

DECEMBER
2024

KSG

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



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

WITH LOADED FEATURES

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

NEW FEATURE: SNAPSHOT: THEMES OF THE MONTH

“Get your Mains Answer Evaluated through this Copy”

UPSC / IAS

KSG

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



www.ksgindia.com

FEATURES

1. Dedicated personal mentor will be allotted to every student
2. Designed to cater to the changing patterns of UPSC CSE
3. Recorded Class along with your offline Classes
4. Subjective Tests with Guided Assessment
5. Sessions with the Toppers of Civil Services Examination
6. Comprehensive Coverage of the course under module based teaching program
7. Real Emphasis On Answer Writing
8. Daily Objective Test (with regular individual performance chart)

& Many More...

Upcoming Offline Batches

DELHI VIJAY NAGAR | **2nd DEC** | ☎ 97173 80832

BHOPAL | **8th DEC** | ☎ 75099 75361

INDORE | **9th DEC** | ☎ 9893 772941

Online

FOUNDATION COURSE

FEE ₹ 49000_{+GST}

Admission Open

ONLINE ADVANCE FOUNDATION COURSE
— 2 YEARS PROGRAM —

ESPECIALLY DESIGNED COURSE
for COLLEGE STUDENTS

Starting From... **2nd Dec.**

NAVIGATOR

Prelims Test Series

Total Tests **46**

**ADMISSION
OPEN**

AWSDP+

**ANSWER WRITING SKILL
DEVELOPMENT PROGRAM**

Starting From... **7th Dec.**

NORTH DELHI
97173 80832

CENTRAL DELHI
98112 93743

JAIPUR
82908 00441

BHOPAL
75099 75361

INDORE
9893 772941

BENGLAURU
76191 66663

KOLKATA
90077 09895

For Enquiry... ☎ **9990 999707 / 8826 002521**

MESSAGE FROM DR. KHAN

Dear Students,

Life is like blue water in front of you; you **must chart your course** depending on where **you wish to go**. You are not competing with anyone external; **you are competing with yourself** & in this context, the concept of intentional living takes centre stage. Seizing the current phase of life is important, where productivity knows no bounds. Individuals can accomplish anything they desire by fostering a conscious awareness of one's dreams and **aligning every hour with intentional actions**. Let us explore the transformative power of intentional living and remain focused, unaffected by distractions.

Youth: A Window of Countless Opportunities. Make conscious decisions because: a, you cannot choose all and b, the window closes pretty fast. Recognize that the present phase represents the pinnacle of productivity, where limitless potential awaits. It is not about the **past or the future but harnessing the strength of the present** to achieve extraordinary feats. Embrace every hour **with the dignity** it deserves.

Consider the journey of **Helen Keller**, who, despite being deaf and blind, became a renowned author and activist. Her life demonstrates that you can achieve goals with **determination and focused action**, no matter your difficulties.

Steve Jobs, the co-founder of Apple, exemplifies **how vision and intentionality** can revolutionize the world. He focused on creating innovative technology that changed how we communicate, reminding us that our unique ideas can lead to significant advancements.

Embrace the consciousness accompanying this phase, leveraging it to drive intentional living. Every hour counts and each action should contribute to the realization of your dreams.

Intentional living requires **staying grounded** and focused amidst external distractions. Social events or unforeseen circumstances should not divert attention from the ultimate goal. However, a minor detour is not a 'u' turn.

Ensure that **every behaviour, decision**, and action aligns with your aspirations. By staying true to your purpose, you will achieve remarkable results.

Monitor your progress by evaluating your performance every **2-3 hours**. Heightened self-awareness keeps you conscious of your existence **and fuels your transition toward the desired goal**.

As you navigate your studies, **embrace each moment** and take deliberate actions toward your goals, just like these leaders did. **Stay focused, resist distractions, and celebrate small victories**. Remember, **consistency breeds success**. The achievements of great leaders remind us that with a **burning desire and purposeful action, you can accomplish anything**. Embrace your potential and let it propel you forward. The world is waiting for your contributions—make them count!

