

**APRIL
2025**

KSG

An Institute For **IAS** Exam...

**PANCHAYATI RAJ:
THE REVOLUTION THAT CHANGED INDIA**



**CURRENT
CONNECT**

**Celebrating 75 Years of
INDIA - INDONESIA
DIPLOMATIC RELATIONS**



Scan the
QR Code to
access a FLT on MARCH
edition of this magazine.

WITH LOADED FEATURES

- **PRE-SHOTS** • **MAP CONNECT** • **PHILOSOPHY OF THE MONTH**
- **THEMATIC ESSAYS** • **CONTEMPORARY ETHICS CASE STUDIES**

"Get your Mains Answer Evaluated through this Copy"

MESSAGE FROM DR. KHAN

Dear Students,

The importance of **embracing and celebrating one's roots, heritage, and ancestry cannot be overstated**. In an increasingly globalized world, many individuals—particularly students—often feel embarrassed or uncomfortable discussing their origins. This reluctance to acknowledge one's past may stem from societal pressures or the allure of adopting a more assimilated identity. However, understanding that our heritage does not solely define us is vital; instead, **it is the journey we embark upon and the destinations we strive for that shape our true selves**. By respecting and celebrating our roots—encompassing families, friends, regions, and cultures—we can **draw immense strength** and pride from our heritage.

The Foundation of Identity

Embracing our roots is essential to forming a solid foundation for personal growth and success. Our identities are shaped by the histories, traditions, and values passed down through generations. For instance, consider the story of Indian author **R.K. Narayan, who often drew inspiration from the small town of Malgudi**. His works reflect his deep connection to his roots and cultural heritage, helping him weave narratives that resonate with readers worldwide. **Narayan's acknowledgment of his background enriched his storytelling**, making his narratives universally relatable while remaining distinctly Indian.

Another example is that of **Sundar Pichai, the CEO of Google**. Pichai was born in Madurai, India, where he was shaped by the values of hard work instilled by his parents. He has often spoken about how his **upbringing and cultural background have played a significant role in his success**.

The Resilience of Heritage

Roots not only provide comfort but also serve as a **source of resilience during challenging times**. A great illustration of this concept can be found in the life of **Dr. B.R. Ambedkar. Facing immense discrimination and adversity due to his caste, Ambedkar's connection to his roots and his cultural identity fueled his determination to fight for the rights of the marginalized**.

Celebrating Diversity in Unity

In a diverse country like India, **pride in our unique roots significantly contributes to the nation's identity**. For example, the rich tapestry of cultural festivals across India—such as **Diwali, Eid, Baisakhi, and Pongal**—**showcases the diverse traditions** and lifestyles that form the essence of Indian culture. By acknowledging and celebrating these unique heritages, communities foster unity while promoting individual identities.

The initiative "**One District, One Product**" is another modern example of **embracing cultural roots**. This government program aims to promote **unique local products by encouraging artisans and craftspeople to take pride in their regional heritage**. By valuing local heritage, communities not only preserve traditional crafts but also build sustainable livelihoods for individuals, showcasing the strength found in cultural roots.

The Power of Self-Recognition

Adopting one's heritage with pride forms an essential part of our personal narratives. When we remind ourselves of our origins, we enhance our self-confidence, propelling ourselves to heights previously unimagined. The Sicilian proverb, "**A man without a heritage is a tree without roots**," poignantly encapsulates this sentiment.

Celebrating one's roots and ancestral heritage serves as a **profound means to honor our identity, discover strength, and forge paths toward unbound success**. By welcoming and respecting the diverse aspects of our ancestry, we create a springboard necessary for **personal growth and self-assurance**.

Ultimately, our **roots constitute the bedrock of our character and resilience**. Embracing them not only aids in competitive landscapes but also in the **remarkable journey of self-discovery** and cultural pride. By honoring our heritage, we illuminate our way to authenticity, fostering connections and alliances that enrich our lives and contribute positively to the world around us.

**My best wishes are always with you.
Stay Blessed!**

GS CONNECT

It gives us immense pleasure to present an innovative approach to mastering current affairs. Current is a passing wind and diverse issues happen at the same time. It is to an extent chaotic. Newspapers, magazines, and various other sources report the chaos per se. With our experience of current affairs, we have tried to give "the current" a medium to travel. It is the syllabus of the UPSC with its components that are the medium through which the "Current is Passed" to the readers. **Ever since the new syllabus of the UPSC came into existence, the current has been gaining significance both at prelims as well as mains examination**. This book is meant to cover current affairs and related questions arising from those events. We have not only covered the current events for their factual contents but also presented them in such a way that any question asked from that topic gets covered. Moreover, topics are also "**peppered**" with the relevant facts/key concepts that are related to the theme.

It is a collection covering myriad sources yet in a manageable size. To use this book, we recommend you to, master the components of the General Studies (GS) syllabus as broken into rows and columns (**provided on the subsequent page**). Each cell comprising the portion of GS becomes the connection for the current and every news subsequently covered guides the reader to the address of the syllabus. It is logical to expect that the same issue may be connected to more than one topic of the syllabus. Further, the news also has some additional vistas opened for the readers by adding a box with the title "**PEPPER IT WITH**" where we expect the students to build further around the theme. We are also trying to reach the remotest part of the country with our spirit and zeal of "**Mains Answer Writing**", which has been admired by students, CSE rank holders, and other scholars. Continuing in line with the effort, we have started **programs like KTP Mains Test Series, Destinaire, Navigator, NEEV, AWSDP plus, KOL, DL& MP, Advance Foundation Course, Weekend Courses as well as Optional Courses (PSIR, Sociology, History, and Geography)**.

Scan the QR code to revise the previous month's current affairs and test yourself.

When it comes to evaluation, we are all together at a different level. We are also reaching every nook and corner with this expertise for the aspirants of CSE. Now you can write a Mains Answer and get it evaluated by our Expert Team and can get Feedback. Drop a mail at **evaluation@ksgindia.com** to register yourself in our race to perfection. Don't wait, it's your golden chance to crack this exam and fulfill your passionate dream.

Team KSG

S. No.	GS -I	GS- II	GS- III	GS-IV	Mis
1	Indian Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian constitution- Amendments, acts and bills.	Various measures to boost Indian economy- planning, policies, management	Ethical issues related to family society, education, Corruption etc.	
2	Indian History significant events, personalities, issues and the Freedom Struggle.	Legislative, executive and judicial processes.	Government budgeting and issues related to budget.	Ethics in public and private administration	
3	Post independence issues, National boundary and disputes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Agriculture, animal husbandry and transport	Issues	
4	Indian society features, issues, globalization and diversity	Federal structure and local bodies. Their powers and functions.	Food security- measures to boost food security and food processing. Issues related to land- land reforms	Related laws and rules	
5	Women - issues and developments	Government policies and various governance issues like transparency, accountability and – governance	Industries and infrastructure- their growth and investment model	Governance/e- Governance	
6	Urbanization – problems and remedies	Committees and schemes.	Space and technology, IT space, robotics and computer	Ethics in international issues	
7	Distribution of industries and resources – India and world	Non-government issues, self-help groups and role of civil society	Disease, biotechnology and human welfare	Personalities and their teachings	
8	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc	Vulnerable sections of our society and social sector issues like Poverty, Hunger, Education, and their initiatives.	Innovations, intellectual property, Awards, POI and other important aspects of S&T	Other important topics	
9		International Relation- India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.	Environment; government initiatives, various judgment, pollution, degradation and conservation efforts		
10			Disaster & Disaster Management		
11			Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity; money laundering and its prevention.		

SCAN THIS QR FOR HIGH-RESOLUTION IMAGES



Contents

POLITY	5
Remission without application	5
Ranveer Allahbadia bail condition	6
Need for Discipline in Political Parties	8
The state of panchayats in India	9
Assam Amends Law on Autonomous Councils	11
SOCIAL ISSUES	12
Social Media and Suicides	12
Endogamy as a Major Cause of Health Disparities in India	14
India Achieves Maternal Mortality Target	15
Challenges and Gaps in the One Health Approach	16
ECONOMY	17
RBI's \$10 Billion FX Swap	17
Proposed New Income Tax Act	19
MPID Act and the Torres scam	20
Challenges Facing India's Textile Industry	22
India's Efforts to Reduce Fertilizer Imports	23
AGRICULTURE	24
PM Modi's Call for Reduced Edible Oil Consumption	24
How climate change affects India's wheat production	25
INTERNATIONAL RELATIONS	27
Zelenskyy at White House	27
75 th Anniversary of India-Indonesia Diplomatic Relations: Strengthening Bilateral Ties	28
Amir of Qatar's Second Visit to India: Strengthening Bilateral Relations	30
India-Europe Partnership: Strengthening Ties Through European Commission Delegation Visit	32
Far-Right AfD is Popular in Once-Communist East Germany	34
ENVIRONMENT	36
The Necessity of Mainstreaming Wetland Conservation	36
The Impact of Ethanol on the Environment	37
Melting Arctic glaciers are a source of methane emissions	39
Study Identifies Sources of PM2.5	40
Impact of Coal-Fired Power Plant Emissions	41
Threat to India's Native Biodiversity	42
SCIENCE & TECHNOLOGY	44
Junk Food Bingeing Affects Brain Activity	44
NASA's SPHEREx Mission	45
Measles death in US after 10 years	47
Antimicrobial Resistance in Soil Bacteria	48
INTERNAL SECURITY	49
Influx from Bangladesh: India Internal security challenge	49
Blast at Darul Uloom Haqqania	50
Mexican drug cartels as FTOs	51
GEOGRAPHY	53
Iraq is Slowly Sinking	53
Rising Frequency of Floods in High Mountain Asia: A Study	53
DISASTER MANAGEMENT	55
Mumbai building fire	55
Disaster Management in the Context of the North Sea Collision	56

PRE-SHOTS	59
POLITY	59
Telangana Backward Classes quota	59
Strict penalties against male relatives in panchayat positions	59
The Maharashtra-Karnataka border dispute	60
Ministry of Rural Development Launches Pilot Project "NAKSHA"	61
SOCIAL ISSUES	62
Women's Progress Superficial Without Safe Public Spaces	62
Tiruchi District's 100-Day TB Elimination Program	63
Last-Mile Delivery Through Digital Infrastructure	64
India's Graduate Skill Index 2025	64
UNESCO Launches "Imagine a World with More Women in Science" Campaign	65
ECONOMY	66
Deposit Insurance in India	66
Treating Virtual Digital Assets (VDAs) as Taxable Properties	68
Strategic Bitcoin Reserve	69
India's Economic Growth Target	69
India's Position in the Global Digital Economy	70
AGRICULTURE	71
SOMS fertilisers help improve nutrient use	71
Whitefly Disease	72
INTERNATIONAL RELATIONS	73
India-Qatar LNG Trade Deal	73
Trump's Announcement of Reciprocal Tariffs	73
Namibia's First Woman President: Netumbo Nandi-Ndaitwah Sworn In	74
Brussels summit	75
ENVIRONMENT	76
Environmental Concerns of Black Plastic	76
Carbon Intensity and Its Role in Climate Mitigation	77
First Comprehensive Estimate of Gangetic Dolphin	78
Environmental Concerns Over Horseshoe Crab Mortality Along Odisha Coast	79
The Impact of Climate Change on Earth's Orbital Environment	80
The Promise of Mycelium Bricks: A Sustainable Future for Construction	81
SCIENCE & TECHNOLOGY	82
Why is Leptospirosis Claiming So Many Lives in Kerala?	82
Low Awareness of Shingles Among Indians Over 50	83
Blue Ghost Lunar Mission	84
Scientists Create 'Woolly Mice'	85
Breakthrough in Fetal Medicine	86
National Science Day 2025	87
Pixxel's Firefly Satellite Constellation	88
Digantara's SCOT Mission: Advancing India's Space Situational Awareness (SSA)	89
INTERNAL SECURITY	90
Flight test of the Naval Anti-Ship Missile	90
India's Last Imported Warship	91
Balochistan Train Attack	92
GEOGRAPHY	93

First-Ever Global Freshwater Fauna Assessment by IUCN.....	93	Pradhan Mantri Shram Yogi Maandhan (PM-SYM): 6 Years of Implementation	102
Mineral assets in Africa.....	94	The Diamond Imprest Authorization (DIA) Scheme	103
ART & CULTURE.....	95	Sashakt Panchayat-Netri Abhiyan	104
25th edition of <i>Jahan-e-Khusrau</i>	95	PHILOSOPHY OF THE MONTH	105
Maharashtra Seeks UNESCO Heritage Status for Shivaji's Forts	96	The Warp and Weft of Existentialism and Svadharma: A Philosophical Exploration	105
Chittara Art of Karnataka: A Traditional Folk Painting	97	ESSAY.....	106
Aadi Mahotsav 2025	98	CONTEMPORARY ETHICS CASE STUDY.....	106
Surajkund Mela 2025: Championing the 'Orange Economy' ..	99	SPECIES IN NEWS	107
GOVERNMENT SCHEMES.....	100	PLACES IN NEWS – INDIA.....	110
MGNREGS and PMAY-G.....	100	PLACES IN NEWS – WORLD.....	112
Strengthening of Cooperative Sugar Mills in India.....	100		
Cabinet Approves Revision of Livestock Health and Disease Control Programme (LHDCP).....	101		

POLITY

Remission without application

News Excerpt:

The **Supreme Court of India** has issued a significant ruling directing all states to **proactively consider the premature release of eligible prisoners**, even if they have not formally applied for remission. This decision reinforces the **principles of rehabilitation and justice** while ensuring a **uniform approach to remission policies** across the country.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

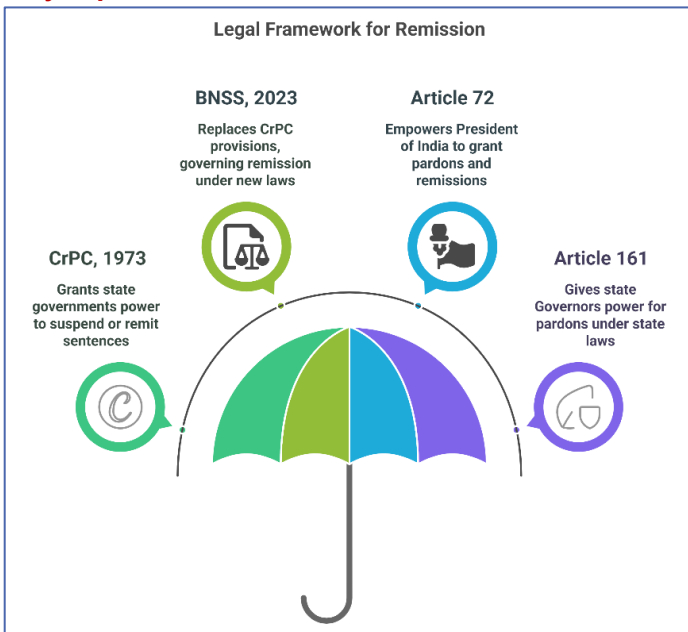
Key Aspects of the Supreme Court's Ruling

Proactive Consideration of Remission

- The Supreme Court has mandated that states must **assess the eligibility of prisoners for premature release without requiring them to submit formal applications**.
- This ensures that **inmates who have served the required portion of their sentences and demonstrated reformation are considered for release in a timely manner**.
- The move seeks to **eliminate bureaucratic delays and inconsistencies** in the remission process.

Legal Framework Governing Remission

Key Implication:



States must adhere to these legal provisions and create a **transparent mechanism for identifying eligible prisoners without waiting for individual requests**.

Need for Uniform and Transparent Guidelines

- The Court has stressed the **importance of having standardized remission policies** across states.
- Currently, **different states follow varied policies** for premature release, leading to **disparities in the treatment of prisoners**.

- The Supreme Court's directive aims to **streamline and unify these policies** so that remission decisions are made **fairly and systematically**.

Focus on Rehabilitation and Reformation

- The **Court emphasized that the penal system should prioritize rehabilitation over prolonged incarceration**.
- In a **specific case**, the Supreme Court **ordered the release of a prisoner who had already served 26 years**, questioning the necessity of continued imprisonment when the individual had shown signs of reformation.
- The judgment suggests that **prisoners who have demonstrated good behavior and rehabilitation should not be denied a second chance at reintegration into society**.

Administrative and Technological Measures

- The Supreme Court has directed states to **update and utilize the e-Prison module** to streamline the remission process.
- This **digital tracking system** will help maintain updated prisoner records and **ensure that eligible inmates are identified without delays**.
- The move aims to **reduce administrative inefficiencies and make the remission process more transparent**.

Potential Implications of the Ruling

Speedier Release of Eligible Prisoners

- The ruling could **expedite the release of thousands of inmates who have completed a significant portion of their sentences**.
- This would also help **decongest prisons**, which are often overcrowded due to delays in remission processing.

Strengthened Rights of Prisoners

- The decision **reinforces prisoners' rights by ensuring they are not overlooked due to bureaucratic hurdles**.
- By making remission an **automatic consideration**, it helps **prevent unnecessary and prolonged incarceration**.

Increased Scrutiny on State Policies.

- The Supreme Court's directive puts **pressure on states to align their remission policies with constitutional principles**.
- States that fail to implement the new guidelines could face judicial intervention and accountability measures**.

PEPPER IT WITH:
Prison reforms, Issue of Undertrials, e-Prison.

Conclusion

- The Supreme Court's ruling on **premature release and remission policies** marks a **progressive step toward a more humane and rehabilitative justice system**.

- By requiring states to **actively consider remission cases**, the judgment ensures that **prisoners are not unjustly held beyond their eligible period**.
- It also seeks to **address inconsistencies in remission policies**, making the system **more transparent, fair, and efficient**.
- This directive could have **far-reaching effects on prison reform**, ensuring that **justice is not just punitive but also restorative**.

Ranveer Allahbadia bail condition

News Excerpt:

The **Supreme Court's recent bail conditions** for YouTuber and podcaster **Ranveer Allahbadia** have triggered a legal and public debate regarding **judicial intervention, free speech, and content regulation in the digital space**.

The case revolves around **his alleged obscene remarks** in a comedy show and the **subsequent legal actions** that led to multiple FIRs across states. The **Court's decision to impose a gag order** has raised concerns about **judicial overreach and the potential chilling effect on freedom of speech**.

Background of the Case

- **Who is Ranveer Allahbadia?**
 - A popular **YouTuber, podcaster, and influencer**, known for his show **"The Ranveer Show"**, where he interviews celebrities, entrepreneurs, and public figures.
 - Has a **large following on social media platforms**, with millions of subscribers.
- **The Controversial Incident**
 - The controversy arose from an episode of a **comedy-based YouTube show, "India's Got Latent"**, where Allahbadia allegedly made an **obscene and offensive remark**.
 - The remark **sparked public outrage**, leading to **multiple FIRs** being filed against him in different states.
- **Legal Complaints Against Him**
 - **Multiple FIRs** were registered under provisions related to **obscenity, hurting public sentiment, and promoting offensive content**.
 - The cases were filed in **different jurisdictions**, making it difficult for him to seek relief.
- **Allahbadia's Legal Response**
 - Filed a **petition in the Supreme Court** seeking:
 - **Consolidation of all FIRs** to prevent legal harassment.
 - **Protection from arrest**, arguing that his remark was made in a comedic context and was not intended to be offensive.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Supreme Court's Interim Bail Order

- **Grant of Interim Bail**
 - The Supreme Court **granted Allahbadia interim relief** by **staying FIRs** registered in Guwahati and Jaipur.
 - This order provided **temporary protection from arrest**, allowing him to continue participating in the legal process.
- **Imposed Conditions on Bail**

The Court **did not grant unconditional relief** and instead imposed the following **strict conditions**:

 - **Gag Order on Digital Content**
 - Allahbadia was **prohibited from hosting any show on YouTube or any other digital platform** until further orders.
 - This effectively **prevented him from engaging in his primary profession**.
 - **Surrender of Passport**
 - He was ordered to **submit his passport**, preventing any potential attempt to leave the country.
 - **Mandatory Cooperation with Investigation**
 - Allahbadia was directed to **fully cooperate** with the ongoing investigations in different states.
- **Court's Observations on the Case**
 - The Supreme Court strongly criticized his remarks, stating:
 - His **"perverted mind" made the entire society feel ashamed**.
 - Such **public discourse should be responsible and must not cross the limits of decency**.

'STATE MUST PROTECT RIGHT TO LIFE'

<ul style="list-style-type: none"> ➤ Five-judge bench of unanimous view that state duty-bound to protect right to life whenever there is threat from any quarter, including private persons ➤ Majority verdict says fundamental right to free speech and life can be enforced against private persons other than state or its instrumentalities 	<ul style="list-style-type: none"> ➤ In dissenting verdict, Justice Nagarathna says except for habeas corpus (produce the person), right to free speech and life cannot be enforced against persons other than state ➤ Majority verdict says mere statement of a minister may not lead to violation of constitutional rights and hence not actionable for award of compensation
---	--

“ Article 19(1)(a) (right to free speech) serves as a vehicle through which dissent can be expressed. The right to dissent, disagree and adopt varying and individualistic points of view inheres in every citizen of this country – **Justice BV Nagarathna**”

Free Speech Debate: Judicial Overreach or Necessary Restriction?

The Court's **gag order** has led to a heated **debate on free speech and prior restraint**.

Arguments Supporting the Court's Decision

- **Need for Responsible Public Discourse**
 - The Supreme Court's decision **reflects concerns over deteriorating standards of public speech**.

- **Public figures and influencers hold significant influence**, and their speech must be **socially responsible**.
- **Precedents on Obscenity Laws**
 - Indian law places **reasonable restrictions on free speech**, including prohibitions on **obscenity, defamation, and content harming public morality**.
 - Courts have upheld restrictions in cases where **content is deemed offensive to public sentiment**.

Judicial Overreach

- Judicial overreach refers to **instances where courts in India exceed their constitutional mandate by intervening in the domains of the legislature or executive**, often leading to policymaking or administrative decisions that fall outside judicial purview.
- This occurs when the judiciary encroaches on functions reserved for other branches of government, **undermining the principle of separation of powers**.

Notable Case Studies

- **Supreme Court’s National Anthem Mandate (2016):** In *Shyam Narayan Chouksey v. Union of India*, the Supreme Court ordered **all cinema halls to play the national anthem** before screenings, requiring audiences to stand and closing doors during the anthem. Critics argued this was an overreach, as it imposed rigid patriotism without addressing constitutional rights.
- **Liquor Ban Near Highways (2017):** The Supreme Court banned liquor sales within 500 meters of national/state highways, citing road safety. This decision, while well-intentioned, was criticized for lacking empirical evidence and causing significant revenue loss for states

Arguments Against the Court’s Decision

- **Contradiction with Previous Supreme Court Rulings**
 - Legal experts argue that the **gag order contradicts previous Supreme Court rulings** that have upheld **freedom of expression**.
 - Example: In the case of **journalist Mohammed Zubair**, the Court held that **restrictions on speech should not create a chilling effect**.
- **Prior Restraint on Speech**
 - By **banning Allahbadia from creating content**, the Court has imposed **prior restraint**, which is **usually disfavored in free speech cases**.
 - Critics argue that **content creators should be held accountable post-publication, not preemptively silenced**.
- **Impact on Digital Content Creators**
 - The decision raises **concerns for all online content creators**, as it sets a precedent where a **single**

controversial statement could lead to an indefinite content ban.

- Could lead to **self-censorship and fear among content creators**, limiting **open discussions on social and political issues**.

SOCIAL MEDIA	DIGITAL MEDIA & OTT PLATFORMS
<p>Rules Seek To Empower Users Of Digital Platforms & Ensure Accountability</p> <p>1] Tighter timelines to take down unlawful content, assist law enforcement</p> <p>2] Identify first originator of a message that causes identified offence</p> <p>3] Stricter rules for bigger platforms, including local presence</p> <p>4] Voluntary user verification mechanism</p>	<p>Seek to address concerns over digital content through...</p> <p>1] Self regulation & self-classification of content - universal, adult etc</p> <p>2] Code of ethics - To follow prescribed guidelines</p> <p>3] Three-tier grievance redressal mechanism</p> <p>4] Subjects digital news media to same laws as traditional media</p>
IN CASE OF NON COMPLIANCE...	
<p>Intermediary will lose its safe harbour from user content</p>	<p>Liable to punishment under IT Act or IPC</p>

The Impact of This Ruling on Digital Content Regulation Regulatory Challenges

- India currently lacks a **comprehensive legal framework for regulating digital content**, leading to **ad hoc judicial decisions**.
- The Court’s ruling might **push for clearer content guidelines** for online platforms.

Potential Overreach by Authorities

- If similar **gag orders become common**, **authorities could misuse them to silence dissenting voices**.
- This case might be **used as a precedent** to justify **restrictions on comedians, satirists, and critics**.

Need for Balanced Regulations

- Instead of **blanket bans**, experts suggest:
 - A **transparent complaints process** for digital content.
 - **Gradual penalties** (warnings, fines) instead of **immediate bans**.
 - Encouraging **self-regulation within the content creation industry**.

Conclusion:

The Future of Free Speech and Digital Expression.

The **Supreme Court’s bail conditions in Allahbadia’s case** highlight the **complexity of balancing free speech with societal morality**.

- **The Court’s strong stance** reflects concerns about **rising obscenity and irresponsible content online**.
- However, the **gag order raises valid concerns** about **prior restraint and judicial overreach**.
- This case **sets an important precedent** for **digital content regulation, freedom of speech, and the rights of content creators in India**.

PEPPER IT WITH:

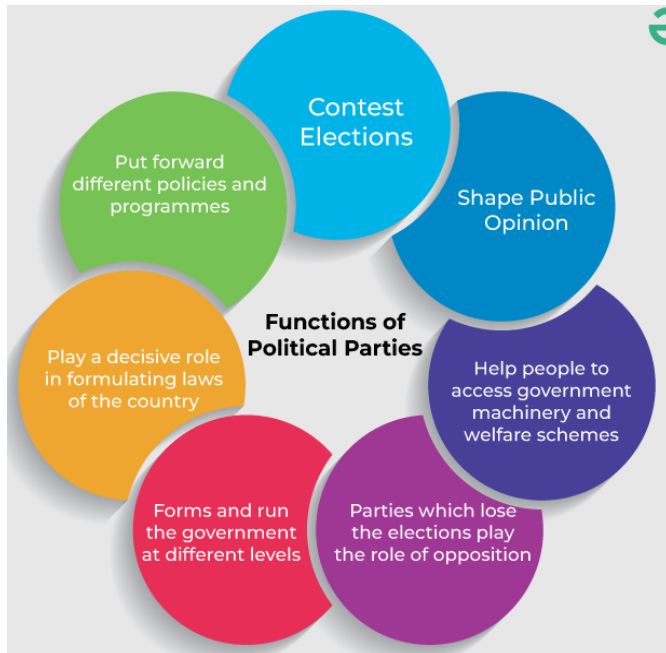
Free speech debate,
Digital content
Regulation, OTT.

Need for Discipline in Political Parties

News Excerpt:

The **Supreme Court of India** has emphasized that while **disciplinary actions** within political parties are essential for maintaining **order and unity**, they **should not undermine democratic participation**. The court highlighted that **punishment should serve as a corrective measure rather than an oppressive tool**, ensuring that party members' rights are protected within a **democratic framework**.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



Context: Balancing Party Discipline and Democratic Participation

- **Need for Discipline in Political Parties**
 - Political parties enforce **disciplinary measures** to maintain **unity, coherence, and adherence to party ideologies**.
 - Actions such as **expulsions, suspensions, or other penalties** are often used against members who go against party directives.
- **Democratic Rights of Party Members**
 - Every political party functions within the larger framework of **Indian democracy**, where individuals have the **right to express opinions and participate in decision-making**.
 - **Excessive disciplinary actions** can **suppress dissent and limit democratic debate** within parties, leading to a culture of authoritarianism.

Supreme Court's Observations on Disciplinary Actions

- **Punishment Should Enforce Discipline, Not Suppress Dissent**
 - The **court ruled** that disciplinary actions should be **justified and reasonable**, ensuring they do not **silence internal criticism or healthy debate**.

- Punishments should aim to **correct behavior** rather than act as a **tool for controlling or eliminating dissenting voices**.
- **Need for Fair and Transparent Disciplinary Processes**
 - Political parties should adopt **transparent mechanisms** when imposing disciplinary measures on members.
 - Arbitrary or **unjustified punishments** can lead to legal challenges and **weaken internal democracy**.
- **Role of the Judiciary in Safeguarding Rights**
 - The Supreme Court's intervention underscores the **importance of democratic values** even within political organizations.
 - It ensures that **party leadership does not misuse its powers** to unfairly punish members.

The Representation of People Act: Foundation of India's Electoral Democracy

The Representation of People Act (RPA) serves as the cornerstone of India's **electoral framework**, providing **comprehensive guidelines for conducting free and fair elections**. This legislation, divided into the **RPA Acts of 1950 and 1951**, establishes the rules governing India's electoral machinery, from constituency delimitation to addressing electoral offenses.

Foundational Framework: The Two RPA Acts

The Representation of People Act, 1950

- The RPA Act of 1950 primarily establishes the **structural framework for elections in India**. It addresses fundamental aspects including:
 - **Constituency Delineation:** The Act provides for the allocation of seats and delimitation of constituencies for elections to the Lok Sabha and state legislative assemblies based on census population figures.
 - **Voter Qualifications:** It establishes that voters must be permanent residents of India, at least 18 years of age, and not disqualified under any law on grounds such as non-residence, unsoundness of mind, or corrupt practices.
 - **Electoral Roll Preparation:** The Act outlines the procedure for preparing electoral rolls by appointing electoral officers including the Chief Electoral Officer (CEO), District Election Officer (DEO), and Electoral Registration Officer (ERO).
 - **Presidential Powers:** It empowers the President of India to amend orders delimiting constituencies after consulting the Election Commission of India.

The Representation of People Act, 1951

While the 1950 Act establishes the electoral structure, the **1951 Act focuses on the procedural and operational aspects of conducting elections**:

- **Administrative Machinery:** It details the administrative framework for organizing and conducting elections.
- **Electoral Offenses:** The Act defines various electoral offenses and prescribes penalties to maintain electoral integrity.

- **Candidate Qualifications:** It establishes qualifications and disqualifications for membership in Parliament and state legislatures.
- **Party Registration:** Section 29A allows political parties to register with the Election Commission, which is essential for electoral participation.
- **Corrupt Practices:** Section 123 defines corrupt practices, including bribery and undue influence, to maintain election integrity.
- **Election Expenses:** Section 77 regulates campaign expenditure to prevent financial misuse and maintain fairness in elections

Implications for Political Parties

- **Reassessment of Disciplinary Policies**
 - Following the court’s ruling, political parties may need to **re-evaluate their disciplinary frameworks** to align with democratic principles.
 - There could be an emphasis on **impartial decision-making** when dealing with internal disputes.
- **Protection of Members’ Rights**
 - Party members will have **greater confidence to express their views** without fear of **arbitrary punishments**.
 - It ensures that members' **fundamental rights**, such as **freedom of speech and association**, are respected.
- **Strengthening Internal Democracy**
 - Political parties will be encouraged to **foster open dialogue and constructive criticism** rather than suppressing dissenting voices.
 - It could lead to **more democratic functioning within parties**, ultimately benefiting the **larger democratic process** in India.

PEPPER IT WITH:
RPA Act, Political Funding Transparency issues,

Conclusion: Strengthening Democratic Norms within Political Parties

- The Supreme Court’s ruling serves as an important **reminder to political parties** that discipline should not come at the cost of **democratic participation**.
- By ensuring **fair procedures and protecting members’ rights**, the judgment aims to **strike a balance between party order and internal democracy**.
- Moving forward, political parties will need to **adopt more transparent and just mechanisms** for handling internal dissent and discipline.

The state of panchayats in India

News Excerpt:

A **government study** evaluates the **performance of Panchayati Raj Institutions (PRIs)** across different

GS CONNECT														
GS	I	II	III	IV	GS	I	II	III	IV	GS	I	II	III	IV
1					7									
2					8									
3					9									
4					10									
5					11									
6					M									

Indian states. The study highlights **major disparities** in the efficiency and functioning of these local governance bodies, emphasizing the need for **better devolution of power, financial support, and community participation** for improved rural development.

Overview of Panchayati Raj Institutions (PRIs)

- **Definition and Purpose**
 - PRIs are **three-tier local governance bodies** in rural India that function at the **village, intermediate (block), and district levels**.
 - Their primary role is to facilitate **grassroots democracy** by empowering local communities and ensuring decentralized decision-making.
- **Constitutional Mandate (73rd Amendment Act, 1992)**
 - This **historic amendment** institutionalized the Panchayati Raj system, making it **mandatory for states to establish PRIs** and conduct regular elections.
 - It aimed to **strengthen participatory governance** by transferring administrative, financial, and planning responsibilities to locally elected representatives.



Key Findings of the Government Study

- **Wide Performance Variations Among States**
 - The study found that PRIs in some states function **effectively**, while others face **structural and operational challenges**.
 - The performance is assessed based on six **factors-**
 - Framework**
 - Functions**
 - Finances**
 - Functionaries**
 - Capacity Enhancement**
 - Accountability**
- **States Leading in PRI Performance**

- **Kerala, Karnataka, and West Bengal** are recognized for their well-functioning PRIs due to:
 - **High devolution of powers** from state governments, ensuring autonomy.
 - **Effective utilization of funds**, leading to significant local development projects.
 - **Strong community participation**, ensuring transparency and accountability.
- **States Lagging in PRI Effectiveness**
 - In states with weaker PRIs, the study identified several challenges:
 - **Lack of financial autonomy** – PRIs depend on state governments for funds, limiting their decision-making power.
 - **Limited administrative support** – Many local bodies lack trained personnel to execute development projects efficiently.
 - **Low public awareness and engagement**, leading to weak governance.

Major Challenges Affecting PRI Performance

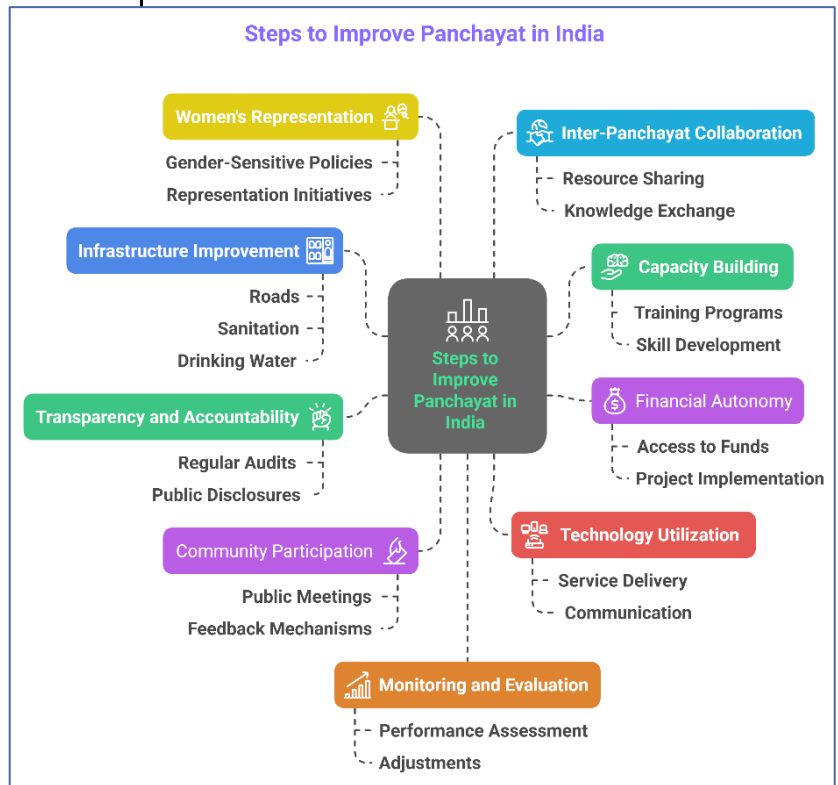
- **Insufficient Devolution of Powers**
 - Many state governments hesitate to transfer **real authority** to PRIs, limiting their ability to function independently.
 - The lack of power to implement policies, collect revenue, or manage resources affects their efficiency.
- **Capacity-Building Issues**
 - Most PRI representatives come from **non-administrative backgrounds** and require training to handle governance duties.
 - Many PRIs lack **technical and managerial expertise**, making it difficult to implement development schemes effectively.
- **Limited Financial Resources**
 - Despite constitutional provisions, many PRIs receive **inadequate funding**, restricting their ability to execute projects.
 - States that provide **higher financial devolution** tend to have better-performing PRIs.
- **Public Awareness and Participation**
 - Many rural communities are **unaware of their rights and the role of PRIs**, leading to a lack of engagement in local governance.
 - In areas where communities actively participate in decision-making, PRIs tend to function **more transparently and effectively**.

Recommendations for Strengthening PRIs

- **Enhancing Devolution of Powers**

- State governments should **fully implement the constitutional provisions** and allow PRIs greater control over **local development, taxation, and resource management**.
- **Improving Capacity Building and Training**
 - Governments should establish **structured training programs** for PRI members to improve their governance and administrative skills.
 - This includes **digital literacy training**, financial management, and project execution techniques.
- **Ensuring Financial Autonomy**
 - States should allocate **sufficient funds** to PRIs and empower them to generate their own revenue through **local taxation and grants**.
 - The timely release of funds can help PRIs execute development schemes **efficiently**.
- **Boosting Public Engagement and Awareness**
 - Awareness campaigns should be conducted to educate rural populations about the **importance of PRIs** and how they can participate in governance.
 - Greater **involvement of women, youth, and marginalized communities** can enhance decision-making and development outcomes.

PEPPER IT WITH:
Panchayat reforms, Devolution of power. ULBs.



Conclusion

- The government study highlights **both the successes and shortcomings** of PRIs across different states.

- While some states have **fully embraced decentralized governance**, others still **struggle with administrative and financial constraints**.
- Strengthening PRIs through **better devolution of power, increased financial support, capacity-building programs, and public participation** is crucial for achieving **sustainable rural development and democratic empowerment** in India.

Assam Amends Law on Autonomous Councils

News Excerpt:

The Assam Assembly passed legislation enabling the **Governor to take control of statutory autonomous councils if elections are postponed beyond their extended term**.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

These amendments are intended to prevent administrative paralysis in tribal governance. Autonomous Councils are essential for the self-governance of tribal communities, allowing them to preserve their culture, manage resources, and implement development policies.

• What are Statutory Autonomous Councils?

These councils are established by State Legislatures under specific Acts aimed at promoting the welfare of tribal communities.

• Objective: To further the social, economic, educational, and cultural development of Scheduled Tribes (STs).

• Key Features of the Amendment

- The amendment allows for a **one-year extension of a council's term (divided into two six-month periods)**.
- If elections cannot be held beyond this extension, the Governor will take control of the council.
- This measure aims to ensure continuity and stability in governance within tribal areas.

• Powers of Statutory Autonomous Councils in Assam

These councils possess executive powers over 34 subjects, including:

- Land administration and revenue
- Education (primary & secondary)
- Cottage industries
- Agriculture and irrigation
- Public health and sanitation

Constitutional Autonomous District Councils (ADCs)

Established under **Article 244 (Sixth Schedule) of the Constitution**, ADCs provide self-rule for tribal populations in Assam, Meghalaya, Mizoram, and Tripura. If a district has multiple tribes, the Governor can create an Autonomous Regional Council. There are ten ADCs across Assam, Meghalaya, Mizoram, and Tripura.

Composition of ADCs

Maximum Strength: 30 members

Elected Members: The majority serves a five-year term.

Nominated Members: The Governor appoints four members for representation. **Exception:** The Bodoland Territorial Council (BTC) comprises 46 members.

THE CONSTITUTION OF INDIA PLACES TRIBAL DOMINATED AREAS IN CERTAIN STATES UNDER TWO SCHEDULES: FIFTH AND SIXTH. THIS ALLOWS THESE AREAS INCREASED AUTONOMY IN TERMS OF THE LOCAL ADMINISTRATION. BUT THESE TWO CATEGORIES HAVE DIFFERENCES WITHIN THEMSELVES.

Fifth Schedule	Sixth Schedule
<p>Areas under this category are called 'Scheduled Areas'</p> <p>Tribal dominated areas in 10 States: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana.</p> <p>Tribal Advisory Committees in Scheduled Areas do not perform administrative duties directly and do not have much autonomy.</p> <p>Panchayat Extension to Scheduled Areas is applicable here.</p>	<p>Areas under this category are called 'Tribal Areas'.</p> <p>Tribal dominated areas in Assam, Meghalaya, Tripura and Mizoram.</p> <p>Autonomous District Councils in Tribal Areas have much autonomy, and carry out local level governance.</p> <p>Panchayat Extension to Scheduled Areas is not applicable here as these areas already have autonomy in their self governance.</p>

Powers of ADCs

• Legislative Powers:

- Authority to create laws on land, forests, agriculture, water resources, sanitation, public health, and social customs.
- Judicial role: Responsible for resolving disputes among tribal groups.

• Executive Powers:

- Administration of village councils, policing, inheritance laws, and local governance.
- Management of education, healthcare, and infrastructure development.

• Judicial Powers:

- Ability to establish tribal courts for cases involving Scheduled Tribes, with the authority to impose penalties of up to five years in prison.

• Financial and Taxation Powers:

- ADCs can levy taxes, tolls, and fees on:
 - Land, buildings, vehicles, boats, and animals

- Goods entering the district
- Employment-based income
The revenue generated is utilized for local governance, road development, and public welfare projects.

Governor’s Role in ADCs

The Governor has the authority to create, modify, or dissolve ADCs and can intervene in governance when necessary to maintain order.

• **Autonomous District Councils in Assam**

Assam has three ADCs under the Sixth Schedule:

- Bodoland Territorial Council (BTC)
- Dima Hasao Autonomous District Council
- Karbi Anglong Autonomous District Council

• **Impact of the Amendment on Governance**

- The Governor’s intervention is intended to ensure that autonomous councils remain operational even when elections are delayed. While this approach aims to increase administrative efficiency, it may also diminish self-governance in tribal areas. Critics warn that such control could lead to political interference, while proponents argue it will prevent governance vacuums.

• **Climate Change and Autonomous Councils in Assam**

- The management of tribal areas, including ADCs and Statutory Councils, is closely linked to environmental and economic challenges.

• **Impact of Climate Change on Assam’s Tea Industry**

- Climate change has resulted in altered rainfall patterns, increased pest populations, and reduced tea yields. In 2024, India’s tea production fell by 109 million kg due to climate-related issues.

• **Role of Renewable Energy in Tribal Areas**

- Assam’s Renewable Energy Policy 2022 promotes the adoption of solar energy in tea estates. Autonomous Councils can leverage solar power to diminish reliance on conventional electricity.

PEPPER IT WITH:
Tribal Welfare Initiative, NE trouble with internal conflicts.

• **Economic Challenges**

- In 2023, global tea production outstripped demand by 376 million kg, leading to an oversupply. Tea producers in Assam are transitioning towards carbon trading and sustainable agricultural practices.

Conclusion

The amendment to Assam’s Autonomous Councils Act enhances the Governor’s authority in the event of election delays, facilitating continuity in governance. While this action seeks to avert administrative standstill, it also raises apprehensions regarding possible political interference.

SOCIAL ISSUES

Social Media and Suicides

News Excerpt:

The rise of **social media** has transformed communication, offering both **connectivity** and **challenges**. A pressing concern is its association with **suicidal behaviors**, prompting an urgent need to examine this complex relationship.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

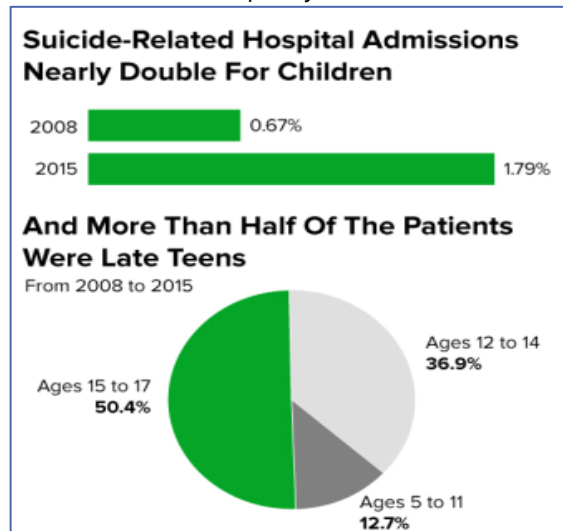
The Dual Impact of Social Media on Suicide

Negative Influences: Pro-Suicide Content and Cyberbullying

- **Pro-Suicide Platforms:** Certain online forums and chat rooms have been identified as spaces where users share and even encourage suicidal behaviors. For instance, a **Japanese message board in 2008 detailed methods of suicide using hydrogen sulfide gas, leading to numerous attempts and fatalities.**
- **Cyberbullying:** The anonymity of social media can facilitate bullying, significantly impacting mental health. The tragic case of 12-year-old Adiel Boyd from Australia, who took her life due to relentless online harassment, underscores this danger.

Positive Aspects: Support Networks and Awareness

- **Supportive Communities:** Many individuals find solace in online support groups, sharing experiences and receiving empathy. Studies have shown that users of such forums often experience reduced feelings of isolation and decreased suicidal thoughts.
- **Awareness Campaigns:** Social media platforms have been instrumental in disseminating mental health resources and suicide prevention information, reaching broader audiences quickly.



Algorithmic Amplification: A Double-Edged Sword

Promotion of Harmful Content

- **Algorithmic Pitfalls:** Research indicates that platforms like Instagram may inadvertently promote self-harm content through their recommendation systems. A Danish study found that Instagram’s algorithm

facilitated the **growth of self-harm networks** by suggesting related profiles to users.

Efforts to Mitigate Risks

- **Content Moderation:** Platforms are investing in artificial intelligence to detect and remove harmful content. However, challenges persist, as harmful materials can bypass detection through coded language or "algospeak."

Legal Actions and Policy Responses

Litigation Against Platforms

- **TikTok Lawsuit:** In France, families have sued TikTok, alleging that the platform's harmful content contributed to their children's suicides. The lawsuit claims that TikTok failed to effectively moderate content promoting suicide, prioritizing profit over user safety.

Legislative Measures

- **Age Restrictions:** In Australia, legislation has been enacted to ban social media use for individuals under 16, aiming to protect minors from online harms, including cyberbullying and exposure to harmful content.

Elevated Rates of Suicidal Ideation

Recent studies have highlighted a troubling increase in **suicidal ideation** and **suicide attempts** among **college students**, emphasizing the urgent need for **comprehensive mental health interventions** within academic institutions.

Prevalence of Suicidal Behaviors in College Populations:

Rising Incidence in India

- **Youth Suicide Rates:** Individuals aged 15 to 24 years have the highest suicide rate in India, accounting for 35% of recorded suicides.
- **Student Suicides:** In 2021, 13,089 students died by suicide in India, with Maharashtra reporting the highest number (1,834), followed by Madhya Pradesh (1,308) and Tamil Nadu (1,246).

Contributing Factors to Suicidal Behaviors

Mental Health Disorders

- **Depression:** Identified as the strongest correlate of suicidal behavior among college students.

Stress and Academic Pressure

- **Academic Stress:** High expectations and competitive environments contribute significantly to student stress.
- **Coaching Institutes:** In India, intense pressure from coaching centers has been associated with student suicides, particularly in Kota, Rajasthan, where 26 cases were reported in 2023.

Socio-Environmental Factors

- **Trauma and Discrimination:** Experiences of abuse, bullying, and discrimination are strong risk factors for suicide among youth.
- **Gender Disparities:** Young women may face additional challenges, including intimate partner violence and economic instability, increasing their suicide risk.

Recommendations for Addressing the Issue

Enhancing Mental Health Support

- **Counseling Services:** Establish accessible mental health services on campuses to provide timely support to students.
- **Peer Support Programs:** Implement peer-led initiatives to foster a supportive community and reduce stigma associated with seeking help.

Reducing Academic Pressure

- **Curriculum Reforms:** Introduce flexible academic schedules and assessment methods to alleviate undue stress.
- **Parental and Institutional Support:** Encourage a balanced approach to academic and personal development, emphasizing well-being over competition.

Promoting Awareness and Early Intervention

- **Educational Workshops:** Conduct regular workshops to educate students and staff about recognizing signs of distress and available resources.
- **Crisis Intervention:** Establish protocols for immediate support and referral for students exhibiting suicidal behaviors.

Helping People:



Conclusion: Navigating the Inflection Point

The intersection of **social media** and **suicide** presents a critical challenge. While these platforms offer support and community, they also harbor risks that can exacerbate mental health issues. Addressing this inflection point requires a multifaceted approach, including:

PEPPER IT WITH:
Stress Management, Mental Health issues, Depression.

- **Enhanced Content Moderation:** Implementing robust systems to detect and remove harmful content promptly.
- **Algorithm Transparency:** Ensuring recommendation systems do not promote harmful behaviors.
- **User Education:** Empowering users with knowledge to navigate online spaces safely.
- **Policy Interventions:** Enacting regulations that protect vulnerable populations, especially minors.

Endogamy as a Major Cause of Health Disparities in India

News Excerpt:

A groundbreaking study conducted by the **CSIR-Centre for Cellular and Molecular Biology (CCMB)** has identified **endogamy**—the practice of **marrying within the same community**—as a significant factor contributing to **health disparities** in India. The research emphasizes that **population-specific genetic variations**, resulting from centuries of **endogamous marriages**, increase the prevalence of **genetic disorders** and influence how different groups respond to **medications**.

Key Findings of the Study

High Inbreeding Rates Among Indian Communities

- The study analyzed **281 high-coverage whole exome sequences** from four **South Indian** populations:
 - **Kalinga** and **Reddy** communities of **Andhra Pradesh**
 - **Yadav** community of **Puducherry**
 - **Kallar** community of **Tamil Nadu**
- Researchers found that **nearly 60% of marriages** within these communities were **endogamous**, leading to a high **inbreeding rate**.
- **Endogamous practices** reduce genetic diversity, increasing the likelihood of **hereditary diseases**.

Genetic Link to Ankylosing Spondylitis

- The study identified a **high prevalence of ankylosing spondylitis**, an inflammatory disease affecting the **spine and joints**.
- This condition was linked to the **HLA-B27:04 risk allele**, a genetic marker increasing **disease susceptibility**.
- The **Reddy community** showed a particularly **high incidence** of this disorder, indicating a strong genetic link within endogamous groups.

Population-Specific Genetic Variants Affecting Drug Metabolism

- The research uncovered **unique genetic mutations** in these communities, many of which were previously **undocumented**.
- These mutations impact how individuals **metabolize drugs**, leading to **variations in drug efficacy** and potential **adverse effects**.
- Specific variations were identified in genes influencing the metabolism of **Tacrolimus** (an immunosuppressant) and **Warfarin** (a blood thinner).

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

About Endogamy

Endogamy is the practice of **marrying within a specific group**, such as a **family, clan, or cultural community**. It is also referred to as **in-marriage**.

Types:

- **Caste Endogamy:** This involves marrying within one's own caste or social class.
 - Example: It is commonly practiced in India and Nepal.
- **Ethnic Endogamy:** This is the practice of marrying within one's own ethnic or cultural community. Example: Polynesians, Armenians, and Cypriots often practice endogamy.
- **Religious Endogamy:** This refers to marrying within one's religious group. Example: This is prevalent in Orthodox Judaism, Mormonism, and Amish communities.
- **Tribal Endogamy:** Marriage occurs within the same tribe. Example: Members of the Tartharol clan of the Todas tribe in the Nilgiri Hills exclusively marry other clan members.
- **Royal Family Endogamy:** This involves marriage within the same royal family to preserve bloodlines.

Purpose:

- **Maintaining Group Identity:** Endogamous practices help protect the cultural, religious, or ethnic identity of a group by ensuring that marriage partners come from similar backgrounds and share common values.
- **Strengthening Kinship Networks:** Marrying within the group reinforces social ties and fosters a sense of community among individuals.
- **Preserving Social Hierarchy:** In certain societies, endogamy helps sustain social structures and hierarchies by limiting marriage to individuals of the same social class or caste.
- **Resisting Integration:** Endogamy can act as a means of segregation, helping a group resist integration or blending with other cultures or communities.

Implications for Public Health

Increased Risk of Population-Specific Genetic Disorders

- The study confirms that **certain genetic diseases** are more common in endogamous populations due to **gene concentration**.
- This highlights the need for **community-specific healthcare strategies** to address these health risks effectively.

HEALTH IMPACT OF INBREEDING

Recessive Alleles:

This loss of diversity increases the chance that individuals will inherit two copies of a recessive gene, which can cause genetic disorders.

Population-Specific Disorders: Certain genetic disorders may be more prevalent in specific populations due to historical patterns of inbreeding or endogamy (marriage within a specific group).

Examples of Population-Specific Disorders:

Ankylosing Spondylitis: A study in India found a high incidence of ankylosing spondylitis in the Reddy community, linked to a specific genetic variant.

Visual Impairment: Inbreeding is strongly associated with visual impairment, with a higher risk in certain kinship degrees (e.g., uncle/niece, aunt/nephew).

Other disorders: Studies have also linked inbreeding to an increased risk of blindness, hearing loss, neonatal diabetes, limb malformations, disorders of sex development, and schizophrenia.

The Role of Personalized Medicine

- Since **genetic variations affect drug responses**, **personalized medicine**—tailoring treatments based on an individual's genetic makeup—can help improve **treatment outcomes**.
- Understanding genetic predispositions can aid in the **development of customized therapies** for affected populations.

