhance efficiency, transparency, and accountability, establishing itself as a global leader in smart urban solutions.

Capturing Land Value in Transport Projects

With half of the required ₹70 lakh crore investment allocated to urban transport, particularly metro rail projects, integrating transport infrastructure with urban development is crucial.

Leveraging land value near transit hubs can drive economic growth while improving urban efficiency.

Conclusion

India's urban future hinges on the ability to address these financial and structural challenges head-on as the stakes are high, and this is the window for action.

HOW FOOD INFLATION HITS RURAL INDIA MORE THAN URBAN AREAS

Context

Over the past few days, several observers of the Indian economy have made the point that urban India, especially the larger mega cities, are the new areas of concern when it comes to economic activity while rural India is witnessing an uptick.

Food inflation has had a more significant impact on rural India compared to urban areas in recent times due to several factors related to consumption patterns, income disparities, and the broader economic conditions that affect the two regions differently. Here's an explanation of why this is happening:

1. Higher Dependence on Food in Rural Areas

Rural consumption patterns: Rural households tend to spend a larger portion of their income on food compared to urban households. In urban areas, people may spend more on non-food items like transportation, entertainment, and housing. Therefore, when food prices rise, it hits rural families harder because a larger share of their budgets is allocated to food.

Limited food diversity: Urban areas typically offer a wider variety of food choices, and the population might substitute expensive items with cheaper alternatives. In contrast, rural areas, particularly in the

poorer sections, have less access to a variety of foods and may find it harder to substitute expensive items when prices increase.

2. Lower and More Inconsistent Income Levels in Rural Areas

Income disparities: Rural incomes are generally lower and more unstable compared to urban areas, where many workers earn regular salaries. A significant portion of rural income comes from agriculture, which can be unpredictable due to factors like weather conditions, poor infrastructure, and fluctuating market prices. When food prices rise, rural households find it harder to cope with the increased costs, as their incomes may not rise proportionately.

Seasonality of income: Farmers in rural areas often face income volatility, with harvests dictating income levels. If food inflation coincides with a lean season or a bad harvest, families struggle even more to meet their needs.

3. Price Transmission and Supply Chain Issues

Inefficiencies in rural supply chains: Rural areas often face higher transportation costs due to poor infrastructure, leading to a situation where food prices in rural markets

can be higher than in urban centers. Additionally, rural areas tend to be more affected by supply chain disruptions, and the inflationary pressures are transmitted more acutely due to a lack of access to cheaper food options or bulk-buying opportunities.

Higher intermediary costs: Rural regions are dependent on intermediaries to access essential goods. These middlemen often mark up prices to cover their transportation costs, which makes food inflation more pronounced in rural markets than in urban ones where the distribution system is more efficient.

4. Limited Access to Government Support and Subsidies

Food programs: Although the government has launched programs like the Public Distribution System (PDS) to provide subsidized food grains, access to these programs in rural areas is often limited or inefficient. Corruption, inadequate infrastructure, and poorly functioning delivery systems can prevent rural populations from receiving the full benefits of these subsidies.

Inconsistent quality and availability: In some rural areas, the availability of subsidized food through government schemes may not be consistent, and families may have to resort

to purchasing food at market prices, which are affected by inflation. In contrast, urban areas tend to have better access to these government programs due to better infrastructure and distribution networks.

5. Impact of Natural Calamities and Climate Change

Agricultural dependency: Rural households are heavily dependent on agriculture for food and income. If food inflation is driven by poor harvests or disruptions in agricultural production due to climate change or natural disasters (such as droughts or floods), rural areas suffer more acutely because they are already vulnerable. In urban areas, food inflation might be mitigated by imports, trade, or the availability of a more diversified food supply.

Crop failure and inflation: In rural areas, particularly in regions where agriculture is

the primary livelihood, food inflation tied to crop failures or rising input costs (like fertilizers or fuel) directly impacts both the cost of production and the cost of food consumption.

6. Migration and Labor Mobility

Urban migration and labor: In many parts of India, people from rural areas migrate to urban centers in search of better job opportunities. However, a large proportion of the rural population still remains dependent on seasonal or low-wage agricultural labor. The rising food prices make it difficult for these workers to afford basic food, especially if their wages are stagnant or have not increased in line with inflation.

Higher urban wages: In urban centers, there is more potential for labor mobility and higher wages in the formal sector, which helps people cope with inflation. In contrast,

rural areas, particularly those dependent on agriculture, do not have such wage growth, making it harder for them to absorb price hikes in food.

Conclusion

The impact of food inflation on rural India is more severe than in urban areas because of the greater proportion of income spent on food, lower and more unpredictable income levels, inefficient supply chains, limited access to government support, and higher vulnerability to climate-related shocks. Urban areas, with their higher average incomes, more diverse food markets, and better access to subsidies and social safety nets, are better equipped to weather the effects of food inflation.

MILK, MEAT AND EGG PRODUCTION INCREASED IN 2023-24: (FACT SHEET)

Context:

Uttar Pradesh produces 16.21% of total milk in the country and ranks at the top in milk production followed by Rajasthan (14.51%), Madhya Pradesh (8.91%), Gujarat (7.65%), and Maharashtra (6.71%)

Milk production

The milk production in the country saw an increase of 3.78% during 2023-24 over the estimates of 2022-23, according to the 'Basic Animal Husbandry Statistics - 2024' prepared by the Department of Animal Husbandry and Dairying.

The report says that the country is estimated to produce 239.30 million tonnes of milk during 2023-24. According to the Ministry, this is a compound annual growth of 5.62% over the past 10 years. In 2014-15, the milk production was 146.3 million tonnes. In 2022-23, the milk production was 230.58 million tonnes. India is at the top in milk production globally and second in in egg production.

Uttar Pradesh produces 16.21% of total milk in the country and ranks at the top in milk production followed by Rajasthan (14.51%), Madhya Pradesh (8.91%), Gujarat (7.65%), and Maharashtra (6.71%). West Bengal recorded 9.76%, the best annual growth rate in milk production in 2023-24, followed by Jharkhand (9.04%), Chhattisgarh (8.62%) and Assam (8.53%) over 2022-23.

Egg production

The total egg production is estimated as 142.77 billion numbers during 2023-24, which is a compound annual growth of 6.8% over the past 10 years. In 2014-15, the egg production was 78.48 billion numbers. "Further, the production has increased annually by 3.18% during 2023-24 over 2022-23 (138.38 billion numbers)," the Ministry said. Andhra Pradesh is the largest producer of eggs with a share of 17.85% of total egg production in the country followed by Tamil Nadu (15.64%), Telangana (12.88%), West Bengal (11.37%) and Karnataka (6.63%).

Meat production

The total meat production in the country (including poultry, cattle, buffalo, sheep, goat and pig) is estimated as 10.25 million tonnes during 2023-24. It registered a compound annual growth of 4.85% over the past 10 years. In 2014-15, the meat production was 6.69 million tonnes. "Further, the production was increased by 4.95% in 2023-24 over 2022-23 (9.77 million tonnes). In 2023-24, of the total meat production, 48.96% was from poultry, cattle contributed 2.60%, buffalo meat was 18.09%, sheep and goat were 11.13% and 15.50% respectively

and the share of pig meat was 3.72%.

West Bengal is the largest meat producer with 12.62% share, followed by Uttar Pradesh (12.29%), Maharashtra (11.28%), Telangana (10.85%) and Andhra Pradesh (10.41%). The highest annual growth rate in meat production was recorded in Assam (17.93%) followed by Uttarakhand (15.63%) and Chhattisgarh (11.70%).

Wool production

Total wool production in the country is estimated as 33.69 million kg during 2023-24, which is a slight growth of 0.22% over last year. “It was 36.76 million kg during 2019-20 and 33.61 million kg in previous year. The major contribution in the total wool production comes from Rajasthan with a share of 47.53% followed by Jammu & Kashmir (23.06%), Gujarat (6.18%), Maharashtra (4.75%) and Himachal Pradesh (4.22%).”

GEOGRAPHY,

ENVIRONMENT,

BIODIVERSITY AND

DISASTER MANAGEMENT

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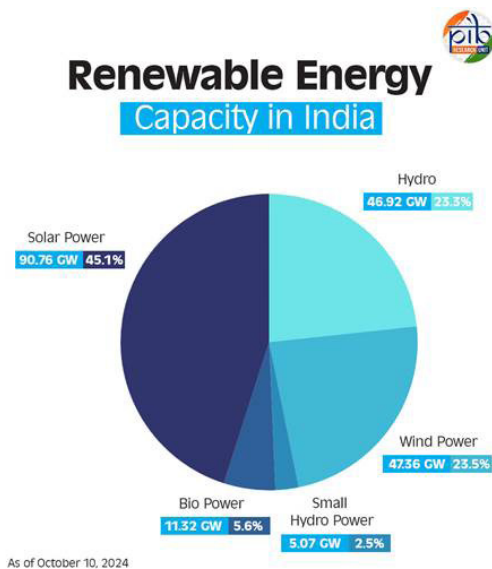
INDIA'S NEED FOR AN ENVIRONMENTAL HEALTH REGULATORY AGENCY

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INDIA'S RENEWABLE ENERGY CAPACITY HITS 200 GW MILESTONE

Context:

India has reached a significant milestone in its renewable energy journey, with the country's total renewable energy capacity crossing the 200 GW (gigawatt) mark as of October 10, 2024.