**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)**.

Additionally, this month, we are introducing a new section called **"SNAPSHOTS,"** offering themes **inspired by** four monthly magazines to provide comprehensive coverage of various topics. We are also providing a **complimentary full-length test** with 100 objective questions. **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
When Parliament isn't in session, standing committees are where the action is	5
Does data justify subdivision of quotas?	6
Evaluating DMs and DCs on Basis of Investments Received.....	7
The burgeoning expenditure of elections	8
Exit Polls and Missed Predictions.....	9
Under-Representation of Women in the Judiciary.....	10
SOCIAL ISSUES	12
Rethinking Workplace Culture	12
Global Multidimensional Poverty Index (MPI) 2024	13
More than half of Indian women remain outside labour force due to care duties.....	14
Tackling Learning Disabilities Head-on.....	16
SC Ruling on Child Marriage.....	17
Teen Social Media Addiction	18
ECONOMY	19
As banks' AI 'scores' surge, why the RBI is flagging concerns of systemic risks	19
The shifting sands within global supply chains	20
Export Push: Govt working on easier loans for SMEs, ecommerce exporters	22
Meal costs are rising faster than earnings: Data	23
Why inflation on prices of tomatoes, onions, and potatoes particularly remains a pain point for RBI	24
India to take on China on GI listings by tapping goods district-wise	25
Just energy transition	26
AGRICULTURE	28
A case for food subsidies: An investment, not a waste.....	28
Farmers in Madhya Pradesh, India's 'soya bean State', battered by rain and betrayed by prices.....	29
Livestock census	31
INTERNATIONAL RELATIONS	32
Donald Trump Wins U.S. Elections 2024.....	32
India-Spain Relations.....	33
India-Germany Relations	35
India-Canada Relations.....	36
SCO Summit 2024.....	37
India-China LAC Agreement.....	39
BRICS Summit 2024.....	40
ENVIRONMENT	41
Emissions Gap Report 2024	41
Living Planet Report 2024	44
Key takeaways from COP-16.....	46
Protected Planet Report 2024	48
Adaptation Gap Report 2024.....	49
Torches and tension on elephant corridors.....	50
On the new coastal zone plan of Kerala	52
SCIENCE & TECHNOLOGY	53
RNA editing promises to go where DNA editing can't	53
World Intellectual Property Indicators 2024 Report.....	54
WHO Identifies 17 Pathogens in Urgent Need of Vaccines	56
Telcos Cast Satellite Internet as a Threat to Terrestrial Networks	57

INTERNAL SECURITY	58
Cyberfraud losses could amount to 0.7% of GDP, projects Ministry's study	58
PM Modi cautions people against 'digital arrest' scam	59
The demand for greater autonomy for Eastern Nagaland districts	60
GEOGRAPHY	62
Cyclone Dana.....	62
Black hole in a triple system.....	63
DISASTER MANAGEMENT	65
Connections established between Volcanic Eruption & Ionospheric Disturbances	65
Italy Flood.....	66
Wayanad Landslides and Gaps in India's Disaster Management Framework	67
Disaster Risk Insurance.....	68
ART & CULTURE	69
First Asian Buddhist Summit 2024.....	69
Ganga Utsav 2024 to be held at Chandi Ghat, Haridwar.....	69
Raigad Fort.....	70
International Abhidhamma Divas	70
Lady Justice.....	71
'Shilp Samagam Mela 2024'	72
'Kutumb Prabodhan' is the Core Principle of Indian Culture..	73
150 th Birth Anniversary Year celebration of Bhagwan Birsa Munda.....	73
Gotti Koya tribals.....	74
Manipur's Non-Naga Thadou community.....	75
Bodo Tribe.....	75
PRE-SHOTS	76
POLITY	76
SC Issues Guidelines to Curb Illegal Demolitions	76
Special Campaign 4.0.....	77
149 TH ASSEMBLY OF INTER-PARLIAMENTARY UNION (IPU)..	77
Karmayogi Competency Model	78
Supreme Court upheld constitutional validity of UP Madarsa Act, 2004	79
95% of Land Records in Rural India Digitized	80
SC rules that Aadhaar cannot be used as proof of date of birth	81
Anomalies in MG-NREGS Implementation	81
Supreme Court Ruling: States Can Tax Industrial Alcohol	82
Strengthening Gram Panchayats.....	82
Not All Private Property Can Be Taken Over by the State for 'Common Good'	83
SOCIAL ISSUES	85
Commitment to Reducing Inequality (CRI) Index 2024.....	85
1st Global Ministerial Conference on Ending Violence Against Children.....	85
Global Education Monitoring Report 2024 and UNESCO-World Bank Education Finance Watch 2024	86
World Survey on the Role of Women in Development 2024 .	86
ECONOMY	87
G20 Independent Expert Group Report Card on Strengthening MDBs	87
'Poverty, Prosperity and Planet: Pathways out of the Polycrisis' report by World Bank Group	88
World Energy Outlook 2024.....	89
Hand-in-Hand Investment Forum 2024.....	89
FTAs strategy.....	90