PEPPER IT WITH:
Healthy Genetic Pool, Endogamy, Inbreeding,

Need for Genetic Screening and Counseling

- The findings emphasize the importance of **genetic screening programs** to identify **high-risk individuals**.
- Genetic counseling** should be encouraged in communities practicing **endogamy** to educate people about **hereditary health risks**.

Conclusion

- The CSIR-CCMB study highlights the **long-term genetic impact of endogamy**, revealing its direct link to **health disparities** in India.
- The research underscores the urgent need for **genetic screening, personalized medicine, and public health policies** that address **population-specific health risks**.
- By adopting **scientific and medical interventions**, India can better manage **hereditary disorders** and improve **healthcare outcomes** for at-risk communities.

India Achieves Maternal Mortality Target

News Excerpt:

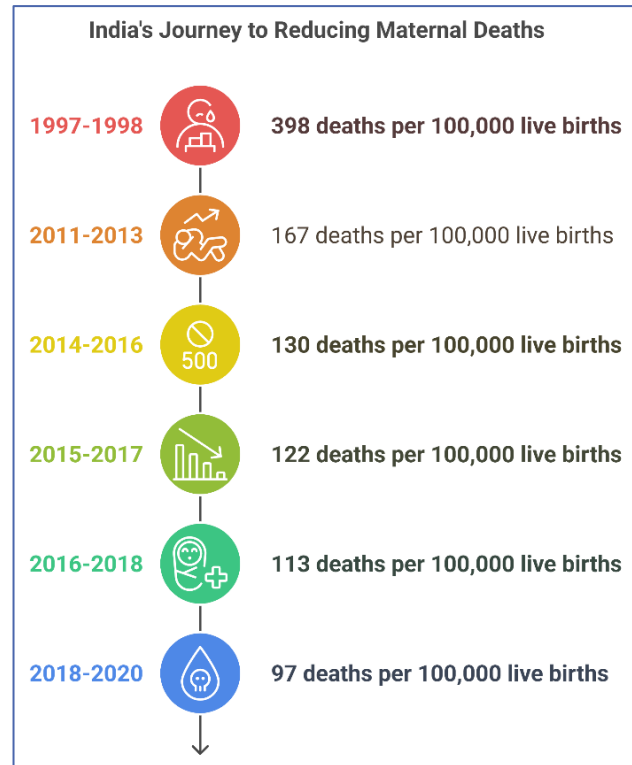
India has achieved a significant **public health milestone** by reducing its **Maternal Mortality Ratio (MMR)** to **97 deaths per 100,000 live births**, according to the latest **Sample Registration System (SRS) data**.

This achievement surpasses the **National Health Policy (NHP) 2017 target** of bringing MMR below **100 by 2020**. The decline reflects improvements in **maternal healthcare**, including **institutional deliveries, antenatal care**, and access to **emergency obstetric services**.

Trends in Maternal Mortality Over the Years

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Significant Decline in MMR



This marks a **70% reduction in MMR** over two decades, demonstrating the effectiveness of **government initiatives and healthcare interventions**.

State-Wise Performance and Disparities
States Achieving the SDG Target

The **Sustainable Development Goal (SDG) target** for maternal mortality is **below 70 deaths per 100,000 live births**. Some states have already achieved this milestone:

- Kerala: 19 deaths per 100,000 live births**
- Maharashtra: 33 deaths per 100,000 live births**
- Tamil Nadu: 54 deaths per 100,000 live births**

States with High Maternal Mortality

Despite the overall decline, some states still report **high maternal deaths**, highlighting **regional healthcare gaps**:

- Assam: 195 deaths per 100,000 live births**
- Uttar Pradesh: 167 deaths per 100,000 live births**

These states require **focused interventions**, including **better access to healthcare**, improved **nutrition**, and increased awareness of **maternal health programs**.

Key Factors Behind the Reduction in MMR
Increased Institutional Deliveries

- More women are giving birth in **hospitals** or healthcare centers, reducing the risk of **maternal complications**.
- The **Janani Suraksha Yojana (JSY)** has played a crucial role in promoting **safe deliveries** by providing **financial incentives** to pregnant women.

Expansion of Healthcare Infrastructure

- Strengthening of primary healthcare centers (PHCs)** has improved access to **antenatal care**.

- Programs like **LaQshya** and **Janani Shishu Suraksha Karyakram (JSSK)** ensure **free maternity services**, including **cesarean sections** and **postnatal care**.

Improved Nutrition and Anemia Control

- **Iron and Folic Acid (IFA) supplementation** under **Anemia Mukh Bharat** has helped reduce **maternal anemia**, a leading cause of maternal deaths.
- Nutritional schemes like **Poshan Abhiyaan** have contributed to **better maternal health**.

Availability of Skilled Birth Attendants

- Training programs for **midwives and healthcare workers** have improved the **management of childbirth complications**.
- **Referral transport systems** like **102 & 108 ambulance services** ensure timely access to **emergency obstetric care**.

Impact of the MMR Reduction

Lives Saved

- The decline in MMR translates to **8,580 additional mothers' lives saved annually** in 2020 compared to 2016.
- Estimated **annual maternal deaths** have dropped from **33,800 in 2016 to 25,220 in 2020**.

Economic and Social Benefits

- **Lower maternal mortality** improves **child survival rates** and strengthens **family well-being**.
- Women's **healthier pregnancies** contribute to **economic productivity** and **gender equality**.

Challenges and the Road Ahead

Addressing Regional Disparities

- States with **high MMR**, like **Assam and Uttar Pradesh**, need **targeted interventions** in rural areas.
- **Strengthening primary healthcare** and **maternal awareness programs** is essential.

Ensuring Quality Care for All

- More focus is needed on **high-risk pregnancies** and **timely referrals** for **complicated deliveries**.
- **Telemedicine and digital health solutions** can improve **maternal healthcare access** in remote areas.

Achieving the SDG Target Nationwide

- India must continue efforts to bring **MMR below 70** across all states.
- Strengthening **public-private partnerships** can enhance **maternal healthcare delivery**.

Conclusion

- India's **remarkable reduction in MMR** below **100 deaths per 100,000 live births** is a **major public health achievement**. However, **regional disparities** persist, requiring **continued investments in maternal healthcare**.

PEPPER IT WITH:
 IMR and MMR control, SDG Targets, Poverty Alleviation,

- By **strengthening healthcare services**, **improving awareness**, and **ensuring equitable access to maternal care**, India can achieve its **SDG target** and secure **better health outcomes for all mothers and newborns**.

Challenges and Gaps in the One Health Approach

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

One Health is a holistic approach that recognizes the **interconnection between human, animal, and environmental health**. Experts emphasize that while this approach is critical in tackling global health challenges such as **zoonotic diseases, antimicrobial resistance, and environmental hazards**, there are **significant gaps** in its implementation. The **lack of integrated data systems and weak multidisciplinary collaboration** are major obstacles to fully realizing the potential of One Health.



Key Challenges in the One Health Approach

Lack of Integrated Data Systems

- **Fragmented Surveillance Mechanisms**
 - The **current surveillance systems for human, animal, and environmental health** often operate separately, making it difficult to track emerging health threats effectively.
 - Without a **centralized database**, detecting **zoonotic diseases** or tracking environmental factors affecting health becomes challenging.
- **Barriers to Data Sharing**
 - Variations in **data collection methodologies** among different sectors create inconsistencies.
 - **Absence of standardized reporting protocols** prevents real-time data exchange, slowing down responses to **disease outbreaks**.

- Confidentiality and regulatory restrictions also hinder **seamless information sharing**.

Weak Multidisciplinary Collaboration

• **Sectoral Silos**

- Experts from **human medicine, veterinary science, environmental science, and public health** often work **independently**, leading to **poor coordination** in addressing health challenges.
- This fragmented approach delays **early detection and intervention** in outbreaks of zoonotic diseases like **COVID-19, Nipah virus, and Avian Influenza**.

• **Lack of Interdisciplinary Training**

- **Traditional education systems** focus on **discipline-specific** training, leaving professionals unprepared for **cross-sectoral collaboration**.
- Without exposure to **interdisciplinary approaches**, many experts struggle to integrate **environmental and animal health considerations** into public health policies.

Recommendations for Strengthening the One Health Approach

Develop Integrated Surveillance and Data Sharing Systems

- Implement **unified platforms** that **combine data from human, animal, and environmental health sectors** for **real-time tracking of disease trends**.
- Strengthen initiatives like the **Integrated Disease Surveillance Programme (IDSP)** to enhance multi-sectoral disease monitoring and response.
- Standardize **data collection and reporting frameworks** across all relevant sectors.

Enhance Multidisciplinary Collaboration

- Create **One Health task forces** at national and international levels to **bridge the gap between public health, veterinary, and environmental agencies**.
- Encourage **joint research projects** and **cross-sectoral policy-making** to address **zoonotic disease outbreaks and antimicrobial resistance**.

Strengthen One Health Education and Training

- Introduce **interdisciplinary curricula** in **medical, veterinary, and environmental science education**.
- Train professionals in **collaborative decision-making and crisis response strategies** under the One Health framework.

PEPPER IT WITH:
Environment conservation, Livelihood Security, Poverty Alleviation,

Improve Policy and Institutional Support

- Governments should **establish clear policies** that mandate **collaboration across health, agriculture, and environmental sectors**.
- Increased **funding and resource allocation** for One Health initiatives can drive impactful **policy implementation**.

Conclusion

- While the **One Health approach** is vital for **preventing pandemics, mitigating antimicrobial resistance, and ensuring environmental sustainability**, its success depends on **overcoming current challenges**.
- By **integrating data systems, enhancing interdisciplinary collaboration, and reforming policies**, One Health can become a **powerful framework for global health security**.

ECONOMY

RBI's \$10 Billion FX Swap

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

The **Reserve Bank of India (RBI)** recently conducted a **\$10 billion buy-sell foreign exchange (FX) swap**, a strategic move aimed at improving rupee liquidity and stabilizing financial markets. This large-scale liquidity intervention is expected to have wide-ranging effects on **banking liquidity, bond yields, currency markets, and corporate hedging strategies**.

Understanding the FX Swap Mechanism

• **What is a Buy-Sell Swap?**

- In a **buy-sell FX swap**, the RBI **buys US dollars from banks in exchange for rupees**, increasing rupee liquidity in the market.
- After a pre-determined period (in this case, **three years**), the RBI will **sell the dollars back to the banks**, effectively reversing the transaction.

RBI Measures for Managing Liquidity and Forex Stability: Key Points

- **Interventions:** The Reserve Bank of India (RBI) has implemented dollar-rupee buy/sell swap auctions and open market operations (OMOs) since January 2025 to manage forex market volatility and infuse liquidity.
- **Interest Rate Cut:** These measures complement an interest rate cut announced in February 2025, aimed at reducing borrowing costs and encouraging domestic spending.
- **Liquidity Importance:** Adequate liquidity is crucial; a rate cut may not effectively stimulate borrowing if banks lack funds to lend.
- **Open Market Operations (OMO):** The RBI purchases government securities from banks to increase liquidity. This activity affects secondary market yields.
- **Forex Swap Auctions:**
 - Involves the RBI buying dollars from banks in exchange for rupees, with a commitment to reverse the transaction later.
 - Infuses domestic liquidity and temporarily increases the RBI's forex reserves.
- **Exchange Rate Management:**

- Aims to stabilize the rupee amid significant foreign capital outflows.
- The rupee depreciated from 83.5/dollar in September 2024 to over 87.5/dollar by February 2025.
- Longer Maturity Swaps: The RBI shifted from six-month swaps to longer maturities to address ongoing forex market uncertainties.

• Why a Three-Year Tenor?

- Unlike previous short-term swaps (typically **six months to one year**), this swap has a longer **three-year maturity**.
- This indicates a **long-term approach** to managing liquidity rather than a temporary intervention.

Objectives of the \$10 Billion FX Swap

The RBI has undertaken this FX swap for multiple reasons:

- **Enhancing Banking Liquidity**
 - This swap will **inject approximately ₹87,000 crore (870 billion rupees)** into the banking system.
 - This helps in addressing the ongoing **liquidity deficit** in the banking sector.
- **Supporting Economic Growth**
 - Increased liquidity allows banks to **lend more to businesses and consumers**, helping economic growth.
 - This move ensures **credit availability** at a time when economic activity is increasing.
- **Reducing Hedging Costs for Businesses**
 - Businesses that engage in international trade or take foreign currency loans need to **hedge against currency fluctuations**.
 - By conducting this swap, the RBI **reduces forward premiums**, making it **cheaper for companies to hedge their foreign exchange risks**.

Impact on Financial Markets

Forward Premiums Decline

- **What are Forward Premiums?**
 - When companies hedge their foreign exchange risk, they pay a **premium** to lock in exchange rates for the future.
 - After the RBI's swap, the **one-year dollar/rupee forward premium dropped to around 1.64%**, making hedging cheaper for companies.

Lower Bond Yields

- Short-term government **bond yields fell** after the swap announcement.
- Lower yields **reduce borrowing costs for companies**, encouraging investment.

Impact on the Rupee

- The **rupee slightly depreciated** against the US dollar after the swap.
- This could be due to the increased supply of rupees in the system.

Increased Corporate Hedging

- Since **hedging has become cheaper**, Indian firms are now **hedging their foreign exchange exposure for longer periods**.
- This reduces their financial risk from currency fluctuations.

Context and Background: Why Did RBI Announce This Swap?

• Liquidity Deficit in the Banking System

- Before the swap, India's banking system faced a **liquidity deficit of nearly ₹1.7 trillion (₹1,70,000 crore)**.
- This shortage was affecting banks' ability to lend and was putting upward pressure on interest rates.

• Similar Past Measures by RBI

- The RBI had previously conducted a **\$5 billion six-month swap**, but it was not enough to address the liquidity concerns.
- This **new, larger \$10 billion swap** shows RBI's commitment to long-term liquidity management.

Future Outlook: What Comes Next?

• Shift Towards an Accommodative Monetary Policy?

- This move suggests that the RBI **may ease monetary conditions** to support growth.
- If inflation remains under control, the RBI might **cut interest rates** in the coming months.

• Possible Further Swaps?

- Analysts believe that if liquidity conditions remain tight, the RBI **may conduct additional FX swaps** or other liquidity-boosting measures.

• Impact on India's Forex Reserves

- This swap slightly **reduces India's foreign exchange reserves** in the short term.
- However, since the transaction will be reversed in **three years**, it does not permanently affect forex reserves.

PEPPER IT WITH:

Rbi liquidity moves, Steps to boost dollar reserves.

Conclusion

- The **\$10 billion FX swap by RBI** is a significant step towards **enhancing rupee liquidity, lowering hedging costs, reducing bond yields, and stabilizing financial markets**.
- By injecting nearly **₹87,000 crore** into the banking system, the RBI aims to **support economic growth while ensuring financial stability**.
- The move is also a signal that the central bank is **closely monitoring liquidity conditions** and is ready to take proactive measures when needed.
- The coming months will determine whether additional measures are required or if this swap is sufficient to maintain stability in India's financial markets.

Proposed New Income Tax Act

News Excerpt:

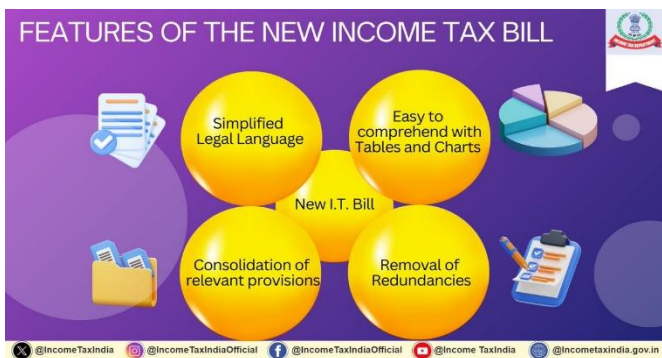
The current **Income Tax Act, 1961**, has been in force for over **six decades**, making it **outdated and complex**. Over the years, **amendments and provisions** have resulted in a **cumbersome tax structure**, leading to **high litigation and compliance burdens**. The government now seeks to **modernize and simplify the tax code** for better efficiency and transparency.

GS CONNECT									
GS	I	II	III	IV	GS	I	II	III	IV
1					7				
2					8				
3					9				
4					10				
5					11				
6					M				

Objectives of the New Tax Law

- **Simplification:** Reduce the complexity of tax calculations and compliance.
- **Litigation Reduction:** Address ambiguities to minimize tax disputes.
- **Alignment with Modern Economy:** Adapt to **digital transactions, global trade, and evolving financial structures**.
- **Encouraging Compliance & Investment:** Make taxation **easier and investor-friendly** to boost economic growth.

Key Features of the Proposed Tax Law



Streamlining and Reducing Complexity

- The new tax law aims to **reduce the length of the Income Tax Act** from **over 800 pages to around 622 pages**.
- **Redundant sections will be eliminated**, and **overlapping provisions will be merged** to enhance clarity.

Tabulated Tax Rates for Clarity

- **Tax rates and slabs will be presented in tabular format** rather than in long explanatory notes.
- This will help **both individual taxpayers and businesses** understand their tax liabilities more easily.

Reducing Tax Disputes and Litigation

- **Tax-related litigation in India is estimated to be around ₹13.4 trillion (₹13.4 lakh crore) as of March 2024.**
- The new law aims to **reduce tax disputes** by clearly defining taxable income, deductions, and exemptions.
- By **removing vague provisions**, the government hopes to **cut down on legal battles** and promote smoother tax administration.

Aligning Taxation with Modern Economic Trends

- The law will address **digital transactions, cryptocurrency taxation, and e-commerce businesses** more effectively.
- It will be updated to **incorporate international taxation rules** and align with **global best practices**.

Encouraging Investments and Economic Growth

- A **simplified tax structure** can boost **business confidence** and attract **foreign direct investment (FDI)**.
- Lower compliance burdens will help **startups and small businesses** navigate taxation more easily.

Inclusion of Virtual Digital Assets:

- Cryptocurrencies and other virtual digital assets are classified as property and treated as capital assets under the new Bill.

Enhanced Dispute Resolution Mechanism:

- The provisions for the Dispute Resolution Panel (DRP) now include defined points of determination, decisions, and justifications, reducing ambiguity in processes.

Digital Monitoring and Compliance:

- The Bill grants the CBDT the authority to implement digital tax monitoring systems without needing frequent legislative changes. The term "virtual digital space" is defined to encompass social media accounts, email servers, cloud storage, and online banking platforms, allowing tax authorities to access information during surveys and investigations.

Why Is This Reform Necessary?

Outdated Legal Framework

- The **1961 Income Tax Act** has been amended **numerous times**, making it **difficult to interpret**.
- Many provisions are **not suited for today's digital and globalized economy**.

High Compliance Burden

- Taxpayers, especially **small businesses and startups**, face **complex tax filing procedures**.

- The new tax law aims to **reduce documentation requirements** and make tax filing **more user-friendly**.

Litigation and Dispute Resolution Issues

- Long-pending tax cases** clog the judicial system and delay economic decisions.
- The new law intends to **reduce ambiguity and introduce clearer provisions** to minimize disputes.

Next Steps: Implementation and Impact

Parliamentary Approval & Enactment

- The government will present the bill in **Parliament for debate and approval**.
- Once passed, the new tax law will replace the **Income Tax Act, 1961**.

Expected Benefits

- Faster tax compliance** due to **clearer tax rules and simplified filing**.
- Lower litigation**, helping both taxpayers and the government save time and money.
- Higher investment inflows**, as a stable tax regime increases investor confidence.
- Better alignment with digital and global economic trends**.

PEPPER IT WITH:
Tax compliance, Tax laws simplification, Tax evasion.

Conclusion: A Step Towards a Modern Tax Regime

- The proposed Income Tax Act represents a **major step toward tax modernization in India**. By **simplifying the law, reducing disputes, and making tax compliance easier**, the government aims to create a **transparent and efficient tax system**.
- If implemented effectively, this could enhance **economic growth, attract investments, and improve ease of doing business in India**.

MPID Act and the Torres scam

News Excerpt:

The **Maharashtra Protection of Interest of Depositors (In Financial Establishments) Act, 1999 (MPID Act)** is a **state-specific law enacted to protect depositors from fraudulent financial establishments**. The act empowers the government to **attach and liquidate the assets of defaulting financial companies** to compensate affected investors.

GS CONNECT							
GS	I	II	III	IV	GS	I	II
1					7		
2					8		
3					9		
4					10		
5					11		
6					M		

This act has recently been invoked in the **Torres investment fraud case**, where thousands of investors lost their money in a Ponzi-like scheme. Below is an elaboration of the **MPID Act's provisions** and its **application in the Torres scam**.

Maharashtra Protection of Interest of Depositors (MPID) Act, 1999

The **MPID Act** was enacted to **protect investors from financial fraud and unauthorized Ponzi schemes**. It applies to all financial establishments in Maharashtra that **default on their obligations to depositors**.

Key Provisions of the Act

- Section 4 – Property Attachment:**
 - Empowers the **government to attach properties** (movable and immovable) of financial establishments that fail to repay depositors.
 - This prevents fraudulent entities from liquidating their assets before compensating investors.
- Section 5 – Appointment of Competent Authority:**
 - The government can **appoint a competent authority (usually a senior official)** to **administer and manage the attached assets**.
 - The authority ensures that **depositors receive compensation from the seized assets**.
- Section 8 – Liquidation and Compensation:**
 - Attached properties **can be sold, and the proceeds distributed** among affected investors.
 - This process ensures that **victims of financial fraud recover a portion of their lost investments**.
- Punitive Measures:**
 - The act imposes **strict penalties, including imprisonment and fines, on fraudulent financial establishments**.
 - The **directors and key officials** of such entities can be held personally responsible.

How Does a Ponzi Scheme Work?

A type of fraud in which investors think their returns come from sales of products. They don't - they come from money invested by new investors. **A HUGE CON**

There are no products. The whole set up is a con.

Why MPID Act is Important

- Prevents fraudulent companies from **disposing of their assets before legal action is taken**.
- Ensures **quick compensation** for depositors through the **attachment and sale of assets**.
- Acts as a **deterrent against Ponzi schemes and financial scams**.

The Torres Investment Fraud Case

The **Torres investment fraud case** has brought the **MPID Act into focus**. The case involves a **Mumbai-based jewellery investment firm that lured thousands of investors into a Ponzi-like scheme**.

Background of the Torres Scam

- Company Profile:**
 - Torres Jewellery** operated in Mumbai and Navi Mumbai.

- It promised **high returns on investments** in **gold, silver, diamond jewellery, and gemstones.**
- **Modus Operandi (How the Scam Worked)**
 - Investors were **promised weekly returns ranging from 2% to 9%** on their deposits.
 - The company **offered luxury incentives**, including **iPhones, cars, apartments, and branded accessories**, to attract more investors.
 - Initially, investors received their **promised returns**, creating **trust and enthusiasm**, leading to **more deposits.**
 - By **December 2024**, the company **stopped payments**, raising alarms among investors.

- Authorities issued **Lookout Circulars (LOCs)** against **international associates**, including **Russian and Ukrainian nationals** linked to the scam.

How the MPID Act is Being Used in the Torres Case

Given the **massive scale of the fraud**, authorities **invoked the MPID Act** to secure investor funds and prosecute those responsible.

Legal Actions Taken Under MPID Act

- **Property Attachment:**
 - The government **moved to attach Torres' assets**, preventing the company from selling properties and fleeing with investors' money.
 - This includes **real estate, bank accounts, jewellery stocks, and luxury items** acquired through the fraud.

- **Freezing of Bank Accounts:**
 - Authorities **froze bank accounts linked to Torres**, ensuring that funds were not withdrawn or transferred overseas.
 - This step aims to **recover at least part of the defrauded amount.**
- **Criminal Charges and Prosecution:**
 - Key **Torres executives face charges under MPID Act, Indian Penal Code (IPC) Sections 406 (criminal breach of trust) and 420 (cheating).**
 - If convicted, they could face **severe penalties, including imprisonment.**

The **Torres scam and the MPID Act's application** raise broader concerns about **financial fraud in India.**

Impact on Investors

- The **fraud has caused massive financial distress** among investors, many of whom invested their life savings.
- The **application of the MPID Act offers hope that some funds may be recovered.**
- However, **full repayment is uncertain**, as recovery depends on the **total assets seized.**

Regulatory Lessons

- The case **highlights the need for stricter financial regulations** to prevent Ponzi schemes.
- Authorities may **introduce stronger investor protection laws** to detect fraud earlier.
- **Digital tracking systems for investment schemes** could help ensure **better monitoring.**

Deterrence for Future Frauds

- The **strong enforcement of the MPID Act** sends a **clear message to fraudulent financial firms.**
- Scammers may **think twice before launching Ponzi-like schemes**, knowing that **strict action awaits.**

AMOUNT EXPECTED TO RISE AS NEWS SPREADS

Shivaji Park police have registered an FIR against the directors and CEO of Torres Jewellers following allegations of defrauding investors of over ₹13.48 cr. Investors discovered the store's closure on Monday when they found it shuttered

Directors | Imran Javed, Sarvesh Surve, and Olena Styne, all registered at the same company address

2023: The store chain, operating under Platinum Haren Private Limited (office listed at Opera House), is registered

2024: Opens a large outlet in Dadar and later expands to other locations, including Mira-Bhayandar



1.25L Investors defrauded

FOREIGN HAND: Two women, who are citizens of Uzbekistan and Russia, are among those arrested for the Torres Ponzi scheme fraud

TORRES PROMISED ASTRONOMICAL RETURNS

Item	Annual return
Gold	48%
Silver	96%
Moissanite*	520%

*Artificial diamond
Returns were paid weekly

BUILT INVESTOR TRUST
The company reportedly encouraged investors to focus on moissanite, offering the highest return. Initially, it delivered on its promises, building investor trust. But all payments, including principals, stopped abruptly on Dec 30

COMPLAINTS POUR IN FROM ALL OVER
With complaints pouring in from Dadar, Grant Road, Mira Road, Kalyan, and Navi Mumbai, the amount is expected to rise as more victims approach the police. The case has been transferred to the Economic Offences Wing (EOW)

Red flags raised by CA | Abhishek Gupta, the company's CA, who was questioned by Shivaji Park police, claimed he raised suspicions during an audit in Dec. **Gupta stated he alerted CBI and other security agencies**

ARRESTS
On Tuesday, Shivaji Park police arrested three accused, all top executives at the firm

Tania, aka Tazagul Karaxanovna Xasatova (52), an Uzbek national



Valentina Ganesh Kumar (44), a Russian national



Sarvesh Surve (30), a resident of Umerkhadi in island city



Unraveling of the Fraud

- **Economic Offences Wing (EOW) Investigation:**
 - After receiving multiple complaints, the **Mumbai Police Economic Offences Wing (EOW)** began an **in-depth investigation.**
 - The probe revealed that **Torres had defrauded over 1.25 lakh investors**, with losses exceeding **₹1,000 crore.**
- **Arrests of Key Accused:**
 - **Tausif Riyaz (alias John Carter)** – the CEO of Torres – was arrested along with other senior executives.

Conclusion

- The **Torres investment fraud case** is one of the **largest financial scams in Maharashtra in recent years**.
- The **MPID Act has been instrumental** in ensuring that the **company's assets are seized, and efforts are made to compensate defrauded investors**.
- This case highlights the **importance of strong financial regulations, proactive legal action, and investor awareness to prevent future scams**.
- The **MPID Act continues to be a crucial tool** in Maharashtra's fight against **financial fraud and Ponzi schemes**.

PEPPER IT WITH:
 Ponzi schemes, Consumer awareness, financial fraud detection.

Challenges Facing India's Textile Industry

News Excerpt:

India's textile industry, one of the country's oldest and most significant economic sectors, is currently struggling due to a mix of domestic and global challenges. Although it has the potential to compete with countries like China, Bangladesh, and Vietnam, several factors are hindering its growth. Below are the major issues affecting the industry:

GS CONNECT									
GS	I	II	III	IV	GS	I	II	III	IV
1					7				
2					8				
3					9				
4					10				
5					11				
6					M				

Sustainability and Environmental Compliance

- Global markets are enforcing stricter **sustainability norms** to reduce carbon footprints in manufacturing.
- India's textile industry heavily relies on **coal-based energy**, making it difficult to meet these environmental standards.
- International buyers are prioritizing suppliers that use **renewable energy and eco-friendly practices**, pushing India to shift towards greener production methods.
- Failure to comply with sustainability regulations can lead to **export restrictions and loss of international clients**.

Regulatory and Labor Constraints

- India's **complex labor laws** make it difficult for textile companies to scale their operations efficiently.
- **Rigid hiring and firing policies** discourage large-scale investments in the textile sector.
- Competing nations like **Bangladesh and Vietnam have more relaxed labor regulations**, giving them an edge over India in attracting manufacturing contracts.
- **High labor costs** and bureaucratic hurdles further reduce India's competitiveness in the global market.

Competition from Neighboring Countries

- Countries like **Bangladesh and Vietnam** have become strong players in the textile export market due to their **lower production costs and trade agreements**.

- Despite **political instability in Bangladesh**, India has struggled to capitalize on the opportunity to expand its market share.
- **Vietnam's integration into free trade agreements (FTAs)** gives its textile industry an advantage in accessing international markets with lower tariffs.
- Indian textile manufacturers face **higher tariffs in Western markets**, making their products less attractive compared to competitors.

Infrastructure and Technological Gaps

- Many textile manufacturing units in India still rely on **outdated machinery**, leading to lower efficiency and higher production costs.
- **Lack of investment in modern technology** has reduced India's ability to produce high-quality textiles at competitive prices.
- **Poor logistics and supply chain infrastructure** result in longer delivery times, making Indian textiles less attractive to international buyers.
- Government initiatives such as **Production-Linked Incentives (PLI) for textiles** aim to modernize the industry, but progress has been slow.

Scheme/Initiative	Overview
Production-Linked Incentive (PLI) Scheme for Textiles	Launched in 2021 with ₹10,683 crore allocation, promotes domestic manufacturing of man-made fibers and technical textiles, aiming for \$600 billion in textile exports by 2047. The 2025-26 budget allocates ₹5,080 crore to expand PLI benefits.
PM MITRA Parks for Integrated Textile Ecosystems	Establishes seven large textile parks to consolidate the entire value chain, promote global investments, reduce logistical costs, enhance efficiency, and create employment for women in rural areas.
Samarth Scheme for Skill Development	Aims to train 10 lakh workers in various textile sectors with ₹1,300 crore budget, focusing on demand-driven, placement-oriented programs to bridge the skills gap.
National Technical Textiles Mission (NTTM)	Launched in 2020 to position India as a leader in technical textiles, focusing on R&D, indigenous innovation, and ensuring quality standards for market linkages.
Amended Technology Upgradation Fund Scheme (ATUFS)	Provides financial incentives for advanced machinery adoption, with ₹635 crore allocated in the 2025-26 budget to modernize

	production infrastructure and enhance export competitiveness.
Mission for Cotton Productivity	Launched in 2025 with ₹600 crore allocation to improve cotton yields and promote extra-long staple (ELS) cotton cultivation through agronomic practices and farmer training.
EU-India Collaborative Projects for Sustainable Textiles	A partnership with the EU resulting in seven sustainability projects funded by €9.5 million, focusing on circular economy practices, resource efficiency, and women's empowerment across nine states.

Supply Chain and Quality Control Issues

- Several global brands have raised concerns about **inconsistencies in the quality of Indian textiles**.
- Mislabeling scandals, such as the **Welspun cotton controversy**, have damaged the reputation of Indian textile exports.
- Maintaining **strict quality control standards** is essential to restore trust among international buyers and ensure repeat business.
- **Better regulation and certification processes** are needed to prevent fraud and maintain India's credibility in the global textile market.

Energy Dependence and Rising Costs

- The textile industry is **energy-intensive**, and India's dependence on **non-renewable energy sources** makes production expensive and less sustainable.
- In contrast, competing nations are investing in **renewable energy solutions** to lower costs and meet international sustainability goals.
- Transitioning to **solar and wind energy** could help Indian textile manufacturers **reduce costs and improve their market positioning** in the long run.

Policy Support and Government Initiatives

- The Indian government is considering **financial incentives and policy reforms** to revive the textile industry.
- Proposed measures include:
 - **Reducing import tariffs on essential raw materials** and textile machinery to lower production costs.
 - **Increasing budget allocations** to the Ministry of Textiles to support modern infrastructure development.
 - Expanding the **Production-Linked Incentive (PLI) scheme** to attract investment and boost textile exports.
- However, the success of these policies depends on

PEPPER IT WITH:
Textile Parks, Largest employer, Export potential.

effective implementation and collaboration between the government and industry stakeholders.

Conclusion

- India's textile industry has immense potential but faces multiple challenges that must be addressed to remain competitive in the global market.
- By **modernizing infrastructure, improving labor policies, ensuring quality control, and adopting sustainable practices**, India can strengthen its position as a leading textile exporter.
- Strategic government support and industry-driven reforms will be crucial in overcoming these obstacles and securing the future of India's textile sector.

India's Efforts to Reduce Fertilizer Imports

News Excerpt:

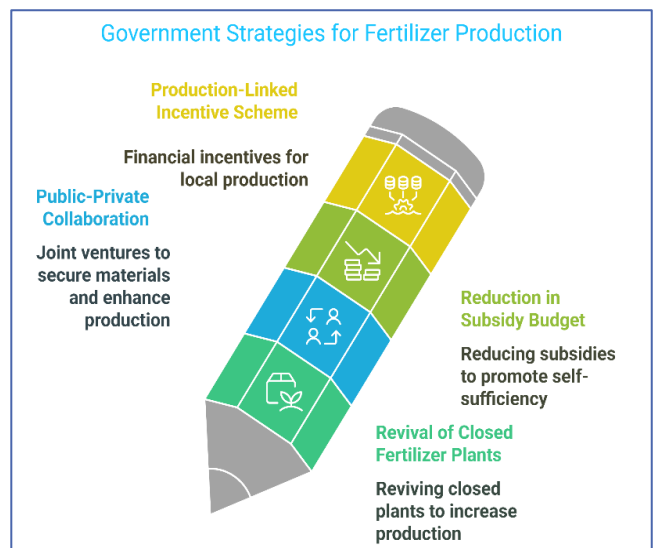
India, a major consumer of fertilizers, has been working to reduce its dependence on imports by boosting domestic production. Fertilizers like

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

urea, di-ammonium phosphate (DAP), and muriate of potash (MOP) are crucial for the country's agricultural sector, but large portions of these are imported, making India vulnerable to global price fluctuations and supply chain disruptions. The government has introduced multiple initiatives to achieve self-sufficiency in fertilizer production.

Increase in Domestic Fertilizer Production

- India has significantly increased its domestic **urea production**, which reached **250.72 lakh metric tonnes (LMT)** in 2023-24.
- Total fertilizer production in the country during this period stood at **435.95 LMT**, covering a major portion of the agricultural sector's demand.



- Production figures for key fertilizers in **2023-24:**
 - **Urea:** 250.72 LMT
 - **NPK (Nitrogen, Phosphorus, Potassium) fertilizers:** 89.67 LMT

- **Di-ammonium Phosphate (DAP):** 42.22 LMT
- **Single Super Phosphate (SSP):** 53.34 LMT
- With increased production, India is reducing its dependence on urea imports and moving towards self-sufficiency.

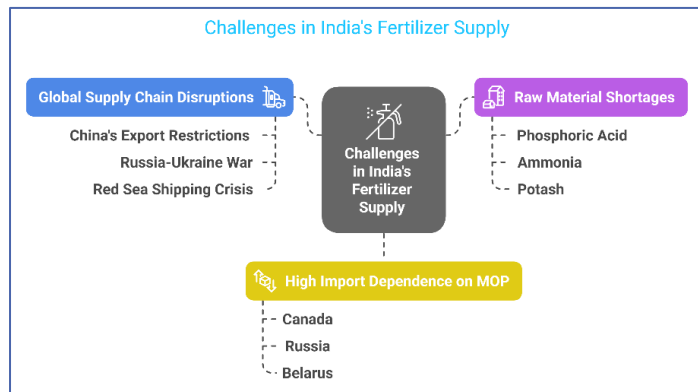
Decline in Fertilizer Imports

- **Import Reduction:** Due to higher domestic production, **fertilizer imports fell by nearly 10% in 2023-24.**
- **Urea Imports:** India still **imports about 20% of its total urea consumption**, but this is expected to decline further as new plants become operational.
- **DAP Imports:** About **50-60% of India's DAP needs** are met through imports, making it a crucial area for domestic expansion.
- **MOP (Muriate of Potash) Imports:** India is **100% dependent on imports** for MOP, as the country does not have domestic reserves of potash.
- **Key Import Sources:** India imports fertilizers mainly from countries like **China, Russia, Canada, Jordan, Saudi Arabia, and Morocco.**
- **Impact of Global Factors:** Restrictions on **Chinese fertilizer exports** and geopolitical issues have caused **supply chain disruptions**, affecting India's import strategy.

Government Initiatives and Policies

To strengthen domestic fertilizer production, the Indian government has implemented several policies and schemes:

Challenges and External Factors Affecting Fertilizer Supply



Future Outlook and Road to Self-Sufficiency

- **Eliminating Urea Imports by 2025:**
 - The Indian government has set a target to **completely stop importing urea by the end of 2025** through increased domestic production.
 - New urea plants are expected to **boost production and meet domestic demand.**
- **Green Urea and Sustainable Fertilizers:**
 - India is exploring the use of **'green urea' (produced using renewable energy)** as part of its sustainability and **decarbonization** efforts.

- The goal is to make fertilizer production more **environmentally friendly and energy-efficient.**
- **Improving Storage and Distribution:**
 - Building **better infrastructure for fertilizer storage and distribution** to ensure timely availability for farmers.
 - Strengthening **domestic supply chains** to reduce dependence on global imports.

Conclusion

- India has made significant progress in reducing fertilizer imports by expanding domestic production and implementing key government policies.
- However, challenges like **raw material shortages, global market fluctuations, and continued reliance on imports for key fertilizers like MOP** remain.
- The government's ambitious plan to **achieve self-sufficiency in urea by 2025** and promote sustainable fertilizer solutions could help India secure its agricultural future and reduce economic dependence on international markets.

PEPPER IT WITH:
Fertilizer uses, Domestic industry, Farmer's welfare

AGRICULTURE

PM Modi's Call for Reduced Edible Oil Consumption

News Excerpt:

Prime Minister Modi, in a recent address, urged Indians to **reduce their edible oil consumption by 10%** as a **practical and easy step** toward healthier living. He emphasized that **small changes in diet can lead to significant long-term health benefits.**

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Rising Obesity Concerns in India:

- Studies predict that by **2050, nearly 44 crore (440 million) Indians** could be affected by **obesity-related health complications** if current dietary patterns persist.
- The consumption of **excessive oils and processed foods** is a major contributor to **obesity, diabetes, and cardiovascular diseases** in India.
- Modi's appeal aligns with the **larger vision of preventive healthcare** and **reducing the burden on India's healthcare system.**

Appointment of Ten Icons to Lead the Awareness Drive

- **Selection of Influential Personalities:**
 - To **ensure effective outreach**, the government has appointed **10 well-known figures** from different fields to spread awareness about **cutting down on oil consumption.**
 - These icons will serve as **role models**, demonstrating healthier cooking habits and making **scientific dietary recommendations** to the public.

- **Role and Responsibilities of the Icons:**
 - Encouraging citizens to **make mindful dietary choices** by limiting **fried and oily foods**.
 - Using **social media, public appearances, and television campaigns** to educate people on the **adverse effects of excessive oil consumption**.
 - Providing **alternative healthy cooking practices**, such as using **less oil, opting for healthier cooking methods (grilling, steaming, baking), and choosing better oils**.

Broader Health and Economic Implications

- **Preventive Healthcare Strategy:**
 - This initiative is part of a **larger push toward preventive healthcare**, aiming to reduce the number of cases related to **obesity, diabetes, and heart disease**.
 - Over time, **cutting down on oil consumption can significantly lower the risk of hypertension, strokes, and fatty liver disease**.
- **Public Awareness and Behavioral Change:**
 - The campaign seeks to **change the mindset of consumers**, encouraging them to be **more conscious of their dietary choices**.
 - It also stresses the importance of **reading food labels, choosing unsaturated fats, and avoiding deep-fried fast foods**.
- **Potential Economic Benefits:**
 - Reducing edible oil consumption **can also have economic advantages** by **cutting household expenses on cooking oils**.
 - Lower healthcare costs due to **fewer obesity-related illnesses** could also be a long-term financial benefit for individuals and the government.

Government Initiatives to increase edible oil production.

Scheme Name	Objective
National Mission on Edible Oils - Oil Palm (NMEO-OP)	To enhance edible oil production from oil palm, aiming to increase area from 3.5 lakh hectares to 10 lakh hectares by 2025-26 and boost crude palm oil production from 0.27 lakh tonnes to 11.20 lakh tonnes.
National Mission on Edible Oils - Oilseeds (NMEO-Oilseeds)	To increase primary oilseed production from 39 million tonnes (2022-23) to 69.7 million tonnes by 2030-31, aiming for self-reliance in edible oils and reducing import dependency.
National Food Security Mission - Oilseeds & Oil Palm (NFSM-OS&OP)	To promote the cultivation of oilseeds like mustard, groundnut, and soybean through research, modern farming techniques, market linkages, and crop insurance to achieve self-sufficiency in edible oils.
Pradhan Mantri	To ensure minimum support prices (MSP) for oilseed farmers, providing

Annadata Aay Sanrakshan Abhiyan (PM-AASHA)	price support and deficiency payment schemes to enhance farmers' income and encourage oilseed cultivation.
SATHI Portal	To facilitate timely availability of quality seeds by enabling states to coordinate with stakeholders for an efficient seed supply chain in the oilseed sector.

Conclusion: A Small Step for a Healthier Future

- PM Modi's initiative is a **simple yet powerful public health move** aimed at **creating long-term dietary changes**.
- By encouraging people to **reduce edible oil intake by 10%**, the government hopes to **curb rising obesity rates and associated lifestyle diseases**. The involvement of **10 well-known icons** ensures that this message reaches the masses effectively.
 - This campaign is a reminder that **small adjustments in everyday habits—such as mindful cooking and balanced eating—can lead to major health benefits** in the long run.

PEPPER IT WITH:
Edible oil import, Edible Oil production schemes.

How climate change affects India's wheat production

News Excerpt:

India, the world's second-largest wheat producer, is grappling with the adverse effects of climate change on its wheat production.

Rising temperatures, particularly during critical growth periods, pose significant challenges to the quantity and quality of wheat yields.

Wheat Production in India

Wheat is predominantly cultivated in the **northwestern Indo-Gangetic plains**, with major producers being **Uttar Pradesh, Punjab, Haryana, and Madhya Pradesh**. It is a **rabi crop**, sown between **October and December** and harvested from **February to April**. Wheat thrives in cooler climates, making it highly vulnerable to rising temperatures during its growth and harvest seasons.

Key Facts:

- **2025 Procurement Target:** 30 million tonnes for the 2025-26 rabi marketing season.
- **2024-25 Production Goal:** 115 million tonnes.
- **Past Trends:** In 2024-25, procurement was 26.6 million tonnes, falling short of the 34.15 million tonne target.

How Climate Change Affects Wheat

India experienced its warmest February in 124 years in 2025, with above-normal temperatures predicted for March. These

G S C O N N E C T											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

heat waves coincide with critical stages of wheat growth and harvest, leading to severe consequences:

- **Early Flowering and Faster Ripening:**
 - High temperatures shorten the grain-filling period.
 - Results in lighter grains with reduced starch accumulation, lowering total yield.
- **Quality Issues:**
 - Heat stress increases protein content but reduces starch levels.
 - Harder grains affect milling quality and market prices.
- **Overuse of Resources:**
 - Farmers often resort to excessive use of fertilizers and pesticides to compensate for lower yields, leading to inefficiencies and environmental concerns.
- **Delayed Crop Cycles:**
 - Warming oceans disrupt monsoons, delaying kharif crop cycles and pushing rabi sowing into periods prone to early heat waves.

Stages of Wheat Growth Affected by Heat Stress

The growth stages of wheat are highly sensitive to temperature fluctuations:

Stage	Description	Impact of Heat Stress
Germination to Emergence	Seedling growth until the first leaf emerges	Reduced seedling vigor due to suboptimal soil moisture and temperature conditions.
Growth Stage 1	Development from emergence to double ridge (formation of spikelets)	Stunted shoot growth; reduced spikelet formation under high temperatures.
Growth Stage 2	Transition from vegetative to reproductive stage (double ridge to anthesis)	Highly susceptible stage; heat stress affects flowering structures and grain number.
Growth Stage 3 (Grain-Filling)	Period from anthesis to maturity	Shortened grain-filling period; lighter grains with lower starch content.

Underlying Causes

1. **Global Warming:**
 - Rising global temperatures are causing heat stress during critical growth stages.
 - The Indian Ocean is warming at an accelerated rate, potentially entering a "near-permanent heat wave state" by the end of the century.
2. **Disrupted Monsoons:**
 - Delayed monsoon cycles affect sowing schedules for rabi crops like wheat.

- Late sowing increases overlap between crop growth stages and early heat waves.

Adaptation and Mitigation Strategies

Addressing the impact of climate change on wheat production requires a multi-pronged approach:

Short-Term Measures:

1. **Financial Support:**
 - Provide compensation for yield losses due to heat stress.
 - Expand crop insurance coverage for farmers.
2. **Weather Monitoring & Advisories:**
 - Strengthen meteorological forecasting systems to provide real-time weather updates.
 - Guide farmers on optimal sowing dates based on weather predictions.

Long-Term Solutions:

1. **Climate-Resilient Varieties:**
 - Develop and promote heat-resistant wheat varieties with shorter growth durations.
 - Ensure accessibility through improved supply chains.
2. **Agricultural Management Practices:**
 - Encourage early sowing in regions prone to early heat waves.
 - Optimize resource use (fertilizers, pesticides) through integrated nutrient management practices.
3. **Research & Development:**
 - Invest in scientific research on crop physiology under heat stress.
 - Explore alternative crops or mixed cropping systems to diversify risks.
4. **Policy Interventions:**
 - Focus on reducing yield gaps through efficient resource management.
 - Align agricultural policies with climate adaptation goals.

Conclusion

The impact of climate change on India's wheat production is a pressing issue that threatens food security and farmer livelihoods. Rising temperatures during critical growth periods lead to reduced yields and quality issues, exacerbating challenges for farmers already facing resource constraints. Immediate policy support combined with long-term strategies such as climate-resilient varieties, improved agricultural practices, and robust weather monitoring systems can help mitigate these effects. A holistic approach addressing both immediate needs and systemic challenges is essential for safeguarding India's agricultural future against the growing threat of climate change.

PEPPER IT WITH:

Food Security, Climate Change Impact of food crops.

INTERNATIONAL RELATIONS

Zelensky at White House

News Excerpt:

A contentious meeting between U.S. President Donald Trump and Ukrainian President Volodymyr Zelensky at the White House on February 28, 2025, has sent shockwaves through international relations, particularly concerning the future of U.S. support for Ukraine. The clash, characterized by heated exchanges and accusations, has left Ukrainians bracing for a potential halt in U.S. assistance and eyeing a stronger alliance with Europe.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



- **Hunter Biden, Joe Biden's son, had business dealings in Ukraine**, serving on the board of the Ukrainian energy company **Burisma**.
- Trump and his allies promoted **unfounded allegations** that Joe Biden, as Vice President, had pushed for the removal of a Ukrainian prosecutor to protect Burisma and his son.
- Trump also referenced a **conspiracy theory** suggesting that **Ukraine, rather than Russia, had interfered in the 2016 U.S. elections**—a claim widely dismissed by U.S. intelligence agencies.

Key Events and Statements

- **Heated Exchange in the Oval Office:**
 - The meeting between Trump and Zelensky took a dramatic turn as Trump berated Zelensky for not being "thankful" enough and for disrespecting the U.S.
 - Trump told Zelensky to "make a deal" with Russia "or we're out," signaling a potential withdrawal of U.S. support.
 - Vice President J.D. Vance echoed Trump's sentiments, calling Zelensky "disrespectful" for challenging the administration's stance on diplomacy with Russia.
 - Trump told Mr. Zelensky: **"You're gambling with the lives of millions of people. You're gambling with World War Three, and what you're doing is very disrespectful to this country."**
- **Trump's Demand for Compromise:**

- Trump insisted that Ukraine would need to make "compromises" in any truce agreement with Russia, which launched a full-scale invasion three years prior.
 - Trump stated, "You can't do any deals without compromises. So certainly he's going to have to make some compromises, but hopefully, they won't be as big as some people think."

Allegations of Quid Pro Quo (Exchange of Favors) Military Aid Withheld

- Before the call, the **Trump administration had put a hold on \$391 million in military aid** that had been approved by Congress to support Ukraine's defense against Russia.
- Critics alleged that **Trump used this aid as leverage** to pressure Zelensky into announcing an investigation into Biden.

Implications of Trump's Request

- Trump's request for an investigation into his political rival was seen as **soliciting foreign interference in the U.S. elections**.
- The phrase **"I would like you to do us a favor"** in the call transcript raised alarms, as it suggested a **potential abuse of presidential power for personal political gain**.
- Zelensky, who was trying to maintain strong relations with the U.S., **did not explicitly agree to the request**, but was placed in a difficult diplomatic position.

Whistleblower Complaint and Impeachment Inquiry The Whistleblower's Report

- A **whistleblower from the U.S. intelligence community** filed a complaint alleging that Trump had **abused his office by pressuring Ukraine** to interfere in the 2020 election.
- The complaint also accused the White House of **attempting to cover up the phone call** by restricting access to its transcript.

House Investigation Begins

- The complaint led to an **impeachment inquiry** launched by the Democratic-controlled **House of Representatives** in **September 2019**.
- Witnesses, including **U.S. diplomats and national security officials**, testified that:
 - Trump and his inner circle **pushed a backchannel policy to pressure Ukraine** into announcing an investigation.
 - **Rudy Giuliani**, Trump's personal lawyer, played a key role in these efforts.

Impeachment Proceedings Charges Against Trump

- On **December 18, 2019**, the **House of Representatives formally impeached Trump on two articles**:
 1. **Abuse of Power** – for pressuring Ukraine to investigate Biden while withholding aid.

- 2. **Obstruction of Congress** – for blocking key officials from testifying in the inquiry.

Senate Trial and Acquittal

- In **January 2020**, the **Republican-controlled Senate held a trial** but ultimately **acquitted Trump on both charges**.
- The vote largely followed **party lines**, with only **one Republican senator, Mitt Romney, voting to convict Trump on the abuse of power charge**.

Impact on U.S.-Ukraine Relations

Diplomatic Fallout for Ukraine

- The scandal put **Zelenskyy in a difficult position**, as Ukraine was **relying on U.S. military aid to counter Russian aggression**.
- Ukraine had to **navigate its relationship with both the Trump administration and the Democratic opposition in Congress**.

Continued U.S. Support for Ukraine

- Despite the controversy, **Congress ultimately released the military aid** to Ukraine.
- The **U.S. continued its diplomatic and military support for Ukraine**, which became even more critical after **Russia's full-scale invasion in 2022**.

International Reactions

• **Russia's Assessment:**

- Russia described Zelenskyy's trip to Washington as a "complete failure," with foreign ministry spokeswoman Maria Zakharova accusing Zelenskyy of being "obsessed with continuing" the conflict.
- Russia reiterated that its goals in Ukraine remained unchanged, including the "demilitarization and denazification of Ukraine" and the "recognition of the existing realities on the ground."

PEPPER IT WITH:
Ukraine ceasefire with Russia, India-Ukraine, Indian initiatives for peace.

• **Ukrainian Response:**

- Ukrainians expressed dismay about the future of U.S. backing for Kyiv's war effort but also voiced hope that European allies would step up support if the U.S. reduces its involvement.
- Some Ukrainians, like Kyiv resident Liudmyla Stetsevych, expressed concerns that "Trump and Putin are dividing up the world."

• **European Response:**

- Germany's Foreign Minister Annalena Baerbock called for European leaders to make decisions on a comprehensive financial package for Ukraine at their upcoming meeting.
- Germany also announced its intention to release an additional 3 billion euros (\$3.1 billion) in aid for Ukraine.

- Turkey reiterated its offer to host peace talks between Ukraine and Russia at the London summit of European leaders.

Potential Implications

• **Shift in U.S. Foreign Policy:**

The clash signals a potential shift in U.S. foreign policy under the Trump administration, with a greater emphasis on reaching a deal with Russia, even if it requires Ukraine to make significant concessions.

• **Strengthened European Alliance:**

The potential decline in U.S. support may compel Ukraine to strengthen its alliance with Europe, seeking increased political, financial, and military assistance from European nations.

• **Increased Uncertainty:**

The future of the conflict in Ukraine and the broader geopolitical landscape remains uncertain, with the clash between Trump and Zelenskyy adding a new layer of complexity to an already volatile situation.

Conclusion

- The **Trump-Zelenskyy phone call and its aftermath** underscored the **risks of leveraging foreign relations for domestic political gain**.
- While Trump was **acquitted in the Senate**, the incident became a defining moment in **U.S. politics, Ukraine's diplomatic struggles, and global discussions on election integrity**.
- The controversy also **shaped future U.S. policy toward Ukraine**, which remains a **key ally in the fight against Russian aggression**.