Overview of India's Renewable Energy Landscape

India's total electricity generation capacity has reached 452.69 GW, with renewable energy contributing a significant portion of the overall power mix. As of October 2024,

renewable energy-based electricity generation capacity stands at 201.45 GW, accounting for 46.3 percent of the country's total installed capacity. This marks a major shift in India's energy landscape, reflecting the country's growing reliance on cleaner, non-fossil fuel-based energy sources.

Leading States in Renewable Energy Capacity

Several states in India have emerged as leaders in renewable energy capacity, contributing significantly to the nation's progress. Rajasthan tops the list with an impressive 29.98 GW of installed renewable energy capacity, benefiting from its vast land and abundant sunlight.

Following closely is Gujarat, which boasts a capacity of 29.52 GW, driven by its strong focus on solar and wind energy projects.

Tamil Nadu ranks third with 23.70 GW, leveraging its favourable wind patterns to generate substantial energy.

Karnataka rounds out the top four with a capacity of 22.37 GW, supported by a mix of solar and wind initiatives. Together, these states play a crucial role in advancing India's renewable energy goals and establishing a more sustainable energy future.

HORSESHOE CRABS

Context:

Horseshoe crabs have been around for millions of years, but their habitats are increasingly being degraded. While scientists have now begun tagging them to track their movements and study them better on the beaches they come to nest on

Key facts related to Horseshoe crabs:

A horseshoe crab's blood has a blue to blue-

green color when exposed to the air. The blood is blue because it contains a copper-based respiratory pigment called hemocyanin.

As fossils show, it has survived 445 million years without undergoing any morphological change.

It belongs to a class called Merostomata, living fossils, or those organisms that haven't changed in millennia.

IUCN Category– Data deficient

Listing of the crab in the Schedule IV of the Wildlife (Protection) Act, 1972.

Distribution - There are four species of horseshoe crab: the mangrove (*Carcinoscorpiusrotundicauda*), which inhabits the coastal waters of South and Southeast Asia; the Atlantic or American (*Limulus polyphemus*), found along the

Atlantic coast of the United States and the southeastern Gulf of Mexico; the coastal (*Tachypleusgigas*), also native to South and Southeast Asia; and the tri-spine (*Tachypleustridentatus*), found in Southeast and East Asia. India is fortunate to have two species: *Carcinoscorpiusrotundicauda* and *Tachypleusgigas*, both found along the Odisha coast.

WHAT IS WAYANAD'S NEW X-BAND RADAR?

Context:

After devastating floods and landslides killed more than 200 people in Kerala's Wayanad district in July 2024, the Union Ministry of Earth Sciences approved an X-band radar to be installed in the district. A torrential downpour triggered the landslide in the valley above Punchirimattom, near the Mundakkai region; its effects were compounded by a massive debris flow triggered by the rains.

How do radars work?

Radar is short for 'radio detection and ranging'. The device uses radio waves to determine the distance, velocity, and physical characteristics of objects around the device.

A transmitter emits a signal aimed at an object whose characteristics are to be ascertained (in meteorology, this could be a cloud). A part of the emitted signal is echoed by the object back to the device, where a receiver tracks and analyses it.

Weather radar, also known as a Doppler radar, is a common application of this device. The Doppler Effect is the change in frequency of sound waves as their source moves towards and away from a listener.

In meteorology, Doppler radars can reveal how fast a cloud is moving and in which direction based on how the cloud's relative motion changes the frequency of the radiation striking it.

Pulse-Doppler radar can measure the

intensity of, say, rainfall by emitting radiation in pulses and tracking how often they're reflected to the receiver.

This way, modern Doppler radars can monitor weather conditions and anticipate new wind patterns, the formation of storms, etc.

What is X-band radar?

Doppler radar relies on Rayleigh scattering, when the scatterer is much smaller than the wavelength of the radiation.

Radar trying to 'see' smaller particles like rain droplets or fog will need to use radiation of lower wavelengths, like in the X-band.

X-band radar is radar that emits radiation in the X-band of the electromagnetic spectrum: 8-12 GHz, corresponding to wavelengths of around 2-4 cm (this is in the microwave part of the spectrum.)

The smaller wavelengths allow the radar to produce images of higher resolution. However, the greater the frequency of some radiation, the faster it will be attenuated. So X-band radars have a relatively shorter range.

In Wayanad, the new radar is expected to be able to monitor the movements of particles, such as soil, to inform landslide warnings. The device will also perform high temporal sampling, that is, rapidly sample its environs, allowing it to spot particle movements happening in shorter spans of time.

How many types of radar does India have?

The India Meteorological Department (IMD) started using radar for weather applications in the early 1950s. The first indigenously designed and manufactured X-band storm detection radar was installed in 1970 in New Delhi. In 1996, IMD replaced 10 outdated X-band radars with digital X-band radars.

In its X-band radar network, India has both wind-finding and storm-detecting radars, and some with dual capabilities.

The country also uses S-band radars (2-4 GHz) for long-range detection. The first S-band cyclone detection radar was installed in Visakhapatnam in 1970 and the first locally made variant was commissioned in Mumbai in 1980.

In September 2024, the Ministry of Earth Sciences said India is set to have 56 additional Doppler radars in a few years. On September 11, the Union Cabinet cleared the ₹2,000-crore 'Mission Mausam' to upgrade meteorological infrastructure in the country. This includes installing up to 60 meteorological radars until 2026 under the Mission's first phase.

Minister of State for Earth Sciences JitendraPradhan said in August in Parliament that the government has started the process to procure and install 10 X-band Doppler radars to improve weather forecasting in the northeast States and in Himachal Pradesh's Lahaul and Spiti district.

The initiative to install an X-band radar in Wayanad included installing a C-band radar (4-8 GHz) with an observational range of 250 km in Mangaluru.

What is NISAR?

NASA and the Indian Space Research Organisation (ISRO) are currently developing a satellite called NISAR, short for 'NASA-ISRO Synthetic Aperture Radar'. It will use radar imaging to produce a high-resolution map of the earth's landmasses.

Its payload consists of an L-band radar (1.25 GHz, 24 cm) built by NASA and an S-band radar (3.2 GHz, 9.3 cm) built by ISRO. Together they will track and record changes in the earth's various natural processes.

It is currently expected to be launched onboard an ISRO GSLV Mk II rocket in 2025, at a total cost of \$1.5 billion, the bulk of it borne by NASA.

ATMOSPHERIC RIVERS

Context:

Atmospheric rivers are shifting poleward, reshaping global weather patterns

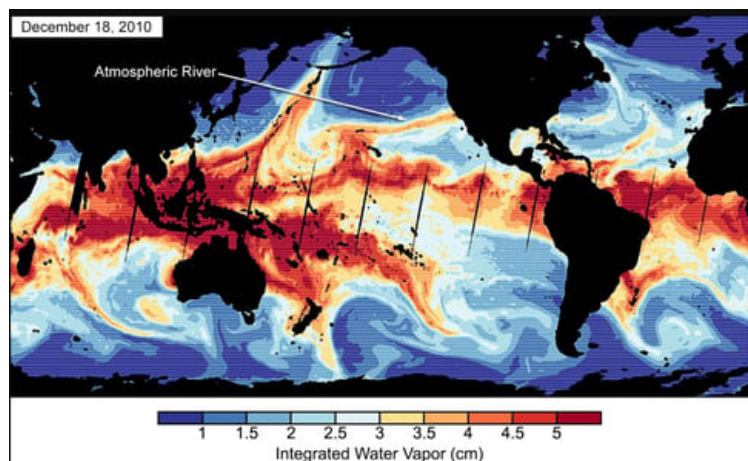
About Atmospheric Rivers:

Atmospheric rivers are long, concentrated regions in the atmosphere that transport moist air from the tropics to higher latitudes.

They are responsible for 90 percent of the movement of moisture from the tropics toward the poles.

They are the largest transport mechanisms of freshwater on Earth.

They form when large-scale weather patterns align to create narrow channels, or filaments, of intense moisture transport.



Ten or more atmospheric rivers can be happening at once across the globe.

A well-known and strong one is the Pineapple Express, with moisture transported from the tropical Pacific around Hawaii to the US and Canadian West Coasts.

Features:

Typically, 250 to 375 miles wide, atmospheric rivers can stretch more than a thousand miles long.

They are more frequent on the East Coast than they are on the West Coast.

They primarily occur during the winter of the respective hemisphere, when extratropical cyclones are most prevalent.

The average atmospheric river carries an amount of water vapor roughly equivalent to the average flow of water at the mouth

of the Mississippi River (second-longest river in North America).

When atmospheric rivers run up against mountains or run into local atmospheric dynamics and are forced to ascend, the moisture they carry cools and condenses, so they can produce intense rainfall or snowfall.

While they are an incredibly important source of rainfall, they can also bring flashflooding, mudslides, and landslides, sometimes killing people and destroying property.

When atmospheric rivers pass over land, they can cause conditions similar to those of hurricanes with intense and rapid rainfall, cyclone-force winds, and significantly increased wave heights.