AGRICULTURE	90
'Guidelines for Import of Live Seaweeds into India'	90
New MIDH guidelines to support vertical farming, hydroponics among 4 components.....	91
New guidelines promote Ayurveda, regulate use of antibiotics in veterinary treatment.....	91
NIFTEM-K Unveils SARTHI: Smart Reefer Transportation to Curb Post-Harvest Losses.....	92
DAP crisis	92
Govt approves ₹10,700 crore equity infusion in FCI to strengthen agricultural sector	93
Agrivoltaic farming focuses on simultaneous use of land for agriculture & solar energy	93
INTERNATIONAL RELATIONS.....	94
UN Relief and Works Agency for Palestinian Refugees	94
China's Belt and Road Initiative (BRI)	94
First ASEAN-India Track 1 Cyber Policy Dialogue.....	95
India-Middle East-Europe Corridor.....	95
ENVIRONMENT	96
Great Indian bustard - Artificial Insemination birth in Jaisalmer	96
Biological diversity rules notified	96
Economics of Water	97
Asia-Pacific Climate Report.....	98
7th Assembly of the International Solar Alliance	99
Localised Weather forecasting	99
'Protected' areas are seeing faster biodiversity decline	99
India cloud chamber as part of Mission Mausam.....	100
Marine heat waves.....	100
SCIENCE & TECHNOLOGY	101
SPACE	101
India to Launch European Space Agency's Proba-3 Mission.....	101
Space Docking Experiment (SPADEX)	102
Lignosat, the first wooden satellite launched into space	102
India will have its own Space Station by 2035	103
GENERAL SCIENCE	104
NTPC launches world's first CO ₂ -to-Methanol Plant.....	104
Chonkus, the mutant Cyanobacteria	104
Fifth Global Standards Symposium (GSS-24).....	105
BIOTECH	105
First Foundation Day of Biotechnology Research and Innovation Council (BRIC).....	105
ICMR announces 'First in the World Challenge'	106
HEALTH	107
Why the Maker of Semaglutide Wants Copies Banned	107
INTERNAL SECURITY	108
MHA issues alert against illegal payment gateways.....	108
C-295 aircraft	108
India, U.S. conclude \$3.5bn deal for 31 MQ-9B armed UAVs.....	108
MAHASAGAR	109
Exercise Austrahind	109
First Ever Space Exercise 'Antariksha Abhyas - 2024'	110
Adaptive Defence.....	110
India-Indonesia concluded 9th edition of Garuda Shakti exercise.....	110

DRDO carries maiden test of land attack long range cruise missile	111
Terror attack on Z-Morh project	111
GEOGRAPHY	112
Sun signs: On extreme heat and Tamil Nadu's policy decision	112
Glacial lakes rise as glaciers retreat.....	112
Dead Sea.....	113
Willingdon Island	113
DISASTER MANAGEMENT	114
G20 Disaster Risk Reduction Ministerial Declaration	114
Ocean Institute Orchestrated Mega Drill.....	115
GOVERNMENT SCHEMES.....	115
Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY) completes 10 years	115
PM Young Achievers' Scholarship Award Scheme for Vibrant India (PM YASASVI).....	117
Anusandhan National Research Foundation (ANRF) Launches PMECRG and MAHA-EV initiative	118
The loan limit under PMMY increased to Rs.20 lakh from the current Rs.10 lakh.	119
Mobile app for birth-death registration	119
National Electricity Plan (Transmission)	119
PM Narendra Modi rolls out health cover for 70-plus senior citizens	120
Government extends "Samarth"	120
PM-Vidyalaxmi scheme for higher education	121
OROP Scheme completes 10 years.....	121
Scheme for Strengthening the Medical Device Industry.....	122
'EV as a Service' Programme.....	123
The Digital Farm Mission.....	123
MISCELLANEOUS	124
Joint naval drills IMEX 2024.....	124
INS Tushil.....	124
Bob Khathing Museum of Valour	124
PHILOSOPHY OF THE MONTH	125
The Quest for Freedom: Is the Will Truly Free?.....	125
THEMATIC ESSAY	126
CONTEMPORARY ETHICS CASE STUDY	126
SPECIES IN NEWS	126
PLACES IN NEWS - INDIA	128
MAP CONNECT WORLD.....	130
SNAPSHOT - KURUKSHETRA (NOVEMBER).....	131
SNAPSHOT - YOJANA (NOVEMBER)	133
SNAPSHOT - DOWN TO EARTH (NOVEMBER) ...	136
SNAPSHOT - EPW (NOVEMBER)	138