75th Anniversary of India-Indonesia Diplomatic Relations: Strengthening Bilateral Ties

News Excerpt:

In January 2025, the Indonesian President's visit to India marked the 75th Anniversary of India-Indonesia Diplomatic Relations, signifying a crucial milestone in strengthening bilateral ties. This visit underscored the mutual commitment to enhancing cooperation across various sectors, reflecting the strategic importance of this partnership.

Key Developments During the Indonesian President's Visit

Several significant agreements and initiatives were launched during the visit, demonstrating the breadth and depth of the growing partnership:

GS CONNECT									
GS	I	II	III	IV	GS	I	II	III	IV
1					7				
2					8				
3					9				
4					10				
5					11				
6					M				



- **Agreements Signed:**
 - **Health Cooperation:** Focused on bolstering collaborative health initiatives.
 - **Traditional Medicine:** Promoted the sharing of traditional knowledge and practices.
 - **Maritime Safety and Security:** Aimed to enhance cooperation on regional maritime security issues.
 - **Digital Development:** Explored opportunities for digital transformation and collaboration.
 - **Cultural Exchange Programme (2025-2028):** Initiated a long-term cultural exchange to deepen mutual understanding.
- **Third India-Indonesia CEOs Forum:** A joint report highlighted collaborative efforts to boost trade and investment.
- **Republic Day Celebrations:** The Indonesian President was the chief guest at India's 76th Republic Day celebrations, showcasing the growing political and diplomatic ties.
- **Joint Statement:** A joint statement was issued, highlighting shared areas of cooperation and mutual goals.

These developments underscore the multifaceted nature of the India-Indonesia relationship and its potential for future growth.

Significance of India-Indonesia Relations

• Mutual Benefits of Bilateral Cooperation

The strategic partnership between India and Indonesia is built on shared interests and mutual benefits across various domains:

- **Economic Engagement:** The India-Indonesia Economic and Financial Dialogue (EFD Dialogue) (2023) enhances economic collaboration and develops a shared understanding of global economic issues.
- **Maritime Security:** Both countries are committed to ensuring the security of key maritime routes like the Straits of Malacca and Singapore (SOMS), enhancing cooperation in regional maritime mechanisms.
- **Defence and Security:**
 - Strategic and operational cooperation between defence forces is evident through joint exercises like Garuda Shakti (Army), Samudra Shakti (Navy), and India-Indonesia Coordinated Patrol (CORPAT).
 - Progress on technology transfer, including discussions on Brahmos missile collaboration, showcases deepening defence ties.
- **Multilateral Cooperation:**
 - Both nations coordinate closely on multilateral forums like the United Nations (UN) and G20, focusing on reformed multilateralism.
 - Indonesia's membership in BRICS further strengthens the alignment of the two countries in global governance.

- **Infrastructure & Connectivity:** India's Development Partnership with the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) helps enhance regional infrastructure and connectivity.
- **Cultural and Heritage Cooperation:** The Cultural Exchange Programme (2025-2028) promotes deeper cultural ties, while the annual Bali Jatra festival commemorates the historic maritime trade and cultural exchange between India (Odisha) and Indonesia (Bali).
- **Other Areas of Collaboration:** Both nations condemn all forms of terrorism and collaborate in Digital Public Infrastructure (DPI), cybersecurity, and global health initiatives.

India's Key Interests in the Relationship

India's strategic interests in fostering strong ties with Indonesia include:

- **Trade:** Indonesia is India's second-largest trading partner in the ASEAN region (after Singapore). Bilateral trade has grown significantly from \$4.3 billion in 2005-06 to \$29.40 billion in 2023-24.
- **Geostrategic Significance:** India's assistance in the development of Sabang Port in Aceh (Indonesia) aligns with its SAGAR (Security and Growth for All in the Region) initiative, boosting maritime connectivity and providing a strategic advantage in the Indo-Pacific region.
- **Internationalization of the Indian Rupee:** A MoU on Local Currency Settlement Systems (LCSS) was signed to facilitate the use of local currencies for bilateral trade, reducing reliance on the dollar.
- **Health and Pharmaceuticals:** India and Indonesia are collaborating on Digital Health initiatives, and India is sharing its best practices and capacity-building programs for Indonesian healthcare professionals.

Indonesia's Key Interests in the Relationship

Indonesia benefits from its relationship with India through:

- **Market Access:** India is a key export destination for Indonesia, particularly as the second-largest buyer of coal and crude palm oil.
- **Investment:** Indian companies have made substantial investments in infrastructure, power, textiles, steel, and automotive sectors in Indonesia. Notably, GMR Airports Limited is involved in developing and operating the Kualanamu International Airport in Medan.
- **Climate Change and Disaster Resilience:**
 - Indonesia is vulnerable to natural disasters like earthquakes and tsunamis.
 - India has been involved in Humanitarian Assistance and Disaster Relief (HADR) activities, and Indonesia is part of India-led initiatives like the Coalition for Disaster Resilient Infrastructure (CDRI).
- **Food Security:** India has supported Indonesia's mid-day meal scheme, sharing knowledge and experience to ensure food security for its population.

- **Space Cooperation:** India's ISRO is working with Indonesia's BRIN (National Research and Innovation Agency) on satellite telemetry and tracking systems, enhancing space cooperation.
- **Education and Skill Development:** India offers training through the Indian Technical and Economic Cooperation (ITEC) Programme and under the ASEAN-India Network of Universities (AINU), contributing to skill development in Indonesia.

Challenges in India-Indonesia Relations

Despite the strong foundation, some challenges need to be addressed to fully realize the potential of the relationship:

- **Unrealized Trade Potential:**
 - The bilateral trade potential between India and Indonesia stands at \$61 billion, which is about 33% higher than the current trade volume.
 - Factors like high tariffs, non-tariff barriers, and limited utilization of the India-ASEAN Free Trade Agreement (FTA) are hindering full trade potential.
- **China's Influence:** China's significant presence in Indonesia, particularly through investments under the Belt and Road Initiative (BRI), raises concerns for India, especially in strategic sectors like infrastructure and energy.
- **Slow Progress of Strategic Projects:** Strategic initiatives like Brahmos missile deals and Sabang Port development have faced slow progress due to various economic and geopolitical challenges.

PEPPER IT WITH:
 India relationship with south east Asian countries, Defence collaboration.

Way Forward: Enhancing India-Indonesia Cooperation



Conclusion

The 75th Anniversary of India-Indonesia Diplomatic Relations marks a significant milestone in a partnership characterized by mutual respect, strategic alignment, and growing cooperation. By addressing existing challenges and focusing on identified areas of convergence, both nations can forge an even stronger and more dynamic relationship that contributes to regional stability and prosperity.

Amir of Qatar's Second Visit to India: Strengthening Bilateral Relations

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Sheikh Tamim bin Hamad Al Thani, the Amir of Qatar, visited India marking his second state visit since March 2015. This visit was significant as it coincided with the **India-Qatar Joint Business Forum**, where ministers and key figures from various sectors, including finance, energy, infrastructure, and technology, convened to discuss collaborative opportunities.

Key Highlights of the Visit

- **Condemnation of Terrorism:** Both leaders strongly condemned terrorism in all its forms, including cross-border terrorism, and agreed to enhance cooperation in combating this global threat through bilateral and multilateral efforts.
- **Bilateral Ties Reinforcement:** The visit followed previous engagements by India's External Affairs Minister S. Jaishankar in Doha in June and December 2024, emphasizing the growing importance of India-Qatar relations.

Bilateral Trade Relationship

Qatar plays a crucial role in India's energy security, particularly through **Liquefied Natural Gas (LNG)** imports. As of 2024:

- **Bilateral Trade:** India is Qatar's second-largest trading partner, with bilateral trade reaching **\$14 billion**. Both countries aim to double this figure to **\$28 billion** over the next five years.
- **Strategic Partnership:** The visit resulted in the elevation of India-Qatar relations to a **Strategic Partnership**, reflecting a significant shift in their diplomatic ties.

Economic and Trade Developments

- **LNG Agreements:**
 - QatarEnergy secured a **5-year agreement** to supply **12 LNG cargoes per year** to India's GAIL.
 - A landmark **20-year LNG deal worth \$78 billion** was signed, projected to save India at least **\$6 billion** in energy costs.
- **Investment Commitments:**
 - Qatar committed to investing **\$10 billion** in India, focusing on infrastructure, energy, and technology sectors.



2. **Recent Developments Post-Blockade:**

- Despite regional tensions, Qatar has continued to foster strong ties with India.
- The unveiling of the **India-Middle East Economic Corridor (IMEEC)** in September 2023 has opened avenues for collaboration despite initial bypassing of Qatar.

Bilateral Agreements and MoUs Signed

During this visit, several significant agreements were signed:

1. **Strategic Partnership Agreement:** Elevating bilateral relations.
2. **Revised Double Taxation Agreement:** Preventing fiscal evasion related to income taxes.
3. **MoUs Signed Include:**
 - Financial and Economic Cooperation between respective finance ministries.
 - Cooperation in Youth Affairs and Sports.
 - Cooperation in Documents and Archives.
 - Collaboration between Invest India and Invest Qatar.

- A new **Bilateral Investment Treaty (BIT)** is being negotiated to accommodate Qatari investment needs.
- **Joint Business Forum:**
 - The forum highlighted collaborative efforts between Indian and Qatari businesses, aiming to strengthen economic ties.

Geopolitical Considerations

The visit occurs during a pivotal time for Qatar as it plays a key role in Middle Eastern geopolitics:

- **Mediation Role:** Qatar has been instrumental in mediating conflicts such as the Gaza ceasefire in January 2025 and hosting diplomatic negotiations with groups like the Taliban.
- **Regional Stability:** The Saudi-led blockade from 2017-2021 forced Qatar to diversify its trade routes and strengthen relations with countries like India.

Historical Context of India-Qatar Relations

1. **Past Diplomatic Engagements:**
 - Prime Minister Modi's personal engagement with Qatar focused on labor reforms for Indian workers and resolving issues like the \$1 billion penalty faced by India's PetroNet.
 - The blockade significantly impacted bilateral efforts; however, India maintained a constructive dialogue throughout this period.

- Partnership between Confederation of Indian Industry (CII) and Qatari Businessmen Association.

Looking Forward

The new Strategic Partnership between India and Qatar emphasizes deepening ties across various sectors:

- Both nations are committed to doubling trade and expanding investments, which could significantly influence regional stability and global energy markets.
- The potential for an **India-Qatar Free Trade Agreement (FTA)** is also under consideration as both sides seek to enhance economic cooperation further.

Conclusion

The Amir of Qatar's second visit to India marks a pivotal moment in strengthening bilateral relations that span trade, energy security, investment, and geopolitical collaboration. With mutual commitments solidified through various agreements and a shared vision for future cooperation, the relationship between India and Qatar is poised for significant growth in the coming years.

PEPPER IT WITH:

India	West	Asia
relationship,		India's
Energy		security
collaboration.		

India-Europe Partnership: Strengthening Ties Through European Commission Delegation Visit

News Excerpt:

In February 2025, a significant milestone in India-EU relations was marked by a delegation of **22 members** from the **European Commission (EC)**, led by President **Ursula von der Leyen**, who visited New Delhi for a **two-day** engagement. This marked the **first-ever** visit by the full College of Commissioners since taking office in December 2024, and their first joint visit to India. The visit signifies a new phase in India-EU relations, entering the third decade of their Strategic Partnership.

GS CONNECT										
GS	I	II	III	IV	GS	I	II	III	IV	
1					7					
2					8					
3					9					
4					10					
5					11					
6					M					



Significance of the Visit

The visit focused on enhancing cooperation across various key sectors, driving forward the **EU-India Strategic Partnership: A Roadmap to 2025**.

Strategic Cooperation & Global Governance

- **Key Focus:** Strengthening trade, investment, digitalization, climate change initiatives, security, global governance, and climate resilience.
- **Objectives:** Promoting sustainable growth and technological advancement.

Energy & Climate Action

- **Initiatives:** EU-India Clean Energy and Climate Partnership, EU-India Green Hydrogen Partnership.
- **Focus Areas:**
 - Collaboration in renewable energy and smart grids.
 - Promoting green hydrogen and offshore wind energy.
 - Developing policy frameworks and pilot projects.
- **Key Figures:**
 - €1 billion fund from the European Investment Bank (EIB) to support clean energy projects.

Sustainable Consumption & Production

- **Initiative:** SWITCH-Asia Programme.
- **Key Objectives:**
 - Eco-friendly manufacturing, waste management, and sustainable consumer practices.
 - Advancing circular economy initiatives to reduce environmental footprint.

Trade & Economic Cooperation

- **Initiative:** EU-India Trade and Technology Council (TTC).
- **Focus Areas:**
 - Enhancing digital governance and trade resilience.
 - Promoting green technology partnerships and supply chain diversification.
 - Reducing economic dependence on single-market sources.
- **Objectives:**
 - Creating future-ready economies with strong trade and technology collaboration.
 - Promoting green bonds for sustainable infrastructure and climate projects.
 - Strengthening climate finance frameworks to attract private investments in clean energy.

Sustainable Urbanization & Connectivity

- **Initiatives:** EU-India Connectivity Partnership, India-EU Urban Forum.
- **Key Objectives:**
 - Enhancing digital and physical infrastructure.
 - Improving supply chains, logistics, transport networks, and cross-regional economic integration.
 - Facilitating dialogue on best practices for sustainable urban development.
 - Creating smarter, greener, and more inclusive urban spaces.

Social Development & Gender Equality

- **Initiative:** We Empower India Initiative.
- **Objectives:**
 - Strengthening gender equality and women's participation in clean energy and sustainable industries.
 - Supporting female entrepreneurship and inclusive business models.
 - Boosting women's economic participation in green and sustainable industries.

Historical Context of India-EU Relations

Diplomatic Relations

- **1962:** India and the European Economic Community (EEC) established diplomatic relations.
- **1993-1994:** Joint Political Statement and Cooperation Agreement laid the foundation for further strengthening ties.

Strategic Partnership

- **2004:** Formalized during the 5th India-EU Summit in The Hague.

- **Summits:** 15 summits held since 2000, progressively upgrading India-EU relations.

Bilateral Engagement

- **Meetings:** Prime Minister Narendra Modi and EC President Ursula von der Leyen have met at least 7 times.
- **Visit:** President von der Leyen visited India in April 2022, participating in the Raisina Dialogue as Chief Guest.

Trade and Economic Relations

- **Bilateral Trade in Goods (FY 2023-24):** \$135 billion (90% increase over the past decade).
 - Indian Exports to the EU: \$76 billion.
 - Indian Imports from the EU: \$59 billion.
- **Trade in Services (2023):** \$53 billion.
 - Indian Exports: \$30 billion.
 - Indian Imports: \$23 billion.
- **Foreign Direct Investment (FDI):**
 - FDI from the EU (April 2000 - September 2024): \$117.4 billion (16.6% of total FDI equity inflows).
 - Indian FDI outflows to the EU (April 2000 to March 2024): \$40.04 billion.

Technological Cooperation

- **Science and Technology Cooperation Agreement:** Established in 2007.
- **Key Initiatives:**
 - Semiconductor R&D: MoU signed in November 2023 for joint R&D efforts.
 - Artificial Intelligence (AI): Participation in the Global AI Summit in New Delhi (2023).
 - High-Performance Computing (HPC): Intent of Cooperation signed in November 2022.
- **Objectives:**
 - Countering technological dominance, particularly in semiconductors and AI.

Green Energy Solutions

- **India-EU Green Hydrogen Cooperation:**
 - India was the exclusive partner at European Hydrogen Week in Brussels (November 2024).
 - The EU played a key role in the International Conference on Green Hydrogen held in Delhi (September 2024).
 - The European Investment Bank has committed €1 billion to support Indian hydrogen projects.
- **Objectives:** Developing a green hydrogen ecosystem by 2030 with European collaboration, particularly in renewable energy.

People-to-People Ties

- **Indian Diaspora in the EU:** Significant growth in the Indian community, including students, researchers, and skilled professionals.
- **Erasmus Scholarships:** Over 6,000 scholarships awarded to Indian students in the last 20 years.

- **Marie Skłodowska-Curie Actions:** 2,700 Indian researchers funded under the EU's Horizon Europe program since 2014.

- **EU Blue Cards:** 20% of all EU Blue Cards issued in 2023-24 went to Indian professionals.

Defence and Space Cooperation

- **Defence Cooperation:**
 - Focus on maritime security in the Indo-Pacific region.
 - Joint naval exercises conducted in October 2023 in the Gulf of Guinea.
 - Growing cooperation on global security, counter-terrorism, piracy, and natural disaster management.
- **Space Cooperation:**
 - ISRO and the European Space Agency (ESA) collaborated on PSLV launch for the PROBA-3 mission in December 2024, Chandrayaan-3, and Aditya-L1 missions.
 - MoU signed for cooperation on India's Gaganyaan human spaceflight mission.

PEPPER IT WITH:

India and EU relationship, Trade & defence collaboration with EU.

About the European Union (EU)

The European Union (EU) is a unique political and economic union consisting of **27 member states**, founded with the goal of fostering peace and preventing future wars in Europe after World War II.

Core Principles:

- Promoting economic and social progress.
- Upholding values of respect for human dignity, freedom, democracy, equality, the rule of law, and human rights.

Key Features:

- Single market allowing free movement of goods, services, capital, and people.
- Key institutions include the European Parliament, the European Council, the European Commission, and the Court of Justice of the European Union.
- Eurozone: A monetary union of member states that have adopted the euro.

Key Policies:

- Common policies in trade, agriculture, environment, and justice and home affairs.

Conclusion

The European Commission Delegation's visit to India in February 2025 underscores the deepening strategic partnership between India and the EU. With enhanced cooperation across trade, technology, green energy, and defense, the relationship is set to address global challenges and foster sustainable development. The strengthened ties through agreements and initiatives are poised to benefit both regions, promoting economic growth and geopolitical stability.

Far-Right AfD is Popular in Once-Communist East Germany

News Excerpt:

The Alternative for Germany (AfD), a **far-right political party**, has gained **strong support in the eastern regions of Germany**, particularly in states that were formerly part of East Germany (the German Democratic Republic or GDR). While the party remains controversial across Germany, its **popularity in the east has surged**, with some states seeing AfD polling at **over 30-38% of the vote**. This phenomenon is rooted in a mix of **historical, economic, cultural, and political factors** that distinguish East Germany from the more affluent and politically moderate West.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



The Economic Divide Between East and West Unfulfilled Promises of Reunification

- After the fall of the Berlin Wall in 1989 and Germany's reunification in 1990, many eastern Germans **expected rapid economic progress and social integration**.
- However, while reunification **brought democracy and modernization**, it also led to **mass unemployment, factory closures, and economic instability** in the east.
- More than **2 million people left eastern Germany** for better job opportunities in the west, leading to **depopulation, aging communities, and economic stagnation**.
- **Even today, wages in eastern Germany remain lower** than in the west, and unemployment rates are **higher**.
- The AfD capitalizes on these frustrations, **framing itself as the party that speaks for the "forgotten" eastern Germans**.

Political and Social Discontent

Feeling of Being Treated as "Second-Class Citizens"

- Many eastern Germans feel that, even decades after reunification, they are **still treated as inferior to western Germans**.
- The political establishment, including the **center-left SPD and center-right CDU**, is often seen as representing western interests rather than addressing **eastern grievances**.

- The AfD appeals to this sentiment by positioning itself as a **protest party against the "West-dominated elite"**.

Distrust in Mainstream Politics

- Eastern Germany has a long history of **state control and skepticism toward government authority** due to its past under the communist regime of the GDR.
- The AfD has successfully tapped into this **anti-establishment mindset**, portraying itself as an outsider force fighting against Berlin's political elites.
- Many eastern voters believe that mainstream parties **ignore their concerns on issues like immigration, economic fairness, and national identity**.

Immigration and Cultural Identity Concerns

Fear of Losing National and Cultural Identity

- The AfD has gained traction by **criticizing immigration policies**, particularly the influx of refugees and migrants, which many eastern Germans perceive as a **threat to German culture and traditions**.
- Even though immigration levels are generally **lower in the east compared to western Germany**, opposition to migration is often **stronger** in the east.
- The **2015 refugee crisis**, when Germany admitted over **a million asylum seekers**, intensified these fears, with the AfD arguing that the government was prioritizing immigrants over native Germans.

Resistance to Multiculturalism

- Eastern Germany is **less diverse** than western regions, leading to a **stronger attachment to traditional German identity**.
- The AfD has successfully **amplified fears** that German culture is under threat from globalization and liberal social policies.
- The party frequently **opposes LGBTQ+ rights, feminism, and progressive social movements**, resonating with more conservative eastern voters.

Historical and Psychological Factors

Legacy of the German Democratic Republic (GDR)

- Under communist rule, **the GDR was isolated from Western democracy and capitalism**, fostering a **different political mindset**.
- **Authoritarianism, centralized control, and propaganda shaped public thinking**, making some older generations **more susceptible to nationalist rhetoric**.
- The AfD's messaging often draws on themes of **strong leadership, national pride, and skepticism toward Western influence**, echoing some aspects of GDR-era ideology.

Protest Voting and Political Extremism

- Eastern Germany has a history of **strong protest movements**—before reunification, opposition groups fought against the communist regime.
- Since the 1990s, eastern Germany has **supported political extremes**, including:

- The **far-left Die Linke**, which attracted former GDR supporters.
- Now, the **far-right AfD**, which appeals to those disillusioned with modern democracy.
- AfD's rise is often **less about pure ideological alignment** and more about voters **expressing dissatisfaction with mainstream politics**.

How the AfD Uses Social Media and Grassroots Mobilization

Direct Outreach to Voters

- The AfD has a strong **social media presence**, particularly on platforms like **Telegram and Facebook**, where it spreads its anti-establishment message.
- Unlike traditional parties, AfD candidates **engage with local communities, attend small-town events, and focus on direct voter contact**, making them seem more relatable.

Blaming the EU and Globalization

- The AfD also uses its platform to criticize **the European Union (EU)**, claiming that Germany **loses sovereignty and resources** by participating in EU policies.
- The party argues that **Germany should focus on its own citizens first**, a message that resonates with **economically struggling eastern regions**.

Implications for Germany's Future

Growing Political Polarization

- The AfD's success has **widened the political divide between eastern and western Germany**.
- Traditional parties like **CDU, SPD, and the Greens** are struggling to counter the AfD's appeal in the east.

Democratic Challenges

- The AfD has been accused of **promoting xenophobia, conspiracy theories, and nationalist propaganda**.
- Mainstream parties are debating whether to **engage with the AfD in coalitions or completely isolate them**.

Upcoming Elections and AfD's Future

- In **2024 and 2025, several state elections will take place in eastern Germany**, where the AfD is projected to perform **strongly**.
- If the AfD gains control of **state governments**, it could significantly influence **German national politics**.

Impact of AfD's on Germany relationship with world Shift in Foreign Policy Orientation

- **Nationalism vs. Multilateralism:** The AfD's nationalist agenda may lead to a shift away from Germany's traditionally multilateral approach to foreign policy, favoring bilateral agreements that prioritize German interests over collective European goals.

- **Reduced Commitment to EU Policies:** The AfD has been critical of the European Union (EU) and may push for a reevaluation of Germany's role within the EU, potentially undermining collaborative efforts on issues like climate change, trade, and security.

Impact on EU Dynamics

- **Strengthening Euroscepticism:** The AfD's rise could embolden other Eurosceptic parties across Europe, leading to increased fragmentation within the EU and challenges to its unity.

Immigration and Asylum Policies

- **Tougher Stance on Immigration:** The AfD advocates for strict immigration controls and policies that may lead to a more isolationist approach. This could strain Germany's relationships with countries that rely on Germany for support in managing migration flows.

Relations with Eastern Europe

- **Support for Right-Wing Governments:** The AfD's rise may strengthen ties with other far-right parties in Eastern Europe, such as Hungary's Fidesz or Poland's Law and Justice party. This could alter Germany's approach to issues like rule of law and democratic governance within the EU.

Economic Implications

- **Trade Relations:** The AfD's protectionist tendencies might lead to a reevaluation of trade agreements, potentially harming Germany's export-driven economy and its relationships with key trading partners.
- **Investment Climate:** Increased political instability due to far-right influence may deter foreign investment, affecting Germany's economic partnerships globally.

Security Alliances

- **NATO Relations:** The AfD has expressed skepticism towards NATO and may advocate for a reduced military presence in Europe. This could weaken Germany's commitments to collective security arrangements and its relationships with allies, particularly the United States.
- **Counterterrorism Cooperation:** A shift in focus towards domestic issues might hinder Germany's participation in international counterterrorism efforts, impacting cooperation with other nations.

Conclusion: A Complex Political Shift

- The AfD's popularity in **former East Germany is rooted in economic struggles, political disillusionment, cultural anxieties, and historical experiences**.
- While some voters support the party for its **strong nationalist and anti-immigration stance**, others use it as a **protest vote against mainstream parties**.
- As **eastern and western Germany continue to diverge politically**, the rise of the AfD poses **serious challenges for Germany's political stability, democracy, and future policymaking**.

PEPPER IT WITH:
India and EU relationship,
India Germany relationship.

ENVIRONMENT

The Necessity of Mainstreaming Wetland Conservation

News Excerpt:

Wetlands are among the most **productive ecosystems** on Earth, providing **critical ecological, economic, and social benefits**. They serve as **biodiversity hotspots, natural water purifiers, and climate regulators**, yet they are often undervalued and face rapid degradation due to **urbanization, pollution, and unregulated development**. **Mainstreaming wetland conservation** into national policies and regional planning is crucial for **sustainable environmental management and climate resilience**.

GS CONNECT									
GS	I	II	III	IV	GS	I	II	III	IV
1					7				
2					8				
3					9				
4					10				
5					11				
6					M				

The Importance of Wetlands

Rich Biodiversity and Habitat Conservation

- **Wetlands support a diverse range of flora and fauna**, including many **endangered species**.
- They serve as **breeding grounds for fish, birds, amphibians, and insects**.
- Several wetlands in India, like the **Sundarbans, Chilika Lake, and Loktak Lake**, are **Ramsar Sites**, recognized for their **global ecological significance**.

Essential Ecosystem Services

- **Natural Water Filters:** Wetlands act as **sponges**, filtering **pollutants** and **purifying water** naturally.
- **Flood Control:** They help in **absorbing excess rainwater**, reducing **flood risks** in urban and rural areas.
- **Groundwater Recharge:** Many wetlands **store rainwater**, replenishing **underground aquifers** and ensuring **water availability** during dry seasons.
- **Carbon Sequestration:** Wetlands absorb and store **large amounts of carbon**, helping in **climate change mitigation**.

Economic Value and Livelihood Support

- Wetlands support **agriculture, fisheries, and tourism**, contributing **significantly to local economies**.
- **Sustainable aquaculture and ecotourism** in wetland regions provide **employment and income** for local communities.
- In India, the **East Kolkata Wetlands** demonstrate a **successful model of wastewater-fed aquaculture**, ensuring **both waste management and economic benefits**.

Challenges in Wetland Conservation

Urban Expansion and Infrastructure Development

- Rapid **urbanization** leads to **encroachment and reclamation** of wetland areas for **housing, industries, and roads**.

- **Unplanned development destroys wetland ecosystems, reducing their ability to provide essential services.**

Pollution and Water Contamination

- **Industrial discharge, agricultural runoff, and domestic sewage** pollute wetlands, affecting **water quality and aquatic life**.
- The accumulation of **pesticides, heavy metals, and plastics** leads to the **decline of biodiversity and ecosystem degradation**.

Climate Change Impact

- **Irregular rainfall, rising temperatures, and extreme weather events** threaten the stability of wetland ecosystems.
- **Droughts and changing water levels** disrupt **fish populations, migratory bird patterns, and plant life**.

Lack of Policy Integration and Conservation Efforts

- In many regions, **wetlands are not given legal protection** and are often considered **wastelands**, leading to their **destruction for economic gain**.
- **Lack of awareness and inadequate funding** result in poor **conservation and restoration efforts**.

Strategies for Mainstreaming Wetland Conservation

Integrated Policy Frameworks

- **Develop national and state-level policies** that integrate **wetland conservation into urban planning, agriculture, and climate adaptation strategies**.
- **Strengthen legal protections** by **designating wetlands as protected areas** under the **Environment Protection Act** and the **Wetlands (Conservation and Management) Rules**.

Community Engagement and Traditional Knowledge

- Local communities **depend on wetlands for their livelihoods**; therefore, **their participation in conservation efforts is crucial**.
- Encouraging **traditional wetland management practices**, such as **sustainable fishing and organic farming**, can support **both conservation and economic growth**.

Economic Incentives for Conservation

- Implement **Payment for Ecosystem Services (PES) programs**, where communities and industries are **financially incentivized to protect wetlands**.
- Promote **eco-tourism initiatives** that generate **revenue for conservation and local livelihoods**.

Research, Monitoring, and Data Collection

- Conduct **scientific research and regular monitoring** to assess **wetland health, biodiversity, and climate impacts**.
- Use **GIS and remote sensing technology** to track **wetland loss, pollution levels, and ecosystem changes**.

Awareness Campaigns and Education

- Promote **public awareness programs** highlighting the **importance of wetlands in climate resilience and biodiversity conservation**.
- Encourage **student participation** in **wetland restoration projects** and **community-driven clean-up drives**.

Case Study: The East Kolkata Wetlands – A Model for Sustainable Wetland Management

- The **East Kolkata Wetlands** in India serve as an **example of effective wetland conservation and sustainable use**.
- These wetlands are **naturally designed wastewater treatment systems, recycling city sewage and supporting large-scale fish farming**.
- By **combining traditional knowledge with modern conservation practices**, this model ensures **both ecological balance and economic benefits**.

PEPPER IT WITH:
Biodiversity Conservation, Wetland conservation acts.

Initiative/ Agreement	Description
Ramsar Convention (1971)	An international treaty aimed at the conservation and sustainable use of wetlands worldwide.
Montreal Protocol (1987)	While primarily focused on ozone layer protection, it indirectly supports wetland conservation by reducing pollutants affecting wetland ecosystems.
Convention on Biological Diversity (CBD)	An international agreement aimed at conserving biological diversity, including wetland habitats.
Clean Water Act (1972, USA)	A U.S. law that regulates discharges of pollutants into waters, including wetlands, to protect water quality.
National Wetlands Inventory (NWI, USA)	A program that maps and assesses the status of wetlands in the United States to support conservation efforts.
EU Water Framework Directive (2000)	A European Union directive that aims to protect and enhance the quality of water bodies, including wetlands.
Wetlands for the Future (WFF)	A regional initiative in Latin America and the Caribbean aimed at promoting sustainable wetland management.
Global Environment Facility (GEF)	An international financial organization that funds projects aimed at environmental sustainability,

	including wetland restoration and conservation.
Wetlands International	A global non-profit organization dedicated to the conservation and restoration of wetlands worldwide through advocacy and project implementation.
Coastal Zone Management Act (1972, USA)	U.S. legislation that promotes the protection of coastal and marine ecosystems, including wetlands along coastlines.

Conclusion

- **Mainstreaming wetland conservation** is crucial for **biodiversity protection, climate resilience, and sustainable development**.
- **A multi-stakeholder approach**, involving **government, communities, industries, and researchers**, is necessary to **integrate wetlands into national environmental policies**.
- By adopting **strong conservation frameworks, promoting sustainable wetland use, and raising awareness**, wetlands can continue to provide **vital ecosystem services and economic benefits for future generations**.

The Impact of Ethanol on the Environment

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Ethanol, a biofuel derived primarily from **corn, sugarcane, and other biomass sources**, is often seen as an **eco-friendly alternative to fossil fuels**. While it has **potential benefits**, including **reducing dependence on petroleum and lowering greenhouse gas emissions**, its **environmental impact is complex**. Large-scale **ethanol production** raises concerns about **land use, water consumption, biodiversity loss, and air quality**.

Ethanol and Greenhouse Gas Emissions

Potential Reduction in Carbon Emissions

- **Ethanol combustion** releases **less carbon dioxide (CO₂)** than gasoline, contributing to lower emissions.
- Studies suggest that **corn-based ethanol reduces emissions by around 40% compared to gasoline**, while **sugarcane-based ethanol can reduce emissions by up to 80%**.
- **Cellulosic ethanol** (made from agricultural waste and non-food plants) has the **lowest carbon footprint** among ethanol types.

Land-Use Changes and Carbon Footprint

- Converting **forests and grasslands into ethanol crop farms** can **release stored carbon into the atmosphere**, potentially **offsetting the benefits** of ethanol use.

- The **process of planting, harvesting, and refining ethanol** requires energy, sometimes leading to **higher lifecycle emissions** than conventional fuels.

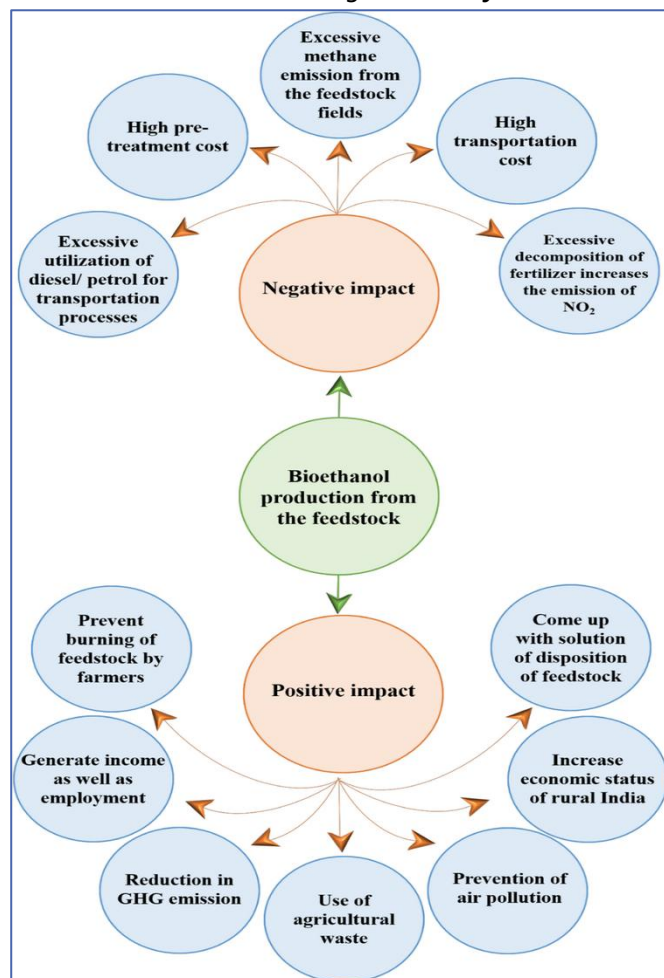
Impact on Land Use and Agriculture

Agricultural Land Allocation

- A **significant portion of arable land** is used for ethanol production, affecting food security.
- In the **United States, around 40% of corn crops** are dedicated to ethanol production instead of food supply.
- **Expanding farmland** for ethanol can lead to **deforestation, soil degradation, and habitat loss**.

Monoculture and Soil Degradation

- Large-scale **monoculture farming** (growing only one crop) for ethanol production depletes **soil nutrients**, leading to **long-term fertility issues**.
- **Heavy fertilizer and pesticide use** contaminates **soil and water bodies**, affecting **local ecosystems**.



Water Usage in Ethanol Production

High Water Consumption

- **Ethanol production is water-intensive**, requiring **thousands of liters** per liter of fuel.
- **Corn-based ethanol** has a **higher water footprint** than sugarcane ethanol.
- In **water-scarce regions**, ethanol production can **exacerbate freshwater shortages**.

Water Pollution Risks

- **Fertilizers, pesticides, and industrial waste** from ethanol plants can contaminate **rivers, lakes, and groundwater**.
- **Runoff from cornfields** used for ethanol has contributed to **dead zones** in aquatic ecosystems, such as the **Gulf of Mexico hypoxic zone**.

Air Quality and Pollution Concerns

Ethanol and Air Pollutants

- **Ethanol burns cleaner than gasoline**, reducing **carbon monoxide and sulfur emissions**.
- However, burning **higher ethanol blends** (such as E85) can release **volatile organic compounds (VOCs)**, which contribute to **ground-level ozone (smog)**.
- Ethanol refineries emit **nitrogen oxides (NOx)** and **particulate matter**, affecting **air quality and public health**.

Human Health Risks

- Exposure to **ethanol production emissions** can cause **respiratory issues and eye irritation**.
- Increased use of **ethanol-blended fuels** in cities with high temperatures can worsen **ozone pollution levels**, impacting **asthma and other lung conditions**.

The Energy Balance Debate

Energy Input vs. Output

- The **energy required to grow, harvest, and process ethanol** is a key factor in its sustainability.
- Studies indicate that **corn ethanol barely breaks even in energy gain**, while **sugarcane and cellulosic ethanol have a more positive energy balance**.
- **Advanced ethanol production methods** using **agricultural waste** could **increase efficiency and reduce environmental impact**.

Alternatives to Traditional Ethanol

- **Second-generation (cellulosic) ethanol** offers **better energy efficiency** with a lower environmental impact.
- **Algae-based biofuels** and **synthetic ethanol** are being researched as **next-generation alternatives**.

Policy and Sustainability Considerations

Government Policies and Ethanol Mandates

- Many countries have **blending mandates** requiring a percentage of ethanol in fuel (e.g., **E10, E15, or E85 blends**).
- While these mandates support **energy security**, they must be balanced against **environmental and food security concerns**.

Sustainable Ethanol Production Strategies

- **Adopting sustainable agricultural practices** (crop rotation, organic farming, precision irrigation) can **reduce ethanol's negative environmental impact**.
- **Diversifying biofuel sources** (beyond corn and sugarcane) can **improve resource efficiency and ecosystem balance**.

Conclusion

- While **ethanol is a renewable fuel**, its **environmental impact depends on how it is produced**.
- **Improper land-use practices, excessive water consumption, and air pollution risks can offset its benefits**.
- **A balanced approach, incorporating advanced biofuels, efficient land management, and better energy policies, is necessary to make ethanol a truly sustainable alternative to fossil fuels**.

PEPPER IT WITH:

Ethanol vs crude oil,
Ethanol cycle, Energy Security

Melting Arctic glaciers are a source of methane emissions

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

A team of scientists have discovered that **Arctic glaciers** are leaking significant amounts of **methane**, a potent greenhouse gas, into the atmosphere. In their analysis, the scientists found that **glacial melt rivers and groundwater springs** release **large volumes of methane from beneath** the ice to the atmosphere. The findings were mentioned in a study, '**Proglacial methane emissions driven by meltwater and groundwater flushing in a high-Arctic glacial catchment**', which was published in the journal Biogeosciences.

Sources of Methane in the Arctic



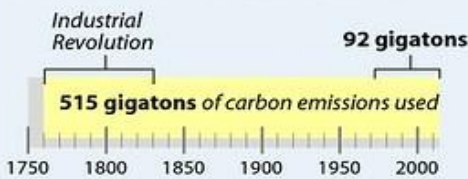
Thawing Permafrost: A Slow, Giant Carbon Release

The thawing permafrost is on track to release a massive store of long-buried CO₂ and methane into earth's atmosphere — 92 gigatons by 2100 — enough to blow through one-third of the remaining "carbon budget." That could more than double in the centuries that follow if current trends of fossil fuel-burning continue.

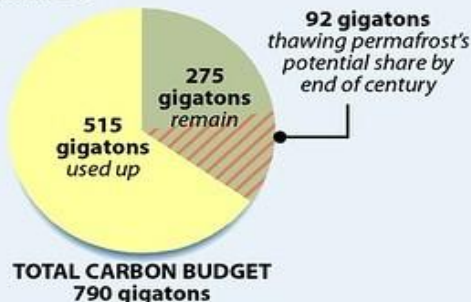
What is 92 Gigatons of Carbon?

It's equal to:

- ▼ **17.9%** of worldwide carbon emissions since the start of the Industrial Revolution.



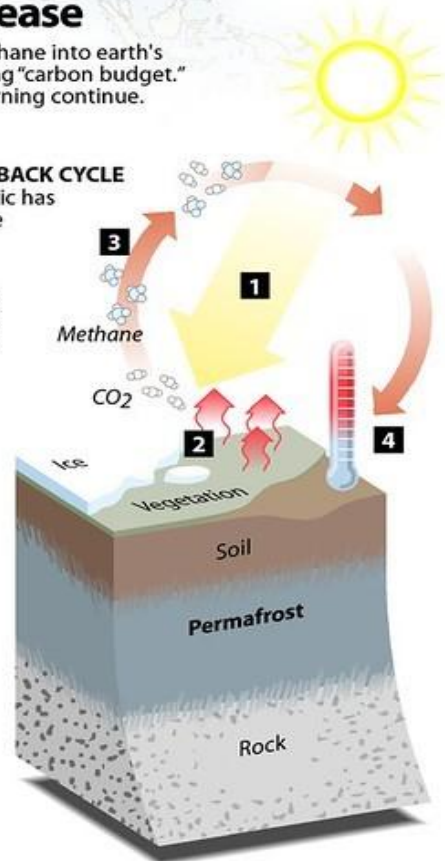
- ▼ **33.5%** of the total greenhouse gases that can be released and still keep global warming within 2°C.



PERMAFROST CARBON FEEDBACK CYCLE

Over the past 35 years, the Arctic has warmed at twice the rate of the rest of the globe.

- 1 As it heats up, ice is turning to water and the permafrost is turning to mud, setting off a slow, irreversible feedback system that will last hundreds of years.
- 2 As the soil thaws, carbon (in the form of dead plants) that's been locked in the soil for thousands of years is broken down by microbial decomposition.
- 3 The decomposition results in the release of both CO₂ and methane, which are released into the atmosphere.
- 4 The CO₂ and methane warm the globe further, causing more thawing of the permafrost, and more release of greenhouse gases.



Permafrost Thawing

- Large amounts of **methane and carbon dioxide** have been trapped in Arctic permafrost (permanently frozen ground) for thousands of years.
- Rising temperatures are now **thawing the permafrost**, causing these gases to be released into the atmosphere.
- This process **amplifies climate change**, as methane is **80 times more potent** than carbon dioxide over a 20-year period.

Methane Clathrates in the Arctic Ocean

- Methane in the Arctic is also stored in **clathrates**, which are ice-like structures containing methane gas.
- As **ocean temperatures rise**, these clathrates become unstable and start releasing **large quantities of methane** into the water and eventually into the atmosphere.
- If destabilization continues, this could lead to **uncontrollable methane release**, further accelerating global warming.

Impact of Sea Ice Decline

Loss of Albedo Effect

- Arctic ice plays a crucial role in **reflecting sunlight** (high albedo effect), keeping the region cool.
- As more ice melts, the exposed ocean absorbs **more heat**, increasing water temperatures.
- This **reinforces the warming cycle**, leading to **more ice melt and higher methane emissions** from both land and sea.

Impact on Weather Patterns

- Changes in Arctic temperatures **disrupt global weather patterns**, leading to:
 - More **frequent heatwaves**
 - **Unpredictable monsoons**
 - Increased **storm intensity**

Recent Scientific Observations

The Arctic Has Become a Net Emitter

- Historically, Arctic ecosystems absorbed carbon dioxide, **helping to balance global carbon levels**.
- However, new research shows that the Arctic has **shifted to being a net greenhouse gas emitter**, primarily due to permafrost thawing and wildfires.

The Arctic is Warming Faster Than the Rest of the World

- Scientists have found that the Arctic is warming **four times faster than the global average**.
- This **rapid warming** is leading to irreversible climate shifts, including rising sea levels and ecosystem disruptions.

Global Implications of Arctic Methane Release

Rising Sea Levels

- The melting of Arctic glaciers contributes directly to **rising sea levels**, threatening **coastal cities worldwide**.

- If emissions continue unchecked, major cities like **Mumbai, New York, and Jakarta** could face severe flooding.

Dangerous Climate Feedback Loops

- The release of methane triggers a **self-reinforcing feedback loop**:
- Rising temperatures cause **permafrost to thaw**.
- Thawed permafrost releases **methane**, further increasing temperatures.
- Warmer temperatures lead to **more permafrost melting**.
- This cycle **continues unchecked**, making climate mitigation much harder.

Increased Need for Global Climate Action

- To prevent catastrophic warming, **urgent action is needed** to curb greenhouse gas emissions.
- Policies promoting **renewable energy, carbon capture, and emissions reductions** are crucial in slowing Arctic melt and methane release.

PEPPER IT WITH:

Glacier melting impact,
Carbon impact on
environment.

Conclusion

- The Arctic’s methane emissions are **a major threat to global climate stability**. The region is experiencing **rapid warming, permafrost thaw, and increased methane release**, all of which contribute to accelerating climate change.
- Scientists warn that if emissions are not controlled, we may **reach a tipping point** where Arctic warming becomes **unstoppable**, leading to **catastrophic consequences worldwide**.

Study Identifies Sources of PM2.5

News Excerpt:

A recent study has analyzed the sources and health impacts of **PM2.5**, a fine particulate pollutant, in Northern India, particularly in highly polluted urban areas such as **Delhi and surrounding regions**. PM2.5 is considered highly hazardous due to its ability to **penetrate deep into the lungs** and even enter the bloodstream, leading to **serious health concerns**.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

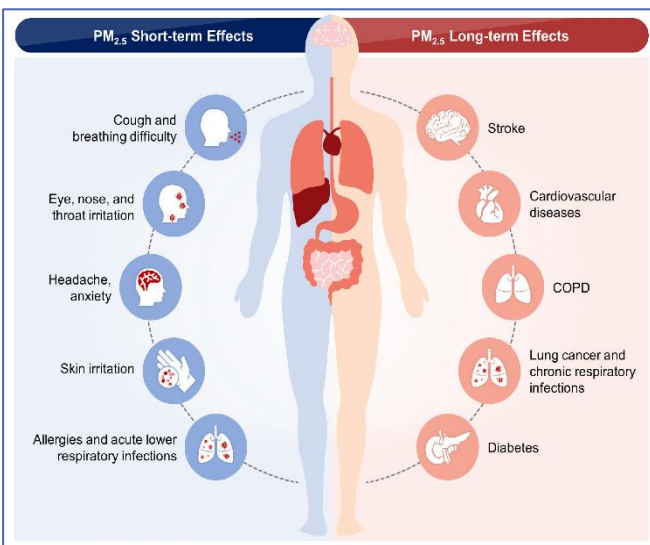
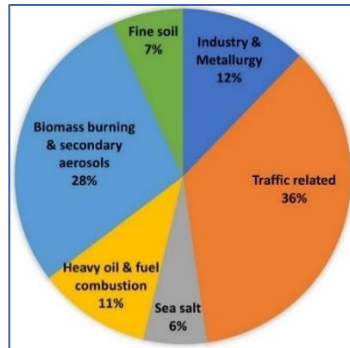
Primary Sources of PM2.5 Pollution

Vehicular Emissions

- The rapid growth in **vehicle numbers**, especially in metropolitan areas, has significantly increased PM2.5 levels.
- Emissions from **diesel and petrol engines** contribute significantly to air pollution.

Industrial Activities

- Industries in and around urban centers release large amounts of **particulate matter** through burning fossil fuels.
- Coal-based power plants** and manufacturing hubs are major contributors to worsening air quality.
- Construction Dust**
 - The **continuous construction of buildings, roads, and infrastructure** generates high levels of dust.
 - Lack of dust control measures further exacerbates PM2.5 levels.
- Crop Residue Burning**
 - Seasonal burning of **crop stubble** in agricultural states like **Punjab and Haryana** is a key reason for spikes in pollution, particularly during the winter months.



Health Impacts of PM2.5 Exposure
Respiratory Diseases

- Long-term exposure to PM2.5 can lead to **asthma, bronchitis, and other chronic lung conditions**.
- Children and the elderly are especially vulnerable to respiratory infections due to **poor air quality**.

Cardiovascular Issues

- Research indicates that continuous exposure increases the risk of **heart attacks, strokes, and hypertension**.
- PM2.5 can cause inflammation in blood vessels, leading to **high blood pressure and artery blockages**.

Increased Premature Mortality

- Prolonged exposure has been directly linked to **higher mortality rates**, particularly among people with existing health conditions.

- Studies suggest that millions of deaths in India are **attributed to air pollution annually**.

Recommended Measures to Reduce PM2.5 Pollution

- Emission Control**
 - Implementing **stricter vehicle emission norms** and promoting **electric vehicles (EVs)** can significantly reduce pollution.
 - Introducing **cleaner fuels** and improving public transport can also help in lowering vehicle-related emissions.
- Industrial Regulations**
 - Industries should be mandated to use **cleaner production technologies** and **install emission-control equipment**.
 - Transitioning from coal-based energy** to renewable sources can help mitigate industrial pollution.
- Construction and Dust Control**
 - Authorities should enforce **dust management practices** such as covering construction sites, using **anti-smog guns**, and planting **green buffers**.
- Public Awareness and Policy Implementation**
 - Educating the public about **air pollution's health risks** and encouraging individuals to adopt **sustainable practices** like carpooling and reducing waste burning.
 - Government intervention through **stringent air quality policies, green initiatives, and pollution monitoring** can help combat PM2.5 pollution effectively.

PEPPER IT WITH:
Air pollution and mitigation impact, Environment protection Act.

Conclusion

The increasing PM2.5 levels in Northern India are a **serious public health challenge**. To combat this issue, a **multi-pronged approach** is needed—**strict regulations, sustainable practices, technological advancements, and public cooperation**.

Impact of Coal-Fired Power Plant Emissions

News Excerpt:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

India, as one of the largest consumers of **coal-based energy**, relies heavily on **coal-fired power plants** for electricity generation. However, recent studies highlight the **adverse effects of coal emissions** on agriculture, particularly on **staple crops like rice and wheat**. Harmful pollutants such as **nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM2.5)** are reducing crop yields and posing a threat to **food security and economic stability**.

Key Findings from the Study

Yield Reduction Due to Emissions

- Emissions from **coal-fired power plants** have been linked to a **10% or more reduction in rice and wheat yields** in several Indian states.
- Pollutants like **NO₂ and ozone (O₃)** interfere with plant growth, affecting **photosynthesis and nutrient absorption**.
- These losses are significant, as rice and wheat are **staple foods** for millions of Indians.

Economic Impact of Crop Losses

- The decline in **agricultural productivity** due to **coal power emissions** is leading to **millions of dollars in economic losses** annually.
- Lower yields mean **higher prices for essential grains**, directly impacting **farmers' incomes and food affordability**.
- In a country where agriculture is a **major economic sector**, such reductions can contribute to **inflation and food scarcity**.

Affected Regions

- States with **high coal power plant density** and agricultural activity have reported the **most significant yield declines**.
- Some of the worst-affected states include:
 - **West Bengal**
 - **Madhya Pradesh**
 - **Uttar Pradesh**
 - **Chhattisgarh**
- These states have both **large agricultural belts** and **coal-fired power stations**, leading to **heavy pollution exposure**.

How Coal Emissions Harm Crop Productivity

Impact of NO₂ and Ozone on Crops

- **Nitrogen dioxide (NO₂)** is known to be **phytotoxic**, meaning it is harmful to plant health.
- It interferes with **plant metabolism**, **weakens chlorophyll**, and reduces **photosynthesis efficiency**.
- NO₂ contributes to **ground-level ozone formation**, which further **damages crop cells and stunts growth**.

Particulate Matter and Reduced Sunlight

- **Particulate matter (PM_{2.5} and PM₁₀)** released from coal plants settles on **plant surfaces**, blocking sunlight.
- This leads to **reduced photosynthesis**, limiting the ability of plants to **produce energy and grow effectively**.

Soil and Water Contamination

- **Sulfur dioxide (SO₂)** and **heavy metals** from coal emissions can **contaminate soil and water sources**.
- Polluted soil results in **poor nutrient uptake**, making crops more vulnerable to **disease and low productivity**.

Recommendations for Mitigating the Impact of Coal Emissions on Agriculture

Implementation of Advanced Emission Control Technologies

- Power plants should adopt **Flue Gas Desulfurization (FGD)** to reduce **SO₂ emissions**.
- **Electrostatic precipitators (ESP)** and **bag filters** can help limit **particulate matter release** into the atmosphere.
- **Selective Catalytic Reduction (SCR)** systems can significantly lower **NO₂ emissions**, helping protect crops.

Pollution Control in Agricultural Regions

- Identify and regulate power plants **located near major agricultural zones** to reduce pollution exposure.
- Encourage the **use of cleaner energy sources**, such as **solar, wind, and natural gas**, in **high-yield farming areas**.
- Promote **afforestation and green buffer zones** around farms to **filter pollutants** before they reach crops.

Strengthening Environmental Policies and Regulations

- **Stricter emission norms** for power plants, ensuring **compliance with pollution control standards**.
- Encourage **research and development** for **sustainable agricultural practices** to combat the effects of pollution.
- Implement **compensation schemes for farmers** affected by pollution-related yield losses.

Conclusion

- Coal-fired power plant emissions are having a **detrimental impact** on **India's agriculture**, particularly **rice and wheat production**.

PEPPER IT WITH:

Coal power plant pollution mitigation, Clean Coal Technology.

- Without **immediate interventions**, the situation may **worsen food insecurity, increase economic losses, and affect farmers' livelihoods**.

- By adopting **cleaner energy solutions, enforcing stricter regulations, and investing in pollution control**, India can **safeguard both its agricultural sector and its food security**.