COMPANY USES MINING DUST TO ENHANCE CARBON CAPTURE

Context:

Recently, Alt Carbon, a Darjeeling-based company is transporting basalt dust from Jharkhand and using it as an organic fertiliser to enrich soil and accelerate carbon sequestration. It has used about 500 tonnes of dust.

Process:

Crushed basalt, a type of volcanic rock, is spread over land to increase surface area, accelerating natural weathering processes.

Atmospheric CO₂ reacts with minerals in the basalt, forming bicarbonates that are washed into oceans where carbon is stored for long periods.

This speeds up the natural carbon capture process, which normally takes thousands of years, making it efficient in 2-4 years.

Location:

Basalt-rich regions like the Deccan Traps in Maharashtra and Gujarat, as well as Jharkhand and West Bengal (Rajmahal Traps), are ideal for sourcing the basalt rock.

Environmental Benefit:

Apart from capturing carbon, basalt also acts as a soil enhancer, improving fertility and benefiting agricultural productivity.

Scale:

For every 3-4 tonnes of basalt dust, 1 tonne of CO₂ can be sequestered over a few years.

Usage in Carbon Credits:

Companies can purchase carbon credits generated from this process to offset their emissions voluntarily.

CONNECTIONS ESTABLISHED BETWEEN VOLCANIC ERUPTION & IONOSPHERIC DISTURBANCES

Context:

A recent study by Indian Institute of Geomagnetism establishes the role of volcanism in shaping space weather.

Key findings of the study

Ionospheric Disturbance: Volcanic eruptions produce strong atmospheric gravity waves triggering formation of Equatorial Plasma Bubbles (EPBs).

EPBs, normally observed in the equatorial ionosphere, are depletions in ionospheric plasma density formed during post-sunset hours.

Impacts Satellite Communication and Navigation Systems: Generated EPBs can impact satellite communication and satellite-based technologies.

Volcanism and its Impacts

A volcano is an opening in Earth's crust through which lava, ash, and gases erupt. Recent incidents include Mount Ruang (Indonesia, 2024), Whakaari/White Island (New Zealand, 2024), etc.

Positive Impacts of Volcanic activities

- Short periods of cooling Earth's atmosphere: Particles from volcanoes can cause temporary cooling by shading incoming solar radiation
- Source of geothermal energy: can provide free electricity for locals
- Improvement in soil fertility by ejected volcanic ash
- Provides Mining opportunities as magma brings valuable minerals to the surface.
- Others: Tourism potential; ash acts as soil fertilizer, etc.

Negative Consequences of Volcanic activity

Impact on Climate: With the release of dust, ash, and other gases into the atmosphere.

Lead to disasters such as Tsunami (E.g. Tonga eruptions (2022))

Others: Leads to damage of lives, property, habitat, and landscapes

WHY INDIA IS BUILDING A CLOUD CHAMBER AS PART OF MISSION MAUSAM

Context:

Mission Mausam, launched by the Indian government, aims to enhance weather forecasting and actively manage weather events, including modifying rainfall, hail, fog, and potentially lightning strikes.

A key focus of the mission is cloud physics research, crucial for effective weather modification. To support this effort, India is setting up its first cloud chamber at the Indian Institute of Tropical Meteorology (IITM), Pune, to advance research in this field.

What is Mission Mausam?

About

In September 2023, India launched Mission Mausam to improve weather understanding and forecasting.

This will be done through expanded observation networks, better modeling and advanced tools like AI and machine learning.

Nodal Ministry

Ministry of Earth Sciences (MoES)

Objective

Improving Weather Prediction Accuracy: By utilizing advanced technologies, Mission Mausam aims to provide highly accurate and timely weather and climate forecasts.

Strengthening Climate Resilience: The mission will equip various stakeholders, including citizens and last-mile users, to better tackle extreme weather events and the impacts of climate change.

Broadening Capacity in Weather Sciences: Through research and development, the mission will strengthen India's capability in atmospheric sciences, including weather modelling, forecasting, and surveillance.

Focus area

Monsoon Forecasts: Enhanced predictions for the monsoon season, critical for agriculture and water management.

Air Quality Alerts: Providing accurate air quality forecasts to help manage pollution.

Extreme Weather Events: Timely alerts for cyclones, floods, and other extreme weather conditions.

Weather Interventions: Techniques for managing fog, hail, and rain to minimize disruptions in daily life and business activities.

Implementing Institutions

India Meteorological Department (IMD): Responsible for daily weather forecasts and warnings.

Indian Institute of Tropical Meteorology (IITM): Engaged in tropical weather and climate research.

National Centre for Medium-Range Weather Forecasting (NCMRWF): Specializes in medium-range weather forecasting.

These institutions will be supported by other MoES bodies such as the Indian National Centre for Ocean Information Services (INCOIS), National Centre for Polar and

Ocean Research (NCPOR), and National Institute of Ocean Technology (NIOT).

Why is India building a cloud chamber under Mission Mausam?**About**

India's upcoming cloud chamber at IITM Pune will be a unique facility designed to study Indian monsoon clouds.

Resembling a closed cylindrical drum, it will simulate conditions for cloud formation by injecting water vapor, aerosols, and maintaining specific humidity and temperature.

Unlike basic cloud chambers in other countries, India's facility will include convection properties, crucial for monsoon research.

This advanced setup will allow scientists to study seed particles forming cloud droplets or ice particles. Globally, only a few such convective cloud chambers exist.

Why is India building a convective cloud chamber?

Cloud physics involves studying cloud behavior, including interactions between particles, the formation of rain droplets and ice, and the impact of added atmospheric moisture from cyclones or low-pressure systems.

Establishing a convective cloud chamber aims to enhance understanding of these processes under conditions specific to Indian weather.

The controlled environment will enable them to manipulate parameters like temperature, humidity, and convection to better understand monsoon cloud behavior.

This knowledge will support strategic planning for weather modification efforts.

India's experience with cloud seeding

The Cloud Aerosol Interaction and

Precipitation Enhancement Experiment (CAIPEEX) was a decade-long program conducted in four phases, focusing on cloud seeding to enhance rainfall.

In the final phase (2016-2018), experiments were conducted in the rain-shadow regions of Solapur, Maharashtra.

Results showed that, under suitable

conditions, cloud seeding could increase rainfall by up to 46% in certain locations and by about 18% in a 100 sq. km area downwind of the seeding site.

Despite these positive findings, it is acknowledged that cloud seeding is not a complete solution to rainfall issues.

GLOBAL WILDLIFE NUMBERS DECLINED 73% SINCE 1970, SAYS WWF

Context:

The latest report by the Worldwide Fund (WWF) for Nature highlights a severe decline in global wildlife populations.

Findings of the report

From 1970 to 2020, the average size of monitored wildlife populations has decreased by 73%. In the 2022 report, the recorded decline was 69%, indicating an ongoing trend of population loss.

The report emphasizes that addressing the dual crises of climate change and nature loss requires urgent, coordinated action over the next five years. Data compiled by the Zoological Society of London (ZSL) included 35,000 population trends across 5,495 species, covering the years 1970 to 2020.

Ecosystems at Risk: The report showed that freshwater Ecosystems has witnessed the sharpest decline at 85%, with freshwater habitats experiencing significant losses. It also showed a 69% decline, reflecting extensive impacts on land-based wildlife. It declined by 56%, highlighting issues within ocean and coastal habitats.

Key Drivers of Decline: Habitat Loss and Degradation are predominantly caused by agriculture and food consumption practices worldwide. Other Threats include over-exploitation, invasive species, and diseases are also contributing to the rapid decline of wildlife populations.

Implications for Global Ecosystems: The declining wildlife populations serve as a critical indicator of escalating extinction risks and potential ecosystem degradation.

SLAG'S ROLE IN CARBON CAPTURE AND ENVIRONMENTAL MANAGEMENT

Why in news?

When lithified slag breaks down, it stores greenhouse gases like carbon dioxide through a process called mineral carbonation.

Slag:

Slag, a by-product of steelmaking, has become a significant part of artificial ground, contributing to sedimentary deposits and

impacting the environment. Its role in the Anthropocene is increasingly studied for its dual potential: environmental harm and carbon dioxide (CO₂) sequestration.

Formation and Environmental Impact

Slag undergoes lithification, where industrial waste hardens into sedimentary rock.

This process can:

Release toxic metals like chromium and vanadium during weathering, contaminating soil, water, and air.

Neutralize acidity due to its chemical stability, reducing environmental harm.

Carbon Capture Potential

Lithified slag facilitates mineral carbonation, a natural weathering process where CO₂ reacts with calcium and other minerals in slag to form stable carbonates like calcite.

This mechanism is significant for:

Reducing atmospheric CO₂.

Limiting the carbon footprint of the steelmaking industry.

This opportunity gains significance in light of projections suggesting a 10.5% rise worldwide in slag production by 2031. While the steelmaking industry is under

pressure to lower its emissions — including with processes that mitigate slag production — reusing slag to sequester carbon could reduce the industry’s carbon footprint.

Mechanisms of Carbon Sequestration

Calcite Cement Precipitation:

Dominates in areas exposed to rain and air above the waterline.

Calcium released from slag reacts with atmospheric CO₂ to form calcite.

Calcium-Silicate-Hydrate (CSH) Cement Formation:

Prevails in intertidal zones exposed to seawater.

This mechanism prevents slag dissolution, reducing toxic metal release.