POLITY

When Parliament isn't in session, standing committees are where the action is

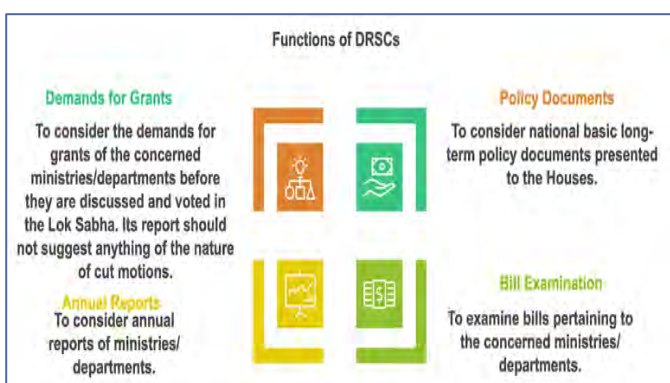
News Excerpt

The average **annual sitting** of the Parliament has sharply **declined**, from 135 days during the first Lok Sabha to just 55 days in the 17th Lok Sabha (2019-2024). Most legislative **scrutiny and discussion** now happen outside the Parliament's formal sessions, in **Standing Committees**.

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									

About Departmentally-Related Standing Committees (DRSCs)

- On the recommendation of the **Rules Committee** of the Lok Sabha, 17 Departmentally-Related Standing Committees (DRSCs) were set up in the Parliament in 1993. In 2004, seven more such committees were set up, thus increasing their number from 17 to 24.
- Of the **24 standing committees**, 8 work under the Rajya Sabha and 16 under the Lok Sabha. These committees cover all the ministries/ departments of the Central Government under their jurisdiction.
- The **main objective** of the standing committees is to secure more **accountability** of the Executive (i.e., the Council of Ministers) to the Parliament, particularly financial accountability. They also assist the Parliament in **debating the budget** more effectively.
- The **term** of office of each standing committee is **one year** from the date of its constitution.
- Each standing committee comprises **31 members** (21 from the Lok Sabha and 10 from the Rajya Sabha). The **Speaker of the Lok Sabha** nominates the members of the Lok Sabha from amongst their members, and the **Chairman of the Rajya Sabha** nominates the members of the Rajya Sabha from amongst their members.
- A minister is **not eligible** to be nominated as a member of any of the standing committees. In case a member, after his nomination to any of the standing committees, is appointed a minister, he ceases to be a committee member.



- The **recommendations** of these committees are **advisory** in nature and hence **not binding** on the Parliament.