Threat to India's Native Biodiversity

News Excerpt:

Invasive species are a growing environmental concern, often outcompeting native flora and disrupting ecosystems. One such emerging invasive species in India is **'Brazilian Beauty' (Ruellia elegans)**, a fast-spreading plant **native to Brazil**. A recent study has flagged its **potential ecological threat**, particularly in **northeastern India**.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

How *Ruellia elegans* Became a Threat in India

Introduction and Spread

- *Ruellia elegans* is an **ornamental flowering plant** with bright red flowers, often used in gardens for its aesthetic appeal.
- **Initially introduced** for decorative purposes, the plant has now started spreading uncontrollably in the **wild**, especially in **northeastern India**.
- Its **adaptability to different environments** and **rapid seed dispersal** make it a highly invasive species.

Impact on Native Biodiversity

The unchecked spread of *Ruellia elegans* threatens **India's native plant and animal species** in multiple ways:

a) Competition with Native Flora

- *Ruellia elegans* grows aggressively, **outcompeting native plant species** for resources like sunlight, water, and soil nutrients.



- This **reduces plant diversity**, leading to **monoculture landscapes**, which are harmful to ecosystem balance.

b) Disruption of Ecosystem Functions

- Changes in plant **composition alter ecosystem services**, affecting **soil fertility, water retention, and habitat availability** for local fauna.
- The decline of native plants can **impact herbivores** that rely on them, disrupting the entire **food chain**.

c) Threat to Pollinators and Faunal Species

- Native pollinators like **bees and butterflies** may struggle to adapt to *Ruellia elegans*, as they depend on indigenous plant species for nectar.
- The loss of these **pollinators** affects **crop production and natural regeneration** of forests.

Other Invasive Species in India

India has previously struggled with **invasive species** that caused **severe ecological and economic damage**, such as:

Lantana camara

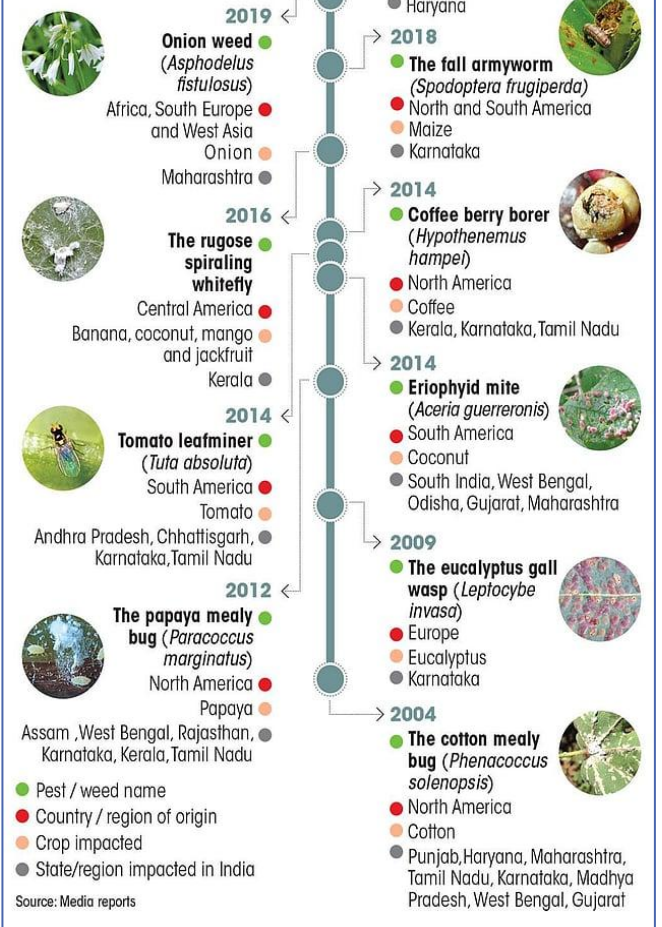
- **Introduced during British rule**, *Lantana camara* has taken over vast forested areas, **choking native vegetation** and creating **impenetrable thickets**.
- It has negatively affected **wildlife**, especially **elephants**, by reducing their food sources and causing **habitat fragmentation**.

Solanum seafortianum (Brazilian Nightshade)

- Another **South American species**, it has become **invasive in parts of India**, forming **dense vines that suffocate native plants**.
- **Toxic to livestock**, it poses a serious risk to **grazing animals and agricultural lands**.

Silent intruders

India has witnessed at least 10 pest and weed attacks in the past 15 years



How to Control the Spread of *Ruellia elegans*

To prevent *Ruellia elegans* from becoming a **major ecological threat**, the following **management strategies** should be implemented:

Early Detection and Monitoring

- Setting up **environmental surveillance systems** to detect and track the spread of invasive species.
- Conducting **scientific research** to understand the plant's behavior and develop control measures.

Public Awareness and Responsible Gardening

- Educating **gardeners and horticulturists** about the risks of planting **non-native species**.
- Encouraging the use of **native plant species** for landscaping and gardening to reduce the spread of invasive plants.

Restoration and Habitat Protection

- **Removing invasive plants** from critical ecosystems and restoring **degraded areas** with native vegetation.

PEPPER IT WITH:
Biodiversity Conservation Acts, Invasive species mitigation

- Implementing **reforestation programs** to **rebuild natural habitats** and prevent further invasions.

Conclusion

- The **uncontrolled spread** of *Ruellia elegans* is a growing concern that could **disrupt India's ecosystems** and threaten **native biodiversity**.
- Proactive intervention** is necessary, drawing lessons from **past invasive species disasters** like *Lantana camara*.
- By **raising awareness, implementing regulations, and restoring ecosystems**, India can **protect its rich biodiversity** from the **harmful effects of invasive species**.

SCIENCE & TECHNOLOGY

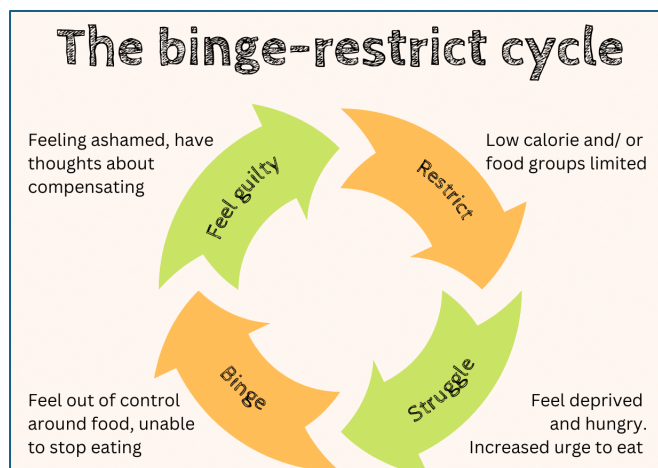
Junk Food Bingeing Affects Brain Activity

News Excerpt:

Recent research has revealed that binge-eating junk food, particularly **hyperpalatable foods** (high in fat, sugar, and salt), significantly affects **brain activity and reward mechanisms**. These foods are designed to **trigger cravings, override fullness signals, and encourage excessive consumption**, often leading to **addiction-like behaviors**.

Understanding Hyperpalatable Foods and Their Effects on the Brain

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



- Definition of Hyperpalatable Foods:**
 - These foods contain a high combination of **fat, sugar, and/or salt**, making them **highly rewarding and addictive**.
 - Common examples include **fast food, processed snacks, sugary beverages, and fried items**.
- How These Foods Activate the Brain's Reward System:**
 - Eating junk food **triggers the release of dopamine**, the neurotransmitter responsible for pleasure and motivation.

- The brain **associates these foods with pleasure**, reinforcing a habit of seeking them out repeatedly.
- This is similar to the way the brain reacts to **addictive substances like drugs or alcohol**.

- Disrupting the Brain's Hunger and Fullness Signals:**

- The consumption of **highly processed foods** interferes with **leptin and ghrelin**, the hormones that regulate hunger and satiety.
- This makes people **overeat even when they are full**, as the brain continues to crave the rewarding effects of junk food.

Neurobiological Changes Due to Junk Food Bingeing

Alterations in Dopamine Levels

- Increased Dopamine Release:**

- The **striatum** (a brain region linked to habit formation) **releases high amounts of dopamine** in response to hyperpalatable foods.
- This creates a **strong reward association**, leading to **compulsive eating behaviors**.

- Tolerance Build-Up:**

- Over time, the brain **needs higher amounts of junk food** to achieve the same pleasure, similar to **drug addiction**.
- This cycle leads to **overeating, weight gain, and dependency on junk food for pleasure**.

Reduction in Serotonin Transporters

- Impact on Mood and Impulse Control:**

- Studies show that **people who binge eat have lower levels of serotonin transporters**, affecting mood regulation and impulse control.
- This can lead to **emotional eating**, where people **consume junk food as a coping mechanism for stress, anxiety, or depression**.

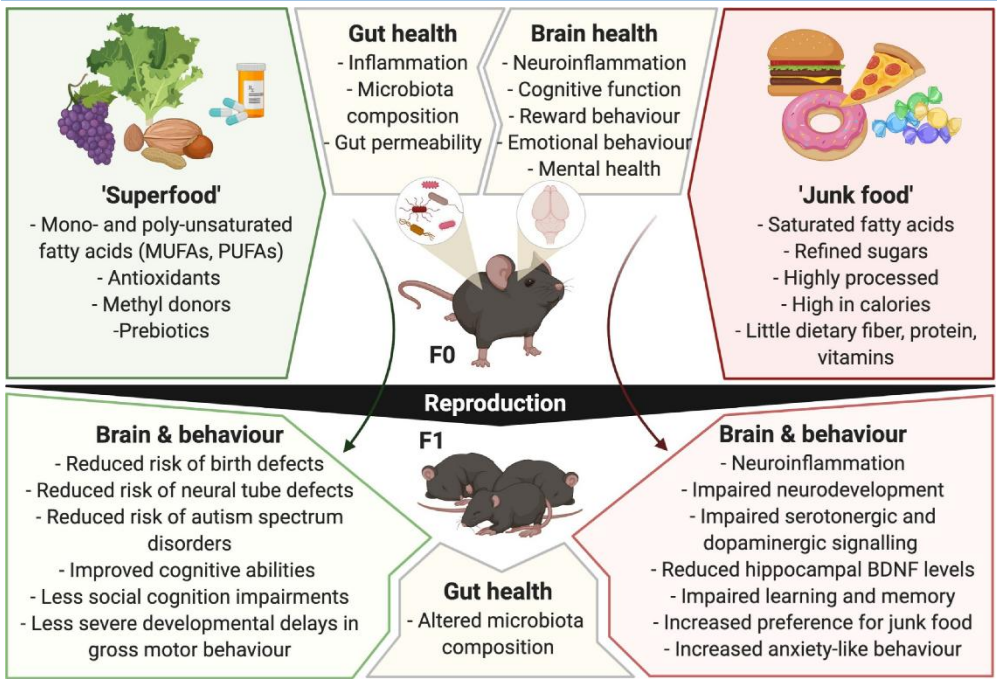
Dysfunction in the Ventral Limbic Circuit

- Impaired Decision-Making About Food Choices:**

- The **ventral limbic circuit**, responsible for controlling eating behavior, **becomes dysregulated** in individuals who binge on junk food.
- This leads to **poor food choices, compulsive eating, and reduced self-control**.

- Cravings Become Automatic:**

- Junk food triggers **habit-based eating**, where people eat **without conscious awareness** (e.g., snacking while watching TV).
- The brain develops an **automatic response** to external cues like advertisements, fast-food smells, and emotional stress.



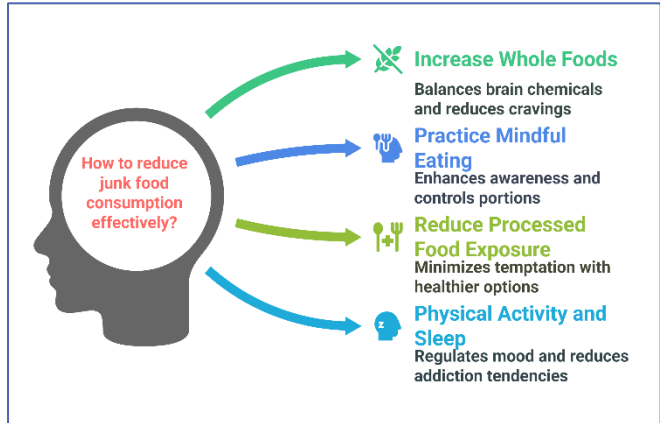
PEPPER IT WITH:
Stress impact on health, Junk food, Obesity challenges.

- The **binge consumption of hyperpalatable foods** affects brain function in ways **similar to addictive substances**, leading to **compulsive eating, mood disorders, and obesity**.
- Understanding **how junk food manipulates brain chemistry** can help people **make healthier choices** and break the cycle of addiction.
- **Public health policies, food industry regulations, and personal dietary awareness** are essential in tackling this growing issue.

Long-Term Consequences of Junk Food on Brain Health

- **Increased Risk of Obesity and Metabolic Disorders:**
 - The brain's **diminished ability to regulate appetite** leads to chronic overeating, weight gain, and **obesity-related conditions like diabetes, heart disease, and high blood pressure.**
- **Higher Likelihood of Depression and Anxiety:**
 - Since **junk food lowers serotonin and alters dopamine balance**, frequent consumption is linked to **higher rates of depression and anxiety.**
- **Cognitive Decline and Memory Impairment:**
 - Junk food consumption negatively affects the **hippocampus**, the brain region responsible for **memory and learning.**
 - Studies suggest a link between **junk food diets and an increased risk of dementia and Alzheimer's disease.**

Breaking the Cycle of Junk Food Addiction



Conclusion: The Need for Awareness and Lifestyle Changes

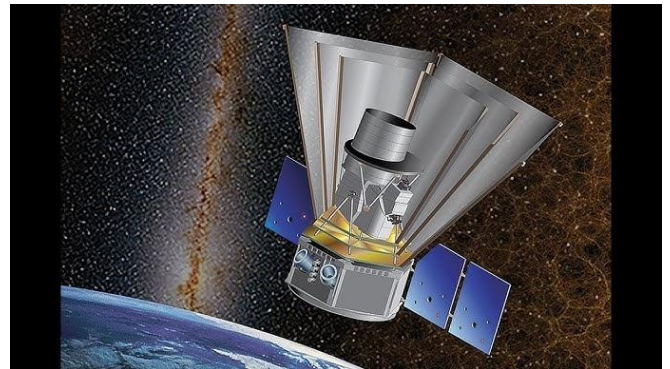
Trends in Endocrinology & Metabolism

NASA's SPHEREx Mission

News Excerpt:

NASA's **SPHEREx (Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer)** is an upcoming space telescope designed to perform an **all-sky survey in near-infrared light**. This mission aims to **explore the origins of the universe, study galaxy formation, and analyze the distribution of water and organic molecules** that could be key to life. SPHEREx is set to launch **on March 7, 2025**, aboard a **SpaceX Falcon 9 Block 5 rocket** from **Vandenberg Space Force Base**. Over its **25-month mission**, the telescope will conduct **four full-sky surveys**, collecting spectral data from **450 million galaxies** and **100 million stars** in the Milky Way.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



Mission Objectives: Understanding the Universe's Past and Future

SPHEREx will provide unprecedented insights into three major areas of astrophysics:

Probing Cosmic Inflation (The Big Bang's Aftermath)

- **What is Cosmic Inflation?**

- Scientists believe that the universe expanded exponentially **within a fraction of a second after the Big Bang**.
- SPHEREx will help test **inflation theories** by analyzing how galaxies are distributed across vast cosmic distances.
- **How SPHEREx Contributes:**
 - By mapping the **three-dimensional distribution of galaxies**, SPHEREx will look for patterns that originated during the universe's earliest moments.
 - This will help astrophysicists determine **what forces drove the universe's rapid expansion**.

Understanding the Epoch of Reionization (First Stars and Galaxies)

- **What is the Epoch of Reionization?**
 - After the Big Bang, the universe was filled with a **dense fog of neutral hydrogen**, making it opaque.
 - The first stars and galaxies **ionized** this gas, allowing light to travel freely across space.
- **How SPHEREx Contributes:**
 - The telescope will study the light from **early galaxies**, helping scientists determine when and how the first stars formed.
 - It will **map the large-scale structure of the universe** and pinpoint **how galaxies evolved over billions of years**.

Searching for Water and Organic Molecules in Space

- **What is the significance of interstellar ices?**
 - Planets and stars form from vast clouds of **gas and dust**. These clouds contain **water, carbon compounds, and other organic molecules** essential for life.
 - SPHEREx will investigate **how these life-forming materials are distributed in young planetary systems**.
- **How SPHEREx Contributes:**
 - It will analyze **the light reflected by interstellar dust grains**, revealing what kinds of ices exist in different regions of space.
 - By studying **the building blocks of life**, SPHEREx will help us understand **how habitable planets form**.

Mission Design and Technology

SPHEREx is a compact but powerful telescope designed specifically for **infrared spectroscopy**, enabling it to scan the entire sky with great precision.

Telescope Specifications

- **Mirror Size: 20 cm (8 inches) in diameter** – smaller than Hubble or JWST but optimized for wide-field surveys.
- **Field of View: 3.5° x 7°** – allowing it to capture large portions of the sky quickly.

- **Wavelength Range: 0.75 to 5.0 micrometers (near-infrared)** – crucial for detecting faint and distant cosmic objects.

Unique Infrared Spectroscopy Capabilities

Unlike traditional telescopes that take regular images, SPHEREx will capture **spectral data** (light split into different wavelengths), providing crucial details about the composition of cosmic objects.

- It will measure **the infrared spectra of every point in the sky** across **96 different wavelength bands**, allowing for:
 - **Identification of galaxy distances** (by measuring redshifts).
 - **Detection of organic molecules and water ice** in star-forming regions.
 - **Study of cosmic dust and interstellar material**.

Orbit and Survey Strategy

- **Orbit Type: Sun-synchronous orbit** (~700 km altitude) – ensuring **consistent lighting conditions** for observations.
- **Survey Plan:**
 - SPHEREx will complete **four full-sky surveys in two years**.
 - The repeated scans will improve **data accuracy and help track changes over time**.

Scientific Impact and Collaborations

A. Complementing Other Space Missions

SPHEREx is part of a new wave of space telescopes working together to explore the cosmos:

- **Euclid (ESA):** Mapping dark matter and dark energy.
- **Nancy Grace Roman Space Telescope (NASA):** Studying exoplanets and cosmic expansion.
- **James Webb Space Telescope (NASA/ESA):** Observing distant galaxies and exoplanets in high resolution.

SPHEREx will complement these missions by providing **large-scale cosmic mapping data**, which can be used alongside high-resolution images from other telescopes.

Shared Launch with NASA's PUNCH Mission

- **SPHEREx will launch alongside NASA's PUNCH (Polarimeter to Unify the Corona and Heliosphere) mission.**
- **PUNCH will focus on studying the solar wind and the Sun's outer atmosphere,** while SPHEREx will focus on **deep-space observations.**

PEPPER IT WITH:

Uncover origin of universe secret, Space Imagine techniques.

Conclusion:

A Step Toward Understanding the Cosmos SPHEREx represents a **new era of space exploration**, helping scientists address fundamental questions about: **The origins**

of the universe, the formation of galaxies & stars and the distribution of water and organic molecules in space

By collecting vast amounts of spectral data from **millions of galaxies and stars**, SPHEREx will serve as a **powerful tool for astrophysics and planetary science**, paving the way for future discoveries about our **cosmic origins and the possibility of life beyond Earth**.

Measles death in US after 10 years

News Excerpt:

A child has died of measles in rural West Texas, US government officials said, marking the first death from the infection in the US in 10 years. The measles outbreak began last month, and 124 cases have since been reported across nine counties.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2				8							
3				9							
4				10							
5				11							
6				M							

The U.S. measles vaccine program has reduced cases from millions in the 1950s and 1960s to a low of 37 in 2004. The disease is making a bit of a comeback, however, and parents and even doctors do not always recognize the symptoms.

COMPLICATIONS

- Encephalitis**, a brain swelling that can leave children deaf or mentally impaired. For every thousand U.S. children who get measles, one or two will die from it.
- Ear infection**
- Pneumonia**
- Diarrhea**

Measles virus

INFECTION

Measles, also called rubeola, invades cells that line the back of the throat and the lungs. It is highly contagious and **spreads through the air**, and it is particularly dangerous for babies and young children.

SYMPTOMS

The first symptom is a high fever. Next comes runny nose, cough and red eyes. Finally a **rash of tiny red spots** begins at the head and travels down the body, but the disease is contagious well before the rash begins.

Skin rash

Source: Centers for Disease Control and Prevention
BONNIE BERKOWITZ AND ALBERTO CUADRA — THE WASHINGTON POST

The Measles Outbreak in Texas

Scale and Impact

- The outbreak **began in early 2024** and has since spread rapidly within **Gaines County**, an area with a **large Mennonite population**.
- **More than 100 cases** have been reported, making it one of the **largest measles outbreaks in recent U.S. history**.
- A **confirmed death—the first U.S. measles-related fatality since 2015—occurred in Texas**.
- **Health officials warn** that more cases could emerge, given the **highly contagious nature of measles**.

Why is Measles Dangerous?

- Measles is a **highly infectious viral disease** that spreads through **respiratory droplets**.
- Symptoms include **high fever, cough, runny nose, rash, and eye inflammation**.
- **Severe complications** can include **pneumonia, encephalitis (brain swelling), and even death**.
- The **MMR vaccine (Measles, Mumps, and Rubella)** is highly effective, providing **about 97% immunity after two doses**.

Who Are the Mennonites?

Origins and Religious Beliefs

- **The Mennonites** are a Christian group that originated from the **Anabaptist movement in the 16th century**.
- They were **founded by Menno Simons, a Dutch religious leader**, and are closely related to the **Amish and Hutterite communities**.

- Their key beliefs include:
 - **Pacifism and non-violence** (they oppose military service).
 - **Separation from mainstream society** (some groups adopt simple, agrarian lifestyles).
 - **Adult baptism** (instead of infant baptism).
 - **Community-based living and self-sufficiency**.

Mennonite Diversity

- Not all Mennonites reject modern society; they range from:
 - **Traditionalist groups** (similar to the Amish, avoiding modern technology).
 - **More liberal Mennonites** (who integrate into modern society while maintaining religious values).
- **In Texas, many Mennonite families are conservative**, working in agriculture and maintaining **limited contact with outsiders**.

Vaccine Hesitancy Among Mennonites

Reasons for Low Vaccination Rates

- **Religious and Cultural Beliefs:**
 - Some conservative Mennonite groups **prefer natural healing** over modern medicine.
 - They **view illness as part of God's will** and believe in **faith-based healing**.
- **Distrust in Government and Modern Medicine:**
 - Many Mennonites live **isolated from mainstream society**, making them **less likely to trust public health agencies**.
 - There is a **history of skepticism toward vaccines**, partly due to **misinformation** spread within close-knit communities.

- **Lack of Access to Healthcare:**
 - Some communities live in **rural areas with limited medical facilities.**
 - Without regular doctor visits, **vaccination rates remain low.**

Consequences of Low Immunization

- **Herd immunity is compromised**—measles spreads easily when less than **95% of the population is vaccinated.**
- **More severe cases arise** because people have **no prior immunity** to the disease.
- **Infants and immuno-compromised individuals** are at **higher risk of serious complications.**

Public Health Response and Challenges Government and Medical Efforts

- **Texas health authorities have launched emergency vaccination drives** in affected areas.
- Public health officials are **working with Mennonite community leaders** to encourage vaccination.
- **Mobile clinics** and **door-to-door campaigns** are being introduced to improve **access to vaccines.**

Challenges in Controlling the Outbreak

- **Misinformation**—Many in the community believe vaccines **cause harm or unnecessary interference.**
- **Resistance to outside intervention**—Mennonites **tend to avoid government programs,** making outreach difficult.
- **Lack of prior outbreaks**—Since **measles was eliminated in the U.S. in 2000,** many younger Mennonites **have never encountered the disease,** leading to **complacency.**

Broader Implications

Lessons for Public Health

- **Vaccination campaigns must be culturally sensitive** to be effective.
- Governments need to **engage with religious leaders** to build trust.
- **Outbreaks among unvaccinated populations threaten wider public health,** as measles can spread to **other vulnerable groups.**

Global Perspective

- Similar vaccine hesitancy exists among **other conservative religious communities worldwide.**
- The outbreak serves as a **reminder that diseases once thought eradicated can return if vaccination rates drop.**

Conclusion

- The Texas measles outbreak highlights the **dangers of vaccine hesitancy** and the **challenges of protecting insular communities from preventable diseases.**

- While efforts are underway to **educate and vaccinate** affected populations, overcoming **deep-rooted beliefs and misinformation** remains an uphill battle.
- The incident serves as a **critical lesson for public health authorities.** Worldwide **disease prevention efforts must be tailored to cultural and religious sensitivities to be effective.**

PEPPER IT WITH:

Disease outbreak,
Vaccine hesitancy,
Preventive steps.

Antimicrobial Resistance in Soil Bacteria

News Excerpt:

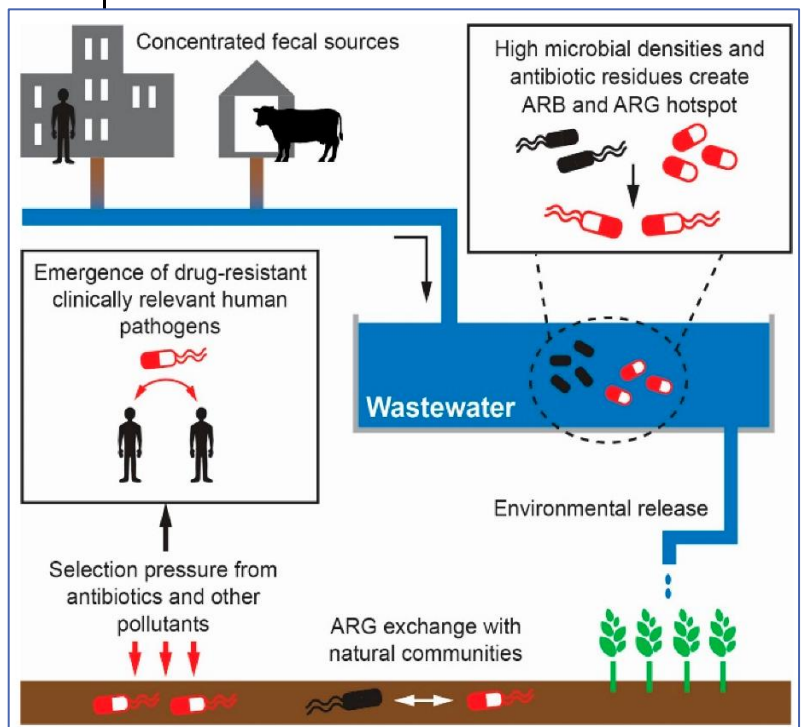
GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

A groundbreaking study has shown that **soil bacteria** can develop **antimicrobial resistance (AMR)** even in environments **without direct exposure to antibiotics.** This finding challenges the long-held belief that **AMR primarily arises from antibiotic misuse or overuse** in humans and animals. It underscores the **complexity of AMR evolution** and its implications for **public health and environmental safety.**

Key Findings of the Study

Natural Resistance in Soil Bacteria

- Researchers found that certain **soil bacteria** possess **intrinsic resistance genes,** allowing them to **survive in antibiotic-rich environments** without prior exposure.
- This resistance has been documented in **untouched, pristine soils,** suggesting that some bacteria have evolved **natural defense mechanisms** over millions of years.



The Environmental Resistome: A Hidden Reservoir of Resistance Genes

- The **resistome** refers to the **collection of all antimicrobial resistance genes** present in both **pathogenic and non-pathogenic bacteria** within an environment.
- Even in **remote locations**, where human activity is minimal, **resistance genes** have been detected in **soil microbes**, proving that AMR is not solely a human-driven phenomenon.

Mechanisms of Resistance Development Without Antibiotics

- Gene Mutation and Evolution:** Some soil bacteria **naturally mutate** over time, developing resistance to harmful substances in their environment.
- Horizontal Gene Transfer (HGT):** Bacteria can **exchange genetic material** through plasmids, even in the absence of antibiotics, spreading **resistance traits** among microbial communities.
- Heavy Metal and Chemical Exposure:** Soil bacteria exposed to **heavy metals, pesticides, and industrial waste** can develop **cross-resistance** to antibiotics.

Implications for Public Health and Environmental Safety AMR Can Emerge Independently of Human Antibiotic Use

- This study highlights that **antibiotic resistance is not solely linked to overprescription or agricultural antibiotic use**.
- Resistant bacteria** can exist in **natural ecosystems**, posing a **hidden threat** to **global health**.

Potential Risks of AMR Spread

- These **resistant bacteria** can enter **human and animal populations** through:
 - Agriculture and food production** (crops grown in contaminated soil)
 - Water sources** (rainwater runoff carrying resistant microbes)
 - Direct human contact with soil**

Need for a Holistic Approach to Combat AMR

- Addressing **AMR** requires a **One Health approach**, integrating **human, animal, and environmental health strategies**.
- There is a need for **better monitoring** of **antibiotic resistance genes in soil**, alongside **stricter regulations on pollutants** that contribute to bacterial resistance.

Conclusion

- This study reveals that **antimicrobial resistance is an ancient and naturally occurring phenomenon**, not just a consequence of human antibiotic usage.
- Understanding the **role of environmental factors in AMR evolution** is crucial for developing **effective strategies** to mitigate its **global impact**.

- As resistance genes continue to spread, a **multidisciplinary approach** is necessary to ensure **public health safety and sustainable environmental practices**.

PEPPER IT WITH:

Anti-microbial resistance, Health hazard, Antibiotics use control.

INTERNAL SECURITY

Influx from Bangladesh: India Internal security challenge

News excerpt:

The issue of illegal migration from Bangladesh into India, particularly in the **northeastern state of Tripura**, has gained significant attention due to its social, political, and security implications.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Emerging Situation: Rising Influx of Migrants

Illegal migration from Bangladesh has surged following the **fall of Sheikh Hasina's Awami League government in August 2024**. Reports indicate that individuals from various religious backgrounds—**Hindus, Buddhists, and Muslims**—have been crossing the porous Indo-Bangladesh border into Tripura. Many claim they are fleeing persecution under Chief Advisor Muhammad Yunus's regime.

Statistics on Arrests

- Between January 1, 2024, and February 28, 2025, Tripura Police arrested **816 Bangladeshi nationals, 79 Rohingya persons, and two Nigerians**.
- A breakdown reveals that **36% of these migrants were Hindus and Buddhists**.
- Monthly arrests fluctuated but began increasing again in early 2025.

Nature of Migration

Some migrants carry contraband such as firearms and drugs, while others arrive with minimal belongings. The motivations range from seeking refuge due to persecution to economic desperation.

Border Vulnerabilities and Security Concerns

Tripura shares an **856 km porous border** with Bangladesh, characterized by unfenced stretches, natural gaps, and linguistic and religious affinities on both sides. These factors have historically facilitated infiltration.

Key Challenges

- Smuggling:** Contraband items such as drugs and firearms are frequently trafficked across the border.
- Human Trafficking:** Touts in both countries facilitate illegal crossings and even arrange fake documents like Aadhaar cards for migrants.
- Security Risks:** Migrants may be exploited by terrorist organizations as sleeper cells or sources of recruitment.

Government Measures

To curb infiltration:

- The Tripura Police have **intensified checks at railway stations, bus stands, airports, and vulnerable border points.**
- High-tech **AI-enabled cameras** are being installed along the border.
- Inter-agency cooperation has been strengthened to tackle human trafficking networks.

Historical Context: Tripura's Role in Bangladesh Liberation War

Tripura played a pivotal role during the 1971 Bangladesh Liberation War:

- The state sheltered nearly **14 lakh East Pakistani refugees**, almost equaling its own population at the time.
- It hosted major training camps for Mukti Joddhas (liberation warriors).

This historical connection has fostered deep ties between communities on both sides of the border. However, recent political changes in Bangladesh have strained relations.

Differing Voices: Humanitarian vs Security Concerns

Opinions vary widely on how India should handle illegal migrants fleeing persecution:

Humanitarian Advocates

Some suggests revising the Citizenship Amendment Act (CAA) to accommodate persecuted Hindus and Buddhists beyond its current cutoff date of December 31, 2014. He argues:

"The responsibility to extend a helping hand can't be ignored."

Security Advocates

Others caution against leniency due to risks posed by infiltrators who may exploit India's asylum system for criminal or extremist activities.

Border security challenges

Category	Description
Porous Borders	Tripura shares an 856 km porous border with Bangladesh, characterized by unfenced stretches, natural gaps, and difficult terrain, making infiltration easy.
Illegal Migration	Large-scale migration of Bangladeshi nationals, including Hindus, Buddhists, and Muslims fleeing persecution, poses demographic and socio-political challenges.
Smuggling Activities	Smuggling of contraband items such as firearms and drugs is rampant across the border.
Human Trafficking	Touts facilitate illegal crossings and provide fake documents like Aadhaar cards through online transactions.

Rohingya Infiltration	Rohingya refugees use Tripura as a corridor for movement to other parts of India, raising concerns about their exploitation by terrorist organizations.
Extremism Risks	Illegal immigrants may be recruited by terrorist organizations or act as sleeper cells for groups based in Bangladesh and Pakistan.
Social Tensions	The influx alters the demographic landscape in northeastern states, fueling socio-political tensions and insurgency.
Border Surveillance Issues	Despite efforts like AI-enabled cameras, riverine borders remain vulnerable to infiltration attempts.

Conclusion: Balancing Humanity with Security

The influx of illegal migrants from Bangladesh poses a complex challenge for India. While humanitarian concerns call for leniency toward persecuted minorities, security risks necessitate stringent measures to prevent exploitation of India's borders by traffickers or extremist groups.

PEPPER IT WITH:
 Border security management,
 Internal security.

India must strike a balance by:

1. Strengthening border security through technology and inter-agency coordination.
2. Revisiting policies like the CAA to address emergent situations.
3. Engaging diplomatically with Bangladesh to ensure protection for minorities within its territory.

Ultimately, any solution must safeguard India's national interests while honoring its legacy as a refuge for those fleeing persecution.

Blast at Darul Uloom Haqqania

News excerpt:

At least six people were killed in a suicide attack at an **Islamic religious school in Pakistan** that had been described as the **"University of Jihad"**. The explosion took place at the mosque within the **Darul Uloom Haqqania**, in the **Khyber Pakhtunkhwa province**.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Incident Details

- A **suicide bombing** took place at **Darul Uloom Haqqania**, a prominent Islamic seminary in **Akora Khattak, Khyber Pakhtunkhwa, Pakistan**.
- The attack occurred **during Friday prayers**, killing at least **six people**, including **Hamid Ul Haq Haqqani**, the seminary's head and son of former chief **Sami ul Haq**.
- Around **20 others were injured** in the explosion.
- The attack is suspected to be linked to ongoing militant conflicts, but no group has claimed responsibility yet.

Darul Uloom Haqqania: History and Influence

Foundation and Ideology

- **Founded in 1947** by **Maulana Abdul Haq**, the seminary follows the **Deobandi school of Sunni Islam**.
- It was established as Pakistan's equivalent of **India's Darul Uloom Deoband**, emphasizing strict adherence to Islamic jurisprudence.
- Over the decades, it gained notoriety for **training individuals who later became key figures in jihadist movements**.

Notable Alumni and Their Influence

- Darul Uloom Haqqania has been **controversially labeled the 'University of Jihad'** due to its alumni's connections with militant organizations.
- Several of its students went on to become **leaders in the Taliban and other jihadist groups**, including:
 - **Mullah Omar** – **Founder of the Taliban** and former ruler of Afghanistan.
 - **Jalaluddin Haqqani** – Leader of the **Haqqani Network**, a major militant group.
 - **Akhtar Mansour** – **Former Taliban chief**, killed in a U.S. drone strike in 2016.
- The seminary has also been linked to **various extremist factions** that have played roles in conflicts in **Afghanistan, Pakistan, and beyond**.

Controversies and Government Relations

Financial and Political Support

- Despite concerns about its radical teachings, Darul Uloom Haqqania has received **state funding** in Pakistan.
- In **2016**, the **Khyber Pakhtunkhwa provincial government**, then led by **Imran Khan's PTI party**, allocated **Rs 300 million** to the seminary, drawing criticism from civil society and international observers.
- Supporters argue that the funds were meant to **modernize the curriculum** and **integrate mainstream education**, while critics claim that it legitimized a **hub of extremism**.

Allegations of Militant Training

- The seminary has been accused of **providing ideological training** to future militants.
- Some analysts argue that its **curriculum** fosters radicalization, though its leadership has denied direct involvement in militancy.
- The **Pakistani Taliban (TTP)** and other extremist factions are believed to have drawn inspiration from teachings at Haqqania.

Regional and Global Impact

Influence on the Afghan Conflict

- Many **Taliban leaders**, educated at Haqqania, played crucial roles in the **Afghan insurgency against U.S. and NATO forces**.
- The seminary has historically been a **recruitment ground for fighters** engaged in conflicts in **Afghanistan and Pakistan**.

- After the **Taliban's return to power in Afghanistan (2021)**, the role of institutions like Haqqania became even more relevant.

Concerns Over Radicalization

- The school remains **under international scrutiny** due to fears that it could **fuel extremism in South Asia and beyond**.
- The presence of seminaries with militant links is seen as a **challenge to Pakistan's counterterrorism efforts**.

Conclusion

- Darul Uloom Haqqania remains a **controversial yet influential institution** in Pakistan's religious and political landscape.
- While it serves as a **center for Islamic education**, its connections to **militant groups and past support for jihadist leaders** continue to raise **concerns about radicalization and regional security**.
- The recent bombing further highlights the **volatile nature of extremist conflicts in Pakistan** and the **complex relationship between the state and radical institutions**.

PEPPER IT WITH:
Threats from insurgent groups and network,

Mexican drug cartels as FTOs

News excerpt:

The United States has recently designated six Mexican drug cartels as **Foreign Terrorist Organizations (FTOs)**, marking a significant escalation in its approach to combating drug trafficking and organized crime. This move has **legal, operational, diplomatic, and security consequences** that could reshape U.S.-Mexico relations and efforts to curb cartel influence. Below is a breakdown of the key points:

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

■ Area of influence ■ Disputed territory



Designated Cartels

The six cartels labeled as **terrorist organizations** include:

- **Sinaloa Cartel** – One of the world's largest and most powerful drug trafficking organizations, formerly led by Joaquín "El Chapo" Guzmán.
- **Jalisco New Generation Cartel (CJNG)** – Known for extreme violence, expansionist tactics, and involvement in fentanyl trafficking.
- **United Cartels** – A coalition of smaller drug groups attempting to counter the dominance of CJNG.
- **Northeast Cartel** – A remnant of the infamous Los Zetas cartel, engaging in drug trafficking, extortion, and human smuggling.
- **Gulf Cartel** – One of Mexico's oldest criminal organizations, controlling smuggling routes along the U.S.-Mexico border.
- **La Nueva Familia Michoacana** – Engaged in methamphetamine production and extreme acts of violence.

Implications of the FTO Designation

This classification brings about significant **legal and financial consequences** for these cartels and anyone associated with them.

Legal Consequences

- **Material Support Criminalization** – It is now illegal for individuals in the U.S. to knowingly provide **funds, weapons, or any other form of support** to these cartels.
- **Asset Seizure and Financial Sanctions** – U.S. financial institutions **must freeze** the assets of these organizations and block their transactions.
- **Immigration Consequences** – Members or affiliates of these cartels **are inadmissible to the U.S.** and can be deported if found within the country.

Operational Impact

- Enhances the **U.S. government's authority** to pursue legal actions against **cartel leaders, financiers, and affiliates**.
- Provides justification for **expanded military and intelligence operations** targeting cartel activities.
- Allows U.S. agencies to **use counterterrorism tools** to disrupt cartel operations, similar to how they combat extremist groups like ISIS or Al-Qaeda.

Criticisms and Concerns

While the U.S. argues that these cartels fit the **terrorist designation** due to their extreme violence and threats to public safety, **Mexico has strongly opposed the move**.

Diplomatic Strains

- **Mexico's government** argues that drug cartels are **profit-driven criminal organizations**, not politically motivated like traditional terrorist groups.

- **Sovereignty concerns** – Mexico fears that this designation **could justify U.S. military intervention** on its soil.
- The Mexican government has been **reluctant to accept U.S. proposals** for direct military action against cartels.

Impact on Migration and Business

- **Complicates asylum claims** – Migrants forced to pay cartels for safe passage **may now be seen as supporting terrorism** and could face **deportation or denied entry**.
- **Risk for businesses** – Companies operating in cartel-controlled areas might be legally implicated if **forced to pay extortion fees**, leading to **economic uncertainty**.

International Response

The move by the U.S. has influenced other countries to **adopt similar strategies**:

- **Canada has designated seven Latin American criminal groups**, including the **Sinaloa Cartel and CJNG**, as **terrorist organizations** to combat **fentanyl trafficking and cartel-related violence**.
- This decision aligns Canada more closely with the U.S. approach to tackling **transnational crime**.

Potential Consequences and Outcomes

Increased Security Measures

- The designation could lead to **expanded law enforcement operations, stricter border controls, and counterterrorism actions**.
- This may also open the door for **U.S. military involvement**, such as **drone strikes or special operations targeting cartel leaders**.

Cartel Retaliation

- There are growing fears that cartels **may escalate violence** in response to this designation.
- Some experts worry about **attacks against U.S. officials, citizens, or businesses in Mexico** as a form of retaliation.

Conclusion

- The **terrorist designation of Mexican cartels marks a significant shift** in how the U.S. plans to combat organized crime.
- While it provides **new legal tools** to tackle drug trafficking and violence, it also **raises diplomatic concerns, security risks, and potential economic consequences**.
- The impact on **U.S.-Mexico relations, border security, and regional stability remains to be seen**.

PEPPER IT WITH:

Drug peddling, Black money movement, Drug trade and India.

GEOGRAPHY

Iraq is Slowly Sinking

News Excerpt:

Iraq is facing a significant environmental and geological challenge: **gradual land subsidence** (the sinking of the Earth's surface). This phenomenon, which can have severe consequences for infrastructure, the environment, and livelihoods, is driven by both natural processes and human activities.

GS CONNECT														
GS	I	II	III	IV	GS	I	II	III	IV	GS	I	II	III	IV
1					7									
2					8									
3					9									
4					10									
5					11									
6					M									

Causes of Land Subsidence in Iraq

Tectonic Activity

- Iraq lies near the boundary between the **Arabian and Eurasian tectonic plates**.
- A growing geological tear, known as the **Neotethys Fault**, is causing **gradual sinking of the northern region of Iraq**.
- This process is slow but could worsen over time, increasing the risk of subsidence-related damage.

Oil Extraction

- Iraq is one of the world's largest oil producers, with significant oil reserves in areas like **Basrah's West-Qurna oil field**.
- The continuous **extraction of oil from underground reservoirs creates empty spaces**, leading to gradual sinking.
- Satellite data (2017-2023) has detected subsidence rates of up to **-13.2 ± 0.4 mm/year**, with a **total vertical displacement of 75 mm over six years** in some regions.

Groundwater Overuse

- Iraq relies heavily on **groundwater for agriculture and daily consumption**, especially as surface water sources like the Tigris and Euphrates Rivers decline.
- **Excessive pumping of groundwater causes underground aquifers to compact**, leading to land subsidence.
- A global study suggests that **land subsidence due to groundwater depletion could impact 19% of the world's population** in the coming decades.

Consequences of Land Subsidence

Infrastructure Damage

- Buildings, roads, pipelines, and bridges can **develop cracks, sink, or collapse** over time.
- This increases **maintenance costs** and poses risks to public safety.

Higher Risk of Flooding

- As land sinks, it becomes more prone to **flooding, especially during heavy rainfall or river overflows**.
- Lowered land elevation in **coastal and riverine areas** could lead to **permanent waterlogging or displacement of communities**.

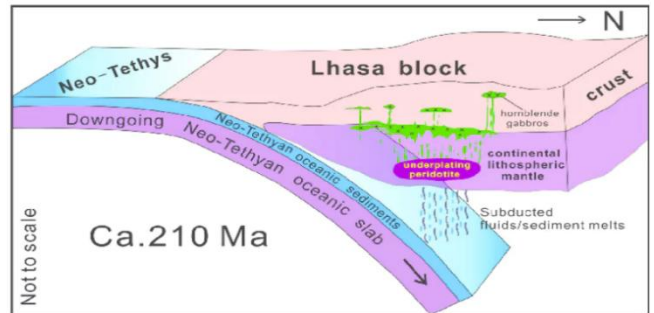
Environmental Degradation

- Land subsidence **disrupts natural ecosystems**, affecting local flora and fauna.
- Changes in land elevation **alter water drainage patterns**, which can **worsen desertification and soil degradation** in already vulnerable regions.

Mitigation Strategies

Sustainable Resource Management

- **Regulating oil and groundwater extraction** to reduce overuse and prevent further land sinking.
- Encouraging **water conservation** and **alternative energy sources** to reduce reliance on oil and groundwater.



Advanced Monitoring and Research

- Scientists are using **Interferometric Synthetic Aperture Radar (InSAR)** technology to **track land deformation** in Iraq.
- Continuous monitoring can help detect subsidence **before it causes major damage**, allowing for **early intervention and better urban planning**.

Infrastructure Adaptation

- Building **subsidence-resistant structures** and reinforcing critical infrastructure (e.g., roads, bridges, and water systems) in **high-risk areas**.
- Implementing **flood-control measures** to protect low-lying regions from potential disasters.

Conclusion

- Iraq's sinking land is a **growing concern that requires urgent attention**. Without proper action, **critical infrastructure, livelihoods, and ecosystems** could face severe consequences.
- By implementing **sustainable extraction practices, improving monitoring technologies, and adapting infrastructure**, Iraq can mitigate the effects of subsidence and safeguard its future.

PEPPER IT WITH:

Ground subsidence,
Plate tectonics,

Rising Frequency of Floods in High Mountain Asia: A Study

News Excerpt

The frequency of floods in **High Mountain Asia (HMA)** has risen significantly since 2000, driven by climate change and human activities. A recent study led by

GS CONNECT														
GS	I	II	III	IV	GS	I	II	III	IV	GS	I	II	III	IV
1					7									
2					8									
3					9									
4					10									
5					11									
6					M									

Sonam Wangchuk analyzed **1,015 flood events since 1950**, highlighting the growing risks to this ecologically and socio-economically critical region.

High Mountain Asia: An Overview

HMA is a vital geographical and ecological region encompassing the **Himalayas, Hindu Kush, Karakoram, Pamir, and the Tibetan Plateau**. It is often referred to as the **Asian Water Tower** due to its role in sustaining major river systems that support over **2 billion people**.

Key Characteristics	Details
Geographical Spread	India, China, Nepal, Bhutan, Pakistan, Afghanistan, Kyrgyzstan, Kazakhstan, Tajikistan
Importance	Primary water source for 10 major rivers (Indus, Ganges, Brahmaputra, Yangtze, Mekong)
Climatic Sensitivity	Warming at nearly twice the global average (0.3°C per decade since 1950)
Ecological Significance	Home to glaciers, high-altitude wetlands, and biodiversity hotspots
Socio-Economic Impact	Water resources crucial for agriculture, hydropower, drinking water

Types of Floods in High Mountain Asia

The study identifies four major types of floods that have become increasingly frequent in HMA:

- **Pluvial Floods:** Caused by extreme rainfall overwhelming drainage systems.
- **Snowmelt Floods:** Triggered by rising temperatures leading to rapid snowmelt.
- **Glacial Lake Outburst Floods (GLOFs):** Occur when glacial lakes overflow or their natural barriers collapse.
- **Landslide-Dammed Lake Outburst Floods (LLOFs):** Result from landslides creating temporary dams that fail catastrophically.

Rising Temperatures and Changing Precipitation Patterns
 Since 1950, HMA has experienced significant climatic changes:

Factor	Impact on Flood Risks
Temperature Rise	Warming at 0.3°C per decade accelerates glacier retreat and snowmelt
Erratic Precipitation Patterns	Unpredictable monsoon activity leads to off-season floods
Glacial Retreat	Increased formation of glacial lakes prone to sudden outbursts

Evidence of Increasing Flood Frequency

- The frequency of floods has risen sharply since 2000 compared to earlier decades.
- A key finding is the increasing unpredictability of flood timing:
 - While most floods occur during monsoons, off-season floods are becoming more common.
- Example: In summer 2023, monsoon-triggered floods in India, Nepal, and Pakistan caused over **1,500 deaths**.

Human Activities Amplifying Flood Risks

In addition to climate change, human activities have exacerbated flood risks:

Activity	Impact on Flood Vulnerability
Unplanned Urban Expansion	Poor drainage systems increase waterlogging
Deforestation	Reduces soil absorption capacity, increasing surface runoff
Encroachment on Floodplains	Reduces natural flood buffers
Infrastructure Development	Projects like hydropower plants built without climate risk assessments

Case Study: Uttarakhand Glacier Burst (2021)

- A glacier burst in Chamoli district triggered catastrophic flooding.
- Over 200 deaths and significant damage to hydropower projects were reported.
- Causes: Climate change-induced glacier retreat and unregulated infrastructure development.

Socio-Economic and Environmental Impacts

The rising frequency of floods in HMA has far-reaching consequences:

Impact Category	Details
Loss of Lives and Livelihoods	Agricultural communities face instability; tourism suffers
Health Crises	Stagnant floodwaters breed diseases like cholera and dysentery
Infrastructure Damage	Destruction of roads, bridges, and power plants disrupts economic activity
Environmental Degradation	Soil erosion and loss of biodiversity

Mitigation and Adaptation Strategies

To address the increasing flood risks in HMA, a multi-pronged approach is essential:

Key Strategies

- **Real-Time Flood Monitoring**

- Use satellite data and AI-driven models for early warning systems.
- **Climate-Resilient Infrastructure**
 - Build flood-resistant structures with better drainage systems.
- **Restrict Construction in High-Risk Zones**
 - Limit urban expansion and infrastructure projects in vulnerable areas.
- **Transboundary Cooperation**
 - Enhance regional collaboration for data sharing and coordinated disaster responses.
- **Community-Based Disaster Management**
 - Train local communities in flood adaptation measures like afforestation programs.
- **Ecosystem Restoration**
 - Promote reforestation and wetland conservation to enhance natural flood absorption.

Conclusion

The rising frequency of floods in High Mountain Asia underscores the urgent need for climate action and sustainable development practices. With temperatures rising at twice the

PEPPER IT WITH:
Disaster prone regions of India, Rapid climate change and its impact.

global average and human activities amplifying risks, a holistic approach integrating scientific research, policy reforms, and community engagement is critical. Protecting this fragile ecosystem is not just an environmental imperative but also essential for safeguarding the livelihoods of billions who depend on its resources.

DISASTER MANAGEMENT

Mumbai building fire

News excerpt

The severe health effects of **inhaling smoke during fires**, particularly in cases like the **Mumbai building fire**.

Smoke inhalation is a major cause of **injuries and fatalities** in fires, often due to a combination of **heat damage, chemical exposure, and oxygen deprivation**. The impact varies depending on the **composition of the smoke, duration of exposure, and individual health conditions**.

Components of Smoke and Their Health Impacts

During fires, the burning of different materials releases **toxic gases, fine particles, and irritants**, which can cause severe damage to the respiratory and cardiovascular systems.

- **Toxic Gases:**
 - **Carbon Monoxide (CO):**
 - CO is a colorless, odorless gas that **binds to hemoglobin** in the blood over **200 times more effectively than oxygen**, reducing oxygen transport to tissues.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

- This leads to **hypoxia (oxygen deprivation)**, which can cause dizziness, confusion, unconsciousness, and even death.
 - **Hydrogen Cyanide (HCN):**
 - Produced when materials like **plastics, wool, and silk** burn, cyanide **disrupts cellular oxygen usage**, leading to **cell death and metabolic failure**.
 - Symptoms include **headaches, nausea, convulsions, and respiratory distress**.
- **Particulate Matter (PM2.5 & PM10):**
 - Tiny particles that penetrate deep into the lungs, causing **inflammation, respiratory distress, and long-term lung damage**.
 - They can trigger **asthma, bronchitis, and cardiovascular diseases** in high concentrations.
- **Other Harmful Compounds:**
 - Smoke also contains **sulfur dioxide, nitrogen oxides, formaldehyde, and benzene**, which are **highly irritating and carcinogenic**.
 - When inhaled, these compounds can cause **permanent lung scarring and increase the risk of cancer**.

Immediate Health Effects of Smoke Inhalation

Even brief exposure to **dense smoke** can cause **severe and potentially fatal health effects**:

- **Respiratory Symptoms:**
 - **Coughing, wheezing, and shortness of breath** due to airway irritation.
 - Swelling of the airways can **lead to suffocation** in severe cases.
- **Neurological Symptoms:**
 - **Headaches, dizziness, and confusion** from lack of oxygen in the brain.
 - Severe cases can result in **loss of consciousness and coma**.
- **Cardiovascular Effects:**
 - Increased risk of **heart attacks and strokes** due to carbon monoxide poisoning.
 - Smoky conditions can lead to **high blood pressure and arrhythmias (irregular heartbeats)**.
- **Thermal Injuries to the Airways:**
 - Superheated gases from flames can **burn the airways and lungs**, leading to swelling and respiratory failure.