KAZIRANGA EMERGES INDIA’S SECOND BUTTERFLY DIVERSITY HUB

Why in news?

Assam’s Kaziranga National Park, famous for its one-horned rhino population, has also earned the distinction of being the second butterfly diversity hub, after Namdapha National Park in Arunachal Pradesh.

Butterfly in Kaziranga Park

Kaziranga has emerged as the butterfly diversity hub, boasting 446 species.

Among the newly recorded species are the Burmese Threering, Glassy Cerulean, Dark-bordered Hedge Blue, Andaman Yellow Banded Flat, Ferrar’s Cerulean, Great Red-vein Lancer, Peacock Oakblue, Single-lined Flash, Yellow-tailed Walking, White Palm Bob, Dark-dusted Palm

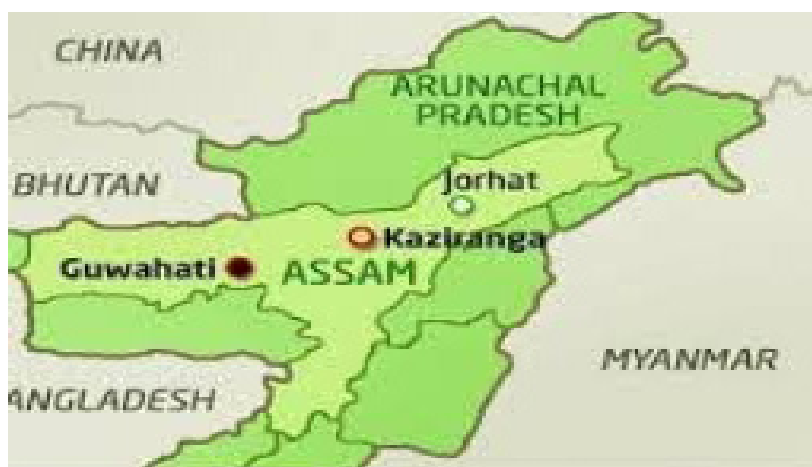
Dart, Clavate Banded Demon, Pale-marked Ace, Yellow Onyx, Long-winged Hedge Blue, Ace sp, Hill Ace, and Dwarf Banded Demon.

About Kaziranga National Park

It is a UNESCO World Heritage Site.

Location: Golaghat and Nagoan in the state of Assam

It lies between Brahmaputra River and the



Karbi (Mikir) Hills.

Rivers: Brahmaputra flows along the northern boundary of the park.

Numerous Other smaller rivers and streams such as Diphlu River, Mora Diphlu River, and Mora Dhansiri River pass through the National Park.

Landscape: Sheer forest, tall elephant grass,

rugged reeds, marshes, and shallow pools.

Fauna: Many endangered and threatened species like Rhino, Tiger, Eastern swamp deer, Elephant, Buffalo, Hoolock gibbon, Capped langur, and Gangetic River dolphin

It is inhabited by the world's largest population of one-horned rhinoceroses, as well as many mammals.

TAMIL NADU DECLARES HEATWAVE A STATE-SPECIFIC DISASTER

Why in News?

The Tamil Nadu government recently declared a heatwave as a State-specific disaster, enabling relief measures for those affected and compensation for families of heat-related casualties.

Interim actions to manage the heat will also be implemented, with funds allocated from the State Disaster Response Fund.

Rising Frequency of Heatwaves in India

The World Meteorological Organization declared 2023 as the hottest year on record, with rising heatwave frequency attributed to anthropogenic climate change, as noted in the IPCC's Sixth Assessment Report.

In India, heatwaves have intensified, with significant health impacts documented. A study in Environment International highlighted frequent and severe heatwaves in recent decades, such as:

1998: Severe two-week heatwave, the worst in 50 years.

1999: Unprecedented April heat, with temperatures over 40°C for more than 14 days.

2003: Heatwave causing over 3,000 deaths in Andhra Pradesh.

2010: Ahmedabad heatwave led to around 1,300 deaths.

2016, 2018, 2019, and 2023: Extreme heatwaves across India.

In May 2024, a severe heatwave struck, with Churu, Rajasthan, reaching 50.5°C, the highest in eight years.

The heatwave resulted in 219 deaths and over 25,000 cases of heatstroke, impacting people across the plains and hills.

What are Heat waves?

A Heat Wave is a period of abnormally high temperatures, more than the normal maximum temperature.

In India, Heat waves typically occur from March to June, and in some rare cases, even extend till July.

On an average, five-six heat wave events occur every year over the northern parts of the country.

Heat wave is considered if maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.

Based on Departure from Normal Heat Wave: Departure from normal is 4.50°C to 6.40°C; Severe Heat Wave: Departure from normal is >6.40°C

Based on Actual Maximum Temperature Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$; Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$

Health Impacts of Extreme Heat

Rapid rises in heat gain compromises the body’s ability to regulate temperature.

It can result in a cascade of illnesses, including heat cramps, heat exhaustion, heatstroke, and hyperthermia.

Prolonged exposure to extreme heat can lead to conditions from heat exhaustion to heat stroke and exacerbates issues like renal, cardiovascular, and pulmonary diseases.

Vulnerable populations—such as children, seniors, pregnant women, and outdoor workers—face higher risks. Extreme heat also impacts early childhood development, affecting learning, sleep, and mental health.

Wet Bulb Temperature and Heat Stress

Wet bulb temperature is the lowest temperature achievable by evaporative cooling, such as sweating, and it measures the combined effects of heat and humidity.

Beyond this threshold, the body can no

longer cool itself, leading to heat stroke or death.

This is particularly concerning for humid regions like India, with its extensive coastlines.

Research indicates that a wet bulb temperature exceeding 35°C for prolonged periods poses a universal heat stress limit, making heat dissipation impossible and inducing hyperthermia.

Recommended Government Actions

Equip health centers and hospitals with essential resources like ORS and medications.

Offer water and shelters for those working outdoors.

Adjust work hours to minimize outdoor exposure during peak heat times.

Long-term goals include addressing climate change causes and improving infrastructure to reduce vulnerability, especially in low-income communities.

PLACES IN NEWS | LITTLE PRESPA LAKE ON ALBANIAN-GREEK BORDER SLOWLY DYING

Context:

Little Prespa Lake, located on the Albanian-Greek border, is slowly drying up.

The lake has deteriorated into a marshy watering hole, with most of its area now transformed into swamps or dried-up land.

Little Prespa Lake faces environmental threats from climate change, characterised by rising temperatures, reduced snowfall, decreased precipitation and also diversion of the Devoll River for irrigation in the 1970s leading to significant water loss.

About Lake Prespa:

Lake Prespa is one of the oldest tectonic lakes in Europe.

It is the highest tectonic lake on the Balkan

Peninsula, located at an altitude of 853 metres.

Balkan countries are countries located on the Balkan Peninsula in southeastern Europe. It includes Albania, Bulgaria, Croatia, Greece, Moldova, North Macedonia, Romania, Serbia, Slovenia, and Bosnia and Herzegovina

It is made up of 2 lakes.

Great Prespa Lake is located on the border of Albania, Greece, and North Macedonia

Small Prespa Lake is located in Greece.

The two Prespa lakes are located between two national parks located in three different countries.

Prespa National Park is in Greece and

Albania,

Galicica National Park is in the Republic of Macedonia.

The Galicica Mountains separate Lake Prespa from Lake Ohrid, one of the oldest and deepest lakes in Europe.



SAUDI ARABIA DESERT SEES RARE SNOWFALL

Context:

Heavy rain and hail caused a surprise snowfall in Saudi Arabia's Al-Jawf region, turning the area into an icy landscape for the first time. Areas like Sakaka City and Dumat Al-Jandal governorate were covered in hail and heavy rain, resulting in white-capped desert landscapes.

Reason:

According to the National Meteorological Center of the United Arab Emirates, the cause of these unusual hailstorms is low pressure system extending from the Arabian Sea to Oman. This weather pattern causes the entry of moist air into the usually dry region, causing thunderstorms, hail and rain in Saudi Arabia and the neighboring United Arab Emirates.

Impact of Climate change:

According to experts, such unusual weather events including snowfall in deserts are

becoming more frequent due to changing atmospheric conditions under the influence of global climate change.

Previous Snowfall in Al-Lawz:

In February 2024, Saudi Arabia's Al-Lawz mountains, near Tabuk, experienced snowfall.

Al-Lawz typically sees snow during the "Marbaniya" season (December 7 – January 14). However, unusually warm temperatures delayed this year's snowfall by two months.

A few years ago, a town in the Sahara desert with very high temperatures (often over 58 °C) experienced a dramatic drop in temperature to -2 °C, resulting in unexpected snowfall.

Note:

According to the World Bank, West Asia is one of the most vulnerable regions to climate-related impacts. An increase in average temperature can lead to rapid irregularities in weather patterns and extreme conditions.

BIP E3 POLICY (ENVI)

Context:

Recently, the Union Cabinet approved the proposal 'BioE3 (Biotechnology for Economy, Environment and Employment) Policy for Fostering High-Performance Biomanufacturing' of the Dept of Biotechnology, Ministry of Science & Technology.

BioE3 Policy:

The BioE3 is aimed at fostering high-performance biomanufacturing, which involves the production of bio-based products across various sectors.