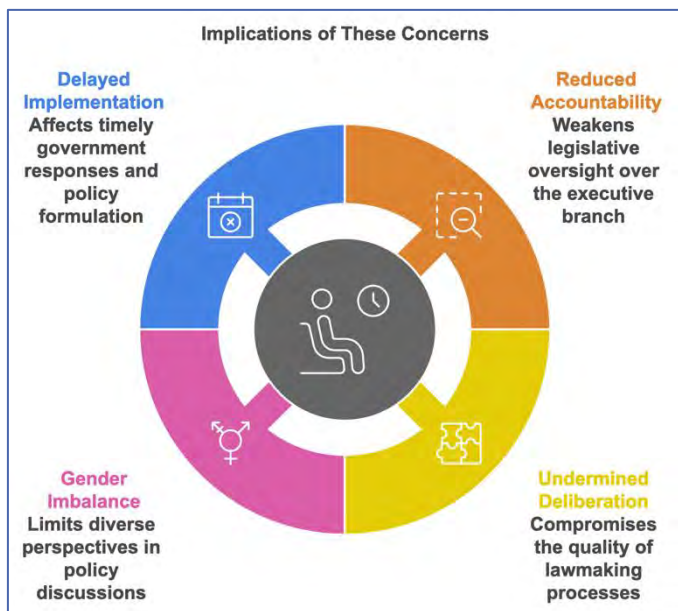
Significance of the DRSCs

- Their proceedings are devoid of any **party bias**.
- The procedure adopted by them is **more flexible** than in the Lok Sabha.
- The system makes **parliamentary control** over the executive much more detailed, close, continuous, in-depth and comprehensive.
- The system ensures economy and **efficiency** in public expenditures, as the ministries/departments are now more careful in formulating their demands.
- They facilitate **opportunities** for all members of Parliament to participate in, understand, and contribute to the functioning of the government.
- They can use **expert or public opinion** to make the reports. They are authorised to invite experts and eminent persons to testify before them and incorporate their opinions in their reports.
- The opposition parties and the Rajya Sabha can now play a greater role in exercising **financial control** over the executive.

Concerns Related to DRSCs

- Delayed Reconstitution:** Despite their importance, the reconstitution of the 24 DRSCs and the appointment of chairpersons were delayed.
- Low Attendance and Participation: Committee on Social Justice and Empowerment:** Oversees critical ministries like Minority Affairs, Tribal Affairs, and Social Justice and Empowerment. In 2023, some MPs attended only 1 or 2 out of 16 meetings, undermining the committee's effectiveness.
- Gender Disparity in Leadership:** Only 2 out of 24 DRSCs are chaired by women, reflecting a significant gender imbalance.
 - Standing Committee on Women Empowerment:** This committee, which advises on enhancing women's status, has not been constituted for the 18th Lok Sabha.
 - Committee on Education, Women, Children, Youth, and Sports:** No woman has chaired this committee in the last two decades despite its critical focus on gender-sensitive areas.
- Decline in Bill Referrals to Committees:**
 - 15th Lok Sabha:** 70% of Bills (7 out of 10) were referred to committees for detailed scrutiny.
 - 17th Lok Sabha:** Only 20% of Bills (1 out of 5) were referred for committee scrutiny. Important legislation, like the three Criminal Law Bills, was wrapped up in just 12 sittings, reducing the quality of deliberation.

- **Delays in Tabling and Discussing Committee Reports:** Committees' reports are often delayed, reducing their impact on legislative discourse.
 - **Committee on External Affairs:** In 2018, its report on the Doklam issue was stalled for months due to opposition from ruling party MPs, highlighting political interference.



Way Forward:

- According to the rules, the government is required to **respond to committee recommendations** within six months. This should be **reduced to 60 days**, as practiced in the **British House of Commons**.
- MPs serve in committees for just a year, leading to constant reshuffling and lack of expertise. Take a cue from the US Congress' permanent Standing Committees or Kerala's Legislative Assembly, with a **30-month tenure**. A longer tenure will work better.
- A **Parliamentary Committee on National Economy** should be formed to examine the state of the economy annually. Short-duration discussions should be initiated in both Houses of Parliament to discuss the reports. A response from the Minister should follow this. This committee should also **review public borrowing**, as it affects future governments.
- A **Constitution Committee** should be established for prior scrutiny of **Constitutional Amendment Bills** to check if these are ultra vires to the Constitution and strengthen the credibility of constitutional amendments.
- **Pre-budget scrutiny** and proper **examination of Demand for Grants** (DFGs) must not be sidelined because of elections. Following the constitution of Lok

PEPPER IT WITH:
Parliamentary Oversight, Federalism, Parliamentary Monitoring.

Sabhas in 2014, 2019, and 2024, DFGs were not sent to Standing Committees.

- The **11th Lok Sabha (1996) precedent** should be followed. The Union Budget was presented on July 22. The House adjourned on August 2 and was reconvened on August 26 for committees to review the Demand for Grants.

Does data justify subdivision of quotas?