Long-Term Health Consequences

Chronic exposure to smoke, even in lower concentrations, **significantly increases the risk of serious health conditions**:

- **Chronic Respiratory Conditions:**
 - Prolonged exposure leads to **scarring of lung tissue**, reducing lung capacity.

- Conditions like **chronic bronchitis, asthma, and emphysema** may develop.
- **Cardiovascular Diseases:**
 - Repeated exposure to smoke and fine particulate matter can cause **long-term heart damage**, leading to **hypertension, heart disease, and stroke**.
- **Increased Cancer Risks:**
 - Many **toxic chemicals in smoke** are known carcinogens, significantly increasing the risk of **lung cancer and throat cancer** over time.
- **Neurotoxic Effects:**
 - Extended exposure to **carbon monoxide and cyanide** can cause **memory loss, cognitive decline, and neurological disorders**.

Vulnerable Populations at Higher Risk

Certain groups of people are more **susceptible** to the effects of smoke inhalation:

- **Children and Elderly Individuals:**
 - Children have **smaller lungs and weaker immune systems**, making them **more vulnerable** to respiratory distress.
 - The elderly often have **pre-existing conditions** that make recovery **more difficult**.
- **People with Pre-existing Health Conditions:**
 - Those with **asthma, COPD, heart disease, or weakened immune systems** are at **higher risk of complications**.
- **Firefighters and First Responders:**
 - Individuals frequently exposed to smoke **without proper protective gear** suffer from **chronic respiratory illnesses** over time.

Preventive Measures to Reduce Smoke Inhalation Risks

While it is difficult to completely avoid smoke exposure in fire emergencies, several preventive measures can help minimize the risks:

- **Use of Protective Equipment:**
 - **Wearing N95 or P100 masks** can filter out **fine particles** and reduce inhalation of toxic chemicals.
 - Firefighters and emergency workers should use **self-contained breathing apparatus (SCBA)**.
- **Limiting Exposure During Fires:**
 - **Evacuate immediately** when smoke levels rise and **stay low** to avoid inhaling hot, rising fumes.
 - Avoid inhaling **smoke from burning plastic, rubber, and other toxic materials**.
- **Ensuring Proper Ventilation in Buildings:**
 - Installing **smoke detectors and ventilation systems** can help reduce indoor smoke accumulation.

- Keeping **emergency exits clear** can prevent people from getting trapped in smoky areas.
- **Seeking Immediate Medical Attention:**
 - If someone experiences **breathing difficulty, dizziness, or loss of consciousness**, they should be taken to a hospital **immediately**.
 - Oxygen therapy and **hyperbaric oxygen treatment** may be needed in cases of severe carbon monoxide poisoning.

Conclusion

- Smoke inhalation injuries are a **major cause of death and disability** in fire incidents. The **toxic chemicals in smoke**, combined with **oxygen deprivation and lung damage**, make it essential to take **preventive measures** and ensure **quick medical intervention**.
- **Wearing protective masks, evacuating promptly, and increasing public awareness** can help **reduce fatalities and long-term health risks** associated with fire smoke exposure.

PEPPER IT WITH:
 Disaster preparedness, NDMA guidelines

Disaster Management in the Context of the North Sea Collision

News excerpt

The **North Sea collision** between the Portuguese cargo ship Solong and the US oil tanker Stena Immaculate, highlights the critical **need for effective disaster management protocols in maritime incidents**. The collision resulted in extensive damage, fires on both vessels, and environmental risks from potential oil spills. While salvage operations and firefighting efforts are ongoing, this incident underscores the importance of legal frameworks and coordinated responses to mitigate such disasters.

GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						



Incident Overview

- **Collision Details:** The Solong collided with the Stena Immaculate, leading to fires on both vessels. Flames remain visible on Solong, while the fire on Stena Immaculate has been extinguished.

- **Casualties:** Of the 14 crew members aboard *Solong*, 13 were rescued, but one is presumed deceased. All 23 crew members aboard *Stena Immaculate* are safe.
- **Environmental Concerns:** Although initial fears of sodium cyanide contamination were ruled out, there remains a risk of heavy engine oil leakage, which could harm marine ecosystems.
- **Legal Actions:** The captain of *Solong* has been arrested on suspicion of gross negligence manslaughter, and a criminal investigation is underway.

Disaster Management Framework in India

India has a robust legal framework for disaster management that can be applied to maritime incidents like this one. Key laws and policies include:

1. Disaster Management Act, 2005

- **Scope:** Provides a comprehensive framework for disaster preparedness, mitigation, and response.
- **Application:** In cases of maritime disasters involving Indian ships or affecting Indian waters, the Act empowers authorities to coordinate emergency measures.
- **National Disaster Management Authority (NDMA):** Responsible for formulating policies and guidelines to manage disasters effectively.

2. Merchant Shipping Act, 1958

- **Scope:** Governs shipping operations in India, including safety regulations for vessels.
- **Application:** Mandates shipowners to ensure safety standards and provides guidelines for handling maritime accidents.
- **Pollution Control:** Includes provisions for preventing marine pollution caused by oil spills or hazardous cargo.

3. Environment Protection Act, 1986

- **Scope:** Focuses on protecting and improving the environment.
- **Application:** In cases of oil spills or chemical leaks from vessels, this Act empowers authorities to take immediate action to mitigate environmental damage.

Environmental Impact

Two primary hazards have emerged: the toxic jet fuel carried by the *Stena Immaculate* and the possible presence of sodium cyanide containers aboard the *Solong*.

Threats from Jet Fuel

The *Stena Immaculate*, which was transporting jet fuel for the US military, has been **leaking this toxic substance into the sea following the collision**. Jet fuel is known to be harmful to marine organisms, and ingestion can lead to fatal consequences for various species.

Wildlife organizations are particularly concerned about seabirds that **may consume contaminated fish or other marine life**, potentially leading to broader ecological impacts.

Contamination Concerns

- **Extent of Leakage:** While it remains unclear how much jet fuel has leaked from the wreckage, reports indicate that some fuel has already been burned off in the ensuing fires. The scale of contamination will depend on natural factors, including how quickly bacteria can break down the fuel and how effectively authorities can contain the spill.
- **Cleanup Operations:** Assessing the required cleanup efforts is challenging without precise information on the spill's size. Preliminary estimates suggest that the environmental impacts could **persist for weeks or even months**, with cleanup costs potentially reaching millions of pounds.

Risks from Sodium Cyanide

In addition to jet fuel, there are concerns regarding **15 containers of sodium cyanide** that *Solong* might have been carrying. The status of these containers remains uncertain; it is not yet known if any have ruptured and released their contents into the water.

Characteristics of Sodium Cyanide

- **Toxicity:** Sodium cyanide is a **highly soluble white powder with a faint almond-like odor**. It poses a serious threat as it interferes with animals' ability to respire by blocking oxygen utilization.
- **Dispersion and Metabolism:** Experts suggest that sodium cyanide can disperse rapidly in water, potentially **diluting quickly and being metabolized by bacteria**. While this may mitigate long-term environmental risks, it could still lead to immediate harm to local fish and shellfish populations.

Disaster Management Protocols

To address maritime disasters effectively, India follows these protocols:

- **Search and Rescue Operations**
 - Coordinated by the Indian Coast Guard under International Maritime Organization (IMO) guidelines.
 - Ensures timely evacuation of crew members and containment of hazards.
- **Pollution Response Measures**
 - Deployment of oil spill response kits and containment booms under the National Oil Spill Disaster Contingency Plan (NOSDCP).
 - Collaboration with port authorities and environmental agencies for cleanup operations.

- **Firefighting Efforts**
 - Specialized firefighting vessels are deployed to control fires aboard ships.
 - Priority is given to extinguishing flames before salvage operations begin.
- **Legal Accountability**
 - Investigation into negligence or violations under relevant laws (e.g., Merchant Shipping Act).
 - Arrests and prosecutions for gross negligence manslaughter or environmental damage.

Lessons from the North Sea Collision

The incident serves as a reminder of key priorities in disaster management:

- **Strengthening Safety Standards**
 - Regular audits of vessel safety features like dual hulls and fire suppression systems.

PEPPER IT WITH:
Environmental disaster, Disaster mitigation efforts and laws.

- **Environmental Safeguards**
 - Enhanced monitoring systems to detect pollution early and deploy rapid response mechanisms.
- **International Collaboration**
 - Cooperation with global agencies like IMO for cross-border incidents involving foreign vessels.
- **Capacity Building**
 - Training programs for maritime personnel in emergency response protocols.

Conclusion

Maritime disasters like the North Sea collision demand robust legal frameworks and coordinated responses to minimize loss of life, environmental damage, and economic impact. India's existing laws—such as the Disaster Management Act and Merchant Shipping Act—provide a strong foundation for addressing such incidents effectively.

PRE-SHOTS

POLITY

Telangana Backward Classes quota

News Excerpt:

The Telangana government is considering **increasing reservations for Backward Classes (BCs) from 25% to 42%**, which would raise the total reservation in the state to **62%**, surpassing the **Supreme Court's 50% ceiling** on reservations. This move, if implemented, could face significant legal and constitutional challenges. Below is a detailed breakdown of the issue:

Current Reservation Structure in Telangana

Currently, the state provides **64% reservation** across different categories:

- **Scheduled Castes (SCs) – 15%**
- **Scheduled Tribes (STs) – 10%**
- **Other Backward Classes (OBCs/BCs) – 29%** (including 25% for BCs)
- **Economically Weaker Sections (EWS) – 10%**
- **Total Reservation in the State – 64%**

Proposed Changes

- The Telangana government is **considering increasing BC reservations from 25% to 42%**.
- If implemented, this would bring the total **reservation quota to 76%** (including the 10% EWS quota), **far exceeding the Supreme Court's 50% limit**.

Legal Context: The Supreme Court's 50% Ceiling

The **Indian Constitution** provides for reservation policies to promote social justice, but the **Supreme Court has consistently upheld a 50% cap on reservations** to maintain a balance between affirmative action and merit-based selection.

Key Supreme Court Judgments

- **Indra Sawhney v. Union of India (1992)**
 - The Supreme Court ruled that **reservation should not exceed 50%** unless in exceptional circumstances.
 - It emphasized that excessive reservations **could violate the right to equality** (Article 14).
- **M. Nagaraj v. Union of India (2006)**
 - The Court reiterated the **50% ceiling and required states to justify exceeding it with quantifiable data** proving backwardness.
- **Jarnail Singh v. Lachhmi Narain Gupta (2018)**
 - Upheld previous rulings and confirmed that **exceeding 50% requires strong constitutional justification**.
- **Maratha Quota Case (2021)**
 - The Supreme Court struck down Maharashtra's attempt to exceed **50% reservation for Marathas**, reaffirming that **only Parliament can modify the limit**.

Challenges to Telangana's Proposal

The Telangana government faces multiple **constitutional and legal challenges** in pushing for this increased quota.

Legal Hurdles

- The **50% ceiling is a constitutional limitation**, meaning any **state law exceeding this limit can be struck down by courts**.
- Even if the state **passes a law increasing BC reservations**, it may face **legal challenges in the High Court and Supreme Court**.
- The government would need to **present quantifiable data** proving the necessity of exceeding the cap.

Possible Legal Strategies

- **Ninth Schedule Protection** – Some states, such as **Tamil Nadu (69% reservation)**, have managed to **bypass the 50% limit by placing their laws under the Ninth Schedule of the Constitution**. However, the Supreme Court has ruled that even Ninth Schedule laws can be **subject to judicial review**.
- **Constitutional Amendment** – Telangana could **seek Parliament's approval for a constitutional amendment** to increase the reservation limit.

Implications of the Increased Reservation

Political and Social Impact

- The move is likely to be **politically motivated**, given the strong **OBC vote bank** in Telangana.
- Increased BC reservations could **strengthen the state's affirmative action policies** but also face **backlash from unreserved groups**.

Potential National-Level Impact

- If Telangana is allowed to increase the BC reservation quota, **other states may follow suit**, leading to **demands for a nationwide increase in the reservation cap**.
- This could set a **precedent for challenging the Supreme Court's 50% ceiling** on a larger scale.

Conclusion

- Telangana's proposal to **raise BC reservations to 42%** and the total quota to **76%** challenges the **constitutional limit of 50% set by the Supreme Court**.
- The state must **justify the increase with quantifiable data** and explore **legal options like seeking Ninth Schedule protection or pushing for a constitutional amendment**.
- However, given past Supreme Court rulings, this move is likely to **face judicial scrutiny and possible legal hurdles**.

Strict penalties against male relatives in panchayat positions

News Excerpt:

A **government panel** has recommended **strict penalties** against male relatives who unlawfully **usurp panchayat**

positions reserved for women. This move is aimed at ensuring the **genuine participation of elected women representatives** and preventing **proxy governance by male family members**.

Background: Women's Reservation in Panchayats

• Policy Objective:

- The reservation of seats for women in **panchayats (village councils)** was introduced to **promote gender equality** and encourage **women's active participation in grassroots democracy**.
- This initiative aims to **empower women in decision-making** and enhance their representation in local governance.

• Issue Identified: Male Proxy Governance

- In many cases, male relatives such as **husbands, brothers, or fathers** of elected women **unofficially take control of panchayat positions**, making decisions on their behalf.
- This practice, often referred to as the "**Pradhan Pati (Husband Sarpanch) syndrome**", undermines the very purpose of **women's political empowerment**.
- It **dilutes the impact of women's reservations**, as **actual power remains with men** while women serve as nominal representatives.

Recommendations by the Government Panel

• Imposing Exemplary Penalties

- The panel has suggested **strict legal and financial penalties** for male relatives who misuse the system by **exercising power in place of elected women representatives**.
- These penalties would serve as a **strong deterrent**, ensuring that **women are the real decision-makers** in governance.

• Strengthening Enforcement Mechanisms

- The government may introduce **clear legal provisions** to prevent male relatives from interfering in **women's official responsibilities** in panchayats.
- Strict monitoring mechanisms, such as **random audits, surprise inspections, and local complaints committees**, may be implemented to detect such violations.

Expected Outcomes and Impact

• Ensuring Authentic Representation

- These measures will ensure that **women actually hold and exercise power**, leading to **better governance and accountability** at the grassroots level.
- It will also prevent **male dominance in decision-making**, fostering **greater independence for elected women leaders**.

• Empowerment of Women in Politics

- By removing male interference, more women will **gain leadership experience** and develop **confidence in governance roles**.

- This could eventually **increase female political participation at higher levels** of governance, such as **state assemblies and Parliament**.

• Inclusive and Effective Local Governance

- Women's active participation in panchayats has been linked to **improved development outcomes**, such as **better healthcare, education, and social welfare policies**.
- Genuine leadership by women will result in **more community-driven policies** that address the needs of **women and marginalized groups**.

Conclusion: Strengthening Gender Equality in Local Governance

- The government's move to **penalize male relatives** taking over panchayat positions is a crucial step towards **ensuring real political empowerment of women**.
- By enforcing **legal protections**, India aims to **strengthen gender equality in local governance**, ensuring that women's reservations translate into **actual leadership and decision-making power**.

The Maharashtra-Karnataka border dispute

News Excerpt:

The Maharashtra-Karnataka border dispute is a longstanding issue centered around the **city of Belgaum** (now Belagavi) and surrounding regions. This conflict has its roots in the linguistic reorganization of Indian states in the 1950s and continues to influence the political dynamics between the two states.

Historical Background

• Pre-Independence Era

- Belgaum was part of the Bombay Presidency during British rule, a province that included parts of present-day Maharashtra, Karnataka, and Gujarat.

• Post-Independence Reorganization

- After India gained independence in 1947, the Belgaum district became part of Bombay State.
- The States Reorganization Act of 1956, which aimed to create states based on linguistic demographics, incorporated Belgaum into the newly formed Mysore State (renamed Karnataka in 1973). This decision was based on the linguistic majority of Kannada speakers in the region.

Emergence of the Dispute

• Maharashtra's Claims

- Maharashtra contended that Belgaum and surrounding Marathi-speaking areas should be part of its territory, citing linguistic and cultural affiliations.

• Formation of Maharashtra Ekikaran Samiti (MES)


- In 1948, the MES was established with the objective of integrating Belgaum into Maharashtra.

Mahajan Commission (1966)

- **Establishment and Recommendations**
 - In response to the dispute, the Government of India set up the Mahajan Commission in 1966 to examine the claims.
 - The commission recommended that Belgaum remain with Karnataka but suggested the transfer of certain villages between the states to address linguistic concerns.
- **Rejection by Maharashtra**
 - Maharashtra rejected the commission's report, alleging bias and inconsistencies, and continued to demand the incorporation of Belgaum into its territory.

HISTORY OF BELGAUM

Post-Independence, Belgaum district is part of the larger Bombay state with a majority of Marathi-speaking population. In 1956, the district was incorporated into the newly formed Mysore state (now Karnataka).



What is the dispute?

Marathi-speaking population in Belgaum, Khanapur and Nipani in north Karnataka have been demanding inclusion in Maharashtra since the reorganisation of states five decades ago. About 80 per cent population in Belgaum and Khanapur talukas is Marathi-speaking.

Maharashtra's stand	Karnataka's stand	The Fighters
Maharashtra has been demanding the inclusion of the disputed area since 1960 when the state was formed on linguistic basis.	It is opposed to reorganisation of boundary now. The state government in 2005 declared Belgaum as its second capital.	Belgaum is an emotive issue for most Maharashtrians. Parties like NCP and Shiv Sena have been vocal in their support for Marathis of Belgaum.

Legal and Political Developments

- **Supreme Court Petition (2006)**
 - Maharashtra filed a petition in the Supreme Court of India in 2006, seeking a resolution to the border dispute. The case remains pending, with both states awaiting a final verdict.
- **Recent Political Resolutions**
 - In December 2022, the Maharashtra Legislative Assembly passed a unanimous resolution asserting its claim over Belgaum and other Marathi-speaking areas in Karnataka. This move emphasized Maharashtra's intent to pursue legal avenues to settle the dispute.

Recent Tensions and Incidents

- **Language-Related Conflicts**

- In February 2025, an incident involving the assault of a Karnataka bus conductor over a language dispute led to heightened tensions between the states. This event disrupted bus services and sparked protests from linguistic and regional groups on both sides.

Current Status

- **Pending Judicial Resolution**
 - The Supreme Court of India has yet to deliver a final judgment on the dispute. Both Karnataka and Maharashtra continue to uphold their respective claims over the contested regions.
- **Administrative Actions**
 - Karnataka maintains administrative control over Belgaum, designating it as the headquarters of the Belagavi district. The state has also taken measures to assert its authority, such as constructing a new legislative building in the city.

Way Forward:

The Maharashtra-Karnataka border dispute remains a complex and sensitive issue, deeply rooted in linguistic and cultural identities. Despite various efforts, including commissions, legal battles, and political negotiations, a mutually acceptable resolution has yet to be achieved. The dispute continues to influence the socio-political landscape of both states, reflecting the enduring challenges of regional and linguistic diversity in India.

Ministry of Rural Development Launches Pilot Project "NAKSHA"

News Excerpt:

The **National Geospatial Knowledge-based Land Survey of Urban Habitations (NAKSHA)** will be initiated across 152 Urban Local Bodies (ULBs) in 26 States and 3 Union Territories (UTs) in India.

About NAKSHA:

Background: Announced in 2024 as part of the **Digital India Land Records Modernization Programme (DILRMP)**, the project seeks to enhance **land record management in urban areas**, ensure accurate documentation of land ownership, and improve urban planning.

Key Objectives:

- Creation and updating of **urban land records** to ensure reliable documentation of land ownership.
- **Empower citizens, minimize land-related disputes**, and promote transparency.
- Improve **urban planning through updated land records**, enhancing infrastructure and service delivery in **urban and semi-urban regions**.
- Reduce disputes by ensuring accurate and readily accessible land records.

- Facilitate **informed decision-making regarding land use and resource allocation** for sustainable urban development.

Technological Integration:

- Conduct aerial surveys and provide orthorectified imagery to state and UT governments for precise mapping.
- Web-GIS Platform:** Developed by Madhya Pradesh State Electronic Development Corporation (MPSEDC) for managing digital land records.
- National Informatics Centre Services Inc. (NICS)** will provide the necessary storage infrastructure.
- States and UTs will perform field surveys using aerial imagery, resulting in published land records.

Program Cost: The total expenditure for the project is ₹194 crore, wholly funded by the Government of India.

Expected Outcomes:

- Improved Governance**
- Sustainable Urban Development**

Significance of Digitizing Land Records:

- Empower Citizens:** Provides legal documents of land ownership.
- Reduces Disputes:** Legal documentation helps lower conflicts, alleviating the judicial strain.
- Enhances Governance:** Promotes transparency and efficiency, aiding in urban planning.
- Boosts Investment:** Facilitates ease of doing business and supports cities as growth hubs.

About DILRMP

- Launched:** The National Land Record Modernization Programme (NLRMP) was revamped into DILRMP in 2016.
- Type:** A Central Sector Scheme with 100% funding from the Centre.
- Key Components:**
 - Computerization of land and registration
 - Digitization of revenue courts
 - Voluntary Aadhaar integration
- Tenure:** Extended from 2021 to 2026 for an additional five years.
- Key Initiatives:**
 - Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhar
 - BHOOMI SAMMAN

Achievements

- 95% of Records of Rights (RoR) have been digitized.
- 68% of cadastral maps are digitized.
- 95% of registrations have been computerized.

Conclusion

The NAKSHA project aims to transform urban land records by digitizing ownership data, enhancing governance, and empowering citizens. This initiative marks a crucial advancement in the Digital India Land Records Modernization Programme (DILRMP) and will lead to a nationwide rollout to improve transparency and facilitate ease of doing business.

SOCIAL ISSUES

Women's Progress Superficial Without Safe Public Spaces

News Excerpt:

The **Delhi High Court** has emphasized that discussions on **women's empowerment** are incomplete without addressing the **safety of women in public spaces**. The court stressed that real progress can only be achieved when women feel safe in everyday environments, including **public transport** and other shared spaces.

Judicial Observations on Women's Safety

Persistent Harassment in Public Spaces

- Justice **Swarana Kanta Sharma** noted that despite decades of **independence and legal reforms**, women continue to face **harassment and assault** in public areas.
- Public transport, which should provide **secure mobility**, has become a site for **frequent harassment**.

Empowerment Linked to Freedom of Movement

- The court emphasized that **true empowerment** means ensuring **women's right to move freely** without fear of **violence or intimidation**.
- Without **safe public spaces**, discussions on **gender equality** and **progress** remain **superficial**.

Key Legal Case: Upholding Conviction in Sexual Harassment

Incident Details

- In **October 2015**, a man **sexually harassed** a female co-passenger on a **public bus**, making **inappropriate gestures** and attempting **forcible physical contact**.

Court's Stance on Public Safety

- The **Delhi High Court** upheld his conviction, reinforcing the **zero-tolerance approach** towards **harassment in public spaces**.
- The court stated that **offenders often act with impunity**, believing they can **evade consequences**.
- Strong legal action is **essential** to **deter potential offenders** and **ensure public safety**.

Initiatives to Enhance Women's Safety

Safe City Projects: **Initiatives like the Safe City project in India, funded by the Nirbhaya funds scheme, aim to create safe, secure, and empowering environments for women in public places.**

Delhi Police's 'Shishtachar' Squad

- Special anti-eve-teasing teams** have been deployed in each district of **Delhi**.
- These squads, led by **Assistant Commissioners of Police** from the **Crime Against Women Cell**, will:
 - Conduct **surprise inspections** at public places.
 - Interact with **public transport personnel** to ensure compliance with safety guidelines.
 - Take **immediate action** against **harassment incidents**.

- **Safety Audits:** Conducting safety audits of public spaces, including transportation systems, to identify vulnerabilities and implement improvements.
- **Infrastructure Improvements:** Investing in public infrastructure, such as better lighting, improved visibility, and safe and accessible public toilets.
- **Economic Empowerment:** Promoting economic opportunities for women, which can contribute to their safety and independence.
- **Community Engagement:** Empowering women within communities, encouraging community advocacy for safer spaces, and working with men and boys to address gender norms.

Technological Solutions – Safetipin

- **Safetipin**, a mobile application, helps women assess the safety of public spaces.
- It provides **real-time data** on:
 - **Street lighting** and visibility.
 - **Security personnel presence.**
 - **Community safety ratings.**
- The app enables **informed decisions on movement**, particularly in **high-risk areas.**

Conclusion:

Ensuring **women's safety** in **public spaces** is **essential for real progress.** A **collective effort** is needed to create **safer urban environments** where women can **live, work, and travel** without **harassment or fear.**

Tiruchi District's 100-Day TB Elimination Program

News Excerpt:

The **Tiruchi district** in Tamil Nadu has launched a **100-day Tuberculosis (TB) elimination campaign**, reinforcing **India's goal of eradicating TB by 2025.** This initiative focuses on **early detection, comprehensive treatment, and public awareness** to effectively curb the spread of the disease.

Program Overview

Objective

- The campaign aims to **identify and treat active TB cases** to prevent further **transmission.**
- It aligns with the **National Tuberculosis Elimination Program (NTEP)** to move towards a **TB-free district.**

Duration

- The campaign runs for **100 days**, from **December 7, 2024, to March 24, 2025**, concluding on **World TB Day.**

Screening and Detection

Awareness Vehicles (Nikshay Vahan)

- **Mobile screening units**, equipped with **digital X-ray machines**, visit **high-risk areas**, including:
 - **Crowded residential zones**
 - **Old-age homes**
 - **Industrial areas**

Screening Camps

- **546 TB screening camps** have been set up across the district.
- These camps provide **easy access to free TB testing** for the local population.

Treatment and Follow-Up

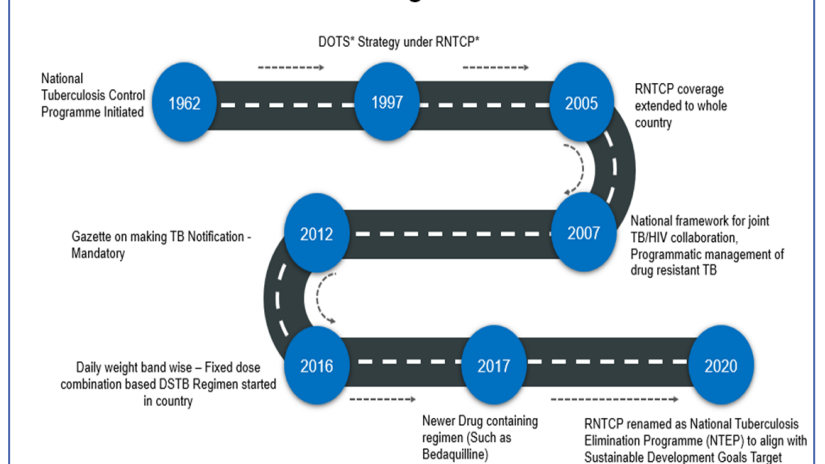
Immediate Intervention

- Patients diagnosed with TB are **immediately enrolled in free treatment programs.**
- **Early medical intervention** ensures higher **recovery rates** and reduces **community transmission.**

Support Services

- Patients receive **monetary assistance** from the **central government** during their **treatment period.**
- The **National TB Elimination Programme (NTEP) team** provides:
 - **Counseling services**
 - **Regular follow-ups** to track progress
 - **Awareness on medication adherence**

Evolution of TB Elimination Programme in India



Community Engagement

Educational Initiatives

- **TB awareness programs** are conducted in various public spaces, including:

- **Post offices**
- **Community centers**
- Example: An **awareness program** was conducted at the **Cuddalore Head Post Office** to educate the public on **TB symptoms and prevention**.

Collaborative Efforts

- The initiative involves **health departments, local authorities, and NGOs** to maximize outreach.
- **Community participation** plays a crucial role in **early detection and prevention**.

Impact and Future Plans

Reduction in TB Incidence

- The campaign is expected to **significantly lower TB cases** in the district.
- **Timely diagnosis and treatment** will help in **curbing disease spread**.

Sustainability

- Plans are in place to ensure **continuous TB elimination efforts** beyond the **100-day period**.
- **Long-term monitoring and awareness programs** will continue to support **public health improvements**.

Conclusion

- This **100-day TB elimination program** in **Tiruchi district** demonstrates a **proactive approach to public health**. It highlights the **importance of large-scale screening, immediate treatment, and community involvement** in the fight against **tuberculosis**.
- The **Delhi High Court's verdict** sends a **strong message: without safe spaces, women's empowerment remains incomplete**.

Last-Mile Delivery Through Digital Infrastructure

News Excerpt: Prime Minister Narendra Modi has underscored the pivotal role of **digital connectivity** in enhancing **last-mile delivery** of services across India. By leveraging advanced digital infrastructure, the government aims to ensure that essential services reach every citizen, particularly in remote and underserved areas.

BharatNet Initiative: Bridging the Connectivity Gap

Comprehensive Broadband Coverage

- **BharatNet** is a flagship initiative designed to provide **broadband connectivity** to all **Gram Panchayats** (village councils) across India. This extensive network aims to bridge the digital divide between urban and rural regions.

Empowering Local Entrepreneurs

- The initiative employs the **BharatNet Udyamis (BNUs) model**, which involves **village-level entrepreneurs, Self-Help Groups (SHGs), and Internet Service Providers (ISPs)** to facilitate and maintain **last-mile connectivity**. These BNUs receive **financial incentives** for activating new home fiber connections and a share of the monthly revenue to ensure service continuity.

Digital Connectivity in Education and Healthcare

Enhancing Educational Infrastructure

- The government is integrating **digital infrastructure** in schools to provide students with access to modern educational resources. This integration ensures that students in rural areas receive quality education through digital means.

Strengthening Healthcare Services

- Primary Health Centers (PHCs) are being equipped with **digital tools** to improve healthcare delivery. This digital integration facilitates better patient management, telemedicine services, and efficient healthcare delivery in rural regions.

Global Advocacy for Ethical Digital Practices

Establishing International Digital Standards

- Prime Minister Modi has called for the development of **global digital rules** to ensure the ethical use of technology. He emphasizes that as digital connectivity becomes integral to governance and service delivery, establishing ethical guidelines is crucial.

Promoting Ethical Artificial Intelligence

- The Prime Minister advocates for the creation of a framework for **ethical Artificial Intelligence (AI)** usage, ensuring that AI technologies are developed and deployed responsibly, benefiting society as a whole.

PM Gati Shakti: Integrating Multi-Modal Connectivity Unified Digital Platform

- The **PM Gati Shakti** plan introduces a **digital platform** that brings together 16 ministries, including Railways and Roadways, for integrated planning and coordinated implementation of infrastructure connectivity projects.

Efficient Logistics and Reduced Costs

- This initiative aims to create **world-class logistics networks**, making them economically sustainable and reducing freight shipping costs. The policy is expected to lower the high freight shipping cost in India by 13-14%.

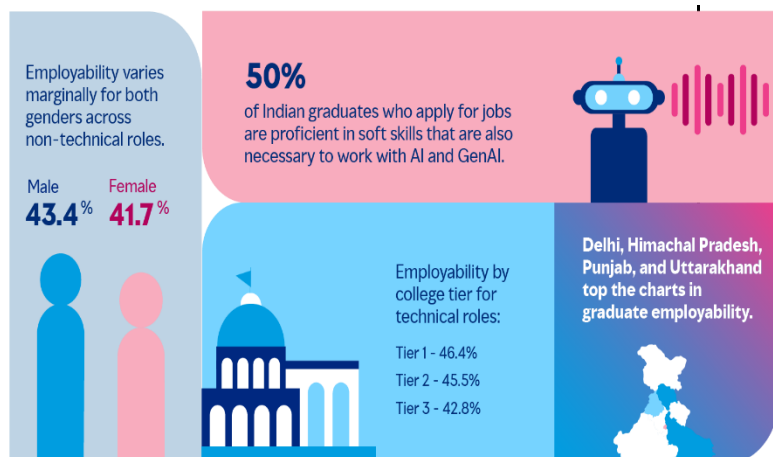
Through these comprehensive initiatives, Prime Minister Modi envisions a digitally empowered India where **digital infrastructure** serves as the backbone for effective **last-mile delivery** of services, ensuring inclusive growth and development across all sectors.

India's Graduate Skill Index 2025

News Excerpt:

India's job market is currently at a pivotal point. As industries undergo transformation through the integration of artificial intelligence (AI) and automation, fresh graduates are finding it increasingly challenging to keep pace.

A recent report, '**India's Graduate Skill Index 2025**' by Mercer-Mettl, reveals that only 42.6 percent of Indian graduates are considered employable, a decline from 44.3 percent in 2023.



Companies now seek graduates who can quickly learn, unlearn, and adapt to evolving work environments, placing a premium on adaptability alongside technical expertise.

Reasons for Graduate Struggles

Several factors contribute to the current employment crisis:

- **Education System Gaps:** Many Indian colleges prioritize theoretical knowledge over practical skills, leaving students ill-prepared for the workforce.
- **AI Disruption:** Automation is reshaping job roles and necessitating continuous upskilling.
- **Limited Non-Technical Training:** Training in soft skills is often unstructured and less accessible to students.
- **Hiring Slowdown in IT Sector:** Global economic uncertainties have resulted in reduced hiring in 2023-24, impacting fresh graduates.

The Biggest Challenge: The Skills Gap

The most significant issue facing graduates today is the widening gap between employer expectations and the skill sets possessed by graduates. While technical skills such as AI and data analytics are in high demand, essential non-technical skills like communication, problem-solving, and creativity are lagging. This disparity has made it difficult for many fresh graduates to secure employment.

Employability by College Tier

The report highlights that graduate from

Tier-I colleges exhibit the highest employability rate at 48.4 percent, followed by

Tier-II (46.1 percent) and

Tier-III (43.4 percent) institutions.

Among states, Delhi (53.4 percent), Himachal Pradesh (51.1 percent), and Punjab (51.1 percent) produce the most employable graduates. The positive outcomes in these states can be attributed to quality education, strong industry partnerships, and favorable economic conditions.

Rise of AI & Data Science Jobs

The report emphasizes a significant increase in the employability of graduates for AI and machine learning (ML) roles, **now at 46 percent**, up from the previous year. The demand for skills in AI, data analytics, and digital technologies is surging, with notable gender parity observed in these positions.

Demand for Soft Skills

Soft skills, which cannot be replaced by machines, are increasingly sought after by employers. **Communication skills (55.1 percent), critical thinking (54.6 percent), and leadership abilities (54.2 percent)** are now crucial for success in the workplace.

However, creativity remains a weak point with an employability score of only 44.3 percent.

Employers Struggle to Find Non-Technical Talent

Despite the uptick in AI and data science opportunities, non-technical fields are still experiencing challenges. Only **43.5 percent of graduates are employable** in areas such as sales, marketing, human resources, and business development, a drop from **48.3 percent in 2023.**

Future of India's Workforce: What Needs to Change?

Experts are optimistic that India's job market will rebound, with hiring expected to rise in 2025. However, immediate actions are essential from students, universities, and policymakers to close the skills gap.

- **For Students:** Emphasize learning AI, coding, data science, and digital marketing, while also enhancing communication, teamwork, and leadership skills.
- **For Colleges:** Shift towards more practical, industry-focused education to better prepare students for real-world scenarios.
- **For Employers:** Invest in on-the-job training and internship opportunities to help fresh graduates transition smoothly into the workforce.

By addressing these challenges and implementing necessary changes, India can better equip its graduates to meet the demands of an evolving job market.

UNESCO Launches "Imagine a World with More Women in Science" Campaign

News Excerpt:

On February 11, 2025, UNESCO announced the launch of the "Imagine a World with More Women in Science" campaign to commemorate the **10th anniversary of the International Day of Women and Girls in Science.**

This campaign emphasizes the significant contributions of diverse perspectives in science and aims to promote increased female participation. The initiative introduces the hashtag #EveryVoiceInScience to amplify the voices of women in the scientific community.

Background:

The United Nations General Assembly (UNGA) declared **February 11 as the International Day of Women and Girls in Science in 2015**, aiming to raise awareness and boost female participation in scientific disciplines.

Current Gender Gap in Science:

Global Perspective:

- **Low Representation:** Women make up only one-third of the global scientific workforce.
- **Leadership Gap:** A mere 1 in 10 leadership positions in STEM fields are held by women.

India:

- **Women in STEMM:** Women comprise 43% of enrolments in STEMM (Science, Technology, Engineering, Mathematics, and Medicine).
- **Women Scientists:** Only 18.6% of scientists in India are women.
- **R&D Projects:** Approximately 25% of research and development projects are led by women.

Challenges and Recommendations:

Challenges

- **Social and Cultural Norms:** Restrictive gender roles limit women's participation in science.
- **Lack of Role Models:** The absence of visible female leaders in science diminishes women's aspirations to pursue scientific careers.
- **Workplace Inequality:** Gender bias in work environments affects professional opportunities for women.
- **Educational Barriers:** Gender biases in educational materials and limited support for girls in science affect their career choices.

- **The International Day of Women and Girls in Science**, celebrated annually on February 11, is a significant observance established by the **United Nations General Assembly** to promote **gender equality in the fields of Science, Technology, Engineering, and Mathematics (STEM)**.
- This day serves as a platform to encourage full and equal access for **women and girls in these critical areas, which are essential for addressing global challenges such as climate change, public health, and sustainable development.**

Historical Context

- The observance was initiated through the adoption of **UN Resolution 70/212 on December 22, 2015**. It aims to highlight the underrepresentation of **women in scientific fields, where only about 35% of students enrolled in STEM programs are female, and women constitute only one-third of the global research workforce.**
- Despite progress, these figures underscore a persistent gender gap that limits female potential and contributions to scientific advancement.

Recommended Actions

- **Dismantle Gender Stereotypes and Biases in Science:**
 - Increase the visibility of female scientists in educational textbooks.

- Ensure equitable representation of women on decision-making bodies, including boards and panels.
- **Enhance Visibility of Women Role Models:**
 - Promote stories and achievements of female scientists to inspire future generations.
 - Use images and narratives of women scientists in educational content to encourage female participation.
- **Create Inclusive Workplace Environments:**
 - Implement policies that foster inclusion, diversity, and equity within scientific organizations.
 - Address issues of gender-based violence, including sexism and sexual harassment in the workplace.
- **Open Educational Pathways for Girls:**
 - Eliminate gender bias from educational materials to create equitable opportunities.
 - Encourage businesses to support women and girls in science through corporate social responsibility (CSR) initiatives.

Conclusion: This campaign serves as a vital call to action to enhance gender equality in science and ensure that the contributions of women are recognized and valued.

ECONOMY

Deposit Insurance in India

Deposit insurance is a **financial safety net** that protects depositors' funds in the event of a bank failure. It ensures public confidence in the banking system by guaranteeing a certain amount of deposits. In India, deposit insurance is managed by the **Deposit Insurance and Credit Guarantee Corporation (DICGC)**, a wholly owned subsidiary of the **Reserve Bank of India (RBI)**.

Establishment and Purpose of DICGC

- **Formation**
 - The **DICGC was established on July 15, 1978**, under the **Deposit Insurance and Credit Guarantee Corporation Act, 1961**.
 - It was created to provide insurance coverage for bank deposits and to guarantee credit facilities, thereby reducing the risk for depositors.
- **Objective**
 - To **protect depositors from losing their money** if a bank collapses.
 - To **ensure financial stability** by preventing panic withdrawals or bank runs during crises.

What Deposits are Covered?

DICGC provides insurance coverage for deposits held in:

- **Savings accounts**
- **Fixed deposits (FDs)**

- **Current accounts**
- **Recurring deposits (RDs)**
- **Coverage Limit**
 - Each depositor is insured **up to ₹5,00,000 (principal + interest combined) per bank.**
 - This coverage was **increased from ₹1,00,000 to ₹5,00,000 on February 4, 2020**, following the Punjab & Maharashtra Cooperative Bank (PMC Bank) crisis.
- **Scope of Coverage**
 - If a person has multiple accounts in **different branches of the same bank**, they are combined and covered only up to ₹5,00,000.
 - However, if the deposits are in **different banks**, each account is **separately insured up to ₹5,00,000.**

Premium and Cost of Insurance

- **Who Pays the Insurance Premium?**
 - **Banks pay the insurance premium** to the DICGC, **not depositors.**
 - This ensures that depositors receive protection **without any extra cost.**
- **Premium Rate**
 - Banks currently pay **0.12% per annum** on their total deposits as a premium to DICGC.
 - This premium rate **may be revised by the RBI** based on risk factors.

What Deposits are NOT Covered?

While most bank deposits are insured, **certain types of funds are excluded** from DICGC coverage:

- **Deposits of Foreign Governments** – Funds belonging to foreign diplomatic missions and governments.
- **Interbank Deposits** – Deposits made by one bank in another bank.
- **State Cooperative Bank Deposits** – Deposits belonging to **state land development banks with state cooperative banks.**
- **Government Deposits** – Funds belonging to **central and state governments or local bodies (municipal corporations, panchayats, etc.).**
- **Deposits Outside India** – Accounts held in **foreign branches of Indian banks.**

How Does the Claims Settlement Process Work?

- **When Does DICGC Pay Depositors?**
 - **If a bank fails, is liquidated, or undergoes reconstruction**, DICGC steps in to compensate depositors.
- **How is Payment Made?**
 - DICGC **does not pay depositors directly.** Instead, it **pays the insured amount to the bank's liquidator**, who then distributes it to the affected customers.
- **Timelines for Payouts**

- As per **recent RBI guidelines**, depositors are entitled to **receive their insured amount within 90 days** of a bank's failure.

Recent Examples

- **PMC Bank & Yes Bank Crises** – The importance of deposit insurance came into focus after the crises involving **Punjab & Maharashtra Cooperative Bank (PMC Bank)** and **Yes Bank**, where depositors faced restrictions on withdrawals.

India's Deposit Insurance vs. Global Standards

Deposit insurance coverage varies across countries. Here's how **India compares** to global benchmarks:

United States

- The **Federal Deposit Insurance Corporation (FDIC)** insures deposits up to **\$250,000 per depositor per bank.**

United Kingdom

- The **Financial Services Compensation Scheme (FSCS)** provides coverage up to **£85,000 per depositor per bank.**

European Union

- EU regulations mandate a **€100,000 deposit insurance limit.**

China

- Depositors are insured up to **¥500,000 (approx. \$70,000).**

India

- With an **insurance limit of ₹5,00,000 (approx. \$6,000)**, India's coverage is **lower than many developed countries**, but it was **recently increased** to improve protection for small depositors.

Importance of Deposit Insurance

Boosts Depositor Confidence

- Ensures that depositors **do not lose their money** in case of bank failures, preventing panic and large-scale withdrawals.

Prevents Bank Runs

- If people believe their deposits are safe, they are **less likely to rush to withdraw money** when a bank is in trouble.

Enhances Financial Stability

- A well-functioning deposit insurance system **helps maintain stability in the banking sector** by protecting the savings of millions of Indians.

Future Outlook & Possible Improvements

Higher Insurance Coverage?

- Some experts argue that the **₹5,00,000 limit is still too low**, especially as the Indian economy grows.
- There are discussions about **increasing the limit further** to bring it in line with global standards.

Faster Payout Mechanisms

- **Ensuring quicker payouts** to depositors in case of bank failures is a key priority for regulators.
- The **90-day settlement rule** is an improvement, but further streamlining the process would provide better protection.

Conclusion

- Deposit insurance is a **crucial safety net** that protects Indian depositors in case of bank failures. The **DICGC, under RBI's supervision, insures deposits up to ₹5,00,000 per bank per depositor**, ensuring financial security for millions of Indians.
- While **India's coverage is improving**, further enhancements, such as **higher limits and faster claim settlements**, could strengthen depositor protection even more.

Treating Virtual Digital Assets (VDAs) as Taxable Properties

Virtual Digital Assets (VDAs), including **cryptocurrencies** and **Non-Fungible Tokens (NFTs)**, have gained significant popularity in India. The Indian government has **classified VDAs as taxable properties**, imposing a structured taxation framework from **April 1, 2022**. While this move aims to regulate the digital asset market, it has **both benefits and challenges** for investors, businesses, and the overall cryptocurrency ecosystem.

Taxation Framework for VDAs

Flat 30% Tax Rate on Income from VDAs

- **Any income** from the transfer of VDAs is taxed at **30%**, regardless of an individual's overall income.
- This rate is among the highest tax brackets, similar to **gambling and lottery winnings**.

No Deductions Allowed

- Investors **cannot claim deductions** for any expenses except for **the cost of acquisition**.
- This rule makes **cryptocurrency trading less profitable** compared to other asset classes like stocks, where deductions on brokerage fees and losses are allowed.

Losses Are Non-Offsettable

- **Losses from VDA trading cannot be offset** against other income sources (like salary, capital gains from real estate, or stock market profits).
- Unlike stocks or mutual funds, **VDA losses cannot be carried forward** to future years for tax adjustment.

Tax Deducted at Source (TDS) on VDAs

1% TDS on Every VDA Transaction

- A **1% TDS (Tax Deducted at Source)** applies to VDA transactions exceeding **₹50,000 (for high-income individuals) or ₹10,000 (for others)** per financial year.
- The buyer must **deduct this TDS** and deposit it with the government.

Tracking of Transactions for Compliance

- The TDS rule helps in **monitoring digital asset transactions**, ensuring better tax compliance.
- However, it has significantly **reduced trading volumes** on Indian cryptocurrency exchanges, as investors try to avoid frequent taxation.

Impact on Investors and the Cryptocurrency Market

Reduced Trading Volume on Indian Exchanges

- After the implementation of **30% tax and 1% TDS**, trading volume on Indian crypto exchanges **dropped by nearly 97%**.
- Many Indian investors are **shifting to international platforms** or **using decentralized exchanges (DEXs)** to bypass tax deductions.

Limited Institutional Participation

- The **high tax burden discourages institutional investors**, who typically seek tax-efficient investment options.
- This hampers India's potential to become a **global hub for cryptocurrency innovation**.

Legal and Regulatory Implications

Increased Government Oversight

- The taxation framework signals **formal recognition of VDAs**, bringing them under legal oversight.
- This could lead to **future regulations** regarding crypto exchanges, anti-money laundering measures, and investor protection laws.

Possibility of Stricter Regulations

- The government may introduce **additional compliance requirements**, such as:
 - Reporting VDA holdings in **income tax returns (ITR)**.
 - **Mandatory KYC (Know Your Customer) verification** for crypto transactions.
 - Enhanced **monitoring of cross-border crypto transfers**.

Future of VDAs in India

Calls for Tax Reforms

- Industry experts and investors are urging the government to **reduce the TDS rate** and allow **loss offsets**, similar to stock market taxation.
- A more balanced tax policy could **encourage innovation and boost India's digital economy**.

Growth of Alternative Digital Asset Markets

- Despite strict taxation, the demand for **NFTs, decentralized finance (DeFi), and blockchain applications** continues to rise.
- Companies and startups are exploring **Web3 technologies** beyond cryptocurrency trading.

Conclusion

- The taxation of **Virtual Digital Assets (VDAs)** has brought **legitimacy and regulatory clarity**, but the **high tax rates and strict rules** pose challenges for investors.

- While **tax collection on crypto transactions** helps monitor the market, the **decline in trading activity** suggests a need for **policy adjustments**.
- Going forward, a **balanced taxation approach** that **supports innovation while ensuring compliance** could determine the future of VDAs in India.

Strategic Bitcoin Reserve

President Donald Trump signed an executive order to establish a **Strategic Bitcoin Reserve and a U.S. Digital Asset Stockpile**. This initiative aims to position the United States as a leader in the management of digital assets, particularly Bitcoin, which is often referred to as "digital gold."

Overview of the Strategic Bitcoin Reserve

- **Capitalization:** The reserve will be funded using Bitcoin owned by the U.S. Department of Treasury that has been forfeited through criminal or civil asset forfeiture proceedings. This includes an estimated 200,000 Bitcoins currently held by the government.
- **Non-Sale Policy:** The U.S. government will not sell any Bitcoin deposited into this reserve; instead, it will be maintained as a **store of value**. This approach aims to avoid past mistakes where premature sales resulted in significant losses for taxpayers.
- **Additional Acquisitions:** The Secretaries of Treasury and Commerce are authorized to develop strategies for acquiring more Bitcoin without imposing additional costs on taxpayers. The focus will be on budget-neutral strategies.

Establishment of the U.S. Digital Asset Stockpile

In addition to the Bitcoin reserve, the executive order also creates a Digital Asset Stockpile, which will include other cryptocurrencies such as **Ethereum, XRP, Solana, and Cardano**. These assets will also be derived from forfeiture proceedings, and no new acquisitions will be made beyond these.

Operational Mechanics

Lack of Current Policy: A fact sheet from the White House highlighted that there is **currently no clear policy for managing these digital assets**, leading to inefficiencies and a lack of accountability. The executive order aims to address this by ensuring comprehensive accounting and management of federal digital asset holdings.

Strategic Importance: The establishment of this reserve is seen as a strategic advantage for the U.S., given Bitcoin's fixed supply of 21 million coins. By being among the first nations to create such a reserve, the U.S. aims to enhance its position in the global financial system.

Market Impact and Future Considerations

Despite the announcement, there was no immediate positive impact on Bitcoin prices, which were trading lower at the time of publication. The initiative has sparked

discussions about potential legal challenges and the need for legislative approval from Congress.

Conclusion:

With Trump's administration signaling a more favorable stance towards cryptocurrency, including appointing advocates within regulatory bodies like the SEC, there is optimism about the future growth of the crypto market under this new framework.

India's Economic Growth Target

According to the **World Bank**, India must sustain an average **annual GDP growth rate of 7.8%** to reach **high-income status** by **2047**. This goal aligns with **Prime Minister Narendra Modi's vision** of transforming India into a **developed nation** by its **centenary of independence**.

Current Growth Trends

- India's economy is projected to grow at **6.4% in the current fiscal year**, the **slowest growth rate in four years**.
- The growth trajectory has been affected by **domestic and global economic challenges**, including inflation, global uncertainties, and policy constraints.

Key Economic Challenges Hindering Growth

High Unemployment and Labor Market Issues

- Unemployment remains a **pressing issue**, especially among **youth and women**.
- India needs **labor market reforms** to create **more jobs and increase workforce participation**.

Inflation and Consumer Demand Weakness

- **Food inflation and high living costs** are reducing **consumer purchasing power**, impacting overall economic demand.
- Domestic consumption, a **major driver of India's GDP**, has been **subdued in recent quarters**.

Weak Investment and Industrial Growth

- Private investment in **manufacturing and infrastructure** has been **lower than expected**.
- FDI inflows are **increasing but still lag behind** other major economies such as **China**.

International Comparisons and Growth Feasibility

Benchmarking Against Other High-Growth Economies

- Historically, very few **large economies** have sustained **7.8%+ growth rates** over multiple decades.
- Countries like **China, South Korea, and Singapore** managed this during their development phases but had **export-driven and heavily industrialized economies**.

India's Unique Growth Constraints

- Unlike **China's manufacturing-led boom**, India has a **services-heavy economy**, which **limits large-scale job creation**.
- **Trade restrictions, regulatory hurdles, and land acquisition issues** slow down industrial growth.

Strategies to Accelerate India's Growth

Implementing Bold Structural Reforms

- **Labor law reforms** to make hiring and employment conditions **more flexible and business-friendly**.
- **Land reforms** to simplify land acquisition and support industrial expansion.

Boosting Trade and Global Integration

- Reducing **protectionist policies** and encouraging **export-led growth**.
- Strengthening **global trade partnerships** to integrate India into global supply chains.

Investing in Human Capital Development

- Enhancing **education and vocational training** to equip the workforce with **future-ready skills**.
- Increasing **female workforce participation**, which remains **one of the lowest among major economies**.

Strengthening Infrastructure and Industrial Growth

- Expanding **transport networks, energy supply, and urban planning** to improve **logistics and business efficiency**.
- Encouraging **foreign direct investment (FDI)** in manufacturing and technology sectors.

Accelerating Technological Innovation and Digital Economy

- Emphasizing **AI, automation, and digital finance** to drive productivity and efficiency.
- Expanding India's **start-up ecosystem** through **government incentives and private-sector collaboration**.

Conclusion – Can India Achieve Its 2047 Goal?

- Achieving a **high-income status** by 2047 is **ambitious but possible** if India undertakes **aggressive economic reforms**.
- **Sustained growth, employment generation, and industrial expansion** are key to reaching this milestone.
- **Policymakers must focus on long-term structural changes**, investment-friendly policies, and innovation-driven growth to realize this vision.

India's Position in the Global Digital Economy

India's **digital economy** is expanding at nearly **twice the rate** of the country's overall economy. The sector is projected to contribute **20% of India's GDP by 2029**, up from **around 11-12% currently**. This rapid growth is being driven by **government initiatives**, increased **internet penetration**, and the rise of **digital services** across industries.

Global Ranking on Digital User Spending

- Despite being the **third-largest economy globally**, India ranks **28th in digital user spending**.
- This means that while India has a **large digital user base**, individual spending on digital services remains **relatively low**.

- Factors such as **income levels, affordability of digital services, and consumer behavior** contribute to this disparity.

Internet Penetration vs. Digital Spending

- India has made significant progress in **expanding internet access**, with over **850 million internet users**.
- However, **low digital spending** suggests that access alone is not enough; **users must be encouraged to participate economically in the digital space**.
- Challenges such as **limited digital literacy, affordability concerns, and lack of relevant local content** may be restricting user engagement.

Combined Digital Economy Ranking

- When both **economic size and digital user economy** are taken into account, India ranks **8th globally**.
- This highlights India's **strong digital foundation** but also emphasizes the need for policies that encourage **higher consumer spending** in the digital sector.