The policy aligns with broader national goals such as achieving a 'Net Zero' carbon economy and promoting sustainable growth through a circular bioeconomy.

The BioE3 Policy is also aligned with India's

vision of Green Growth and also with the clarion call of the Hon'ble Prime Minister on 'Lifestyle for Environment (LiFE)' which envisions collective approach towards sustainability.

Objective:

The objective of the BioE3 Policy is to set forth a framework that ensures the adoption of cutting-edge advanced technologies, and aligning innovative research for promoting Biomanufacturing.

The Policy outlines guidelines and principles for enabling mechanisms for 'Fostering High Performance Biomanufacturing' in the country across diverse sectors.

The Policy aims at revolutionizing the biomanufacturing process for enhanced efficiency, sustainability, and quality while also

accelerating the development and production of bio-based high-value products.

Core Themes of the BioE3 Policy:

1. **Bio-Based Chemicals and Enzymes:** Development of advanced bio-based chemicals and enzymes to reduce environmental impact.
2. **Functional Foods and Smart Proteins:** Innovations in functional foods and smart proteins to enhance nutrition and food security.
3. **Precision Biotherapeutics:** Advancing precision medicine and biotherapeutics to improve healthcare outcomes.
4. **Climate Resilient Agriculture:** Promoting agricultural practices that are resilient to climate change, ensuring food security.
5. **Carbon Capture and Utilization:** Fostering technologies for efficient carbon capture and its utilization in various industries.
6. **Futuristic Marine and Space Research:** Expanding research in marine and space biotechnology to explore new frontiers in biomanufacturing.

PYQ on Lakes

Q- Which one of the lakes of West Africa has become dry and turned into a desert? (2022)

- 1. Lake Victoria
- 2. Lake Faguibine
- 3. Lake Oguta
- 4. Lake Volta

Answer- Option B

EXPLANATION

Lake Faguibine in northern Mali is dry since the 1970s.

Q- Consider the following pairs: (2022)

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- 1. Ghataprabha : Telangana
- 2. Gandhi Sagar : Madhya Pradesh

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- 3. Indira Sagar : Andhra Pradesh
- 4. Maithon : Chhattisgarh

How many pairs given above are not correctly matched?

- (a) Only one pair
- (b) Only two pairs
- (c) Only three pairs
- (d) All four pairs

Answer- Option C

EXPLANATION

Please Note the question is asking for Incorrect matches.

Pair 1 is incorrect: The Ghataprabha Reservoir is situated in the Belgavi district of Karnataka. With a storage capacity of approximately 659 million cubic meters, it facilitates irrigation across an area of 1,396,000 hectares. The Ghataprabha River is a significant tributary of the River Krishna.

Pair 2 is correct: The Gandhi Sagar Dam is among the four major dams constructed on India's Chambal River, located in the Mandla and Neemuch districts of Madhya Pradesh. It is a masonry gravity dam.

Pair 3 is incorrect: The Indira Sagar Dam is indeed a multipurpose project situated on the Narmada River, specifically at Narmada Nagar in the Khandwa district of Madhya Pradesh.

Pair 4 is incorrect: The Maithon Dam is situated on the banks of the Barakar River, approximately 48 kilometers from Dhanbad, Jharkhand. It features an underground power station and is a unique infrastructure in Southeast Asia. Developed by the Damodar Valley Corporation (DVC Ltd), the dam creates a reservoir spanning 65 square kilometers.

Q- Which one of the following is an artificial lake? (2018)

- (a) Kodaikanal (Tamil Nadu)
- (b) Kolleru (Andhra Pradesh)
- (c) Nainital (Uttarakhand)
- (d) Renuka (Himachal Pradesh)

Answer- Option A

EXPLANATION

Kodaikanal, situated in Tamil Nadu, boasts a manmade lake created within the city in 1863 by Sir Vere Henry Levinge, the former Collector of Madurai. Kolleru Lake, located in Andhra Pradesh, is renowned as one of India's largest freshwater lakes and holds the distinction of being Asia's largest shallow freshwater lake, positioned between the Krishna and Godavari Deltas. Nainital, nestled in Uttarakhand, features a natural freshwater lake of tectonic origin located amidst the city. Renuka Lake, the largest natural lake in Himachal Pradesh, derives its name from the goddess Renuka.

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INDIA'S NEED FOR AN ENVIRONMENTAL HEALTH REGULATORY AGENCY

Context:

India is at a crucial juncture where rapid economic growth coincides with increasing environmental health challenges. The interconnectedness of climate, environment, health, and the economy demands a cohesive governance framework. Establishing an Environmental Health Regulatory Agency (EHRA) could enable India to tackle these issues in an integrated and effective manner.

The Case for an EHRA

I n t e g r a t i o n o f Environmental and Health Governance:

India's current model distributes responsibilities across multiple ministries—pollution control under the Central Pollution Control Board (CPCB), environmental policy under the Ministry of Environment, Forest and Climate Change (MoEFCC), and disease surveillance under the Ministry of Health and Family Welfare (MoHFW). This fragmented approach hinders comprehensive management of pollution-related health risks.

Urgency of Addressing Environmental Health Challenges:

Numerous studies link pollutants in air, water, and soil

to serious health conditions, including respiratory diseases, adverse pregnancy outcomes, and mental health disorders. Vulnerable groups like children, the elderly, and economically disadvantaged communities are disproportionately affected.

Global Inspirations for an EHRA

India can look to global models like:

U.S. Environmental Protection Agency (EPA): Integrates air and water quality regulation, waste management, and health-focused science assessments.

Germany's Federal Environment Agency (UBA): Combines environmental policy with sustainable energy initiatives.

Japan's Ministry of the Environment (MOE): Tackles pollution and chemical safety alongside urban and radiation issues.

These frameworks demonstrate effective integration of environmental governance with public health protection.

Role of an EHRA in India

1. Centralized and Data-Driven Framework:

Integrating environmental and health data to inform

policy decisions.

Conducting research on challenges like air pollution, vector-borne diseases, and chemical exposure.

Embedding Health Impact Assessments (HIAs) into major infrastructure projects.

2. Economic and Environmental Synergy:

An EHRA can promote sustainable practices, spurring innovation and green jobs.

Regulatory frameworks, as seen with the U.S. EPA, can align environmental goals with economic growth.

3. Public Awareness and Participation:

Educating communities on environmental health risks to foster advocacy for cleaner living conditions.

Empowering local accountability through citizen initiatives and NGO involvement.

4. Localized Interventions:

Developing region-specific policies tailored to diverse environmental and health needs.

5. Meeting International Commitments:

Supporting India's Paris Agreement goals and Sustainable Development Targets by aligning policies

with global standards.

Challenges in Establishing an EHRA

- **Resistance from Stakeholders:** Industries may resist stricter regulations.
- **Bureaucratic Inertia:** Integrating cross-sectoral initiatives requires overcoming institutional silos.

- **Operational Independence:** The agency must operate autonomously with enforcement powers guided by scientific expertise.

Conclusion

An EHRA can redefine environmental governance in India by framing pollution control as both a public health necessity and an economic opportunity. It can harmonize

policies, promote innovation, and enhance public awareness while helping India fulfill its global commitments. With strategic implementation, India can balance growth with the health of its people and environment, setting a benchmark for sustainable development.



SCIENCE & TECHNOLOGY

What's Inside?

1. NASA-ISRO SYNTHETIC APERTURE RADAR
2. OPERATION DRONAGIRI LAUNCHED ALONG WITH GDI MARKING A MILESTONE IN THE NATIONAL GEOSPATIAL POLICY
3. UNIFIED COMPLEX RADIO ANTENNA (UNICORN)

NASA-ISRO SYNTHETIC APERTURE RADAR

Why in News?

The NISAR (NASA-ISRO Synthetic Aperture Radar) satellite, a collaboration between NASA and ISRO, is set to launch in early 2024 from the Satish Dhawan Space Centre in Andhra Pradesh.

NISAR will revolutionize Earth observation and disaster preparedness by monitoring changes in Earth's surface, ice sheets, glaciers, vegetation, and fault lines with unprecedented precision.

Background

NISAR represents a significant collaboration between the United States and India in space technology.

The mission aims to enhance our understanding of Earth's dynamic processes, including seismic and volcanic activities, landslides, and infrastructure stability. NASA provided the L-band radar system, while ISRO contributed the S-band radar system and will manage the satellite's launch.

About NISAR

Launch Vehicle: ISRO's Geosynchronous Satellite Launch Vehicle Mark II (GSLV Mk II).

Orbit: Low Earth orbit.

Observation Cycle: Measures nearly all land and ice-covered surfaces on Earth every 12 days.

Applications: Includes monitoring earthquakes, volcanic activity, landslides, ice movement, vegetation changes, and infrastructure stability.

Special Features of NISAR

Dual Radar System:

Equipped with an L-band radar (from NASA) and an S-band radar (from ISRO), it is the first satellite to carry both.

These radars operate day and night and can penetrate clouds, unlike optical instruments.