News Excerpt:

Recent debates have questioned whether a **'quota-within-quota'** system is needed to ensure that **affirmative action** policies are more equitable across **Scheduled Caste subgroups**.

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

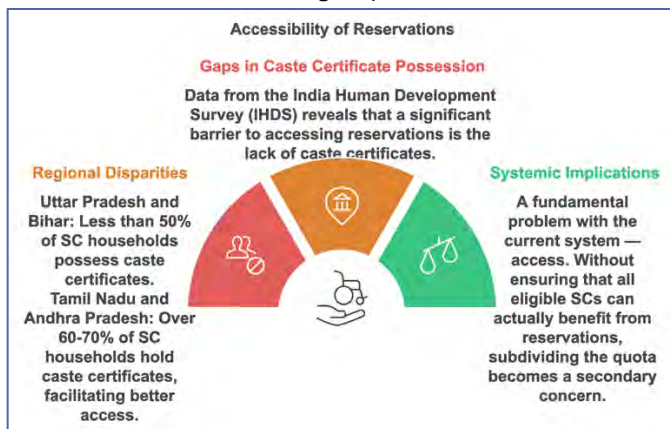
India's Reservation System:

- **Origins and Purpose**
 - India's reservation system was designed as a mechanism to **correct historical injustices** and **socio-economic exclusion** faced by the Scheduled Castes (**SCs**), Scheduled Tribes (**STs**), and Other Backward Classes (**OBCs**).
 - **Dr. B.R. Ambedkar**, the chief architect of the Indian Constitution, envisioned reservations as a bridge from formal **legal equality** to **substantive equality** by ensuring representation in **education, public employment, and political offices**.
- **Uneven Outcomes and Emerging Debates**
 - Over 75 years post-independence, data reveals that **not** all SC communities have **benefited equally** from reservations. This disparity has led to calls for a **more nuanced** affirmative action policy that considers the **heterogeneity** within the SC category.
 - Earlier this year, a **seven-judge Bench** of the Supreme Court had ruled in a **6:1 majority judgment** that **State governments** were **permitted to sub-classify** communities within the **SC list** based on empirical data, to grant quotas within the reserved category to uplift those who belong to the more underprivileged castes.

Data Insights: State-Level Analysis

- **Andhra Pradesh and Tamil Nadu: Relative Equity**
 - **Andhra Pradesh:** Data indicates that major SC groups like **Malas** and **Madigas** have seen similar socio-economic progress. By 2019, both were equally represented in white-collar jobs.
 - **Tamil Nadu:** Similar patterns emerge between **Adi Dravida** and **Pallan** groups, with negligible disparities in socio-economic outcomes.
 - In other words, in both the states where SC groups exhibit similar progress, subdivision may be unnecessary.
- **Punjab: Success of Quota Subdivision**

- Punjab has subdivided its SC quota since 1975, benefiting historically disadvantaged groups like **Mazhabi Sikhs** and **Balmikis**.
- These groups have begun to close the gap with relatively advanced SC subgroups like **Ad Dharmis** and **Ravidasis**.
- **Bihar: Cautionary Tale of Mahadalit Policy**
 - The creation of the **Mahadalit category in 2007** in Bihar aimed to target the most marginalised SC groups.
 - However, political pressures diluted its impact by extending the category to include all SCs, undermining its original intent.
- The broader takeaway from these findings is that while there is some heterogeneity within the SC category, the **disparities between SC groups and upper-caste groups** (general category) remain far **more pronounced**. In other words, the gap between SCs and the privileged castes is still much larger than the gap between different SC subgroups.



Way Forward:

- **Enhancing Access to Reservations:** Many eligible individuals fail to benefit due to lack of documentation or awareness. Therefore, efforts must focus on:
 - Streamlining the process for obtaining **caste certificates**.
 - Improving **last-mile delivery** of reservation benefits by reducing bureaucratic hurdles.
- **Need for Comprehensive Data:** Robust data is necessary to design policies that effectively target disadvantaged groups.
- **Addressing Political Interference:** Reservation reforms must be shielded from political expediency. **Independent commissions** should oversee the implementation and revision of reservation policies, ensuring decisions are based on empirical evidence rather than political motives.