CHIPS Framework for Digitalization

- Expanding **broadband access, 5G networks, and public Wi-Fi hotspots** to ensure **universal connectivity**.
- Government programs such as **BharatNet** are working to bring **rural and remote areas** into the digital fold.

Harness – Leveraging Digital Technology

- Using **big data, cloud computing, and AI-driven solutions** to enhance economic productivity.
- Encouraging **startups and businesses** to integrate **digital tools for efficiency and innovation**.

Innovate – Boosting AI and R&D

- Investing in **artificial intelligence (AI), blockchain, and emerging technologies** to create a **competitive digital ecosystem**.
- Strengthening **India's innovation hubs and research institutions** to develop **homegrown digital solutions**.

Protect – Strengthening Digital Security

- Addressing concerns related to **cybersecurity threats, data privacy, and digital fraud**.
- Implementing **stronger regulations** and improving **cyber awareness** among businesses and individuals.

Sustain – Creating a Long-Term Digital Ecosystem

- Ensuring that digital transformation is **inclusive and environmentally sustainable**.
- Promoting **digital financial literacy** to enable more people to participate in the **digital economy**.

India's Artificial Intelligence (AI) Capabilities

India's AI Research & Development Ranking

- India ranks **11th globally in AI research** and **16th in AI infrastructure**.
- While the country has a strong base in **software development**, it lags in **high-end AI innovation and application**.

- Countries like **the US, China, South Korea, Singapore, and the Netherlands** lead in AI advancements due to **greater investment and policy support.**

Growth Potential for AI in India

- India has a **large pool of engineering talent**, making it well-positioned to **develop AI-driven solutions.**
- Increased **government funding and private sector collaboration** can help India strengthen its **AI ecosystem.**
- AI can play a key role in **healthcare, agriculture, finance, and manufacturing**, driving **efficiency and innovation.**

Key Implications & Recommendations

Encouraging Higher Digital User Engagement

- Policies should focus on **building trust and encouraging users to spend more on digital services.**
- Enhancing **affordable subscription models, digital payment incentives**, and **regional language content** can increase digital spending.

Bridging the Access-Usage Gap

- **Expanding digital literacy programs** will ensure that more users understand the benefits of **online transactions, e-commerce, and digital tools.**
- **Reducing the cost of internet access and smartphones** can help lower-income groups **participate more actively in the digital economy.**

Strengthening AI and Innovation

- **Increasing R&D funding** in AI, machine learning, and other emerging technologies is crucial.
- **Public-private partnerships** can help scale AI adoption and **promote local AI startups.**

Conclusion

- India's **digital economy is growing at an unprecedented pace**, but key challenges remain in **user engagement, digital literacy, and AI development.**
- Addressing these issues through **targeted policy interventions, stronger investments in innovation, and improved affordability of digital services** will be essential for India to maximize its digital potential and **compete globally in the digital era.**

AGRICULTURE

SOMS fertilisers help improve nutrient use

News Excerpt:

SOMS fertilizers, an acronym for **Soluble Fertilizer, Organic Fertilizer, Micronutrients, and Bio Stimulants**, represent a transformative approach in agriculture. These fertilizers are designed to improve crop yield, soil health, and sustainability while minimizing chemical residues in agricultural produce. SOMS fertilizers are gaining prominence as a sustainable alternative to traditional

fertilizers, contributing significantly to modern farming practices.

Components of SOMS Fertilizers

- **Soluble Fertilizers:**
 - Dissolve completely in water, ensuring efficient nutrient delivery to plants.
 - Examples: Potassium sulfate, potassium nitrate, ammonium nitrate, and NPK fertilizers.
- **Organic Fertilizers:**
 - Derived from natural sources like plants, animals, or minerals.
 - Improve soil fertility by enhancing microbial activity and organic matter content.
- **Micronutrients:**
 - Include essential trace elements like zinc (Zn), iron (Fe), boron (B), and manganese (Mn).
 - Crucial for plant growth, even in small quantities.
- **Bio Stimulants:**
 - Promote plant growth by enhancing nutrient uptake and stress tolerance.
 - Examples: Seaweed extracts, humic acids, and beneficial microorganisms.

Advantages of SOMS Fertilizers

- **Environmental Sustainability:** Lower chemical residues reduce environmental pollution and make produce safer for consumers.
- **Improved Soil Health:** Organic components enhance soil structure and fertility.
- **Efficient Nutrient Delivery:** Soluble fertilizers ensure precise application and minimize wastage.
- **Enhanced Crop Quality:** Micronutrients and bio-stimulants improve crop resilience and nutritional value.
- **Cost Efficiency:** Reduces dependence on subsidized chemical fertilizers by 30–100% in various crops.

Comparison of SOMS Fertilizers with Traditional Fertilizers

Feature	SOMS Fertilizers	Traditional Fertilizers
Composition	Combination of soluble fertilizers, organic matter, micronutrients, bio-stimulants	Primarily synthetic chemicals (e.g., urea, DAP)
Environmental Impact	Minimal residue; eco-friendly	High risk of leaching and pollution
Soil Health	Improves organic matter content; supports microbial life	Long-term use depletes soil microbiology
Nutrient Release Rate	Controlled and gradual release	Rapid release; risk of over-fertilization

Application Efficiency	High precision with minimal wastage	Often excessive application due to lack of targeted delivery
Crop Quality	Enhances nutritional value and reduces chemical residues	May leave harmful residues in produce
Cost Effectiveness	Reduces reliance on subsidies; long-term savings	Often subsidized but less sustainable
Suitability for Export	Meets global standards with low residue produce	High residue levels may limit export opportunities

Conclusion

SOMS fertilizers offer a holistic solution to modern agricultural challenges by integrating the benefits of soluble nutrients, organic matter, micronutrients, and bio-stimulants. Compared to traditional fertilizers, they provide a more sustainable approach that enhances soil health, reduces environmental impact, and improves crop quality. Their adoption is expected to revolutionize farming practices globally while supporting farmers' income through better yields and export opportunities.

Whitefly Disease

News Excerpt:

Coconut trees in Karnataka are facing a severe threat due to whitefly disease, affecting approximately **1.48 lakh hectares** across **14 districts**. This widespread infestation has led to significant declines in coconut yield, prompting calls for government intervention and compensation for affected farmers.

Overview of the Situation

Karnataka's Minister for Industries, reported in the Legislative Assembly that the whitefly infestation has severely impacted coconut production in various districts, including Tumakuru and Hassan, where over **64,457 hectares** and **34,530 hectares** respectively have been affected. The disease has resulted in a yield reduction of more than **50%**, leading to increased coconut prices and financial distress among farmers.

In response to the crisis, farmers are demanding compensation of **₹50,000 per acre** of coconut plantation to mitigate their losses. The state government is also taking steps to enhance the natural immunity of coconut trees through integrated nutrient management, allocating **₹15.31 crore** under the Coconut Development Board Scheme for this purpose.

Government Initiatives

The government has initiated several measures to combat the whitefly infestation:

- A grant of **₹15.31 crore** has been allocated for integrated nutrient management.

- The Coconut Development Board Scheme will provide **₹35,000 per hectare** for maintaining demonstration plots over two years.



- Awareness programs are being conducted to educate farmers about effective pest management strategies as traditional pesticide applications have proven ineffective against whiteflies.

Whitefly Disease: Key Information

Whiteflies are small sap-sucking insects belonging to the family Aleyrodidae. They pose a significant threat to various crops, particularly **coconut palms**. The damage caused by whiteflies can be both direct and indirect:

- **Direct Damage:** Whiteflies feed on plant sap, weakening the plants and reducing their vigor.
- **Indirect Damage:** Their feeding can lead to the growth of sooty mold on leaves, which blocks sunlight and further hampers photosynthesis.

Effective management strategies include **enhancing plant health through nutrient management and promoting natural predators of whiteflies**. Chemical control methods have shown limited success, necessitating alternative approaches such as integrated pest management (IPM) practices.

Conclusion

The whitefly infestation represents a critical challenge for coconut farmers in Karnataka, necessitating immediate government action and support. With significant yield losses reported and rising prices affecting consumers, it is essential for stakeholders to work collaboratively towards sustainable solutions that protect both farmer livelihoods and agricultural productivity in the region.

INTERNATIONAL RELATIONS

India-Qatar LNG Trade Deal

News Excerpt:

India and Qatar have renewed a **20-year liquefied natural gas (LNG) supply agreement**, reinforcing their long-standing energy partnership. This deal is crucial for India's energy security and aligns with its long-term goal of increasing the share of natural gas in its energy mix. The agreement also strengthens Qatar's position as one of the world's leading LNG suppliers.

Overview of the Agreement

- **Parties Involved:**
 - **QatarEnergy**, Qatar's state-owned LNG company, and **Petronet LNG Limited**, India's leading natural gas importer, have signed this agreement.
- **Contract Duration & Volume:**
 - The deal is set for **20 years (2028-2048)**.
 - Qatar will supply **7.5 million metric tons of LNG annually**, maintaining the volume from the previous contract.
- **Renewal Terms:**
 - This agreement **renews and extends the existing LNG supply contract**, which was set to expire in **2028**.
 - The terms suggest a stable continuation of Qatar's role in fulfilling India's natural gas needs.

Significance of the Deal

- **Energy Security for India**
 - India depends on **LNG imports to meet its rising energy demands**, and a stable long-term supply agreement helps avoid market uncertainties.
 - This contract ensures that **India will have a steady supply of LNG for the next two decades**, crucial for its growing industries and households.
- **Strengthening Bilateral Ties**
 - **Qatar is India's largest LNG supplier**, meeting nearly **50% of India's total LNG imports**.
 - The deal reaffirms **Qatar's strategic importance in India's energy ecosystem** and strengthens diplomatic ties between the two nations.

India's LNG Market & Future Demand

- **Current LNG Consumption**
 - India is the **fourth-largest LNG importer in the world**.
 - The country currently consumes **around 185 million standard cubic meters per day (MMSCMD)** of LNG.
- **Future LNG Demand Projections**
 - The Indian government aims to **increase natural gas's share in the country's energy mix to 15% by 2030** (up from the current ~6%).
 - By 2030, LNG consumption is expected to **exceed 500 MMSCMD**, indicating a massive growth in demand.

• Diversification of LNG Sources

- While Qatar remains a key supplier, India is also exploring **LNG imports from the U.S., Russia, and Australia** to reduce dependency on a single country.
- Companies like **GAIL India** are actively seeking new LNG supply agreements from U.S. exporters.

Qatar's LNG Commitments & Global Position

• Qatar's LNG Exports & Long-Term Deals

- Qatar is one of the world's leading LNG exporters and has been securing **long-term supply contracts with multiple countries**.
- Apart from India, Qatar has also signed a **27-year LNG deal with China for 4 million metric tons per year**.

• LNG Production Expansion

- Qatar is investing in **one of the world's largest LNG expansion projects**, which aims to **increase its production by over 60% by 2027**.
- This expansion ensures that Qatar remains a **dominant force in the global LNG market**, securing long-term partnerships like the one with India.

Strategic & Market Implications

• Mutual Benefits for India & Qatar

- India benefits from a **stable and predictable LNG supply**, while Qatar secures a **key customer for its expanding LNG output**.
- This agreement ensures **energy price stability for India**, shielding it from global LNG market volatility.

• Impact on Global LNG Market

- As **LNG demand grows in Asia**, long-term agreements like this help in **reducing uncertainties in energy supply chains**.
- India's commitment to natural gas reflects a **global shift toward cleaner fuels**, with LNG playing a crucial role in energy transition.

Conclusion

- The **India-Qatar LNG deal is a critical step in India's energy security strategy**, ensuring uninterrupted natural gas supply for industrial and domestic use.
- At the same time, **Qatar strengthens its position as a top LNG exporter**, securing long-term demand for its expanding production.
- This agreement highlights **the deep economic ties between India and Qatar** and sets the stage for continued energy cooperation in the coming decades.

Trump's Announcement of Reciprocal Tariffs

News Excerpt: Trump has often criticized India's trade policies, especially the **100% tariff on American automobiles**. He argues that such high duties make U.S. exports uncompetitive in India while Indian goods enjoy relatively lower tariffs in the U.S.

Trump Tariff Plans Would Hit Most Important Trade Partners

Countries with the highest value of imports into/exports from the U.S. in 2023 (in billion U.S. dollars)*



India's Response and Trade Negotiations

• Diplomatic Discussions

India is actively negotiating with the U.S. to prevent trade relations from deteriorating further. **Commerce Minister Piyush Goyal** recently visited Washington to discuss trade agreements that could mitigate these tariffs.

• Commitments to U.S. Imports

To balance the trade relationship, India has **pledged to purchase more U.S. goods**, including **energy resources (oil and gas)** and **military equipment**. This is intended to reduce the trade deficit and ease U.S. concerns over unfair trade practices.

Domestic Criticism and Economic Implications

• Political Backlash in India

The opposition parties in India have **criticized the government's trade policies**, warning that retaliatory tariffs from the U.S. could severely impact **small and medium enterprises (MSMEs)**, which rely on exports to the U.S.

• Stock Market Reaction

Despite these trade tensions, **Indian markets showed resilience**, with a **1% gain** following Trump's tariff announcement. This suggests that investors believe a trade deal might be reached before the tariffs take effect.

Global Trade Context and U.S. Trade Policy

• U.S. Tariff Measures on Other Countries

The U.S. has already imposed a **25% tariff on steel and aluminum imports**, affecting multiple countries, including India. Trump's approach reflects his broader **"America First"** economic policy.

• Broader Implications of Reciprocal Tariffs

This move signals a shift toward **protectionist trade policies**, where the U.S. aims to **match the tariff levels imposed by its trading partners**. If implemented, it could **escalate trade tensions globally** and encourage other countries to follow suit.

Trump's Policies And Their Impact On India

The Trump administration's recent unilateral trade policies, particularly the imposition of reciprocal tariffs effective April 2, 2025, mark a significant shift in US-India economic relations.

These measures, framed as a response to "unfair" trade practices, target sectors where India maintains higher import duties than the US, threatening bilateral trade dynamics and India's export-driven industries.

- **Trade Deficit:** India's \$45.6 billion trade surplus with the US in FY2024 makes it a prime target for these tariffs. India's average applied tariff on US goods (11%) is 8.2 percentage points higher than US tariffs on Indian exports, per Morgan Stanley.
- **US tariffs on Indian auto parts** (e.g., engines, transmissions) could rise to 25–30%, mirroring India's current rates.
- **India's \$8 billion pharmaceutical exports** to the US may face stricter FDA inspections and "Buy American"
- procurement mandates, delaying approvals for generics.
 - Tariffs on polished diamonds (6%) and textiles (15–20%) threaten Surat's \$24 billion diamond industry and
- **Tiruppur's textile hubs:** The US may impose tariffs up to 39% on Indian farm exports (e.g., rice, spices) to match India's duties on
- **American dairy and poultry.**

Conclusion

- The U.S. is set to introduce **reciprocal tariffs on Indian goods starting April 2, 2025**, as a response to India's high tariffs on American imports.
- While **trade negotiations are ongoing**, India faces growing pressure to lower its tariffs to avoid retaliation.
- The outcome of these discussions will determine whether a **trade war** can be averted or if India will have to face **increased economic challenges** due to U.S. tariffs.

Namibia's First Woman President: Netumbo Nandi-Ndaitwah Sworn In

News Excerpt:

On **March 21, 2025**, Netumbo Nandi-Ndaitwah was inaugurated as **Namibia's first female president**, marking a historic moment for the southern African nation. At 72 years old, she becomes one of the few women leaders in the region, joining a select group of female heads of state in Africa, including Ellen Johnson Sirleaf of Liberia and Joyce Banda of Malawi.



Background and Election

Nandi-Ndaitwah, often referred to by her initials **NNN**, previously served as Namibia's Vice President and is a prominent member of the **South West Africa People's Organisation (SWAPO)**, which has governed Namibia since its independence from apartheid South Africa in 1990. She won the presidential election held on **November 27, 2024**, securing **58%** of the votes against her main opponent from the Independent Patriots for Change (IPC), who garnered **25.5%**.

The elections were marked by logistical challenges that led to delays, but Nandi-Ndaitwah's victory underscores continued loyalty to SWAPO despite a growing opposition presence.

Inauguration Ceremony

The inauguration ceremony took place in Windhoek and was attended by heads of state from neighboring countries such as Angola and South Africa. The event coincided with Namibia's **35th independence anniversary**, although it was moved from Independence Stadium to State House due to unexpected heavy rains.

In her inaugural address, Nandi-Ndaitwah emphasized her commitment to addressing pressing issues such as unemployment, particularly among the youth, where approximately **44%** of individuals aged 18 to 34 were unemployed in 2023. She pledged to create at least **500,000 jobs** over the next five years, requiring an investment of around **85 billion Namibian dollars** (approximately **\$4.67 billion**).

Key Priorities and Policies

- **Job Creation:** Focus on sectors such as agriculture, fishing, and creative industries.
 - Commitment to producing significant employment opportunities for the youth.
- **Economic Diversification:** Nandi-Ndaitwah aims to diversify Namibia's economy to maximize benefits from its natural resources through value addition.

- **Infrastructure Development:** Plans to enhance infrastructure investments to stimulate economic productivity and improve living standards.
- **Universal Health Coverage:** A commitment to implementing universal health coverage for all Namibians.
- **Climate Change Initiatives:** Acknowledgment of climate change as a critical issue for Namibia, which frequently faces droughts. Continued commitment to combat climate change impacts.
- **Support for Global Causes:** Expressed solidarity with the right to self-determination for Palestinians and Western Saharans.
 - Advocated for lifting international sanctions on Cuba, Venezuela, and Zimbabwe.

Personal Background

Netumbo Nandi-Ndaitwah was born on **October 29, 1952**, in Onamutai, Namibia. She joined SWAPO at just 14 years old during the liberation struggle and was exiled in various countries including Zambia, Tanzania, and the former Soviet Union during her political career.

Nandi-Ndaitwah has been a strong advocate for women's rights and played a pivotal role in passing Namibia's Combating of Domestic Violence Act in 2002.

Conclusion

Netumbo Nandi-Ndaitwah's inauguration as Namibia's first female president marks a significant advancement in gender representation in leadership roles within Africa. With her extensive political experience and commitment to addressing critical issues such as unemployment and climate change, she aims to guide Namibia towards a more prosperous future while continuing the legacy of SWAPO's governance. As she embarks on this new chapter in Namibian history, her leadership will be closely watched both domestically and internationally.

Brussels summit

News Excerpt:

European Union leaders have faced significant challenges in their efforts to provide military support to Ukraine amid ongoing tensions with Russia. During a summit held in Brussels, EU foreign policy chief **Kaja Kallas** urged member states to back Ukraine with a substantial military aid package, but the discussions revealed deep divisions among the countries regarding the extent of their commitment.



Key Developments from the Brussels Summit

Call for Increased Military Aid:

- Kaja Kallas proposed an ambitious **€40 billion** military aid package to bolster Ukraine's defenses and strengthen its position in ongoing peace negotiations with Russia.
- The proposal aimed to supply **2 million artillery shells** at a cost of **€5 billion** (\$5.4 billion) as an immediate measure to support Ukraine's military capabilities.

Resistance from Member States:

- The initial proposal faced pushback, particularly from southern European countries like Italy and France, leading to a significant scaling back of the aid commitment.
- Ultimately, the EU leaders agreed on a much smaller package of **€5 billion**, reflecting ongoing disagreements about financial contributions and military commitments.

Political Context:

- The summit occurred against the backdrop of shifting dynamics in international relations, particularly with U.S. President **Donald Trump** engaging in dialogue with both Ukraine and Russia in an effort to negotiate peace.
- Kallas emphasized that a strong military presence for Ukraine would enhance its negotiating power at the table, urging EU leaders to translate their verbal support into tangible actions.

Challenges Facing EU Unity

- The failure to agree on a substantial military aid package highlighted the difficulties within the EU regarding a unified approach towards supporting Ukraine.
- Diplomatic sources indicated that Kallas's plan was poorly coordinated from its inception, lacking prior consensus among key stakeholders.
- The inconclusive outcome of the summit raised concerns about the EU's credibility and ability to act decisively in response to the crisis.

Broader Implications

Military Support Dynamics:

- As European nations grapple with internal divisions, there is increasing pressure on individual countries to step up their military contributions.
- Germany recently approved an additional **€3 billion** in military aid for Ukraine, complementing existing commitments and reflecting a broader trend of increasing defense spending across Europe.

Geopolitical Landscape:

- The EU's hesitance to fully commit may be perceived as a weakening of resolve amid ongoing Russian aggression.
- With NATO intelligence suggesting potential large-scale threats from Russia within five years, European leaders

are urged to bolster their defense strategies and support for Ukraine.

Future Prospects:

- Despite setbacks, political support for Ukraine remains robust within the EU, with leaders recognizing the need for continued assistance as part of a broader strategy for regional stability.
- Moving forward, there is an urgent need for improved coordination among EU member states to ensure effective and timely support for Ukraine amidst evolving geopolitical challenges.

Conclusion

The Brussels summit underscored the complexities and challenges facing EU leaders as they navigate their support for Ukraine amidst internal divisions and external pressures. While Kaja Kallas's initial proposals aimed at significantly boosting military aid were curtailed, the ongoing commitment to assist Ukraine remains critical for both regional security and the integrity of the EU's collective foreign policy stance. As tensions persist, it will be essential for European nations to find common ground and enhance their collaborative efforts in supporting Ukraine against Russian aggression.

ENVIRONMENT

Environmental Concerns of Black Plastic

News Excerpt:

Black plastic is widely used in various industries, including food packaging, electronics, and automotive components. However, it presents significant challenges in recycling and waste management. Below are the key issues associated with black plastic:

Detection and Recycling Challenges

- Most recycling plants use optical sorting systems that rely on near-infrared (NIR) sensors to identify and separate plastics based on their composition.
- Black plastic often contains carbon black pigments, which absorb NIR light, making it difficult for the sensors to detect and sort.
- Due to this limitation, black plastic is frequently rejected from recycling streams and ends up in landfills or incinerators.

Environmental Impact

- Since black plastic is difficult to recycle, a large proportion of it contributes to global plastic waste accumulation.
- When dumped in landfills, black plastic takes hundreds of years to decompose, potentially leaching harmful chemicals into the soil and water sources.
- Improper disposal leads to microplastic pollution, further harming marine and terrestrial ecosystems.

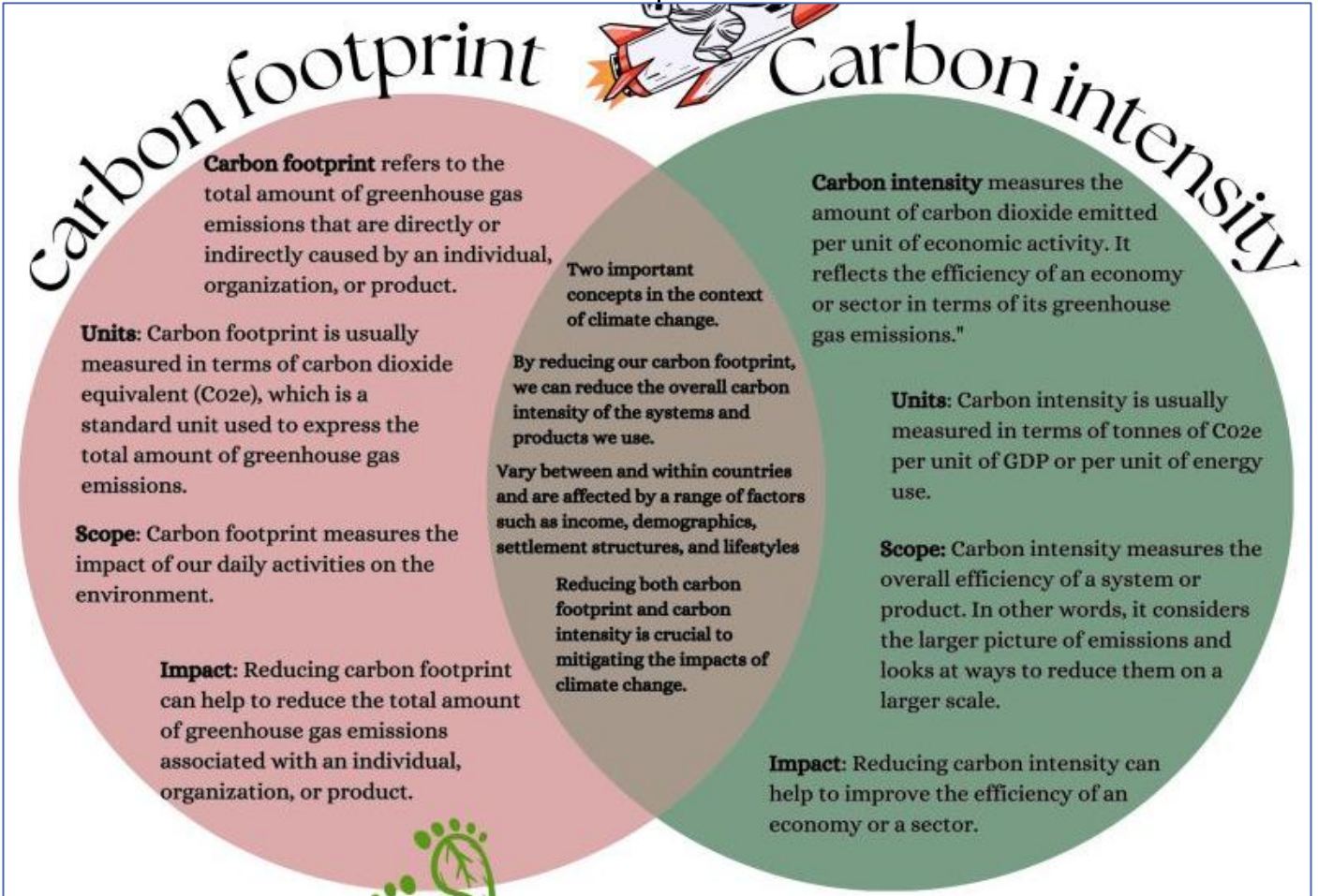
Health and Safety Concerns

- When incinerated, black plastic can release toxic fumes, including dioxins and other hazardous substances, which pose serious health risks.
- Some black plastics, particularly those made from recycled electronic waste, may contain harmful additives such as heavy metals.
- Prolonged exposure to such substances may have adverse health effects on humans and wildlife.

Carbon Intensity and Its Role in Climate Mitigation

News Excerpt:

Carbon intensity refers to the **amount of carbon dioxide (CO₂) emissions** released per unit of energy produced or economic output. It is a critical **metric used to assess environmental impact**, particularly in sectors like **energy, manufacturing, and transportation**. Reducing **carbon**



Possible Solutions and Alternatives

- Researchers and manufacturers are exploring alternative pigments that allow black plastics to be detected by recycling technology.
- Encouraging consumers to opt for recyclable or biodegradable alternatives can help reduce black plastic waste.
- Governments and industries can implement stricter regulations and incentives to promote sustainable plastic use and better waste management systems.

Way Forward:

Addressing the challenges of black plastic requires a combined effort from industries, policymakers, and consumers to improve recycling infrastructure and reduce reliance on non-recyclable plastics.

intensity is essential for mitigating **climate change** and transitioning to **sustainable energy sources**.

How Carbon Intensity is Measured

Units of Measurement

- **Carbon intensity** is typically expressed as:
 - **Grams of CO₂ per kilowatt-hour (gCO₂/kWh)** for electricity generation.
 - **Kilograms of CO₂ per kilogram of oil equivalent (kgCO₂/kgOE)** for energy consumption.
 - **CO₂ emissions per unit of GDP** to measure economic carbon intensity.

Sector-Wise Carbon Intensity Assessment

- **Energy Sector:** Measures emissions from **power plants, fossil fuel combustion, and renewable energy sources**.

- **Industrial Sector:** Assesses emissions from **manufacturing processes, steel production, and cement industries.**
- **Transportation:** Calculates emissions from **vehicles, aviation, and shipping** per unit of fuel consumed.

Factors Influencing Carbon Intensity

Energy Source Dependency

- **High Carbon Intensity:** Coal and oil-based power generation emit more CO₂ per unit of energy.
- **Low Carbon Intensity:** Renewable sources like **solar, wind, hydro, and nuclear energy** emit significantly less CO₂.

Energy Efficiency and Technological Advancements

- **Efficient power plants and industrial processes** reduce carbon emissions per unit of output.
- **Carbon capture and storage (CCS)** can further lower emissions from fossil fuel-based power generation.

Economic Growth and Carbon Output

- Rapid **industrialization and urbanization** can increase carbon intensity if reliant on fossil fuels.
- Countries with a strong shift toward **renewables and energy efficiency** show declining carbon intensity trends.

Global Carbon Intensity Trends

Carbon Intensity Reduction in Leading Economies

- **China:** Despite reducing carbon intensity in 2024, it still lags behind key targets.
- **European Union:** Focused on **net-zero targets** with significant investments in renewable energy.
- **United States:** Shift towards **natural gas and renewables** has helped reduce overall carbon intensity.

Challenges in Carbon Intensity Reduction

- **Developing nations** face difficulties due to **economic dependence on fossil fuels.**
- **Big oil companies** continue to struggle with meeting sustainability commitments.

Strategies to Reduce Carbon Intensity

Transition to Renewable Energy

- Investing in **solar, wind, hydro, and nuclear power** to replace fossil fuels.
- Enhancing **battery storage technology** to support grid reliability.

Improving Energy Efficiency

- Upgrading **power plants** with cleaner technologies.
- Encouraging **energy-efficient appliances and industrial machinery.**

Implementing Carbon Capture and Storage (CCS)

- Developing CCS technologies to **trap and store CO₂ emissions** from industrial facilities.
- Encouraging businesses to adopt **carbon offset strategies.**

Policy and Regulatory Measures

- **Carbon taxes and emission trading systems** to incentivize businesses to reduce emissions.
- Setting **strict emission targets** for industries and automobiles.

Conclusion

- **Carbon intensity is a key indicator** of a country's or industry's impact on climate change.
- **Reducing carbon intensity** through **clean energy, efficiency, and technological innovations** is crucial for a sustainable future.
- **Global collaboration** is needed to achieve **net-zero goals** and **limit global warming.**

First Comprehensive Estimate of Gangetic Dolphin

News Excerpt:

The **Gangetic dolphin** (*Platanista gangetica*), India's **national aquatic animal**, is a unique **freshwater species** primarily found in the **Ganges-Brahmaputra-Meghna river systems**. Due to **habitat destruction, pollution, and accidental entanglement in fishing nets**, these dolphins are classified as **endangered** by the **International Union for Conservation of Nature (IUCN)**. A **landmark survey** has provided the **first-ever synchronized population estimate**, offering crucial insights into their **distribution and conservation needs.**

Survey Overview

Who Conducted the Survey?

- The study was conducted under the **National Mission for Clean Ganga (NMCG)** in collaboration with the **Wildlife Institute of India (WII)**.
- It involved a **synchronized, multi-state effort** to estimate the population of **Gangetic dolphins** across their habitat range.

Key Findings of the Study

Total Population Estimate

- The survey recorded a total of **6,327 Gangetic dolphins** across the four states.
- **West Bengal** recorded the **highest number** of Gangetic dolphins, with a **population of 3,155**, primarily found in the **Hooghly River.**
- **Bihar**, home to the **Vikramshila Gangetic Dolphin Sanctuary**, recorded **1,816 dolphins.**
- **Uttar Pradesh** recorded **1,275 dolphins**, highlighting significant populations in **the Chambal and Yamuna river stretches.**
- **Jharkhand** had the **lowest number**, with only **81 dolphins**, raising concerns about the species' survival in the region.

State-wise Distribution:

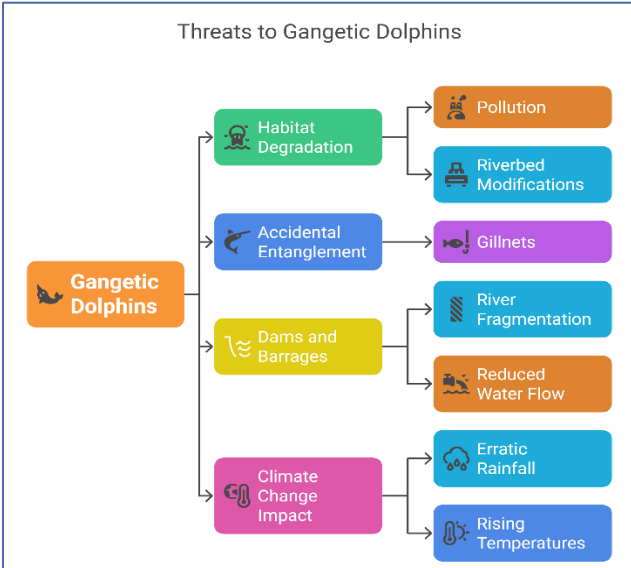
- **Uttar Pradesh:** 1,275 dolphins
- **Bihar:** 1,816 dolphins
- **Jharkhand:** 81 dolphins
- **West Bengal:** 3,155 dolphins

High-Density Zones

The survey identified **key habitats** where the **dolphin population is most concentrated**:

- **Vikramshila Gangetic Dolphin Sanctuary, Bihar** – A **protected area** known for its rich biodiversity.
- **Hooghly River, West Bengal** – A critical stretch with **high dolphin density**.
- **Lower Ganga Basin, Uttar Pradesh & Bihar** – Significant numbers found in this stretch.

Threats to Gangetic Dolphins



Conservation Measures Needed

The findings emphasize the need for **immediate conservation efforts** to ensure the survival of **Gangetic dolphins**.

PROJECT DOLPHIN

PRESERVING OUR UNDERWATER FRIENDS

- 10-YEAR PROJECT TO FOCUS ON BOTH RIVER AND SEA DOLPHINS**
- AIM TO STRENGTHEN BIODIVERSITY, CREATE EMPLOYMENT OPPORTUNITIES AND ATTRACT TOURISM**
- KILLING, HABITAT FRAGMENTATION BY DAMS AND BARRAGES AND INDISCRIMINATE FISHING HAS REDUCED THE GANGES RIVER DOLPHIN POPULATION FROM TENS OF THOUSANDS TO AROUND 3,700 OVER THE LAST CENTURY**
- GANGES RIVER DOLPHIN, A SPECIES OF FRESHWATER DOLPHINS, IS PRIMARILY FOUND IN GANGA AND BRAHMAPUTRA RIVERS, AND THEIR TRIBUTARIES IN INDIA, BANGLADESH AND NEPAL**
- IN INDIA, THESE DOLPHINS ARE SIGHTED IN DEEP RIVERS IN ASSAM, BIHAR, JHARKHAND, MADHYA PRADESH, RAJASTHAN, UTTAR PRADESH AND WEST BENGAL**
- GANGES RIVER DOLPHIN, OFFICIALLY DISCOVERED IN 1801, CAN LIVE ONLY IN FRESHWATER**

Strengthening Protected Areas

- Expanding and enforcing conservation areas like the **Vikramshila Gangetic Dolphin Sanctuary**.
- Establishing **new protected zones** in critical habitats across states.

Pollution Control Measures

- Strengthening the **Namami Gange program** to **reduce industrial and domestic waste** in rivers.
- Promoting **sustainable agricultural practices** to minimize **chemical runoff**.

Regulating Fishing Practices

- Encouraging **dolphin-safe fishing gear** to **prevent accidental entanglement**.
- Training local fishermen in **sustainable and eco-friendly fishing techniques**.

Community Awareness and Engagement

- Educating **local communities and stakeholders** about the **importance of dolphin conservation**.
- Promoting **eco-tourism initiatives** that provide **economic incentives** while ensuring the **species' protection**.

Conclusion

- The first synchronized survey of **Gangetic dolphins** provides a **baseline for future conservation efforts**.
- Despite a **stable population**, the **species remains vulnerable** due to **habitat destruction, pollution, and human activities**.
- **Immediate action** is required through **policy interventions, habitat restoration, pollution control, and community engagement** to ensure **the long-term survival of India's national aquatic animal**.

Environmental Concerns Over Horseshoe Crab Mortality Along Odisha Coast

News Excerpt:

The alarming increase in the mortality of horseshoe crabs along the Balasore coast in Odisha has raised significant environmental concerns. These ancient marine creatures, known as "living fossils," have survived for over 445 million



years but now face serious threats due to destructive fishing practices.

Current Situation

- **High Mortality Rates:** Environmentalists have reported hundreds of horseshoe crab carcasses along Gudpahi beach, indicating a severe decline in their population. Many of these crabs are believed to have died recently, coinciding with their breeding season.
- **Rescue Efforts:** Local NGO Bikash Saathi has managed to rescue and release 163 horseshoe crabs that were trapped in fishing nets, highlighting the urgent need for intervention.
- **Breeding Season:** This period is critical for horseshoe crabs as they come ashore in pairs to lay thousands of eggs. A single female can produce between 8,000 to 10,000 eggs, making their survival vital for population replenishment.

Causes of Mortality

Destructive Fishing Practices:

- Fisherfolk often abandon damaged fishing nets in the sea or on beaches, leading to entanglement and death for numerous marine species, including horseshoe crabs. The use of non-selective fishing gear exacerbates bycatch issues, contributing significantly to the mortality rates of this endangered species.

Habitat Disruption:

- The majority of horseshoe crab breeding grounds fall within prohibited zones near the Integrated Test Range in Chandipur, which limits conservation efforts.
- The encroachment of human activities into these habitats further threatens their survival.

Implications

- **Biodiversity Loss:** The decline of horseshoe crabs could disrupt local ecosystems, as they play a crucial role in marine food webs.
- **Medicinal Value:** Horseshoe crabs are valued for their blue blood, which is used in medical applications to **test the toxicity of injectable drugs**. Their decline could impact medical research and development.
- **Ecological Imbalance:** The loss of this species could lead to an imbalance in marine ecosystems, affecting other species that rely on them for food.

Innovative Solutions and Conservation Measures

Strengthening Regulations:

- Implement stricter regulations on fishing practices to minimize bycatch and protect vulnerable species like horseshoe crabs.
- Enforce penalties for abandoning fishing gear that leads to entanglement.

Community Engagement:

- Involve local communities in conservation efforts by raising awareness about the importance of horseshoe crabs and sustainable fishing practices.
- Promote alternative livelihoods for fisherfolk that do not rely on destructive practices.

Rescue and Rehabilitation Programs:

- Establish dedicated programs for rescuing entangled horseshoe crabs and rehabilitating them before releasing them back into their natural habitat.
- Collaborate with local NGOs and research institutions to monitor populations and health metrics.

Research and Monitoring:

- Conduct ongoing research to assess the population dynamics of horseshoe crabs and identify critical habitats that need protection.
- Utilize technology such as drones or underwater cameras to monitor breeding sites and detect illegal fishing activities.

Conservation Partnerships:

- Foster partnerships between government agencies, NGOs, and academic institutions to create comprehensive conservation strategies tailored to the unique needs of horseshoe crabs.

Conclusion

The rising mortality rates of horseshoe crabs along Odisha's coast serve as a stark reminder of the fragility of marine ecosystems. Immediate action is required to address destructive fishing practices and implement effective conservation measures. By engaging local communities and fostering collaborative efforts, there is hope for preserving this ancient species and ensuring the health of marine environments for future generations.

The Impact of Climate Change on Earth's Orbital Environment

News Excerpt:

Climate change is increasingly recognized for its far-reaching effects on our planet, but a recent study from the Massachusetts Institute of Technology (MIT) reveals that it may also have significant implications for space. As global warming continues due to the burning of fossil fuels, the available space for satellites in low Earth orbit (LEO) could be drastically reduced by the end of the century.

Key Findings of the Study

Reduction in Orbital Space:

- The study estimates that climate change could decrease the available space for satellites in low Earth orbit by **one-third to 82%** by the year 2100, depending on levels of carbon pollution.
- The cooling of the upper atmosphere, a consequence of greenhouse gas emissions, is a primary factor contributing to this reduction.

Atmospheric Changes:

- The greenhouse effect warms the air near Earth's surface while cooling the upper atmosphere where satellites operate.

- A cooler upper atmosphere becomes less dense, which reduces atmospheric drag on space debris and satellites.

Impact on Space Debris:

- Normally, **atmospheric drag helps pull space debris down towards Earth, where it burns up upon re-entry. However, with reduced drag due to a cooler atmosphere, debris will remain in orbit longer.**
- The accumulation of debris increases the risk of collisions, creating more fragments and exacerbating the problem.

The Risks of Space Debris

Collision Hazards:

Millions of pieces of debris are **currently orbiting Earth, with sizes ranging from tiny fragments (about one-ninth of an inch) to larger objects (plum-sized pieces).** Collisions can occur with significant energy, posing risks to operational satellites.

Satellite Operations:

There are approximately **11,905 satellites** in orbit, with **7,356** classified as being in low Earth orbit. These satellites are essential for various functions including communication, navigation, weather forecasting, and environmental monitoring.

Long-Term Sustainability:

As space becomes increasingly cluttered with debris, maintaining a sustainable orbital environment will become more challenging. The study emphasizes the need for awareness regarding climate change's impact on orbital dynamics.

Implications for Future Space Activities

Need for Stewardship:

The traditional notion that "space is big" and can accommodate careless practices is becoming outdated. As space becomes more congested, responsible stewardship is essential to ensure safe operations.

Policy and Regulation:

Policymakers and space agencies must consider climate change's effects when developing regulations for satellite launches and debris mitigation strategies.

International cooperation may be necessary to address these challenges effectively and establish guidelines for sustainable practices in space.

Research and Monitoring:

Continued research is crucial to understand how climate change affects orbital environments. Monitoring atmospheric conditions and their impact on satellite operations will be essential for future planning.

Conclusion

The findings from MIT highlight an urgent need to recognize climate change not only as an Earth-bound issue but also as a significant factor affecting our orbital environment. As we move forward into an era where satellite technology plays

an increasingly vital role in daily life and global communication, understanding and mitigating the impacts of climate change on space will be critical for ensuring long-term sustainability in Earth's orbits. Addressing these challenges through proactive measures will help protect both our planet and the vastness above it.

The Promise of Mycelium Bricks: A Sustainable Future for Construction

News Excerpt:

As the world grapples with the impacts of climate change, the construction industry is under increasing pressure to reduce its carbon footprint and adopt sustainable practices. One innovative solution gaining traction is the use of mycelium bricks—an eco-friendly alternative to traditional fired clay bricks.

Understanding Mycelium Bricks

Mycelium is the vegetative part of fungi, consisting of branching filaments that form a network known as mycelia. Researchers have harnessed this natural material to create biodegradable, fire-resistant, and insulative bricks. The process involves combining agricultural byproducts such as husk and sawdust with fungal spores to cultivate a fibrous structure that solidifies into a lightweight brick within days.



Key Advantages

- **Reduced Carbon Emissions:** The production of fired clay bricks contributes approximately **300 million tonnes** of carbon dioxide emissions annually. Mycelium bricks offer a more sustainable alternative by utilizing organic waste and requiring less energy during production.
- **Lightweight and Insulative:** Mycelium bricks are lighter than traditional materials, which can reduce transportation costs and energy consumption in construction. Their insulating properties also contribute to energy efficiency in buildings.
- **Versatile Applications:** Beyond construction, mycelium-based materials have potential uses in liquid filtration, sports equipment, and even printed circuit boards, showcasing their versatility.

Challenges Facing Mycelium Bricks

Despite their promising attributes, mycelium bricks face several challenges that must be addressed before they can achieve widespread adoption:

- **Load-Bearing Limitations:** Current mycelium composites have a strength-to-weight ratio significantly lower than concrete, making them unsuitable for load-bearing applications in their present form.
- **Moisture Sensitivity:** Mycelium bricks are highly absorbent and can biodegrade within a few years, particularly in humid climates like India's. This susceptibility to moisture poses risks for structural integrity and durability.
- **Fire Resistance Concerns:** While inherently fire-resistant, prolonged exposure to heat can lead to structural failure. Enhancing fire resistance through treatment with non-toxic flame retardants may be necessary for outdoor applications.
- **Production Infrastructure:** The cost of cultivating and treating fungi for construction purposes is currently high due to inadequate infrastructure and technology.
- **Consumer Perception:** There is a need for greater awareness and acceptance of mycelium bricks among consumers and builders, which will require investment in education and marketing efforts.

Innovative Solutions and Future Prospects

Addressing these challenges presents an opportunity for innovation:

- **Research and Development:** Continued investment in R&D can improve the strength and moisture resistance of mycelium bricks, making them more competitive with traditional materials.
- **Treatment Enhancements:** Developing non-toxic treatments to improve fire resistance and moisture management can extend the lifespan of mycelium bricks.
- **Policy Support:** Government initiatives promoting sustainable building practices can drive demand for eco-friendly materials like mycelium bricks.

Conclusion

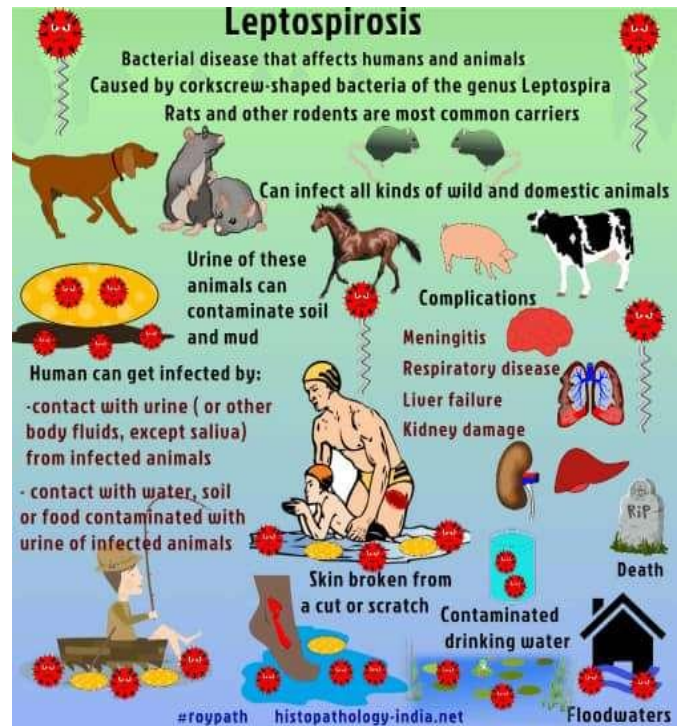
Mycelium bricks represent a promising step towards sustainable construction practices that align with global efforts to combat climate change. While challenges remain, advancements in technology, research, and consumer awareness hold the potential to transform the construction industry. As interest in alternative materials grows alongside policy pushes for sustainability, mycelium bricks could play a pivotal role in shaping the future of eco-friendly building solutions. By embracing this innovative material, we can move towards a greener, more sustainable built environment.

SCIENCE & TECHNOLOGY

Why is Leptospirosis Claiming So Many Lives in Kerala?

News Excerpt: Leptospirosis, commonly known as "rat fever," has become a growing public health crisis in Kerala, leading to a surge in infections and fatalities. The disease,

caused by the **Leptospira bacteria**, spreads through **contaminated water, soil, and infected animals**, especially **rodents**. The recent spike in cases is attributed to **heavy monsoon rains, flooding, poor waste management, and delayed diagnosis**.



Current Scenario: Rising Leptospirosis Cases in Kerala
Recent Statistics Highlighting the Surge

- **2024:** Kerala recorded **5,999 cases** and **386 deaths**, marking a **36.8% rise** in fatalities compared to the previous year.
- **January-February 2025:** The state has already reported **567 cases** and **37 deaths**, showing a continued increase.
- **January-October 2024:** The state reported **2,512 confirmed cases** and **155 confirmed deaths**, with **1,979 suspected cases** and **131 additional suspected deaths**.

High Mortality Rates Raise Concern

- The **fatality rate** of leptospirosis in Kerala is significantly higher than in many other Indian states.
- **Lack of early diagnosis**, improper **antibiotic administration**, and **severe organ complications** contribute to the **high death rate**.

Factors Contributing to the Spread of Leptospirosis in Kerala

Impact of Monsoons and Flooding

- Kerala's **heavy monsoon rains** cause **severe waterlogging and floods**, creating an ideal environment for **bacteria to thrive**.
- Floodwaters mix with **contaminated sewage, animal waste, and rodent urine**, increasing human exposure.
- Previous major **floods, like those in 2018**, led to an alarming rise in **leptospirosis cases post-disaster**.

Occupational and Lifestyle Risks

- **High-risk groups** include **farmers, sewage workers, construction workers, and fishermen** who frequently come into contact with **contaminated water and soil**.
- People walking barefoot or without protective clothing in **waterlogged areas** are also at risk.

Poor Urban Waste Management and Rising Rodent Population

- **Kerala's urban areas struggle with waste disposal**, leading to a **surge in rodent populations**, which are primary **carriers of the Leptospira bacteria**.
- Open **garbage dumps** and improper **drainage systems** increase the risk of contamination.

Symptoms, Complications, and Fatalities

Common Symptoms of Leptospirosis

- **Mild Symptoms:** Fever, **muscle pain**, headache, nausea, **redness in the eyes**, and **skin rashes**.
- **Severe Symptoms:** **Jaundice, low blood pressure, difficulty breathing, kidney failure, and internal bleeding**.

Why is the Fatality Rate High?

- **Delayed Diagnosis:** Many cases are misdiagnosed as **dengue or viral fever**, leading to **late treatment**.
- **Severe Complications:**
 - **Hepatorenal Syndrome (55.7%) – Liver and kidney failure** lead to multiple organ dysfunction.
 - **Myocarditis (50%) – Inflammation of the heart muscle** causes fatal cardiac complications.
- **Antibiotic Resistance & Treatment Gaps:** In some cases, **antibiotics** are not administered **on time or in sufficient doses**, reducing their effectiveness.

Preventive Measures to Curb Leptospirosis in Kerala

Strengthening Public Health Awareness

- **Educating high-risk groups** (farmers, laborers) on **disease symptoms and early warning signs**.
- Promoting **personal hygiene practices**, such as wearing **protective footwear and gloves**.

Improving Urban Sanitation and Waste Management

- **Better waste disposal systems** to control the **rodent population**.
- Upgrading **drainage infrastructure** to **prevent water stagnation and contamination**.

Early Diagnosis and Medical Intervention

- **Encouraging rapid testing and early antibiotic administration** (doxycycline).
- Ensuring **adequate supply of medical kits** in flood-prone areas.

Prophylactic Treatment & Vaccination

- Distributing **doxycycline prophylaxis** to **high-risk individuals** before the monsoon season.
- Exploring **vaccination strategies** for those in **frequent contact with contaminated environments**.

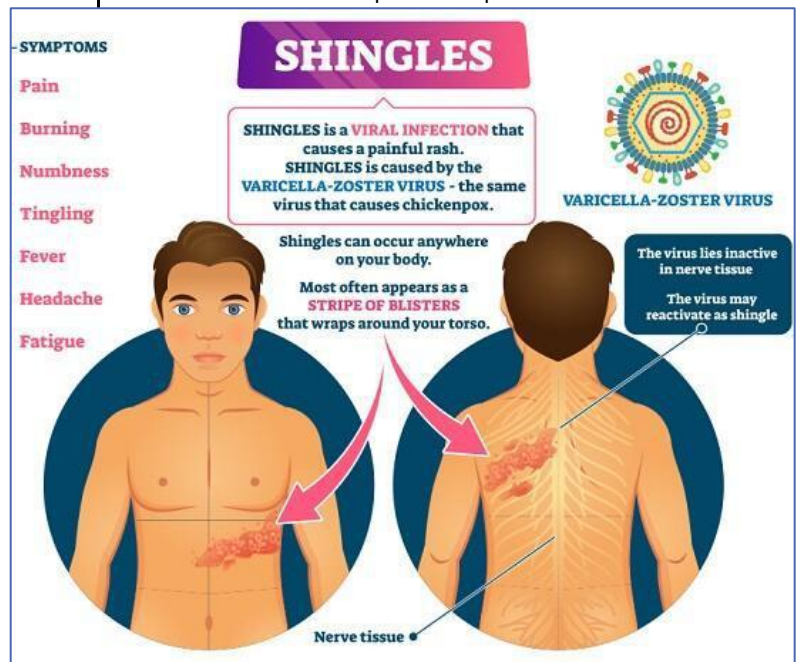
Conclusion: A Call for Urgent Action

- Kerala's **rising leptospirosis fatalities** demand **immediate intervention**. While **monsoon flooding and environmental factors** play a significant role in disease spread, **delayed diagnosis, lack of awareness, and poor waste management** exacerbate the crisis.
- A **comprehensive approach**, involving **public health awareness, early detection, sanitation improvements, and preventive medicine**, is essential to **curb the growing threat of leptospirosis in Kerala**.

Low Awareness of Shingles Among Indians Over 50

News Excerpt:

A recent global survey has revealed a significant lack of awareness about **shingles** among Indians aged 50 and above, despite their increased susceptibility to the disease. This finding underscores the need for enhanced public health education and proactive preventive measures.



Survey Findings: A Startling Gap in Awareness Limited Knowledge Among Older Adults

- **56.6%** of Indian participants aged 50 and above reported having little to no knowledge about shingles.
- Globally, only **44%** of respondents were somewhat familiar with the disease.

Prevalence of Chronic Conditions

- In India, **61%** of survey participants in this age group live with chronic conditions such as diabetes, chronic

obstructive pulmonary disease (COPD), asthma, cardiovascular disease, or chronic kidney disease.