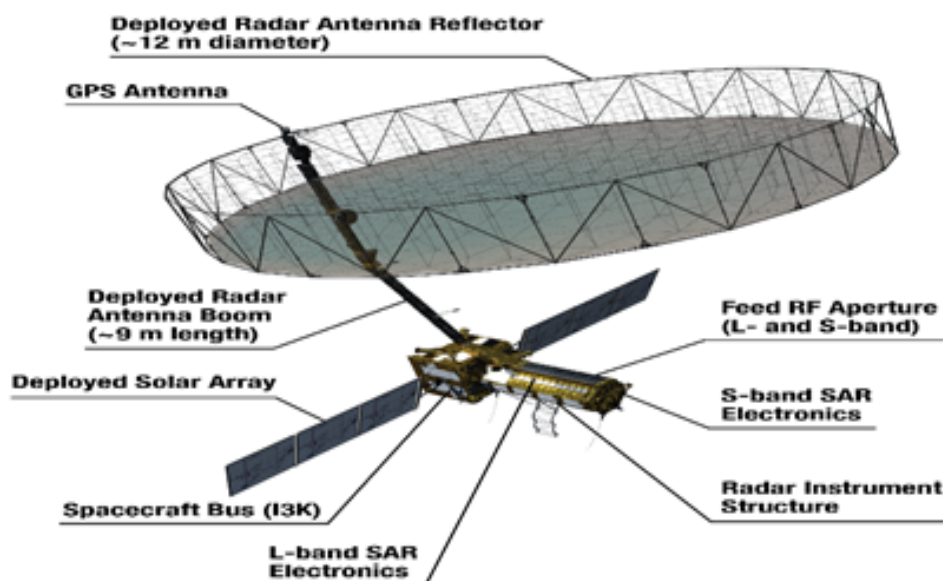
High-Precision Measurement:

Tracks surface changes with precision down to fractions of an inch.

Capable of detecting subtle horizontal and vertical movements, offering insights into geological shifts and fault line activity.

Global Coverage:

Scans nearly all land and ice-covered areas twice every 12 days, providing comprehensive



data on Earth's surface.

Versatility:

Monitors a wide range of phenomena, including infrastructure stability, forest and farmland changes, wetland dynamics, and natural disaster precursors.

Global Scope with Local Detail:

While other satellites focus on specific regions, NISAR offers near-global coverage with data integration to enhance understanding of localized and global phenomena.

OPERATION DRONAGIRI LAUNCHED ALONG WITH GDI MARKING A MILESTONE IN THE NATIONAL GEOSPATIAL POLICY

Context:

Secretary, Department of Science and Technology, Professor Abhay Karandikar launched the Operation Dronagiri, a pilot project under National Geospatial Policy 2022 to demonstrate the potential applications of geospatial technologies and innovations in improving the quality of life of citizens and ease of doing business, at Foundation for Innovation and Technology Transfer (FITT), Indian Institute of Technology Delhi, New Delhi.



About Operation Dronagiri:

The Operation Dronagiri is part of the numerous efforts of DST in liberalising geospatial data, developing geospatial infrastructure, geospatial skill and knowledge as well as standards in implementing the policy.

“In the first phase, Operation Dronagiri will be implemented in the states of Uttar

Pradesh, Haryana, Assam, Andhra Pradesh & Maharashtra, where pilot projects will be run and use cases will be demonstrated to showcase the potential applications of integration of geospatial data and technology in 3 sectors --Agriculture, Livelihoods, Logistics and Transport.

Several Government departments, Industry, Corporate and Startups will be partnered with in the first phase. This will create the base for its Nationwide roll out.

Operation Dronagiri gains a powerful backbone with support from Integrated Geospatial Data Sharing Interface (GDI), also unveiled today, that will make spatial data accessible, bringing transformation similar to the process in which UPI has brought about financial inclusion.

The Integrated Geospatial Data Sharing Interface (GDI) enables seamless data sharing, access, and analysis for urban planning, environmental monitoring, disaster management, and more.

Built with advanced data exchange protocols and privacy-preserving features, it empowers organisations to make data-driven decisions for the public good, fostering innovation and responsible use of geospatial data.

GDI offers tools to unlock actionable insights and drive collaboration. It enables efficient data processing, analysis, and sharing among stakeholders.

This collaboration ensures faster, more

coordinated responses in areas like infrastructure monitoring, disaster relief, and environmental protection.

A nationwide rollout is envisioned under a PPP model, with a similar approach to UPI's deployment. Industry and private sector engagement will be pivotal in supporting this transformation in the geospatial sector

A Grand Challenge was also announced in which startups will be selected and supported in developing Proofs of Concept (POCs) that address specific problems within the designated sectors. The initiative executed through geospatial innovation accelerators will provide a platform for both early-stage

and growth-stage startups, offering them mentorship, resources, and access to geospatial datasets, fostering their potential to contribute meaningfully to India's thriving geospatial ecosystem.

The activities under Operation Dranagiri will be overseen by IIT Tirupati Navavishkar I-Hub Foundation (IITTNiF). The Geospatial Innovation Accelerators (GIAs) at IIT Kanpur, IIT Bombay, IIM Calcutta and IIT Ropar will act as the operational arms of Operation Dranagiri. The entire implementation process will be driven by Geospatial Innovation Cell, Department of Science and Technology.

UNIFIED COMPLEX RADIO ANTENNA (UNICORN)

Context

India and Japan recently signed a Memorandum of Implementation (MoI) for the "co-development" of the UNICORN (Unified Complex Radio Antenna) mast for deployment on Indian Navy ships.

About Unified Complex Radio Antenna (UNICORN):

It is a state-of-the-art integrated antenna system.

It is a mast with integrated communication systems that help improve the stealth characteristics of ships.

Developed jointly by three Japanese companies (NEC Corporation, Sampa Kogyo K.K., and The Yokohama Rubber Co., Ltd.), these

antennas are currently fitted on Mogami-class frigates of the Japan Maritime Self-Defence force.

Unlike the conventional masts, UNICORN consolidates various antennas that are attached to multiple points on a mast into a single radar dome, known as a radome.

This innovation significantly reduces the cross-section of naval platforms, thereby enhancing their stealth characteristics and enabling them to operate with reduced electronic signatures.

In addition, the optimal placement of the antennas improves the maximum detection distance of radio waves emitted from outside and simplifies maintenance and installation processes.



SECURITY

What's Inside?

1. **INDIA'S 1ST SPACE DEFENSE EXERCISE ANTARIKSHA ABHYAS**
2. **9TH EDITION OF INDIA-INDONESIA JOINT SPECIAL FORCES EXERCISE GARUD SHAKTI 24**
3. **FLIGHT TRIAL OF INDIA'S FIRST LONG-RANGE HYPERSONIC MISSILE**

INDIA'S 1ST SPACE DEFENSE EXERCISE ANTARIKSHA ABHYAS

Context:

'Antariksha Abhyas – 2024', a three day Exercise to war-game the growing threats from and to Space Based Assets and Services, is being conducted by the Defence Space Agency of Headquarters Integrated Defence Staff.

About Antariksha Abhyas exercise

Exercise Antariksha Abhyas is a first of its kind exercise being conducted and is expected to help secure national strategic objectives in space and integrate India's space capability in military operations.

The Space Exercise aims to provide enhanced understanding of space based assets and services and to gain understanding of operational dependency on space segment between stakeholders.

In addition, it intends to identify vulnerabilities in conduct of operations in the event of denial or disruptions of space based services.



It will have participants from the Defence Space Agency and its allied units along with personnel from the Army, Navy and the Air Force. Specialist branches under Headquarters Integrated Defence Staff viz Defence Cyber Agency, Defence Intelligence Agency and Strategic Forces Command would also be active participants in conduct of the exercise.

Representatives from Indian Space Research Organisation and the Defence Research & Development Organisation will also take part in it.

9TH EDITION OF INDIA-INDONESIA JOINT SPECIAL FORCES EXERCISE GARUD SHAKTI 24

Context:

The Indian Army contingent comprising 25 personnel departed for Cijantung, Jakarta, Indonesia to take part in the 9th edition of India-Indonesia Joint Special Forces Exercise GARUD SHAKTI 24. The Exercise will be conducted from 1st to 12th of November 2024.

Aim:

The aim of Exercise GARUD SHAKTI 24 is to acquaint both the sides with each other's operating procedures, enhance mutual understanding, cooperation and interoperability between the Special Forces of both armies.

Objective:

The Exercise is designed to develop bilateral military cooperation and strengthen bond between two armies through conduct of discussions and rehearsal of tactical military drills.

Regiments:

The Indian contingent is being represented by troops from The Parachute Regiment (Special Forces) and Indonesian contingent comprising 40 personnel is being represented by Indonesian Special Forces Kopassus.

About the Exercise:

The Exercise will involve planning and execution of special operations, orientation to advance special forces skills, sharing of information on weapon, equipment, innovations, tactics, techniques & procedures. Joint Exercise GARUD SHAKTI 24 will also involve jointly practicing Special Forces Operations in Jungle terrain, strikes on terrorist camps and a Validation Exercise integrating basic and advance special forces

skills apart from gaining an insight into the lifestyle and culture of both countries to foster military cooperation.

The Exercise will provide an opportunity to both the contingents to strengthen their bond and share best practices. It will also act as a platform to achieve shared security objectives and foster bilateral relations between two friendly nations.