PEPPER IT WITH:
 Socio-economic mobility, Caste-based discrimination, Historical injustices,

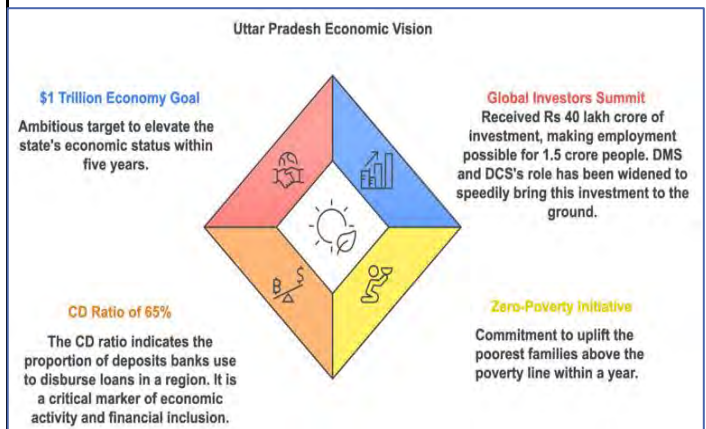
- **Incremental Introduction of Creamy Layer Exclusion:** The idea of a creamy layer exclusion for SCs warrants caution.
 - **Economic mobility** does **not** yet equate to the elimination of social stigma and caste-based discrimination.

Evaluating DMs and DCs on Basis of Investments Received

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						

The **Uttar Pradesh** government has introduced a significant policy shift by making **District Magistrates (DMs)** and **Divisional Commissioners (DCs)** responsible for attracting investment and increasing the **Credit-Deposit (CD) Ratio** in their districts.



Key Features of the Policy:

- **Expanded Responsibilities:**
 - Beyond land identification and regulatory approvals, DMs are now tasked with actively **promoting and facilitating investment** in their districts.
 - They are expected to maintain close contact with **industrial establishments** and proactively address challenges faced by investors.
- **Linking Investment and CD Ratio to Annual Appraisals**
 - DMs and DCs must now report their efforts in attracting investment, **creating employment opportunities**, and improving the CD ratio in their **Annual Confidential Report (ACR)**.
 - Investment and employment data must be included in the **self-appraisal column** of their **APAR** (Annual Performance Appraisal Report).
 - DMs and Divisional Commissioners will receive **district-specific CD ratio data** each year. At the end of the year, they are expected to analyse and report the change in the CD ratio.
 - The **finance department of UP** will coordinate with the **Reserve Bank of India (RBI)** to provide CD ratio

data at the beginning of each year and assess progress annually.

Recognition and Incentives:

- DMs who excel in attracting investments will be **honoured** for their contributions.

PEPPER IT WITH:
 Good Governance, Investment Promotion, Corruption and Favouritism, Ease of Doing Business.

Arguments in Favour of Evaluation on Basis of Investment	Arguments Against the Evaluation on Basis of Investment
<ul style="list-style-type: none"> Encourages Proactive Governance: Officials will adopt a more proactive approach in streamlining bureaucratic processes such as land allotments and regulatory clearances, making the state more business-friendly. Boosts Economic Growth and Employment: More investments lead to industrial development and job creation, benefiting the local population, especially the youth. Promotes Accountability and Efficiency: A competitive environment among districts may lead to faster and more effective implementation of investment-related projects. Improves Investment Climate in Underdeveloped Areas: The policy aims to draw attention to economically lagging regions and encourages officials to make these areas more attractive to investors. Focusing on building infrastructure like land banks and easing land-use conversions could bridge regional disparities over time. 	<ul style="list-style-type: none"> Diversion from Core Responsibilities: DMs' primary duties include Maintaining law and order, implementing development schemes, and overseeing welfare programs for marginalised communities. The focus on investment promotion risks diverting attention from these critical responsibilities. Geographical and Structural Disparities: Districts close to Delhi, enjoy better infrastructure and locational advantages than eastern Uttar Pradesh, making it unrealistic to expect uniform investment outcomes. This may lead to the demoralization of civil servants. Risk of Superficial Targets: The pressure to meet investment targets may lead officials to focus on signing Memorandums of Understanding (MoUs) without ensuring their implementation. Lack of Control over External Factors: Investment decisions depend on various external factors, including Global economic conditions, Investor confidence, and

- Supports the State's Vision for Industrial Growth:** The scheme aligns with the **Uttar Pradesh Global Investors Summit 2023**, where investment proposals were received. The policy ensures that the summit's promises materialize by holding officials accountable for converting these proposals into actual investments.