- Despite these health issues, only **49.8%** expressed significant concern about developing shingles.

Understanding Shingles: Causes and Risks

Reactivation of Varicella-Zoster Virus

- Shingles is caused by the reactivation of the **varicella-zoster virus (VZV)**, the same virus responsible for chickenpox.
- After an individual recovers from chickenpox, VZV remains dormant in the nervous system and can reactivate later in life as shingles.

Increased Risk with Age

- The likelihood of developing shingles rises with age, particularly after 50, due to the natural decline in immune system function.
- Individuals with chronic health conditions are at an even higher risk.

Symptoms and Complications

Common Symptoms

- A painful rash that typically appears on one side of the body or face.
- Blisters that scab over in 7 to 10 days.
- Fever, headache, chills, and upset stomach.

Potential Complications

- **Postherpetic neuralgia (PHN):** Severe pain in the areas where the shingles rash occurred, lasting for months or even years.
- **Vision loss:** If shingles affects the eye, it can lead to vision problems or blindness.
- **Neurological issues:** In rare cases, shingles can cause inflammation of the brain (encephalitis), facial paralysis, or hearing problems.

Recommendations for Older Adults

Increase Awareness

- Educate oneself about shingles, its symptoms, and potential complications.
- Understand the higher risk associated with aging and chronic health conditions.

Consult Healthcare Providers

- Discuss vaccination options to prevent shingles.
- Seek medical advice promptly if symptoms of shingles appear.

Adopt Preventive Health Measures

- Maintain a healthy lifestyle, including a balanced diet and regular exercise, to support immune function.
- Manage chronic health conditions effectively to reduce additional health risks.

Conclusion

- The survey's findings highlight a critical gap in awareness about shingles among Indians over 50, a demographic already at increased risk for the disease.

- Addressing this issue requires concerted efforts in public health education, proactive healthcare consultations, and the adoption of preventive health measures to mitigate the impact of shingles on this vulnerable population.

Blue Ghost Lunar Mission

News Excerpt:

Firefly Aerospace, a **private space company**, successfully launched and operated its **Blue Ghost** lunar lander. The mission was part of **NASA's Commercial Lunar Payload Services (CLPS) program**, which aims to **support lunar exploration through private sector partnerships**. Blue Ghost's **landing and operations on the Moon mark a major milestone in commercial space exploration**, paving the way for future private lunar missions.



Key Mission Details

Landing and Operational Success

- Blue Ghost **landed in the Moon's Mare Crisium region on March 2, 2025.**
- The lander was **designed to survive and operate for one full lunar day (about 14 Earth days).**
- It **exceeded mission expectations**, successfully collecting and transmitting scientific data before its operations ended.

Scientific Contributions and Data Collection

- Blue Ghost carried **ten scientific instruments**, including:
 - **Lunar Magnetotelluric Souder** from Southwest Research Institute, which measured the **Moon's subsurface electrical conductivity.**
 - Other sensors focused on **lunar dust behavior, surface radiation, and thermal conditions.**
- The lander **collected approximately 119 gigabytes of scientific data**, which will be used for future Moon exploration research.

Observations of Lunar Events

- The mission successfully captured:

- **A total solar eclipse from the lunar surface**, providing a unique perspective on the Sun-Earth-Moon alignment.
- **High-definition images of the lunar sunset**, showcasing the phenomenon of “**lunar horizon glow**” caused by electrostatically charged dust particles.

Significance of the Mission

Demonstrating Private Space Exploration Capabilities

- Blue Ghost’s successful operation shows that **private companies can conduct complex lunar missions**, reducing NASA’s reliance on government-led missions.
- It **validates the effectiveness of NASA’s CLPS program**, which encourages **cost-efficient private sector participation in Moon exploration**.

Advancing Lunar Science and Future Missions

- The mission’s findings will **help scientists understand the Moon’s surface environment better**, particularly in preparation for human missions under the **Artemis program**.
- Understanding **lunar dust behavior, subsurface structures, and radiation levels** is crucial for designing **future lunar bases**.

Future Prospects and Next Steps

Upcoming Blue Ghost Missions

- Firefly Aerospace has announced plans for **two more Blue Ghost missions**, scheduled for **2026 and 2028**.
- These missions will focus on:
 - **Delivering more scientific payloads** to the Moon.
 - **Supporting NASA’s Artemis program**, which aims to establish a **sustainable human presence on the Moon by 2027**.

Expanding Commercial Lunar Exploration

- With the success of Blue Ghost, more **private companies may enter the lunar exploration market**, competing for NASA contracts.
- This could lead to **more frequent lunar missions**, eventually **supporting lunar mining, research stations, and future Mars missions**.

Conclusion

- Blue Ghost’s successful mission proves that **private companies can play a major role in deep-space exploration**.
- The data and insights from this mission will **shape future lunar exploration strategies**, benefiting both government and commercial space programs.
- With upcoming **NASA Artemis missions and further CLPS contracts**, we are moving closer to a **new era of sustainable Moon exploration and potential colonization**.

Scientists Create ‘Woolly Mice’

News Excerpt:

Scientists at **Colossal Biosciences**, a company focused on **de-extinction and genetic engineering**, have successfully created **genetically modified mice** that exhibit characteristics of the extinct **woolly mammoth**. This breakthrough marks a **significant step** toward the company’s ambitious goal of **bringing the woolly mammoth back to life** by 2028. By introducing mammoth-specific genes into mice, researchers have **validated the feasibility of reintroducing mammoth traits into living species**, laying the groundwork for future de-extinction efforts.



Genetic Modifications: How Woolly Traits Were Engineered

Targeting Mammoth-Specific Genes

- Scientists focused on **seven genes** that were responsible for key mammoth traits, including:
 - **Thicker, longer, and curlier hair**, providing insulation against extreme cold.
 - **Lipid metabolism adaptations**, crucial for survival in **freezing temperatures**.
- These genes were introduced into **mouse embryos** using **CRISPR gene-editing technology**, allowing the team to study how mammoth-like traits manifest in living organisms.

Experiment and Observations

- Over **five experimental cycles**, researchers created nearly **250 embryos**, which resulted in **38 live births**.
- The newborn mice displayed **clear mammoth-like traits**, such as:
 - **Thicker, woollier fur**, similar to that of the woolly mammoth.
 - **Altered fat metabolism**, hinting at improved **cold resistance**.
- These modifications suggest that similar genetic alterations could be **successfully applied to elephants**, the closest living relatives of mammoths.

Implications for De-Extinction and Conservation

A Step Toward Resurrecting the Woolly Mammoth

- The success of these experiments provides a **proof of concept** for reviving extinct species through **genetic engineering**.

- Colossal Biosciences aims to apply this research to **Asian elephants**, modifying their DNA to resemble that of woolly mammoths.
- If successful, the **first genetically engineered woolly mammoth-elephant hybrids** could be born by **2028**.

Potential Ecological Impact

- Scientists believe **reintroducing mammoth-like creatures to the Arctic** could help combat **climate change** by:
 - **Preventing permafrost thaw** by compacting snow and allowing cold air to reach the ground.
 - **Restoring grassland ecosystems**, which store carbon more effectively than forests.
- However, the actual impact of **introducing genetically engineered species into modern ecosystems** remains uncertain.

Ethical Concerns and Scientific Debate

- While the research represents a **groundbreaking achievement**, it raises several **ethical and ecological questions**:
 - **Is it ethical to create genetically engineered animals for de-extinction?**
 - **Could these creatures survive in the modern Arctic, or would they require human intervention?**
 - **Would reintroducing mammoth-like animals disrupt current ecosystems?**
- Critics argue that resources might be better spent **preserving existing endangered species**, rather than bringing back extinct ones.

Conclusion

- The successful creation of **woolly mice** brings the dream of **de-extinction closer to reality**.
- While challenges remain, this research could **redefine conservation strategies** and **reshape our understanding of genetic engineering**.
- As the project advances, it will spark **further debate on the ethics and feasibility** of resurrecting long-lost species.

Breakthrough in Fetal Medicine

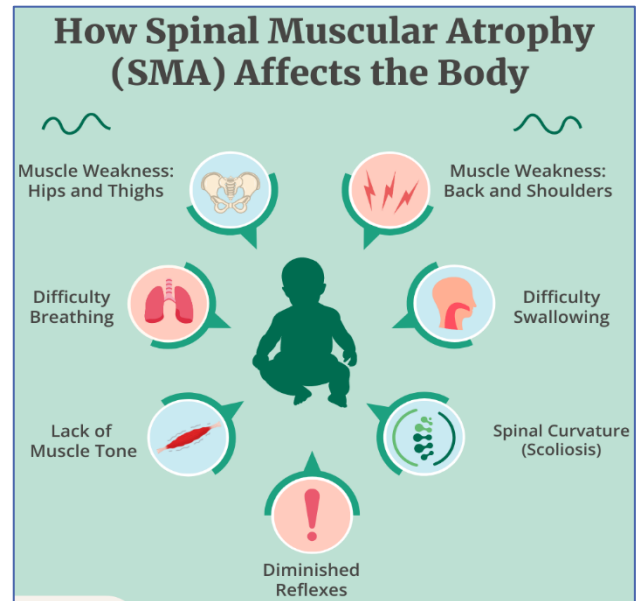
News Excerpt:

For the first time, doctors have successfully treated a genetic disorder in a fetus before birth, marking a significant milestone in prenatal medicine. The treatment was aimed at **Spinal Muscular Atrophy (SMA)**, a severe genetic condition that affects muscle strength and movement. This development could pave the way for early interventions in other genetic disorders.

Condition Treated: Spinal Muscular Atrophy (SMA)

- SMA is a rare but serious genetic disorder caused by mutations in the **SMN1 gene**.

- The disorder leads to a deficiency of the **Survival Motor Neuron (SMN) protein**, which is crucial for motor neuron function.
- Without enough SMN protein, motor neurons in the spinal cord progressively deteriorate, leading to muscle weakness, paralysis, and, in severe cases, death.
- SMA is one of the leading genetic causes of infant mortality if left untreated.



Treatment Approach: In-Utero Administration of Risdiplam

- **Risdiplam** is an FDA-approved oral drug used to treat SMA by boosting SMN protein production.
- Typically, SMA treatments like gene therapy or Spinraza (another SMA drug) are administered after birth.
- In this groundbreaking case, **Risdiplam was given to the fetus while still in the womb, making it the first known prenatal intervention for SMA.**

Procedure Details

- The **pregnant mother was given Risdiplam**, which crossed the placenta and reached the fetus.
- This method ensured that the drug could start working before birth, potentially preventing severe symptoms from developing.
- The fetus was monitored throughout the pregnancy for any signs of improvement or adverse effects.
- By treating SMA before birth, doctors aimed to **preserve motor neurons before irreversible damage occurred.**

Outcomes and Future Implications

- The baby was born with **encouraging motor functions**, suggesting that early intervention was beneficial.
- Post-birth assessments continue to monitor the infant's development, but early signs indicate **improved muscle control compared to untreated cases.**
- This success demonstrates the **potential for treating genetic disorders before birth**, rather than waiting for symptoms to appear after delivery.

- The case could inspire further research into **in-utero therapies for other genetic and neuromuscular disorders**.

Significance of This Advancement

- This case represents a **major leap in fetal medicine** and genetic disorder management.
- If further research supports the safety and efficacy of in-utero treatments, **more genetic conditions could be treated before birth, reducing or even preventing disabilities**.
- Ethical considerations, long-term effects, and broader clinical trials will be necessary before **this approach becomes a standard treatment**.

This pioneering medical intervention offers **hope for families affected by genetic disorders** and lays the foundation for a future where early prenatal treatments can significantly improve quality of life.

Way Forward:

The successful treatment of Spinal Muscular Atrophy (SMA) before birth marks a groundbreaking advancement in fetal medicine. Continued research into in-utero interventions may pave the way for treating various genetic disorders, enhancing outcomes for affected infants. Rigorous studies and ethical considerations will be essential for establishing standard practices in prenatal care.

National Science Day 2025

News Excerpt:

National Science Day, celebrated annually on **February 28** in India, marks the discovery of the **Raman Effect** by **Sir C.V. Raman** in **1928**. His groundbreaking research on the **scattering of light** revolutionized **spectroscopy** and earned him the **Nobel Prize in Physics in 1930**. Today, the **Raman Effect** plays a crucial role in **scientific research, medicine, industrial applications, and security technologies**.



Understanding the Raman Effect

- **Definition:**
 - The **Raman Effect** is a phenomenon where **light interacts with a molecule**, and a small fraction of the scattered light undergoes a shift in **wavelength and energy**.

- This shift occurs due to **energy being transferred between the photons and molecular vibrations**, which allows scientists to study the **molecular structure of materials**.

- **Mechanism of the Raman Effect:**

- When light strikes a molecule, the majority of photons are **elastically scattered** (Rayleigh scattering), meaning they retain their original energy.
- However, a small fraction of the photons interacts with the **molecular vibrations**, causing a **change in energy levels**, which results in a **new wavelength of scattered light**.
- This energy shift provides a **molecular fingerprint** unique to each substance, allowing scientists to identify different materials based on their **Raman spectra**.

Applications of the Raman Effect

The **Raman Effect** is widely used in **scientific, medical, industrial, and defense applications** due to its ability to **analyze materials non-destructively**.

A. Raman Spectroscopy: A Powerful Analytical Tool

- **Chemical Identification:**

- Raman spectroscopy helps **identify unknown substances** by analyzing their molecular vibrations.
- It is widely used in **forensic science, chemical analysis, and quality control in industries**.

- **Material Characterization:**

- In **solid-state physics**, Raman spectroscopy is used to study the **structure, composition, and temperature variations** in materials.
- It helps in **semiconductor research, battery technology, and nanomaterials analysis**.

- **Nanotechnology Applications:**

- Raman spectroscopy is crucial in **studying nanomaterials** like **carbon nanotubes, graphene, and nanowires**, helping researchers understand their **unique electrical and optical properties**.

- **Pharmaceutical Industry:**

- The technique is used to **analyze drug compositions** and ensure **the right molecular forms (polymorphs)** are used in medicines.
- This is important for **drug safety, stability, and efficacy**.

Medical and Healthcare Applications

- **Early Disease Detection:**

- Recent research has explored using Raman spectroscopy for **non-invasive medical diagnostics**.
- Scientists have developed a **Raman laser test** that can **detect dementia years before symptoms appear** by analyzing changes in **biochemical markers** in bodily fluids.

- **Cancer Detection:**

- Raman spectroscopy is being developed for **early cancer diagnosis**, especially for detecting **tumors in tissues** without invasive biopsies.

● **Biochemical Analysis:**

- The technique is used to **study biological samples**, including **proteins, DNA, and cells**, providing insights into **disease progression** and **wound healing**.

Environmental Monitoring and Atmospheric Studies

● **Pollution Analysis:**

- Raman spectroscopy is used to **detect pollutants** in air, water, and soil.
- It can analyze **microplastics, toxic gases, and chemical contaminants** in real time.

● **Climate and Weather Studies:**

- **Raman Lidar systems** (Light Detection and Ranging) measure atmospheric parameters such as **humidity, temperature, and pollution levels**.
- These systems help in **climate change research and weather prediction models**.

Security and Defense Applications

● **Explosives and Hazardous Material Detection:**

- Law enforcement agencies use **portable Raman spectrometers** to detect **explosives, narcotics, and toxic chemicals** from a safe distance.
- This technology is widely used in **airport security, border control, and military defense**.

● **Counterfeit Detection:**

- Raman spectroscopy is used to **identify counterfeit drugs, currency, and luxury goods** by comparing their **molecular signatures** with authentic samples.

Industrial and Manufacturing Applications

● **Real-time Process Monitoring:**

- In industries like **petrochemicals, pharmaceuticals, and food production**, Raman spectroscopy is used for **quality control and process optimization**.
- It ensures that **chemical reactions are occurring correctly**, reducing waste and improving efficiency.

● **Automotive and Aerospace Engineering:**

- Raman spectroscopy helps in **studying the composition of advanced materials**, such as **composite materials used in aircraft and space exploration**.
- It is also used for **analyzing lubricants and fuel compositions** in the automobile industry.

Conclusion: The Legacy of the Raman Effect

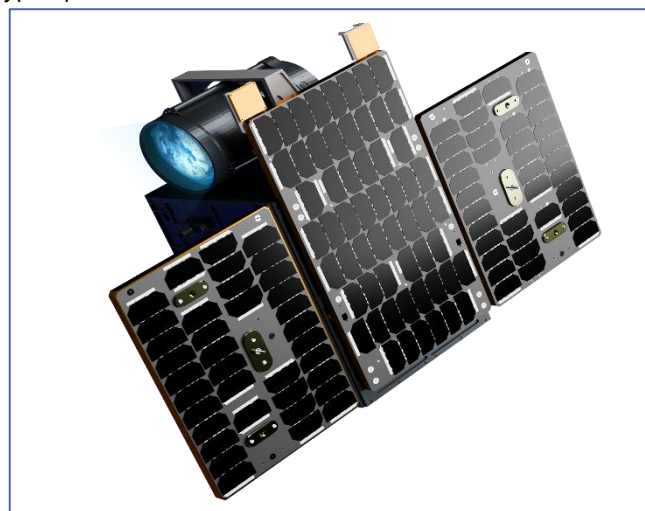
- The discovery of the **Raman Effect** by **Sir C.V. Raman** has had a **profound impact on multiple scientific fields**, leading to advancements in **physics, chemistry, medicine, and technology**.
- **National Science Day** celebrates this achievement and encourages **scientific research and innovation** in India.

- With continued advancements, **Raman spectroscopy** is expected to play an even more significant role in **healthcare, space exploration, and environmental sustainability**.

Pixxel's Firefly Satellite Constellation

News Excerpt:

The Firefly satellite constellation, developed by Bengaluru-based startup Pixxel, represents a groundbreaking advancement in India's private space sector. This study guide highlights the key concepts and features of the Firefly project, which is the world's highest-resolution hyperspectral satellite constellation.



What is the Firefly Satellite Constellation?

- **Definition:** Firefly is India's first private commercial satellite constellation designed for Earth observation using hyperspectral imaging technology.
- **Launch Details:** The first three satellites were launched aboard SpaceX's Transporter-12 rideshare mission from Vandenberg Space Force Base, California.

Unique Features of Firefly Satellites

The Firefly constellation is distinguished by its advanced capabilities:

Feature	Details
Resolution	5-meter resolution, 6x sharper than the 30-meter standard of most hyperspectral satellites.
Spectral Bands	Captures data across over 150 spectral bands for detailed Earth observation.
Orbit Type	Sun-synchronous orbit at ~550 km altitude for consistent global coverage.
Swath Width	40 kilometers, enabling wide-area monitoring without compromising detail.
Revisit Rate	Daily revisit capability for real-time data updates.

Applications of Hyperspectral Imaging

Hyperspectral imaging involves collecting data across a wide range of wavelengths, enabling precise analysis of Earth's surface and atmosphere. Key applications include:

- **Agriculture:** Monitoring vegetation health and soil composition.
- **Climate Monitoring:** Tracking atmospheric changes and water quality.
- **Environmental Protection:** Detecting deforestation and ocean pollution.
- **Resource Management:** Assisting industries like mining and oil in sustainable practices.
- **Defense and Security:** Supporting surveillance and strategic planning.

Technological Advancements

The Firefly satellites incorporate cutting-edge technology to redefine Earth observation:

- **High Precision:** Detect subtle changes in chemical compositions and environmental conditions.
- **Advanced Imaging:** Uncover hidden patterns invisible to traditional imaging systems.
- **Global Coverage:** Provide comprehensive data collection for industries and governments worldwide.

Significance for India's Space Sector

The Firefly project marks a turning point in India's space journey:

- **First Private Constellation:** Demonstrates the growing role of private players in a sector traditionally dominated by ISRO.
- **Make in India Initiative:** Highlights indigenous innovation and engineering excellence.
- **Global Impact:** Positions India as a leader in advanced satellite technology with potential to capture a larger share of the \$19 billion global satellite imagery market by 2029.

Future Plans

Pixxel aims to expand its constellation to six satellites by mid-2025 and eventually to 24 satellites. This expansion will enhance its ability to deliver real-time insights for addressing critical global challenges like climate change, resource management, and environmental sustainability.

Conclusion

The Firefly constellation sets new benchmarks in hyperspectral imaging, showcasing India's capability to develop world-class space technology. With its transformative applications across multiple sectors, Pixxel's initiative is not only a milestone for India but also a significant contribution to global efforts in environmental monitoring and resource management.

Digantara's SCOT Mission: Advancing India's Space Situational Awareness (SSA)

News Excerpt:

Indian space startup Digantara successfully launched its **Space Camera for Object Tracking (SCOT) mission**, marking a significant milestone in Space Situational Awareness (SSA). This mission enhances India's capability to monitor and track objects in **Low Earth Orbit (LEO)** and represents a major step forward in the private sector's contribution to the nation's space ecosystem.



Mission Overview and Technological Capabilities

The SCOT satellite is a cutting-edge technology designed to track Resident Space Objects (RSOs) with high precision. Below are its key features:

- **Object Detection:** SCOT can detect objects as small as 5 cm in size, offering superior tracking accuracy compared to traditional systems.
- **Orbit and Revisit Rates:** Operating in a sun-synchronous orbit, it provides high revisit rates, overcoming geographical and weather-related limitations of ground-based systems.
- **Real-Time Surveillance:** Its advanced positioning enables continuous monitoring of space traffic and real-time data collection.

By addressing the limitations of ground-based SSA systems, SCOT represents one of the world's first commercial SSA satellites.

Funding, Support, and Recognition

The SCOT mission received funding from Aditya Birla Ventures and SIDBI, highlighting the growing role of private investment in India's space sector.

Understanding Space Situational Awareness (SSA) What is SSA?

Space Situational Awareness (SSA) refers to the ability to monitor, track, and predict the movement of objects in space. **It is essential for:**

- **Collision Avoidance:** Preventing accidental crashes between satellites and debris.
- **Space Traffic Management:** Coordinating satellite movements to avoid congestion.
- **National Security:** Safeguarding assets against threats like anti-satellite weapons.

As space becomes increasingly crowded with satellites, debris, and commercial activities, SSA has emerged as a critical need for both government and private entities.

Key Components of SSA

- **Tracking & Monitoring:** Identifying objects such as satellites and debris in orbit.
- **Prediction & Analysis:** Assessing potential collision risks and forecasting orbital movements.
- **Communication & Coordination:** Sharing data among global partners to ensure safe operations.

Challenges in SSA

Despite its importance, SSA faces several challenges:

- **Space Debris:** The growing number of satellites and defunct objects increases collision risks.
- **Limited Observation Coverage:** Ground-based systems often lack global reach.
- **Cybersecurity Threats:** Space assets are vulnerable to hacking and cyberattacks.

Technological Advancements in SSA

To address these challenges, advanced technologies are shaping the future of SSA:

- **Ground-Based Radars & Telescopes:** Used for real-time object detection.
- **AI & Machine Learning:** Enhancing tracking accuracy and predictive analytics.
- **Satellite-Based Sensors:** Providing continuous in-orbit surveillance.

India is actively leveraging these technologies through initiatives like **ISRO's Netra project**, which focuses on tracking space debris, and private missions like Digantara's SCOT satellite.

Objectives of SSA

SSA serves multiple critical functions beyond just tracking space objects. Its primary objectives include:

- **Collision Avoidance:** Preventing accidental crashes by providing real-time alerts.
- **Space Weather Monitoring:** Protecting satellites from solar radiation effects by monitoring solar activity.
- **Satellite Health Monitoring:** Ensuring spacecraft performance by detecting anomalies or malfunctions.
- **National Security:** Enhancing military surveillance against threats like anti-satellite weapons.

- **Space Traffic Coordination:** Managing orbital traffic as satellite constellations grow.
- **Mission Support:** Assisting spacecraft docking and station operations with real-time data.
- **Compliance with International Policies:** Ensuring adherence to global space treaties for sustainable exploration.
- **Active Debris Removal Planning:** Identifying high-risk debris for targeted cleanup efforts using technologies like robotic arms or lasers.
- **Planetary Defense:** Monitoring asteroids and near-Earth objects (NEOs) for impact prevention.
- **Global Collaboration:** Promoting data sharing between international agencies for safer space operations.

Conclusion

The launch of Digantara's SCOT mission marks a pivotal moment in India's journey toward becoming a global leader in Space Situational Awareness (SSA). By combining innovative technology with growing private sector involvement, India is well-positioned to address the challenges of space traffic management, debris mitigation, and national security while contributing to sustainable global space operations.

INTERNAL SECURITY

Flight test of the Naval Anti-Ship Missile

News excerpt:

The Defence Research and Development Organisation (**DRDO**), in collaboration with the **Indian Navy**, has **successfully conducted a flight test** of the **Naval Anti-Ship Missile – Short Range (NASM-SR)**. This **indigenously developed missile** is a crucial step towards strengthening India's **maritime strike capabilities**. It is designed to **replace older anti-ship missiles** and enhance the Navy's ability to **neutralize enemy warships with precision**.

Overview of NASM-SR: India's Indigenous Anti-Ship Missile

- **Purpose and Development:**
 - The NASM-SR is developed to **replace the aging British-origin Sea Eagle missiles** currently used by the Indian Navy.
 - It is designed for **airborne launch from naval helicopters** and aircraft, allowing India to **strike enemy warships from a safe distance**.
 - The **DRDO led the development**, with manufacturing support from **Adani Defence & Aerospace**, as part of India's push for **self-reliance in defense technology**.

Technical Specifications: Key Features of NASM-SR

- **Range and Speed:**
 - The missile has a **range of 55 kilometers** and travels at speeds of up to **Mach 0.8** (subsonic).

- It is designed for **short-range naval engagements**, giving Indian forces an edge in **coastal and maritime combat**.
- **Guidance and Targeting System:**
 - The NASM-SR is equipped with an **Imaging Infra-Red (IIR) seeker**, which enables precise targeting, even in **low-visibility conditions**.
 - The missile can also execute **sea-skimming attacks**, flying at extremely **low altitudes** to **evade enemy radar and interception systems**.
- **Advanced Flight Capabilities:**
 - **Lock-on After Launch (LOAL):** This allows the missile to **acquire targets mid-flight**, improving accuracy and adaptability in **dynamic combat situations**.
 - **In-Flight Retargeting:** A **two-way datalink** enables operators to **update target coordinates while the missile is airborne**, making it **highly adaptable against moving enemy ships**.
 - **All-Weather & Day-Night Operation:** The NASM-SR is designed to **operate in diverse weather conditions** and during both **day and night missions**.

Feature	Description
Man-in-Loop Capability	Allows real-time human intervention for in-flight retargeting via a two-way datalink.
Advanced Targeting System	Includes a Bearing-Only Lock-On Mode and an Indigenous Imaging Infra-Red (IIR) Seeker for precision strikes.
Sea-Skimming Mode	Enables the missile to fly at low altitudes over the sea surface, avoiding radar detection.
Pinpoint Accuracy	Demonstrated by striking small ship targets with high precision during trials.
Navigation & Control	Features Fiber Optic Gyroscope-based Inertial Navigation System (INS), radio altimeter, and electro-mechanical actuators for superior maneuverability.
Propulsion System	Uses solid propulsion with an in-line ejectable booster and long-burn sustainer for extended range and stable flight.
Warhead System	Equipped with a high-impact warhead capable of inflicting significant damage on enemy ships.

Strategic Significance: Why NASM-SR Matters for India

- **Strengthening Naval Strike Capabilities:**
 - The successful development of NASM-SR gives the **Indian Navy an advanced, homegrown anti-ship missile**, reducing reliance on **foreign weaponry**.
 - It will **enhance India’s ability to counter maritime threats**, particularly in the **Indian Ocean Region (IOR)**, where naval competition is intensifying.
- **Boosting Indigenous Defense Production:**

- The missile is part of **India’s Atmanirbhar Bharat (Self-Reliant India) initiative**, promoting **domestic defense technology development**.
- Its success demonstrates **India’s growing ability to produce sophisticated military systems without foreign dependence**.



- **Operational Deployment in Future Conflicts:**
 - Once **fully integrated into the Indian Navy**, the NASM-SR will play a critical role in **defensive and offensive maritime operations**.
 - It is particularly useful in **coastal defense scenarios, anti-piracy missions, and high-seas engagements**.

Conclusion: A Significant Leap for Indian Naval Warfare

- The **successful flight test of NASM-SR** represents a major step forward in **India’s naval strike capabilities**. With **advanced targeting, mid-flight adaptability, and stealth capabilities**, the missile significantly strengthens India’s **maritime deterrence and operational flexibility**.
- As it moves towards **full deployment**, NASM-SR will enhance the **Indian Navy’s ability to secure national interests in the Indian Ocean and beyond**.

India’s Last Imported Warship

News excerpt:

INS Tamal is part of the **Talwar-class frigates**, a series of **stealth warships** that have been **integral to the Indian Navy**. It was initially built as **Admiral Istomin** at the **Yantar shipyard in Kaliningrad, Russia**. India signed a \$950 million deal in October 2018 with Russia to procure **two advanced Talwar-class frigates**, including **INS Tamal**. The deal was part of **India’s long-standing defense cooperation with Russia**, aimed at strengthening the Navy’s operational capabilities.

Design and Features

- **INS Tamal** is an advanced guided-missile frigate, optimized for multi-role operations, including anti-air, anti-surface, and anti-submarine warfare.
- The frigate is equipped with the **Shtil-1 air defense missile system**, featuring a vertical launching system (VLS) with two 12-cell configurations, enabling it to carry 24 missiles.

- The Shtil-1 system has an improved range of 50 km, offering enhanced defensive and offensive capabilities.
- Its stealth features minimize radar cross-section, making it harder to detect by enemy sensors.



Construction and Trials

- The ship was **laid down on November 15, 2013**, and took over a decade to complete due to geopolitical factors and supply chain constraints.
- INS Tamal is powered by **Zorya-Mashproekt M7N1 gas turbine engines**, delivering a combined power output of **44,000 horsepower**, ensuring high speed and maneuverability.
- **Sea trials commenced on January 21, 2025**, in the Baltic Sea, where the ship underwent rigorous testing for navigation, propulsion, and weapon systems.
- By **February 25, 2025**, the frigate successfully completed both **manufacturer and state committee trials**, confirming its operational readiness.

Commissioning and Strategic Significance

- A **200-member Indian Navy commissioning crew** was dispatched to Russia to oversee final testing, training, and the official handover process.
- INS Tamal is expected to be formally inducted into the Indian Navy by **June 2025**, marking a historic moment in India's defense modernization.
- With this commissioning, **INS Tamal becomes the last warship to be imported by India**, symbolizing a shift towards indigenous warship production under the **Atmanirbhar Bharat (Self-Reliant India) initiative**.
- Future naval warships will be built domestically, as India continues to expand its shipbuilding capabilities through projects like the **Project 17A frigates and Next-Generation Destroyers**.

Conclusion

- **INS Tamal's commissioning marks the end of India's reliance on foreign-built warships** and highlights the Navy's transition towards self-reliance in defense manufacturing.
- This milestone aligns with India's long-term strategic vision of bolstering maritime security through indigenous production and cutting-edge naval technology.

Balochistan Train Attack

News excerpt:

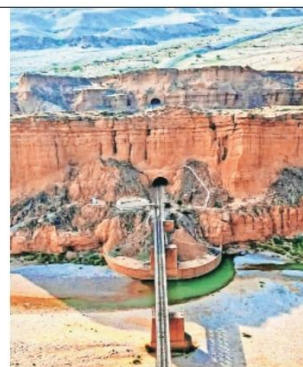
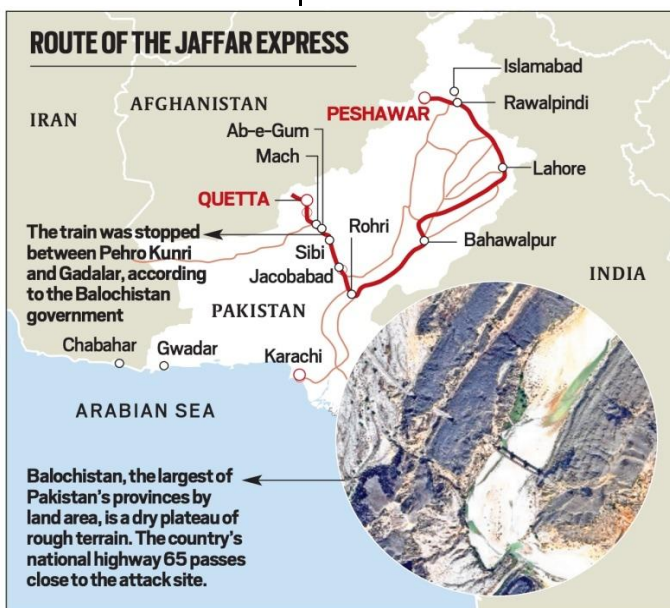
On March 11, 2025, the **Jaffar Express**, a passenger train traveling from Quetta to Peshawar, was hijacked by militants from the Balochistan Liberation Army (BLA) in a significant escalation of the ongoing insurgency in Balochistan, Pakistan. The attack resulted in numerous casualties and highlighted the challenges faced by Pakistani authorities in managing security within the region.

Key Details of the Incident

Location: Bolan Pass, Sibi, Balochistan, Pakistan
 Casualties: Total Killed: 64 (including 33 militants)
 Military Personnel: 18 soldiers and paramilitary troops among the dead
 Injured: 38 individuals
 Hostages Taken: Initially reported as 354 hostages, including military personnel and civilians.

Attack Overview

- The BLA militants executed a coordinated ambush by detonating explosives on the tracks to halt the train, which was carrying approximately 450 passengers.
- Following the detonation, militants stormed the train, threatening hostages and demanding the release of political prisoners.



Pakistan Tourism X/ @PakistanJannatt

The 10-coach train came under attack near Tunnel Number 8 in a rugged, sparsely populated mountainous area (left) that has a network of 17 tunnels, including the historic Mashkaf Railway Tunnel (above) built by the British in the late 19th century.

- The siege lasted for **about 30 hours**, during which security forces launched an operation to rescue hostages and eliminate the attackers.

Military Response

- The operation, codenamed Operation Green Bolan, commenced shortly after the hijacking.
- Security forces successfully rescued over 300 passengers and eliminated all 33 insurgents involved in the attack.
- Five paramilitary soldiers were killed during the operation, with no additional casualties reported among security forces.

Political Reactions

- Pakistan Army officials accused India of supporting terrorism in Balochistan, claiming that external forces contribute to instability in the region.
- Indian officials dismissed these allegations as baseless and emphasized that Pakistan should address its internal issues rather than blame others.
- The attack drew widespread condemnation both domestically and internationally, with calls for enhanced security measures on railways.

Context of Balochistan Insurgency

- The BLA has been involved in a long-standing insurgency seeking **greater autonomy and rights for the Baloch people**.
- Grievances include resource exploitation and neglect by the federal government.
- This incident represents a notable shift in tactics for the BLA, marking one of their most audacious attacks to date.

Conclusion

The **hijacking of the Jaffar Express underscores** the persistent security challenges faced by Pakistan in its southwestern province of Balochistan. As authorities continue to confront insurgent threats, there is an urgent need for comprehensive strategies that address both immediate security concerns and long-term grievances within the region.

GEOGRAPHY

First-Ever Global Freshwater Fauna Assessment by IUCN

News Excerpt :

The International Union for Conservation of Nature (IUCN) has conducted the largest-ever global assessment of freshwater species, revealing that one-quarter of the world's freshwater animals are threatened with extinction. **This landmark study, published in January 2025, involved over 1,000 experts and assessed nearly 23,500 freshwater species.** The findings highlight critical threats to biodiversity and underline the urgent need for conservation efforts.

Key Highlights

Background and Significance

- First Comprehensive Assessment:** This is the first multi-taxon evaluation of extinction risk for global freshwater species.
- Methodology:** The assessment utilized the IUCN Red List categories and criteria to evaluate 23,496 species.
- Long-Term Effort:** The project spanned over two decades, involving more than 100 workshops and extensive remote assessments.

Key Findings

- Extinction Risk: 24% of freshwater species are at high risk of extinction, comparable to the 23% of threatened terrestrial tetrapods.**
- Species Breakdown:**
 - Decapod crustaceans (crabs, crayfishes, and shrimps): 30% threatened.
 - Freshwater fishes: 26% threatened.
 - Odonates (dragonflies and damselflies): 16% threatened.
- Confirmed Extinctions:** At least 89 confirmed extinctions since 1500, with an additional 178 suspected.

Geographical Hotspots

- High-Risk Areas: Major hotspots include:**
 - Lake Victoria (Kenya, Tanzania, Uganda)
 - Lake Titicaca (Bolivia and Peru)
 - Sri Lanka's Wet Zone
 - Western Ghats (India)
- Species Richness Patterns:** Highest concentrations of freshwater species are found in tropical regions like the Amazon basin and parts of Africa.

Primary Threats

- Pollution:** Major threat from agriculture and forestry activities affecting water quality.
- Hydrological Alterations:** Dams and water extraction disrupt flow regimes and habitat connectivity.
- Land Use Change:** Conversion of natural landscapes for agriculture degrades habitats.
- Invasive Species:** Non-native organisms threaten native species through competition and predation.

Ecological and Human Importance

- Freshwater ecosystems support approximately 10%** of all known species, playing a crucial role in global biodiversity.
- They provide essential services such as safe drinking water, fisheries support, flood regulation, and climate change mitigation.

Conservation Implications

- Targeted Actions Needed:** Calls for conservation plans for imperiled taxa.

- **Integration with Water Management:** Emphasizes incorporating biodiversity data into water management policies.
- **Nature-Based Solutions:** Advocates for collaborative approaches that benefit both biodiversity and human welfare.

Conclusion

The IUCN's assessment highlights a pressing conservation crisis in freshwater ecosystems. With significant proportions of freshwater species at risk of extinction, immediate action is required to address threats and implement effective conservation strategies. This groundbreaking study provides critical data to guide efforts aimed at preserving freshwater biodiversity for future generations.

Mineral assets in Africa

News Excerpt:

India is actively pursuing mineral assets in **Africa (Democratic Republic of Congo, Zambia, and Tanzania) and Australia** as part of its strategy to secure critical minerals needed for its **industrial and technological growth**. These minerals are vital for sectors such as **electronics, renewable energy, and battery manufacturing**. The initiative is being spearheaded by the **Ministry of Mines**, which is working on partnerships and investments in these regions.

Targeted Countries for Mineral Acquisition

- **Democratic Republic of Congo, Zambia, and Tanzania (Africa)**
 - These African nations are rich in **cobalt, copper, and nickel**, which are crucial for:
 - **Battery manufacturing** (especially for electric vehicles and energy storage).
 - **Electronics industry** (smartphones, laptops, and semiconductors).
 - India is focusing on long-term agreements to **secure these essential resources** to meet the growing domestic demand.
- **Australia**
 - Australia has abundant reserves of:
 - **Lithium:** Essential for rechargeable batteries used in **EVs and renewable energy storage**.
 - **Rare Earth Elements (REEs):** Critical for **electronics, defense applications, and green technologies**.
 - India is looking at **joint ventures with Australian firms** to extract and refine these minerals.

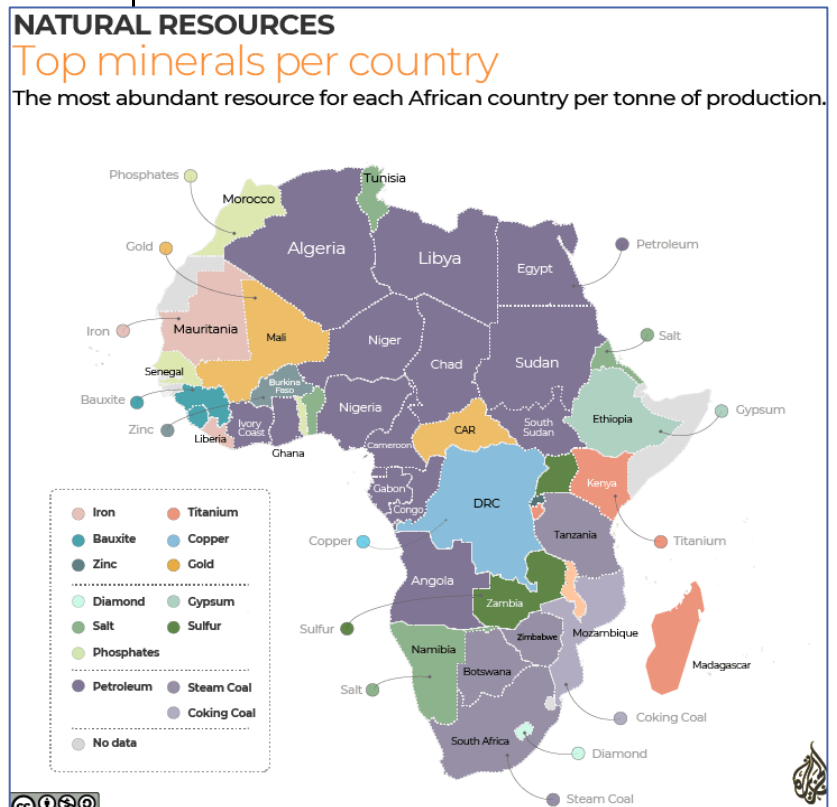
Strategic Objectives of India's Mineral Acquisition Plan

- **Diversification of Mineral Supply Chains**

- India aims to **reduce dependency on China**, which currently dominates the supply of critical minerals like **rare earths and lithium**.
- By engaging with multiple countries, India seeks to create a **stable and diversified supply chain**.
- **Strengthening Domestic Industries**
 - The secured minerals will support:
 - **EV battery manufacturing** under the government's **National Electric Mobility Mission**.
 - **Solar and wind energy projects** as part of India's **renewable energy transition**
 - **High-tech industries**, including defense, electronics, and aerospace.
- **Boosting Economic Growth and Job Creation**
 - The expansion into mineral acquisition will lead to:
 - **Investment opportunities for Indian mining companies** abroad.
 - **Job creation in the domestic processing and manufacturing industries**.

Collaborative Efforts and Investment Strategies

- **Joint Ventures and Bilateral Agreements**
 - India is exploring **partnerships with mining firms and governments** in these countries.
 - The strategy includes:
 - **Equity investments in mining projects**.
 - **Long-term supply contracts** with foreign partners.
 - **Technology sharing and expertise exchange**.



• Development of Infrastructure for Mining and Processing

- To facilitate mineral extraction and transport, India may invest in:
 - **Mining operations and logistics** in Africa and Australia.
 - **Setting up refineries in India** to process raw minerals, ensuring value addition within the country.

Potential Challenges and Future Outlook

• Geopolitical and Regulatory Challenges

- Mining operations in Africa may face **political instability, regulatory hurdles, and local opposition**.
- Negotiating long-term agreements with **stable investment terms** will be crucial.

• Sustainability and Environmental Concerns

- India must ensure **responsible mining practices** to meet **global environmental standards**.
- Developing **eco-friendly extraction and refining technologies** will be a key focus area.

• Future Expansion Plans

- India may **expand mineral sourcing** to other regions, such as **Latin America (Chile, Argentina)**, which are also rich in lithium.
- Domestic mining exploration efforts are also being intensified to reduce reliance on imports.

Conclusion: India's Strategic Move Towards Resource Security

India's **aggressive push for overseas mineral acquisitions** aligns with its long-term **economic and industrial strategy**. The move is expected to:

- ✓ **Secure a steady supply of critical minerals** for EVs, electronics, and renewable energy.
- ✓ **Reduce import dependency on China** and create a more **resilient supply chain**.
- ✓ **Enhance India's role in the global mineral trade** and boost domestic manufacturing.

ART & CULTURE

25th edition of *Jahan-e-Khusrau*

News Excerpt:

The **Prime Minister Narendra Modi** attended at the **25th edition of *Jahan-e-Khusrau***, an annual Sufi music festival held in New Delhi, celebrating the life and legacy of 13th-century poet-musician Amir Khusrau. The event underscores Khusrau's role in shaping India's pluralistic cultural and musical traditions.

Amir Khusrau's Contributions to Indian Culture Literature and Language

- Amir Khusrau was a prolific poet who primarily wrote in **Persian** while also developing **Hindavi**, an early form of Hindi-Urdu.
- He played a crucial role in shaping the linguistic synthesis that later evolved into **Urdu**.
- His poetry blended **Persian, Arabic, and local Indian dialects**, making it accessible and widely celebrated across different communities.

Musical Innovations

- He made significant contributions to **Indian classical music** and was deeply associated with the **qawwali tradition**.
- Many historians attribute the invention of the **sitar** and **tabla** to Khusrau, although this remains debated.
- He is credited with introducing and refining **several new ragas**, which have had a lasting impact on Indian classical music.
- His poetry and songs remain central to **Sufi devotional music**, with pieces like *Chhaap Tilak Sab Chheeni* and *Sakal Ban* still performed widely.

Khusrau's Life and Legacy

Mixed Heritage and Cultural Fusion

- Born in 1253 to a **Turkic father and an Indian mother**, Khusrau embodied a fusion of Central Asian and Indian cultural influences.
- He referred to himself as an **"Indian Turk,"** symbolizing his dual heritage and deep-rooted love for India.
- His works reflect the ethos of **Ganga-Jamuni Tehzeeb**, a syncretic culture blending Hindu and Muslim traditions.

Court Poet and Historical Influence

- He served as a **court poet for multiple Delhi Sultans**, spanning over **five decades**.
- His poetry often celebrated royal achievements, but he also composed **romantic and devotional verses**, highlighting his versatile genius.

Sufi Spirituality and Relationship with Nizamuddin Auliya

- Khusrau was a devoted disciple of **Sufi saint Nizamuddin Auliya**, one of the most revered figures of Indian Sufism.
- Their deep spiritual bond is well-documented, with Khusrau often expressing his love and devotion for his master in his poetry.
- His association with the **Chishti Sufi order** helped spread Sufi ideals of **love, unity, and devotion** across India.

Key Highlights of PM Modi's Address at Jahan-e-Khusrau

Cultural Harmony and Integration

- PM Modi emphasized how India has always been a land where **different cultures blend seamlessly**.
- He noted that **Sufi traditions in India** have absorbed local influences, creating a **harmonious spiritual and cultural ecosystem**.

- He highlighted that Indian Sufis could **recite the Quran while also resonating with Vedic wisdom**, showcasing India's inclusive cultural fabric.

The Universal Message of Sufi Teachings

- Modi stressed that the **teachings of Sufism are more relevant than ever** in today's world.
- He underscored **Amir Khusrau's vision of unity**, which aligns with modern ideals of **peace, brotherhood, and cultural coexistence**.

Literary and Poetic Tributes

- He quoted renowned poets like **Amir Khusrau, Mirza Ghalib, and Rumi**, illustrating India's **rich literary and philosophical heritage**.
- He described how poets like Khusrau serve as **bridges between diverse traditions**, fostering dialogue between different communities.

Conclusion


- The event, *Jahan-e-Khusrau*, featured **traditional and contemporary musical performances**, reflecting the **enduring influence of Khusrau's legacy** in Indian music and culture.
- Through this festival, his role as a **pioneer of India's syncretic traditions** is celebrated, reaffirming the **timeless relevance of his poetic and musical contributions** in promoting **unity and peace**.

Maharashtra Seeks UNESCO Heritage Status for Shivaji's Forts

News Excerpt:

A delegation led by Maharashtra's Cultural Affairs Minister, visited Paris to present a proposal to UNESCO for granting **World Heritage status to forts associated with Chhatrapati Shivaji Maharaj**.

THE 14 FORTS IN MAHARASHTRA'S PROPOSAL

<p>RAIGAD FORT Originally called Rairi, it is built on a large wedge of a hill in the Sahyadris, separated from the main range by a ravine. The capital fort of the Maratha Empire, it was rebuilt for the coronation of Chhatrapati Shivaji Maharaj.</p>	 <p style="text-align: center; font-size: 0.8em;">Raigad Fort. Wikipedia</p>	<p>ANKAI TANKAI FORTS In Nashik district, Anikai and Tankai are separate forts on adjacent hills, with a common fortification wall.</p>
<p>RAJGAD FORT Hill fort in Pune district, capital of the Maratha Empire under Chhatrapati Shivaji for almost 26 years, before the capital moved to the Raigad Fort.</p>	<p>KASA FORT Popularly known as Padmadurg, built on a rocky island off coast of Murud, and provided a base for naval military operations.</p>	<p>SINDHUDURG FORT Built by Chhatrapati Shivaji Maharaj in 1668, this sea fort is considered a masterpiece in military defence.</p>
<p>SHIVNERI FORT Near Junnar in Pune district. Shivaji's birthplace. It consists of 7 gates. It is an example of Bahamani/Nizamshahi architecture providing a backdrop to narrative of guerrilla warfare.</p>	<p>SALHER FORT One of the highest forts in the Sahyadris, located in Dolhari range of Nashik. The fort witnessed a key battle in 1672 between Marathas and Mughals.</p>	<p>ALIBAG FORT Popularly known as Kulaba Fort, it was chosen as one of the forts to be modelled as a naval base by Chhatrapati Shivaji.</p>
<p>TORNA FORT Fort in Pune district, captured by Shivaji in 1646, when he was 16, and marked the beginning of the Maratha empire.</p>	<p>MULHER FORT In Nashik: one of three forts situated on a hill, flanked by Mora to the east and Hatgad to the west. The surrender of Mulher ended the third Maratha War.</p>	<p>SUVARNADURG Built on an island, it was repaired and strengthened by Shivaji Maharaj in 1660.</p>
<p>LOHAGAD Close to Lonavala, it overlooks one of the most picturesque valleys and is believed to have been built in the 14th century. It is an example of Maratha hill fort architecture until Peshwa period.</p>	<p>RANGANA FORT In Kolhapur, bordering Sindhudurg. Aurangzeb tried to conquer it along with Bhudargad and Samangad in his Deccan campaign, did not succeed.</p>	<p>KHANDERI FORT Khanderi, officially named as Kanhoji Angre Island in 1998, is 20 km south of Mumbai. Built in 1679, Khanderi Fort was the site of many battles between Shivaji Maharaj's forces and the navy of the Siddhis.</p>

The proposal, titled *"Maratha Military Landscape of India,"* aims to secure global recognition for these historic

forts as symbols of Maratha military strategy and cultural heritage.

**Key Highlights of the Proposal
Forts Included**

The proposed list consists of **forts**, located in Maharashtra and 1 in Tamil Nadu: These forts were developed between the **17th and 19th centuries**, showcasing the Maratha Empire's architectural brilliance and defense strategies. They reflect integration with diverse landscapes such as the Sahyadri mountain ranges, Konkan coast, Deccan plateau, and Western Ghats.

Objectives of UNESCO Recognition

1. **Global Recognition:** Highlight the historical and architectural significance of Shivaji Maharaj's forts.
2. **Conservation Efforts:** Ensure enhanced preservation and protection of these heritage sites.
3. **Boost Tourism:** Promote heritage tourism in Maharashtra and Tamil Nadu.
4. **Economic Development:** Strengthen local economies through increased tourist inflow.

About UNESCO World Heritage Status

- **Designation:** Awarded to sites of outstanding cultural or natural value.
- **Criteria for Selection:**
 - Masterpiece of human creative genius.
 - Unique testimony to cultural traditions or civilizations.
 - Outstanding examples of architecture or land-use illustrating historical stages.
 - Tangible links to significant events or traditions.
- **Benefits:**
 - International recognition and legal protection.
 - Access to funding for conservation efforts.
 - Increased tourism potential.

Historical Significance of Shivaji's Forts

The forts played a pivotal role in Maratha military history:

- **Strategic Strongholds:** Served as defense hubs against invasions.
- **Administrative Centers:** Facilitated governance during Shivaji Maharaj's reign.
- **Naval Defense:** Coastal forts like Sindhudurg and Suvarnadurg protected maritime trade routes.

Their presentations emphasized the historical importance and architectural uniqueness of these forts while advocating their inclusion in UNESCO's World Heritage list.

Potential Impact if Granted UNESCO Status

Impact Area	Details
Conservation	Enhanced preservation efforts supported by global recognition.

Tourism Development	Increased international tourist visits boosting local economies.
Cultural Awareness	Greater understanding of Maratha history and heritage globally.
Economic Growth	Employment opportunities through heritage tourism expansion.

Challenges Ahead

- **Encroachments:** Many forts face challenges from unauthorized constructions.
- **Infrastructure Needs:** Improved facilities are required to accommodate tourists sustainably.
- **Climate Risks:** Preservation efforts must account for environmental vulnerabilities.

Conclusion

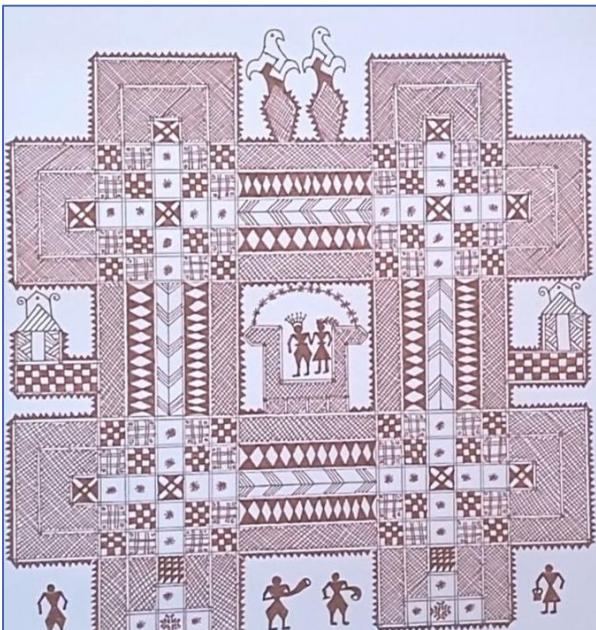
Securing UNESCO World Heritage status for Shivaji Maharaj’s forts would mark a significant milestone in preserving India’s rich cultural legacy. These forts not only symbolize Maratha military ingenuity but also serve as reminders of India’s historical resilience. If successful, this initiative will enhance conservation efforts, boost tourism, and bring global recognition to Maharashtra’s cultural heritage.