FLIGHT TRIAL OF INDIA'S FIRST LONG-RANGE HYPERSONIC MISSILE

Context:

Recently, The Defence Research and Development Organisation (DRDO) successfully conducted the flight trial of India's first long-range hypersonic missile from Dr. A.P.J. Abdul Kalam Island, off the coast of Odisha, an official communication from the Eastern Naval Command (ENC).

Hypersonic Missiles:

These missiles can fly at speeds of at least Mach 5 (five times the speed of sound). The speed of sound is Mach 1, and speeds between Mach 1 and Mach 5 are supersonic and speeds above Mach 5 are hypersonic. Hypersonic weapons can maneuver midway which when combined with their high speeds makes their detection and interception extremely difficult.

There are two types of hypersonic weapons:

Hypersonic Glide Vehicles (HGVs): Launched by a rocket and then glide to the target.

Hypersonic Cruise Missiles (HCMs): Powered by air-breathing engines or "scramjets" after locking onto the target.

Highlights:

The hypersonic missile has a range of over 1500 kms. India is the fourth successful nation

to carry out long range hypersonic missile trial. Only US, Russia and China had this technology earlier.

Technologies demonstrated during test:

Aerodynamic configuration for hypersonic manoeuvres for stability and control.

Use of scramjet propulsion for ignition and sustained combustion at hypersonic flow.

- A scramjet is a form of air-breathing jet engine that uses the vehicle's forward motion to compress incoming air for combustion and operates at hypersonic speeds.

Thermo-structural characterization to withstand extreme aerothermal environments during flights.

Separation mechanism at hypersonic velocities.

Applications:

Hypersonic missiles can be used across the Army, Navy, and Air Force; the naval version (which is in developmental stage) is designed to precisely target and destroy enemy warships at long distances.



HISTORY



ART & CULTURE



What's Inside?

1. **LOTHAL'S MARITIME HERITAGE COMPLEX**
2. **5 YEARS OF KARTARPUR SAHIB CORRIDOR.**
3. **ASIAN BUDDHIST SUMMIT 2024**
4. **PRIME MINISTER PAYS TRIBUTES TO THE ARYA SAMAJ MONUMENT**
5. **ASIAN BUDDHIST SUMMIT 2024**
6. **LOTHAL'S MARITIME HERITAGE COMPLEX (ART)**

LOTHAL'S MARITIME HERITAGE COMPLEX

Context:

The Prime Minister Shri Narendra Modi, during the 116th episode of his monthly radio program Mann Ki Baat, emphasized the significance of Lothal in India's maritime history.

National Maritime Heritage Complex:

Lothal which is Known as the site of the world's first dockyard, is now witnessing the construction of the National Maritime Heritage Complex, under Ministry of Ports, Shipping and Waterways, a grand museum dedicated to showcasing India's 5000-year-old maritime history that began with the Harappan civilization.

Significance of National Maritime Heritage Complex:

- The NMHC is set to become the world's largest maritime museum complex and an international tourist destination.
- It will play a crucial role in educating visitors about India's rich maritime history and

elevate India's image in the global maritime sector.

- The project is part of the Sagarmala Programme and is being developed with the participation of public and private institutes, organizations, and corporate social responsibility (CSR) initiatives. Major ports in India have also contributed funds to support the project.

Lothal:

- Southernmost Indus Valley Civilization site in India. It is located in Gujarat's Bhal Region.
- It flourished as a trade center around 2,200 BC, with trade connections reaching West Asia and Africa.
- Known for its trade of beads, gems, and ornaments.
- Meaning of "Lothal" in Gujarati is "the mound of the dead."
- The excavated site of Lothal is the only port town of the Indus Valley Civilization.

5 YEARS OF KARTARPUR SAHIB CORRIDOR.

Context:

Recently, India and Pakistan has agreed to extend the validity of the Agreement on Sri Kartarpur Sahib Corridor for next five years period.

About Dera Baba Nanak - Sri Kartarpur Sahib Pilgrimage

- Gurdwara Sri Kartarpur Sahib falls in district Narowal of Pakistan, about 4.5 k.m. from the international border near the historic town of Dera Baba Nanak, District Gurdaspur, Punjab.
- Village Kartarpur is located at the west bank of river Ravi.
- Gurdwara Dera Baba Nanak is on the east

bank of River Ravi.

About Agreement on Sri Kartarpur Sahib Corridor

Sri Kartarpur Sahib Corridor agreement was originally signed in 2019 that was valid for 5 years.

Agreement provides for visa-free travel of Indian pilgrims and Overseas Citizen of India (OCI) cardholders, from India to Gurdwara Darbar Sahib Kartarpur in Pakistan on a daily basis, throughout the year.

However, Pakistani Sikhs do not have access to this corridor and cannot visit Dera Baba Nanak in India without first obtaining an Indian visa.

All pilgrims travelling to Gurdwara Darbar Sahib Kartarpur are required to return the same day.

Pakistan levy USD 20 on every pilgrim for each visit.

Under the agreement, there is no restriction on the faith of the pilgrims who travel through the corridor.

Significance of Kartarpur Sahib Corridor

Cultural and religious significance:

- Kartarpur is the final resting place of Guru Nanak Dev Ji, where he spent the last 18 years of his life.
- Guru Nanak is believed to have composed many hymns of the Guru Granth Sahib, the holy book of the Sikhs, in Kartarpur.

- Community meal, called guru ka langar, was also initiated at Kartarpur, an important part of Sikh tradition.
- Guru Nanak Dev first practised three pillars of Sikhism here i.e.
- Kirat Karo (working hard and an honest living); Vand Chhako (share wealth, possessions and talents with others) and Naam Japo (meditation through reciting, chanting and singing)' as the path to liberation.

Peace and diplomacy: The corridor promotes religious tourism and fosters people-to-people connections. It helps to enhance cultural diplomacy between India and Pakistan despite their political differences.

Important Sikh Pilgrimage Places

- Gurdwara Janam Asthan (Nankana Sahib, Pakistan)- Birthplace of Guru Nanak
- Gurudwara Ber Sahib (Sultanpur Lodhi, Punjab)
- Akal Takht (Sri Harimandir Sahib (Golden Temple) Amritsar)
- Takht Sri Keshgarh Sahib (Anandpur Sahib, Punjab)
- Takht Sri Damdama Sahib (Talwandi Sabo, Punjab)
- Takht Sri Patna Sahib (Bihar)
- Takht Sri Hazur Sahib (Nanded, Maharashtra)

ASIAN BUDDHIST SUMMIT 2024

Context:

Recently, the first Asian buddhist summit was held at New Delhi. It was organised by Ministry of Culture and International Buddhist Confederation.

Theme:

“Role of Buddha Dhamma in Strengthening Asia”. It emphasises Asia’s collective, inclusive, and spiritual development.

Summit Themes:

1. Buddhist Art, Architecture, and Heritage: Highlights the rich cultural legacy of Buddhist

landmarks like Ajanta caves and Sanchi stupa.

2. Buddha Cārikā and Dissemination of Buddha Dhamma: Focuses on Buddha’s travels (Buddha Cārikā) and his role in spreading teachings across India.

3. Role of Buddhist Relics and its Relevance in Society: Buddha relics inspire devotion and mindfulness, support local economies through pilgrimage tourism and promote peace and compassion.

4. Role of Buddhist Literature and Philosophy in the 21st Century: Demonstrates Buddhism’s enduring relevance in modern philosophical

discourse.

5. **Buddha Dhamma in Scientific Research and Well-being:** Integrates principles of buddhism with scientific research to enhance mental and physical health.

Special Exhibition:

In addition to discussions on these important themes, the summit will feature a special exhibition titled “India as the Dhamma Setu (Bridge) Connecting Asia,” along with other creative displays at the venue.

This event presents a unique opportunity to unite diverse perspectives on Buddha’s Dhamma from across Asia. Through dialogue that addresses contemporary challenges and promotes Buddhist heritage, the summit aims

to foster a more compassionate, sustainable, and peaceful world, contributing to the overall welfare of humanity.

Significance:

o The Asian Buddhist Summit 2024 emphasizes the profound interconnection among Buddha Dhamma, India, and Asia, showcasing their complementary relationship. The Honorable President of India is anticipated to attend as the Chief Guest, underscoring the event’s significance.

Also the summit aligns with India’s Act East Policy and Neighborhood First Policy, focusing on collective, inclusive, and spiritual development in Asia.

PRIME MINISTER PAYS TRIBUTES TO THE ARYA SAMAJ MONUMENT

Context

Prime Minister pays tributes to the Arya Samaj monument marking the 200th Jayanti of Swami Dayanand Saraswati.

“In Georgetown, Guyana, paid tributes to the Arya Samaj monument. Their role in preserving our culture in Guyana is indeed commendable. This is also a very special year because we are marking the 200th Jayanti of Swami Dayanand Saraswati.”

Arya Samaj

Arya Samaj was founded on April 10, 1875, in Bombay (now Mumbai) by Swami Dayanand Saraswati. He was deeply influenced by the Vedas and sought to promote the ancient texts as the ultimate source of knowledge and truth. He believed that the degeneration of Hindu society was due to the abandonment of Vedic principles and the rise of idolatry, superstitions, and rituals that had no basis in the Vedas.

- Swami Dayanand’s reformist ideas were a reaction to the prevailing conditions in India, including British colonial rule and the rigid caste system that perpetuated social inequalities.

- His movement, Arya Samaj, aimed to return to the original teachings of the Vedas, which he believed were devoid of idol worship, caste discrimination, and religious intolerance.
- The establishment of Arya Samaj marked the beginning of a new era of religious and social reform in India. It attracted many followers who were inspired by Swami Dayanand’s vision of a society based on Vedic values and principles.

Arya Samaj Mission

The mission of Arya Samaj can be summarised as the promotion of Vedic knowledge and the eradication of social evils. The movement’s key objectives include:

Revival of Vedic Dharma: Arya Samaj emphasised the Vedas as the ultimate source of truth, promoting a return to original Vedic practices that focused on monotheism, morality, and social justice.

Social Reform: The movement aimed to eliminate social evils like caste discrimination, child marriage, and untouchability, advocating for equality and justice for all, regardless of caste, gender, or social status.

Education: Arya Samaj prioritised education as a tool for empowerment, establishing many schools and colleges based on Vedic principles.

Religious Reform: The movement rejected idolatry, rituals, and superstitions not rooted in the Vedas, promoting a rational and ethical

approach to religion based on Vedic teachings.

Promotion of Hindi: Arya Samaj significantly contributed to the promotion of Hindi as a national language and a medium of education and communication.

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LOTHAL’S MARITIME HERITAGE COMPLEX (ART)

Context:

The Prime Minister Shri Narendra Modi, during the 116th episode of his monthly radio program Mann Ki Baat, emphasized the significance of Lothal in India’s maritime history.

National Maritime Heritage Complex:

Lothal which is Known as the site of the world’s first dockyard, is now witnessing the construction of the National Maritime Heritage Complex, under Ministry of Ports, Shipping and Waterways, a grand museum

dedicated to showcasing India's 5000-year-old maritime history that began with the Harappan civilization.

Significance of National Maritime Heritage Complex:

The NMHC is set to become the world's largest maritime museum complex and an international tourist destination.

It will play a crucial role in educating visitors about India's rich maritime history and elevate India's image in the global maritime sector.

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WHY NATIONS FAIL: THE ORIGINS OF POWER, PROSPERITY, AND POVERTY

BY DARON ACEMOGLU AND JAMES A. ROBINSON

Explores the stark inequalities in wealth and development between nations. The authors argue that the success or failure of nations hinges on the type of political and economic institutions they adopt, which they classify as inclusive or extractive.

Ideas

Inclusive vs. Extractive Institutions

Inclusive Institutions

Inclusive Institutions: These institutions promote economic prosperity by safeguarding property rights, enforcing contracts, and enabling broad participation in economic activities. They encourage innovation and investment by providing individuals with the freedom to pursue their interests and by ensuring that the benefits of economic activities are widely shared. Inclusive political institutions support this framework by distributing power broadly and fostering pluralism and democracy.

Property Rights: Secure property rights ensure individuals can invest without fear of expropriation.

Rule of Law: A legal framework that treats everyone equally.

Open Markets: Encouraging entrepreneurship, innovation, and competition.

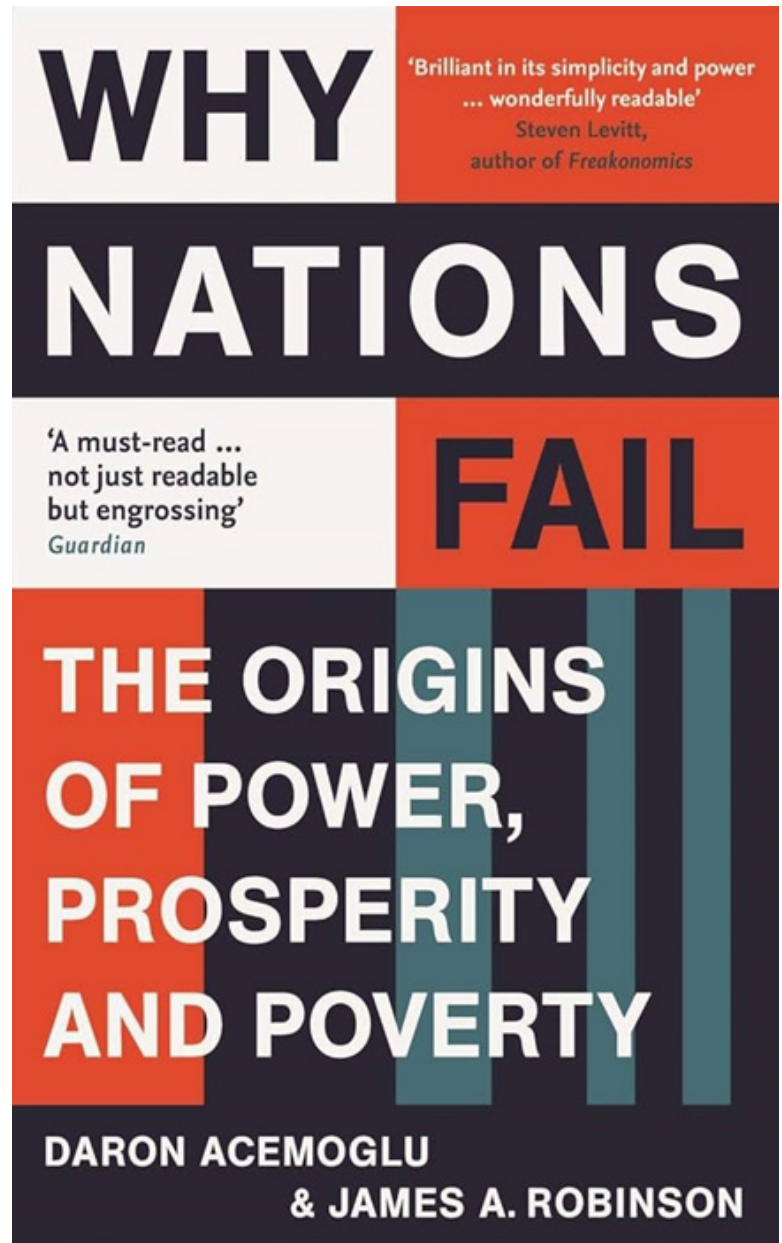
Political Pluralism: Distribution of power among many groups ensures accountability and democracy.

These institutions create an environment where innovation thrives, and economic growth becomes self-sustaining. An

example is the United States, where inclusive institutions have enabled broad-based prosperity.

Extractive Institutions

Extractive Institutions: In contrast, extractive institutions concentrate power and wealth in



the hands of a select elite. They limit participation in economic and political activities, often leading to the exploitation of the majority. Such institutions stifle innovation and economic progress, as the general populace lacks incentives to invest or improve productivity when they cannot reap the benefits of their efforts

Exploitation: A system where the majority is excluded from economic benefits.

Stifled Innovation: Little incentive to innovate due to high barriers and lack of rewards.

Centralized Power: Political power resides with a few, enabling them to create economic policies that serve their interests.

Such systems, while capable of short-term gains (e.g., colonial extraction economies), fail to sustain long-term prosperity. North Korea is a stark example of a country trapped in extractive institutional frameworks.

Historical Insights

The book uses compelling case studies to illustrate how institutions shape the destinies of nations:

Korea's Divide: North and South Korea share the same cultural and historical background, yet their economic outcomes are vastly different. South Korea embraced inclusive institutions post-1950s, resulting in an economic miracle, while North Korea adhered to extractive systems, resulting in poverty and authoritarian rule.

Nogales Example: The city of Nogales is split by the U.S.-Mexico border. Nogales, Arizona, benefits from inclusive U.S. institutions that enable prosperity through education, law enforcement, and opportunities. Meanwhile, Nogales, Sonora, suffers from corruption, limited opportunities, and poor governance under Mexico's extractive framework.

Critical Junctures and Institutional Drift

Nations experience "critical junctures" that determine their institutional path. These pivotal moments—such as revolutions, colonization, or wars—disrupt the status quo. The response to such junctures can reinforce or reshape institutions.

The Glorious Revolution (1688): This event in England replaced absolutist rule with parliamentary democracy, setting the stage for inclusive institutions that catalyzed the Industrial Revolution.

Colonial Legacies: Colonization often imposed extractive institutions in regions with abundant resources (e.g., Africa, Latin America), leaving a legacy of poverty and inequality.

The Role of Political Centralization

Acemoglu and Robinson emphasize that economic growth also requires political centralization. Effective governance ensures laws are enforced and public services provided. However,

centralization without pluralism often leads to extractive systems, where elites exploit centralized power to maintain control.

Policy Implications

The authors challenge traditional development models that focus solely on economic reforms or foreign aid. They argue:

Inclusive Institutions First: Economic growth is unsustainable without inclusive political frameworks.

Foreign Aid Limitations: Aid to nations with extractive institutions often entrenches corruption.

Structural Reforms: Development policies must address institutional weaknesses, not just infrastructure or market inefficiencies.

Conclusion

"Why Nations Fail" underscores the importance of institutional frameworks in shaping the fortunes of nations. The authors provide a nuanced explanation of how inclusive institutions foster innovation, participation, and prosperity, while extractive systems trap nations in cycles of poverty and stagnation. This work is not only a profound analysis of historical patterns but also a roadmap for understanding modern economic challenges and opportunities.

Book written by 2024 Nobel Economics winners.