Chittara Art of Karnataka: A Traditional Folk Painting

News Excerpt:

Chittara art, also known as **Hase Chittara**, is a traditional folk painting style originating from the **Malnad region** of Karnataka. This intricate art form is deeply rooted in the cultural practices of the **Devaru community** and showcases their connection to nature, rituals, and social traditions.

Key Features of Chittara Art



Origins and Cultural Significance

- **Region:** Predominantly practiced in villages like Sirevanthe, Honemaradu, and Majina Kaanu in Shivamogga district.
- **Community:** Created by the women of the Devaru tribal community.
- **Occasions:** Associated with auspicious events like weddings, house-warming ceremonies, festivals (e.g., Bhoomi Hunnime), and naming ceremonies.
- **Historical Roots:** Believed to be over 2,000 years old, with connections to Stone Age cave paintings.

Materials and Techniques

- **Natural Colors:**
 - White: Made from ground rice paste.
 - Red: Derived from crushed red mud or stones.
 - Black: Created by burning rice.
 - Yellow: Extracted from *gurige* seeds native to Shimoga and Sagar districts.
- **Brushes:** Crafted from areca nut fibers (*pundi naaru*).
- **Patterns:** Geometric shapes, straight lines, and stylized motifs representing nature, social life, and rituals.
- **Collaborative Creation:** Women work together late at night while singing folk songs.

Motifs and Symbolism

Chittara paintings depict elements of daily life and nature:

- Birds, insects, agricultural tools (sickles, ladders), musical instruments.
- Fertility symbols, brides and grooms, sowing paddy fields.
- Central motifs often include a palanquin symbolizing opulence and social triumph.

Revival and Contemporary Trends

Revival Efforts

The art form was nearly extinct until its revival by national award-winning artist **Eshwar Naik** and his sister Lakshmi. They established training centers to teach Chittara art and documented its traditions. Their efforts have brought Chittara art back into public consciousness.

Modern Adaptations

- Artists now use acrylic paints alongside traditional materials to ensure longevity.
- Chittara designs are featured on handmade rice paper, baskets, decorative items, and urban artifacts for broader markets.
- The art has gained international recognition, with exhibitions in Japan and the UAE.

Cultural Practices Associated with Chittara Art

Chittara art is not merely decorative but an integral part of rituals:

- **Marriage Ceremonies:**

- Paintings feature Lord Shiva and Parvati or the names of the bride and groom.
- Rituals like breaking papad under mats are celebrated alongside Chittara depictions.
- **Festivals:**
 - During Bhoomi Hunnime (full moon festival), Chittara is painted on baskets used in rituals.
- **Daily Life:**
- Walls adorned with Chittara replace Rangoli in areas frequented by animals to prevent erasure.

Challenges and Preservation

Challenges

- Declining interest among younger generations due to urbanization.
- Limited documentation of traditional techniques.

Preservation Efforts

- Training programs by artists like Eshwar Naik.
- Integration into educational kits for children (e.g., DIY painting kits).
- Promotion through exhibitions and workshops globally.

Conclusion

Chittara art represents the rich cultural heritage of Karnataka's Malnad region. Its intricate patterns, natural materials, and deep connection to rituals make it a unique artistic expression. While efforts to revive this ancient tradition have been successful, continued promotion through education, modern adaptations, and global exhibitions is essential to ensure its survival for future generations.

Aadi Mahotsav 2025

The **Aadi Mahotsav 2025**, held from February 16 to 24, is a vibrant celebration of India's tribal heritage, organized by the **Tribal Co-operative Marketing Development Federation of India Limited (TRIFED)** under the **Ministry of Tribal Affairs**.

This year's festival, themed "**A Celebration of the Spirit of Tribal Crafts, Culture, Cuisine, and Commerce**," took place at the Major Dhyan Chand National Stadium in New Delhi and showcased the rich cultural capital and entrepreneurial spirit of tribal communities across India.

Key Highlights of Aadi Mahotsav 2025

Cultural and Commercial Showcase

- **Participation:** Over 600 tribal artisans and 500 performing artists participated in the festival, representing diverse tribal traditions from more than 30 states and Union Territories. The event attracted **thousands of visitors, reinforcing Delhi-NCR's status** as a hub for art and heritage fairs.
- **Products on Display:** Artisans showcased a wide array of products, including organic produce, **handlooms, jewelry, paintings, and eco-friendly handicrafts.**

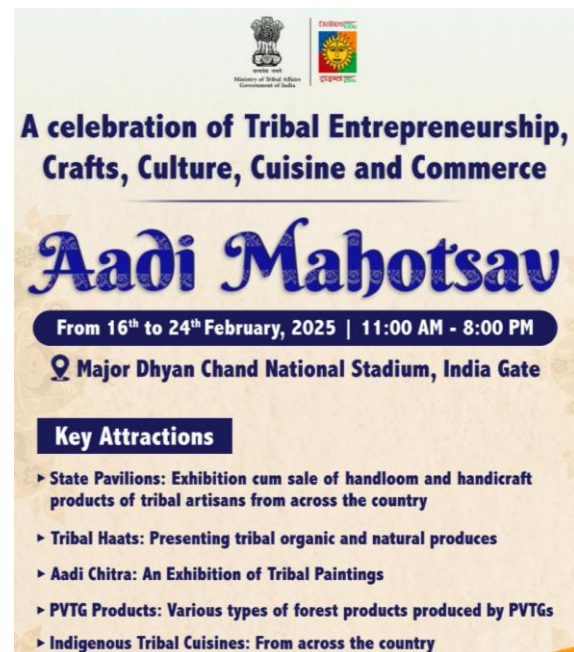
Notable items included Mahua-based products from Maharashtra, Ganesha idols made from coir in Gujarat, Nannari sharbat from Andhra Pradesh, and Araku Coffee with a Geographical Indication (GI) tag.

Empowerment Initiatives

- **Economic Empowerment:** The festival supports rural livelihoods through initiatives like Aajeevika and PM Van Dhan Vikas Yojana. These programs aim to empower tribal artisans economically by providing them with market access and training in product processing.
- **Women Empowerment:** A significant focus of the festival is on women artisans. For example, Beenaben R Tadv from Gujarat transitioned from aspiring government service to becoming a successful entrepreneur making eco-friendly Ganesha idols with her community.

Sustainable Practices

- **Ecological Balance:** The festival promotes sustainable practices by showcasing products that reflect deep-rooted ecological traditions. For instance, **Shabari Naturals highlighted Mahua-based creams and soaps packaged in eco-friendly materials featuring Gond art.**
- **Culinary Diversity:** The **Aadi Vyanjan** section celebrated tribal cuisine with traditional dishes that represent the culinary diversity of India. Visitors enjoyed special thalis featuring local delicacies alongside herbal beverages.



Aligning with Sustainable Development Goals (SDGs)

Aadi Mahotsav 2025 aligns with several Sustainable Development Goals (SDGs), particularly:

- **SDG 17 (Partnerships for the Goals):** By fostering craft-based entrepreneurship and promoting cultural exchange among tribal communities.

- **SDG 5 (Gender Equality):** By empowering women through skill development and economic opportunities.
- **SDG 8 (Decent Work and Economic Growth):** By enhancing market access for tribal artisans and promoting sustainable livelihoods.

Global Participation

This year's edition saw international participation from countries like **Indonesia and Sri Lanka**, further enriching the **cultural exchange at the festival**. Such global engagement enhances the visibility of tribal crafts on an international platform, promoting fair trade practices.

Conclusion

The Aadi Mahotsav 2025 stands as a testament to India's commitment to preserving its tribal heritage while promoting economic empowerment and sustainability. By bridging traditional craftsmanship with modern market dynamics, the festival not only celebrates the rich tapestry of tribal culture but also paves the way for future generations to thrive in their entrepreneurial endeavors.

Surajkund Mela 2025: Championing the 'Orange Economy'

The Surajkund International Crafts Mela, celebrating its 38th edition in 2025, has become a vibrant platform for showcasing India's rich cultural heritage, artisanal skills, and women-led entrepreneurship.

Held from **February 1 to 23 in Faridabad**, the fair brings together over 2,500 artisans from around India and across the globe against the picturesque backdrop of the Aravalli hills. This year's fair emphasizes the **'orange economy'**—a term referencing creative and cultural industries that contribute significantly to economic growth.



A Celebration of Craft and Culture

Organized by the Surajkund Mela Authority in collaboration with **Haryana Tourism and key Union Ministries—Culture, Tourism, Textiles, and External Affairs**—the Surajkund Mela is an immersive experience that blends commerce with cultural appreciation.

- With its vibrant pathways adorned with indigenous crafts, the event promotes the **"Vocal for Local" initiative** aimed at encouraging grassroots entrepreneurship while fostering global integration of arts and crafts as vital tools for cultural exchange.

- **Odisha and Madhya Pradesh** are this year's theme states, featuring dedicated attractions that spotlight their rich heritage. Upon entering the fair, visitors are greeted by a **stunning sand sculpture of Lord Jagannath, representative of Odisha's famous sand art tradition**, and vibrant Pattachitra paintings from Raghurajpur village.

The Orange Economy and Economic Empowerment

- Alongside the traditional crafts, the fair showcases numerous local businesses, from processed foods and herbal products to artisanal crafts, further promoting the economic independence of rural communities.
- A significant emphasis is placed on empowering rural women entrepreneurs through initiatives like the **Sale of Articles of Rural Artisans Society (SARAS) Aajeevika pavilion. This pavilion features self-help groups (SHGs) or "Lakhpati Didis"**—women who have successfully navigated socio-economic barriers to showcase their handiwork.

Global Cultural Exchange

- In a bid to enhance cultural ties, the Surajkund Mela has partnered with the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** nations, including **Bangladesh, Bhutan, India, Nepal, Myanmar, Thailand, and Sri Lanka**.
- This partnership enables a profound cultural exchange, with the international pavilion emerging as one of the major attractions. Here, visitors can explore unique crafts, from Syrian glass lamps and Tunisian olive wood handicrafts to Afghan dry fruits and Nepalese Rudraksha beads.
- This global participation not only enriches the Mela's diversity but also embodies India's ethos of **"Vasudhaiva Kutumbakam"**—the notion that the world is one family.

Spotlight on the Northeastern States

- A special pavilion devoted to the northeastern states highlights the region's rich cultural and natural heritage. In collaboration with the **North East Handloom and Handicrafts Association**, stalls feature water hyacinth crafts, **Meghalaya's turmeric, Manipur's cane and bamboo furniture, and other exotic spices and textiles**.
- Informative displays celebrate the region's agricultural bounty, showcasing Lakadong turmeric, the Shirui Lily from Manipur, and Muga silk from Assam.

Conclusion

The Surajkund Mela 2025 has transcended its role as merely a crafts fair; it stands as a testament to India's commitment to promoting cultural heritage, economic empowerment, and global cooperation. Through its vibrant showcase of local craftsmanship and innovative entrepreneurship, the Mela not only revitalizes traditional arts but also bolsters the economic viability of rural communities, making it an essential event in India's cultural calendar.

GOVERNMENT SCHEMES

MGNREGS and PMAY-G

The **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** and the **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G)** together account for **75% of the total budget** of the **Ministry of Rural Development**. These two flagship schemes play a **critical role in rural livelihood and infrastructure development**, ensuring **employment security and housing for economically weaker sections** in rural India.

MGNREGS: Strengthening Rural Employment

- **Objective:**
 - The **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** aims to provide at **least 100 days of wage employment** to every rural household that demands work.
 - It serves as a **social safety net**, ensuring **sustained income** for the rural population, particularly during economic slowdowns or seasonal unemployment.
- **Budget Allocation & Expenditure:**
 - In the **2024-25 fiscal year**, the government allocated **₹86,000 crore** to MGNREGS.
 - This funding helps in **implementing labor-intensive public works**, such as **irrigation projects, road construction, water conservation, and afforestation**.
 - It remains one of **India's largest employment programs**, benefiting **millions of rural laborers** across the country.
- **Challenges:**
 - **Delayed wage payments** and **budgetary cuts** have been issues affecting its efficiency.
 - **Technological interventions like digital payments** have improved transparency, but **exclusion errors remain**, particularly for marginalized communities.

PMAY-G: Rural Housing Initiative

- **Objective:**
 - The **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G)** aims to achieve "**Housing for All**" by constructing **pucca houses with basic amenities** for the rural poor.
 - The scheme focuses on providing **dignified living conditions** to **economically weaker sections** in villages.
- **Budget Allocation & Achievements:**
 - The exact **budget allocation for PMAY-G in 2024-25** has not been detailed, but the scheme has been a **priority for the government** in rural infrastructure development.
 - Since its launch, **over 3 crore houses** have been constructed under PMAY-G, with the government targeting more homes in **upcoming years**.

- **Challenges:**
 - **Delays in fund disbursement, land availability issues, and implementation inefficiencies** in certain states have slowed progress.
 - Ensuring **timely completion of houses** with quality infrastructure remains a **key focus area**.

The Combined Impact of MGNREGS & PMAY-G on Rural Development

- **Significance of the Allocation:**
 - Together, these schemes **account for 75% of the Rural Development Ministry's budget**, highlighting their **importance in poverty alleviation and rural economic growth**.
 - While **MGNREGS provides employment opportunities**, PMAY-G ensures **better housing**, contributing to an **improved standard of living for rural households**.
- **Social & Economic Benefits:**
 - **Reduction in rural distress:** By offering **employment and financial assistance for housing**, these programs help **reduce migration** to urban areas.
 - **Strengthening rural infrastructure:** MGNREGS supports **community asset creation**, such as **roads, irrigation canals, and water conservation projects**, while PMAY-G enhances **housing conditions**.
 - **Boost to rural economy:** Increased **employment and construction activity** under these programs contribute to **local economic growth**.

Conclusion: A Focus on Rural Development

- The government's **continued investment in MGNREGS and PMAY-G** underscores its **commitment to rural employment and housing**.
- However, ensuring **timely fund allocation, efficient implementation, and reduction of delays** remains **key to maximizing their impact**.
- Moving forward, **enhancing transparency and addressing existing challenges** will be crucial for **sustained rural development** in India.

Strengthening of Cooperative Sugar Mills in India

The Government of India has implemented several initiatives aimed at strengthening Cooperative Sugar Mills (CSMs) to enhance their operational efficiency and ensure their sustainability in the sugar sector. The measures focus on providing financial assistance, resolving tax-related issues, promoting ethanol production, and expanding the capabilities of these cooperatives. This article summarizes the key steps taken by the government along with their implications.

Key Initiatives for Strengthening Cooperative Sugar Mills

Initiative	Description	Benefits
Relief from Income Tax	Introduction of new clause in section 36 of the Income-tax Act allowing deductions for payments made for sugarcane purchases that equal or exceed prices set by the government.	Provides tax certainty and encourages cooperative movement in the sugar sector.
Resolution of Tax Litigations	Amendment of section 155 of the Income-tax Act allowing past deductions for sugarcane purchases to be claimed, effective from April 1, 2023.	Resolves long-standing tax disputes and enables cooperatives to reclaim rightful deductions.
Loan Scheme through NCDC	Launch of the 'Grant-in-aid to NCDC for Strengthening of Cooperative Sugar Mills' scheme providing a grant of ₹1,000 crore.	Enables loans up to ₹10,000 crore for establishing ethanol plants, cogeneration plants, and working capital requirements.
Ethanol Procurement Preference	Oil Marketing Companies (OMCs) prioritize Cooperative Sugar Mills in ethanol procurement cycles.	Enhances market opportunities for CSMs, with 24,650 KL of ethanol worth ₹25.50 crore already procured.
Conversion to Multi-Feed Ethanol Plants	New scheme for converting molasses-based ethanol plants into multi-feed ethanol plants is initiated.	Allows CSMs to operate distilleries year-round and utilize various feedstocks, thereby augmenting ethanol production capacity.
Interest Subsidy on Loans	Central Government will bear the interest on loans for the conversion of ethanol plants at a rate of either 6% per annum or 50% of the lending institution's rate, for five years.	Reduces financial burden on CSMs and facilitates their transition to multi-feed ethanol production.

Implications of the Initiatives

- **Enhanced Financial Viability:** The tax relief and loan schemes aim to improve the financial health of

Cooperative Sugar Mills, ensuring they can invest in modern technologies and expand production capacities.

- **Increased Ethanol Production:** By converting existing plants to multi-feed plants, CSMs can diversify their production and utilize alternative feedstocks, promoting sustainability and aligning with the government's ethanol blending targets.
- **Support for Farmers:** The emphasis on cooperative models in the sugar sector enhances the bargaining power of sugarcane growers, ensuring they receive fair compensation, thus supporting the rural economy.
- **Biodiversity and Environmental Impact:** By promoting ethanol as an alternative energy source, these initiatives may contribute to reducing fossil fuel dependency, aiding environmental conservation and supporting India's climate goals.
- **Strengthening Cooperative Movement:** These steps reinforce the cooperative movement's significance in agriculture, promoting a more equitable distribution of benefits among stakeholders in the sugar industry.

Conclusion

The government's proactive measures to strengthen Cooperative Sugar Mills reflect a strategic approach to revive and sustain the sugar sector in India. By addressing financial, operational, and regulatory challenges, these initiatives not only benefit the mills and their farmers but also contribute to broader goals of energy security and environmental sustainability. As these programs roll out, continued monitoring and support will be essential to realize their full potential in revitalizing the sugar cooperative landscape in India.

Cabinet Approves Revision of Livestock Health and Disease Control Programme (LHDCP)

The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved the revision of the **Livestock Health and Disease Control Programme (LHDCP)** to strengthen animal healthcare and disease control in India. The scheme has an outlay of **₹3,880 crore** for two years (2024-25 and 2025-26) and aims to boost livestock productivity, reduce disease burden, and improve rural livelihoods.

Key Components of LHDCP

The revised LHDCP consists of three main components:

1. **National Animal Disease Control Programme (NADCP):** Focuses on eradicating major livestock diseases.
2. **Livestock Health & Disease Control (LH&DC):**
 - **Critical Animal Disease Control Programme (CADCP):** Targets diseases like Foot and Mouth Disease (FMD), Brucellosis, PPR, CSF, and Lumpy Skin Disease.

- **Establishment and Strengthening of Veterinary Hospitals and Dispensaries – Mobile Veterinary Units (ESVHD-MVU):** Provides doorstep veterinary care.
 - **Assistance to States for Control of Animal Diseases (ASCAD):** Supports states in controlling state-prioritized diseases.
3. **Pashu Aushadhi (New Component):** Allocates ₹75 crore for affordable generic veterinary medicines through PM-Kisan Samridhi Kendras and Cooperative Societies.

Objectives and Benefits

- **Disease Prevention:** Immunization programs will help control diseases such as FMD, Brucellosis, PPR, CSF, and Lumpy Skin Disease.
- **Veterinary Care:** Mobile Veterinary Units will ensure timely healthcare delivery in rural areas.
- **Affordable Medicines:** Pashu Aushadhi will improve access to low-cost generic veterinary drugs.

CABINET DECISIONS


5 MARCH 2025

myGov
मेरे सरकार

Stronger Livestock, Stronger Farmers!

Livestock Health and
Disease Control
Programme Approved

Total outlay of ₹3,880 crore for 2024-26





Prevention & Control of livestock diseases through vaccination & surveillance

Doorstep veterinary care via Mobile Units

Improve livestock productivity & reduced economic losses for farmers

Employment & entrepreneurship boost in rural areas





Impact on Livestock Health

The scheme addresses critical challenges affecting livestock productivity due to diseases. By controlling these diseases through vaccination, surveillance, and healthcare facility upgrades, the program aims to:

- Reduce mortality rates.
- Minimize economic losses for farmers.
- Enhance livestock productivity.

Economic and Social Benefits

The **implementation of LHDCP is expected to:**

- Generate employment opportunities in rural areas.
- Encourage entrepreneurship in animal husbandry.
- Improve rural livelihoods by reducing disease-related losses.

Other Government Initiatives Supporting Livestock Sector:

Scheme	Objective
Rashtriya Gokul Mission	Conservation and development of indigenous cattle breeds ; genetic upgradation of the bovine population.
National Livestock Mission (NLM)	Employment generation , entrepreneurship development, and increased productivity of meat, goat milk, eggs, and wool .
National Programme for Dairy Development (NPDD)	Enhancing milk quality , procurement, processing, value addition, and marketing.
Animal Husbandry Infrastructure Development Fund (AHIDF)	Encouraging investments by entrepreneurs, private companies, MSMEs, and Farmer Producer Organizations (FPOs) .
Livestock Health and Disease Control Programme (LHDCP)	Controlling livestock diseases and improving veterinary healthcare infrastructure .
Livestock Census & Integrated Sample Survey Scheme	Data collection and analysis for better livestock management and policy formulation .
Kisan Credit Cards (KCC) for Dairy Farmers	Providing financial assistance to dairy farmers associated with milk cooperatives and producer companies .

Conclusion

The revised LHDCP is a significant step toward improving animal health infrastructure in India. With its focus on disease prevention, affordable medicines, and doorstep veterinary care, the scheme will not only enhance livestock productivity but also contribute to the economic stability of farmers dependent on animal husbandry.

Pradhan Mantri Shram Yogi Maandhan (PM-SYM): 6 Years of Implementation

The **Pradhan Mantri Shram Yogi Maandhan (PM-SYM)** is a pension scheme launched in 2019 to provide old-age protection and social security to workers in the unorganised

sector. Despite its ambitious goals, a Parliamentary Standing Committee (PSC) report in December 2024 highlighted concerns over its underperformance.

Key Features of PM-SYM

Feature	Details
Launch Year	2019
Administered By	Ministry of Labour and Employment
Pension Fund Manager	Life Insurance Corporation of India (LIC)
Eligibility	Workers aged 18–40 years with monthly income ≤ ₹15,000
Pension Benefits	₹3,000/month post-retirement (age 60); spouse gets 50% as family pension
Contribution Structure	Monthly premium ranges from ₹55 to ₹200, depending on enrolment age
Exit Provisions	Flexible exit with refund options
Coverage	36 States/UTs

Concerns Raised by PSC Report

Underperformance

- **Low Enrollment:** Only 5 million enrollments achieved against the target of 100 million by FY 2024.
- **Reduced Funding:** Government contributions halved from ₹324.23 crore (FY 2021-22) to ₹162.51 crore (FY 2023-24).
- Less than **1% coverage of the unorganised workforce**, which totals approximately 565 million workers.

Reasons for Poor Performance

- **Income Challenges:** Irregular incomes make it difficult for daily wage earners to afford premiums.
- **Impact of COVID-19:** Financial instability during the pandemic reduced workers' ability to contribute.
- **Structural Barriers:** Lack of formal employer-employee relationships and insufficient documentation hinder access.
- **Competition with Other Schemes:** Alternatives like Atal Pension Yojana (APY) confuse workers.

Recommendations for Revamping PM-SYM

Recommendation	Details
Expand Entry Age	Increase eligibility age from 40 years to 50 years.
Merge Schemes	Combine PM-SYM with APY and Pradhan Mantri Laghu Vyapari Maandhan Yojana.
Utilize e-Shram Portal	Streamline enrollment using the portal's database of over 305 million workers.

Introduce Subsidies	Use Direct Benefit Transfer (DBT) for workers unable to afford premiums.
Awareness Campaigns	Launch targeted outreach programs to improve participation rates.

Global Pension Context

India ranks last among 48 countries in the Mercer CFA Institute Global Pension Index (2024), scoring only **44/100**, compared to top-ranked countries like Denmark and Netherlands with state-funded universal coverage systems.

International Models

- **Netherlands:** Universal state pension combined with occupational pensions.
- **Denmark:** State-funded pension alongside mandatory occupational schemes.
- **New Zealand:** Flat-rate universal pension for all residents over age 65.
- **Sweden:** Multi-pillar system including guaranteed minimum pension and income-related schemes.

Conclusion

The PM-SYM scheme represents an important initiative for India's unorganised workforce but faces significant challenges in implementation and outreach. Revamping the program through expanded eligibility, better integration with existing platforms like e-Shram, and improved funding could help achieve its ambitious goals of providing financial security to millions of workers in the informal sector.

The Diamond Imprest Authorization (DIA) Scheme

The Diamond Imprest Authorization (DIA) Scheme, launched by the Department of Commerce, Government of India on January 21, 2025, is set **to significantly enhance the global competitiveness of India's diamond sector**. Effective from April 1, 2025, this initiative aims to support **micro, small, and medium enterprises (MSMEs)** in the diamond industry while safeguarding domestic manufacturing.

Key Features of the DIA Scheme

- **Duty-Free Imports:** The scheme allows for the duty-free import of natural cut and **polished diamonds weighing less than ¼ carat (25 cents)**. This exemption covers various duties including **Basic Customs Duty, Anti-dumping Duty, and Integrated Tax**, facilitating easier access to raw materials for exporters.
- **Export Obligation:** Exporters are required to add a **minimum of 10% value to these imported diamonds** before exporting them. This obligation is designed to ensure that India maintains its position as a leader in diamond processing and value addition.
- **Eligibility Criteria:** Only diamond exporters with a **Two Star Export House status or higher and who have achieved at least \$15 million in exports** annually are eligible for the benefits under this scheme. This focus on

established exporters aims to create a level playing field for MSMEs against larger competitors.

- **Response to Global Trends:** The DIA Scheme is a strategic response to beneficiation policies in **diamond-producing countries like Botswana and Namibia**, where local processing is mandated. By implementing this scheme, India seeks to retain investments and jobs within the country while enhancing its competitive edge in the global market.

Economic Impact

The introduction of the DIA Scheme is expected to have several positive outcomes for the Indian diamond industry:

- **Job Creation:** By boosting exports and facilitating local processing, the scheme is anticipated to generate employment opportunities for skilled workers such as **diamond sorters and polishers**. This is particularly crucial given recent trends of declining exports and job losses within the sector.
- **Support for MSMEs:** The scheme specifically aims to empower smaller exporters by providing them with the necessary tools and resources to compete effectively against larger players. This support is vital for sustaining the domestic diamond processing industry and protecting associated jobs.
- **Strengthening Global Position:** By reinforcing compliance with international standards while simplifying business processes, the **DIA Scheme positions India as a key player in the global diamond trade**. It aims to enhance India's reputation as a hub for diamond processing and exports.

Overview of India's Diamond Industry

Global Leadership

- **Processing Capacity:** India is recognized for **processing about 90% of the world's rough diamonds**, showcasing its dominance in the cutting and polishing segment.
- **Export Statistics:** The country is the largest exporter of polished diamonds globally, with exports valued at **approximately \$18.2 billion** in the fiscal year 2024. This figure underscores India's critical role in the international diamond market.
- **Market Presence:** Indian businesses have established a robust presence in major diamond trading hubs such as Dubai and Antwerp, further solidifying their influence in the global supply chain.

Historical Significance

Historically, India has been a pivotal player in the diamond industry since ancient times, with evidence of diamond mining and trading dating back to 500 BCE.

Challenges Facing the Diamond Industry

Global Challenges

- **Declining Demand:** There has been a noticeable decline in demand for polished diamonds,

particularly in key markets like the United States, China, and Europe.

- **Consumer Preferences:** A significant shift toward lab-grown diamonds has emerged as consumers increasingly favor these alternatives due to their lower prices and perceived ethical advantages. Lab-grown diamonds now account for about 50% of the U.S. engagement ring market by volume.

Domestic Challenges

- **Inventory Accumulation:** The Indian diamond sector is grappling with rising inventories of unsold polished diamonds. Reports indicate that unsold returns have increased from 35% to 45.6%, exacerbating financial stress for many businesses.
- **Operational Costs:** Rising operational costs—including labor, energy, and materials—have pressured profit margins within the industry. Many polishing units are struggling to remain profitable under these conditions.
- **Credit Availability:** Reduced credit availability from banks has further complicated matters for diamond exporters, limiting their capacity to import rough diamonds necessary for processing.
- **Corporate Tax Regime:** India's high corporate tax rates have made it less attractive for foreign suppliers to sell directly to Indian manufacturers, leading to a rise in imports from intermediary markets like Dubai.

Conclusion

The Diamond Imprest Authorization Scheme represents a significant step forward for India's diamond sector. By facilitating duty-free imports and mandating value addition, it not only aims to rejuvenate a struggling industry but also seeks to secure India's status as a global leader in diamond processing. With its implementation set for April 2025, stakeholders are optimistic about its potential impact on employment and export growth in the coming years.

Sashakt Panchayat-Netri Abhiyan

The **Sashakt Panchayat-Netri Abhiyan** was officially launched on March 4, 2025, by the **Ministry of Panchayati Raj in India**. This initiative aims to empower Women Elected Representatives (WERs) in Panchayati Raj Institutions (PRIs) and enhance their leadership capabilities in local governance.

Objectives of the Sashakt Panchayat-Netri Abhiyan

- **Strengthening Leadership Skills:** The program focuses on equipping women representatives with essential leadership and administrative skills, addressing challenges such as lack of training and confidence in governance roles.
- **Enhancing Participation:** Despite the 33% reservation for women in PRIs, their active participation in decision-

making remains limited. The initiative aims to bridge this gap by providing mentorship and training.

- **Encouraging Policy Engagement:** The campaign seeks to increase the involvement of WERs in shaping rural development policies and ensuring effective implementation of government schemes.

Significance of the Initiative

The Sashakt Panchayat-Netri Abhiyan is notable for being the **first national gathering of WERs from all tiers of PRIs—Gram Panchayats, Block Panchayats, and Zilla Panchayats**. It provides a platform for women to share experiences, challenges, and best practices, fostering collaboration and cross-learning among participants.

Moreover, the initiative aims to combat the "**Mukhiya Pati**" phenomenon, where elected women leaders are often controlled by male family members. By empowering these leaders, the program ensures that they can exercise real authority and influence in their communities.

Expected Impact on Rural Governance

- **Better Implementation of Schemes:** Empowered women leaders are expected to ensure more effective execution of government initiatives related to health, education, sanitation, and social welfare.
- **Improved Gender Equality:** Increased participation of women in PRIs promotes gender-sensitive policymaking and contributes to a more inclusive development approach.
- **Economic and Social Development:** Stronger leadership among women is anticipated to lead to better community development, resource management, and enhanced welfare programs.

Conclusion

The **Sashakt Panchayat-Netri Abhiyan** represents a transformative step towards empowering women leaders in rural India. By enhancing their skills and confidence, this initiative not only strengthens grassroots democracy but also promotes gender equality and improves local governance effectiveness.

PHILOSOPHY OF THE MONTH

The Warp and Weft of Existentialism and Svadharma: A Philosophical Exploration

The interplay between **existentialism**, a Western philosophical tradition, and **svadharma**, a cornerstone of Indian philosophy, offers fertile ground for **probing the nature of human existence, freedom, and identity**. Both frameworks grapple with the individual's role in a world teeming with social constructs and cosmic order.

Existence Precedes Essence: Sartre Meets the Upanishads

Jean-Paul Sartre's existentialist dictum, "**existence precedes essence**," posits that individuals define themselves through

their actions rather than being predetermined by any inherent nature or divine blueprint. Sartre's assertion that humans are "**condemned to be free**" resonates deeply with the **Brihadaranyaka Upanishad, which declares, "In the beginning, this was but the self of a human form. It reflected and found nothing else but oneself."** Both traditions emphasize the primacy of existence as the starting point for self-definition.



Svadharma: Duty as Individual Freedom

The concept of **svadharma—one's personal duty**—provides a nuanced lens through which to examine existentialist freedom. In the **Bhagavad Gita, Krishna advises Arjuna, "Better to die following one's own law than to die pursuing the law of another."** This echoes Sartre's insistence that individuals must create their own values in an indifferent universe. For both Krishna and Sartre, authenticity arises from living in accordance with one's inner truth rather than succumbing to external pressures or societal norms.

However, while **existentialism often emphasizes radical individualism, svadharma situates personal duty within a larger cosmic framework**. Dharma is not merely a personal choice; it is an alignment with universal order (rta). This duality—personal freedom within cosmic interdependence—offers a counterpoint to Sartre's atheistic humanism, which denies any overarching divine structure.

Anguish and Responsibility: Arjuna's Dilemma and Sartre's Freedom

Sartre famously stated, "**It is certain that we cannot escape anguish, for we are anguish.**" This poignant assertion resonates with the existential dread that characterizes much of modern life. In a similar vein, Arjuna's plea to Krishna in the battlefield of Kurukshetra encapsulates the overwhelming uncertainty faced by individuals navigating their dharma—their duties and moral obligations. Both instances **illustrate the existential crisis of the individual confronting the vastness of existence and societal expectations**.

Identity Beyond Social Constructs

Both traditions critique the ways in which **societal constructs—race, caste, creed**—impose artificial identities on individuals. Sartre illustrates this through his famous anecdote of the café waiter who "**plays at being a waiter,**" suggesting that social roles are performative rather than essential. **Similarly, Ashtavakra's declaration in his Gita**

dismantles caste-based hierarchies: "You are neither a brahmana nor of any other caste... you are simply yourself."

The Divine Question: God or No God?

A significant point of divergence between these traditions lies in their treatment of divinity. Kierkegaard's Christian existentialism insists that **true freedom originates from God's grace: "Only by loving God above all else can one love the neighbor."** In contrast, **Sartre's atheistic existentialism denies any need for God as a guarantor of freedom.** For Sartre, humans must invent their own values without divine intervention.

Indian philosophy offers a **middle ground.** While svadharma is often framed within a spiritual context—**Krishna speaks as an avatar of Vishnu—it does not necessitate belief in God** as understood in Western theology. Instead, it emphasizes **self-realization through alignment with universal principles (rta), allowing room for both atheistic and theistic interpretations.**

Conclusion: A Harmonious Tapestry

While existentialism champions individual freedom against societal pressures and cosmic indifference, svadharma situates individuality within a larger cosmic order. Together, these philosophies offer complementary visions for navigating life's labyrinths. **As Sartre put it: "If I am an incarnation of freedom, it is directed at me; I am the source of it."** The Chandogya Upanishad echoes this sentiment: **"What a person wills in his present, he becomes in the future."**

ESSAY

1. The purpose of life is a life of purpose.
2. Where flowers bloom, so does hope

CONTEMPORARY ETHICS CASE STUDY

You have a financially challenging situation at home since your family income is dependent on farming, which has become challenging due to the changing climate. Your family is looking up to you to get a good government job since you have two younger sisters who are coming of age for marriage. Your parents are convinced that this year you will pass the examination. You are preparing for your last attempt at the state PCS exam and have given

everything for your preparation. The exam is going to be held in the next few days. However, you feel nervous and burdened with family expectations, which affects your preparation in the final days of the exam.

One day, you were in the library and got a call from an unknown number. A person told you that if you wanted to pass the exam, you had to pay 5 lakh rupees, and they would take care of the rest. He also told you that he is talking on behalf of a big officer of the state PCS commission and is fully guaranteeing your seat in the upcoming exam. He told you that he would call again the next day and warned you not to tell anyone about this because some government leaders and officials are also involved. If you go to the police, you and your family will have to pay a high price because they keep an eye on your every move.

You are an honest person, and you have always done ethical things in your life. But this situation is very serious. You want to become a PCS officer, and you have tried but could not succeed in the past. This will be a golden opportunity, but on the other hand, your morality and conscience do not allow you to accept the offer, and also, if you keep your mouth shut, then you know that the whole process is fixed and you cannot succeed through this process. You told your father about this offer, and he is ready to sell all his property and give you the required money. You wanted a fair exam and tried to tell your local police officer about this incident, but he told you to either accept the offer or keep your mouth shut as this is a high-level Plan. In light of the above circumstances, consider the following questions.

- (a) What ethical dilemmas do you face, and how will you deal with them? What are your options?
- (b) Which one do you think will be the best, and why?
- (c) If you become a PCS officer, what steps will you take to prevent such corruption in public exams?



SCAN THIS QR FOR
MODEL CONTENT

SPECIES IN NEWS

New Congrid Eel Species: *Ariosoma tamilicum*

News Excerpt: Researchers at the National Bureau of Fish Genetic Resources (NBFGR), under the Indian Council of Agricultural Research (ICAR), have identified a new species of **Congrid eel off the coast of Thoothukudi, Tamil Nadu. Named *Ariosoma tamilicum*, the species pays homage to Tamil, one of the world's oldest languages**

Key Findings

- The researchers observed several distinct characteristics of the new species, which set it apart from other eels:
- The dorsal surface of the head features a single whitish band that runs across the anterior margin of the eye.
- Tiny dark pigmentation patches are found on the ventral portion of the lower jaw, creating a dark line along the isthmus.
- The species possesses a long patch of vomerine teeth that extends to about half the length of its maxillary teeth.
- Additionally, it has a total of 120 to 129 vertebrae.
- These physical traits provide crucial evidence supporting the classification of this Congrid eel as a unique species.



Physical Characteristics

Distinctive Features: A whitish band across the anterior margin of the eyes.

Tiny dark pigmentation patches along the ventral portion of the lower jaw forming a dark line along the isthmus.

A long vomerine teeth patch extending to half the length of its maxillary.

Significance and Biodiversity Focus

This is the **14th eel species discovered by NBFGR from Indian waters**, highlighting their focus on studying poorly explored fish groups like Anguilliformes.

The discovery underscores India's rich marine biodiversity and emphasizes the need for further exploration and conservation efforts.

First Local Plant Extinction in the US Due to Rising Sea Levels.

News Excerpt: The Key Largo tree cactus (*Pilosocereus millspaughii*) has tragically become the **first documented plant species in the United States to go extinct** due to the impacts of rising sea levels, thereby underscoring the profound consequences of climate change on biodiversity. This event serves as a **critical indicator of the vulnerabilities faced by various plant species, particularly those inhabiting low-lying coastal areas**

Background

Discovered approximately thirty years ago, the Key Largo tree cactus was endemic to the **Florida Keys**—a region particularly susceptible to climate change effects such as sea-level rise and storm surges.

It was predominantly found in a **single population in this delicate ecosystem, characterized by low-lying lands that are mostly less than five feet above sea level.** Although the cactus was also present in scattered islands in the Caribbean, including northern Cuba and parts of the Bahamas, its primary habitat remained in the Florida..

Over the past several decades, the habitat of the Key Largo tree cactus has faced increasing challenges, primarily due to saltwater inundation caused by rising sea levels. From 1971 to 2022, sea levels rose approximately 0.21 meters at an average annual rate of 4.09 millimeters. This saltwater intrusion led to severe soil degradation, ultimately rendering the environment inhospitable for the cactus.



Factors Contributing to Extinction

The extinction of the Key Largo tree cactus can be attributed to multiple interrelated stressors:

1. **Increasing Storm Surges and Sea Levels:** The post-2015 period witnessed a notable decline in cacti populations due to severe storm surges and heightened sea levels.
2. **Herbivory:** Animals experiencing water scarcity turned to the cacti, which store substantial amounts of water in their stems, further exacerbating their decline.

Ecological and Environmental Implications

The extinction of the **Key Largo tree cactus** serves as a poignant reminder of the precarious state of local biodiversity. The Florida Keys have seen 19 named hurricanes since 2000 alongside a growing occurrence of "king tides" that cause prolonged flooding. These conditions have led to increased saltwater intrusion and habitat loss, threatening various plant and animal species in the region.

At a broader level, rising sea levels pose significant **risks to biodiversity across the globe**. According to NASA, sea levels have risen by 103 millimeters since 1993, mainly driven by **melting ice sheets and thermal expansion of seawater**. Furthermore, a 2013 report from the **Center for Biological Diversity noted that approximately 17%** of the nation's threatened and endangered species are at risk from rising sea levels. This includes species such as the **Key deer, Loggerhead Sea Turtle, Delmarva Peninsula fox squirrel, Western snowy plover, and Hawaiian monk seal**.

Conclusion

The extinction of the Key Largo tree cactus stands as a stark illustration of the urgent need to address climate change and protect vulnerable ecosystems. As rising sea levels continue to threaten biodiversity, it is imperative that appropriate measures are taken to safeguard habitats and foster resilience among both plant and animal species.

The Threat of *Ruellia elegans*: Invasive Beauty Endangering Native Biodiversity

News Excerpt: A recent study has raised alarms regarding the potential threat to native biodiversity posed by an invasive flowering plant, *Ruellia elegans*, commonly known as the Brazilian petunia.

This species, which is **native to Brazil**, has been recorded for the first time in **Digboi, Assam**, sparking concerns about its impact on the local flora.

Discovery in Digboi

Although the plant is praised for its elegant appearance, its introduction to the region could have detrimental effects on local ecosystems.



Characteristics and Impact of *Ruellia elegans*

Ruellia elegans thrives primarily in **wet tropical biomes and is recognized by several common names**, including **Christmas pride, elegant Ruellia, red Ruellia**, and wild petunia. It is one of four invasive species from the Acanthoideae sub-family identified in India, alongside *Ruellia ciliatiflora*, *Ruellia simplex*, and *Ruellia tuberosa*.

Current Distribution and Human Influence

While *Ruellia elegans* was previously documented in regions including the **Andaman Islands, Jamaica, and Puerto Rico**, its recent appearance in **Digboi signifies an extension of its distribution possibly propelled by human activities**.

Conclusion

The case of *Ruellia elegans* serves as a poignant reminder of the challenges posed by invasive species on native biodiversity. As urbanization and human activities continue to reshape landscapes, it is essential to implement proactive monitoring and management strategies to halt the spread of such invasive plants.

The Goliath Beetle: A Looming Threat of Extinction

News Excerpt: Recent research has uncovered alarming news about the Goliath beetle, **Africa's largest insect**, revealing that one of its species is on the brink of extinction.

The primary culprit behind this drastic decline is the west **African cocoa industry**, with the international trade in dried insects exacerbating the situation. This issue has significant implications for biodiversity and forest health in the region.

Goliath beetles (*Goliathus* spp.) are among the largest insects globally, native to Africa's tropical forests. Recent studies indicate that certain species, particularly **Goliathus cacicus** and **Goliathus regius**, are experiencing significant population declines, pushing them towards extinction.

Factors Contributing to Population Decline

Habitat Loss Due to Cocoa Cultivation

- The expansion of cocoa plantations in West Africa, especially in countries like Côte d'Ivoire, has led to extensive deforestation.
- This deforestation results in the loss of the beetles' natural habitat, disrupting their life cycle and reducing their populations.

Overexploitation for the Insect Trade

- Goliath beetles are sought after by collectors and for use in traditional practices, leading to over-collection from the wild.
- This overexploitation further threatens their already dwindling populations.

Conservation Status and Efforts

- Historically, Goliath beetles were not evaluated by major conservation organizations like the IUCN.
- Recent assessments suggest that **Goliathus cacicus** should be listed as **Critically Endangered**, and **Goliathus regius** as **Endangered**.
- Conservation efforts are now focusing on:
 - **Habitat Preservation:** Protecting and restoring tropical forests in West Africa to ensure suitable habitats for these beetles.
 - **Sustainable Practices:** Promoting sustainable cocoa farming practices that minimize environmental impact.
 - **Regulation of Insect Trade:** Implementing stricter controls on the collection and trade of Goliath beetles to prevent overexploitation.

Conclusion

- The decline of Goliath beetles highlights the broader issue of biodiversity loss due to human activities.
- Immediate and concerted conservation actions are essential to prevent the extinction of these remarkable insects and to maintain ecological balance.



PLACES IN NEWS – INDIA

Madhav National Park: India's 58th Tiger Reserve

On March 2025, the Indian government officially designated **Madhav National Park in Madhya Pradesh** as the country's **58th tiger reserve**.

Overview of Madhav Tiger Reserve

Madhav Tiger Reserve is located in the **Shivpuri district of the Chambal region** and is **officially recognized as Madhya Pradesh's ninth tiger reserve**. This designation not only highlights the state's commitment to wildlife protection but also marks a critical step in enhancing the tiger population in India, which has been a focal point of conservation efforts.



Recent Efforts in Conservation

The tiger reintroduction project in Madhya Pradesh has seen significant developments, with **three tigers, including two females, reintroduced to Madhav National Park in 2023**.

The designation of Madhav National Park as a tiger reserve **represents a strategic effort to promote biodiversity** and restore ecological balance in the region. With a rich cultural heritage that celebrates wildlife, Madhya Pradesh continues to lead in wildlife conservation initiatives, setting an example for other states.

Conclusion

The establishment of Madhav Tiger Reserve as India's 58th tiger reserve is a pivotal milestone in the **nation's ongoing journey toward wildlife conservation and ecological sustainability**. As Madhya Pradesh embraces this new chapter in protecting its natural heritage, the collaborative efforts of government officials, conservationists, and local communities will play a critical role in securing a future where wildlife thrives in harmony with human activities. The continued focus on biodiversity preservation promises a healthier and more balanced ecosystem for generations to come.

Kanger Valley National Park

It has recently gained significant attention as it has been added to **UNESCO's Tentative List of World Heritage Sites**. This recognition highlights the park's rich biodiversity, stunning landscapes, and cultural significance, marking a pivotal moment for both conservation efforts and tourism in the region.

About Kanger Valley National Park

Location and Size

Location: Kanger Valley National Park, also known as Kanger Ghati National Park, is located in the Bastar district of Chhattisgarh.

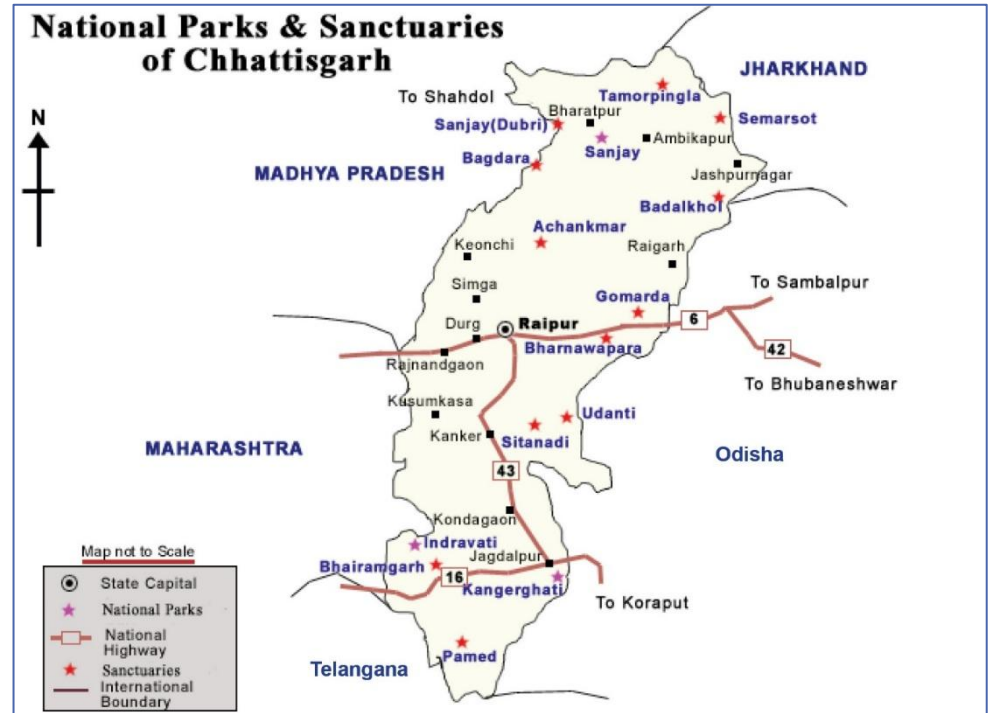
Established: The park was established in 1982 and covers an area of approximately 200 square kilometers, stretching from the Teerathagarh waterfalls in the west to the Kolab River at the Odisha border in the east.

Flora and Fauna

Vegetation: The park features mixed moist deciduous forests with prominent species such as sal, teak, and bamboo. It is recognized as one of the last untouched virgin forests in peninsular India.

This milestone is particularly noteworthy as it is the first site from Chhattisgarh to achieve this status, which could pave the way for future recognition as a World Heritage Site.

Biodiversity: Over 550 plant species have been documented, including medicinal plants and rare species. The park is home to diverse wildlife including tigers, leopards, sloth bears, wild boars, and langurs. Additionally, it supports 144 bird species and various reptiles like crocodiles and pythons.



Geological Features

Limestone Caves: Kanger Valley is famous for its limestone caves such as Kotumsar, Kailash, and Dandak. These caves are known for their impressive stalactites and stalagmites and hold archaeological significance.

Waterfalls: The park also features scenic waterfalls like Teerathgarh Falls, which enhances its natural beauty and attracts visitors.

Cultural Significance

Kanger Valley is rich in tribal heritage and serves as a center for ecotourism. The indigenous tribes of the region view the forest as integral to their culture. This recognition by UNESCO is expected to boost conservation efforts while supporting local communities.

Conclusion

The addition of Kanger Valley National Park to UNESCO's Tentative List marks a significant achievement for Chhattisgarh. It not only acknowledges the park's ecological and cultural importance but also sets the stage for increased global recognition and sustainable tourism initiatives that benefit both conservation efforts and local communities.

PLACES IN NEWS – WORLD

NORTH SEA
A cargo ship collided with a jet fuel tanker off eastern England, igniting both vessels and causing fuel to spill into the North Sea.

TORKHAM BORDER
Intense clashes between Pakistan and Afghanistan forces at the Torkham border, escalating tensions and disrupting trade and movement between the two neighbouring countries.

KYRGYZSTAN AND TAJIKISTAN
Kyrgyzstan and Tajikistan have resolved their decades-long border dispute through a land swap deal, easing tensions in the Fergana Valley.

HAITI
Haiti's capital, Port-au-Prince, faces escalating violence as armed gangs expand control, overwhelming security forces.

TIGRAY REGION
Ethiopia's Tigray regional government has appealed for urgent intervention as factional fighters, including militias from the Amhara region and Eritrean forces, seize key towns.

VOLCÁN DE FUEGO
Guatemala's Volcán de Fuego erupted violently, unleashing explosions, incandescent material, and pyroclastic flows.

LAKE TANGANYIKA
Countries surrounding Lake Tanganyika —launched a joint initiative to protect biodiversity, combat land degradation, and ensure sustainable management

LAKE URMIA
Lake Urmia in Iran has seen a significant rise in water levels due to increased rainfall and conservation efforts.

VANUATU
Lalit Modi, the fugitive ex-IPL chief, applied to surrender his passport after obtaining citizenship of Vanuatu.

GUYANA
Guyana condemned a Venezuelan Navy incursion near an ExxonMobil oil facility, amid ongoing territorial disputes over the Essequibo region.

MAP NOT TO SCALE

KSG

An Institute For **IAS** Exam...

NORTH DELHI

www.ksgindia.com

2521, 1st FLOOR, HUDSONE LANE,
NEAR GTB NAGAR METRO STATION,
VIJAY NAGAR CHOWK,
DELHI - 110009

☎ 97173 80832 / 88605 88805

CENTRAL DELHI

www.ksgindia.com

1/1-A, 1st FLOOR,
BADA BAZAAR ROAD,
OLD RAJENDER NAGAR,
NEW DELHI - 110060

☎ 98112 93743 ☎ 011-45170303

BHOPAL

www.ksgbhopal.com

PLOT NO. 48, 1st & 2nd FLOOR,
BEHIND SARGAM TALKIES,
ZONE-II, M.P. NAGAR, BHOPAL
MADHYA PRADESH - 462011

☎ 75099 75361 / 91798 95361

INDORE

www.ksgindore.com

160/4, PIPLIYA RAO,
NEAR BHOLARAM GATE,
AB ROAD, INDORE
MADHYA PRADESH - 452014

☎ 9893 772941 ☎ 0731-4977441

JAIPUR

www.ksgjaipur.com

403-404, 4th FLOOR, APEX TOWER,
LAL KOTHI, TONK ROAD, JAIPUR
RAJASTHAN - 302015

☎ 82908 00441 ☎ 0141-4052441

KOLKATA

www.ksgkolkata.in

COLLEGE MORE, PTI BUILDING,
2nd FLOOR, SEC-V, SALT LAKE,
KOLKATA, WEST BENGAL - 700091

☎ 90077 09895 / 9559932 5599

BENGALURU

www.ksgbengaluru.com

A1, 2nd FLOOR, MAMMOOR PLAZA,
ABOVE AIRTEL OFFICE,
2nd CROSS ROAD, 5th BLOCK
KORAMANGALA, BENGLAURU,
KARNATAKA - 560095

☎ 76191 66663 ☎ 080-48544393

GUWAHATI

www.ksgindia.com

4th & 5th FLOOR,
MOTILAL NEHARU ROAD,
ADJACENT TO MAYFLOWER HOTEL,
PAN BAZAR, GUWAHATI,
ASSAM - 781001

☎ 931999 0882

we are a hardworking team, those who are willing to work hard should join us...

Please Note : there are no short cuts to success.

≡≡≡ We have most of the Faculties same across all our centres. ≡≡≡