Policy stability at the state and central levels. Holding DMs accountable for these factors, which are beyond their control, could lead to unfair evaluations.

- Potential for Corruption and Favoritism:** The policy may inadvertently promote favouritism toward businesses willing to invest quickly, potentially compromising the quality of investments.

Way Forward:

- Evaluation of DMs and DCs based on investments received aims to foster **economic development** and **enhance investment inflows**. However, it also raises valid **concerns** about its impact on **civil servants' core responsibilities**, districts' unequal potential, and the risks of focusing on short-term gains.
- For the scheme to succeed, it must **balance investment promotion with effective governance** and provide **differentiated targets** for each district's unique challenges.

The burgeoning expenditure of elections

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				

The total expenditure for **U.S. presidential and Congressional elections** in November 2024 is around U.S. \$16 billion (equivalent to **₹1,36,000 crores**). According to the Centre for Media Studies (CMS), the total expenditure by various political parties for the **general election to Lok Sabha** this year was around **₹1,00,000 crores**.

Election Expenditure Limits in India

- The election expenditure limit for candidates is **₹95 lakh** per **Lok Sabha** constituency in larger States and **₹75 lakh** in smaller States.
- The figures for **legislative Assemblies** are **₹40 lakh** and **₹28 lakh** for larger and smaller States, respectively.
- The Election Commission (EC) sets these limits from time to time. There are no limits on the expenditure of political parties during elections.

Global Practices:

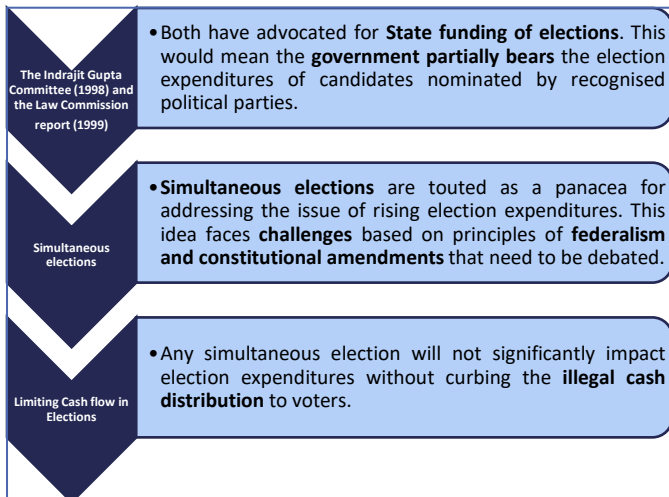
- USA:** Elections are primarily funded by contributions from **individuals, corporations, and political action committees (PACs)**.

- While individual and PAC contributions to candidates are limited, various judgments of the U.S. Supreme Court have created **Super PACs with no spending limits**.
- UK:** In the U.K., a political party can spend **£54,010 on each constituency** it contests, with a **limit of £35 million for parties** contesting all constituencies.

Challenges of High Election Expenditures

- Elections in democracies worldwide have become very expensive. This increased expenditure, primarily through large donations, creates an **unholy nexus** between **elected representatives** and **donors seeking favours**. This acts as an entry barrier into electoral politics for many well-meaning citizens.
- In India, candidates from all major political parties breach the election expenditure limits by a wide margin. Further, **political party spending** during elections is **not limited**.
 - The official expenditures the BJP and Congress declared for the **2019 election** were ₹1,264 crores and ₹820 crores, respectively.
- However, according to a **report by the CMS, ₹50,000 crore** was spent by various parties during the 2019 election. The report suggests that 35% of this money was spent on campaigns and publicity, while 25% was illegally distributed among voters.
 - The CMS has estimated that spending during the **2024 election** by various political parties was close to **₹1,00,000 crores**. Such inflated election expenditure fuels corruption, resulting in a **vicious cycle**.

Proposed Reforms:



Way Forward:

Certain practical steps to create a level playing field regarding election expenditure can be implemented if there is political will. These are based on the **EC's 2016 report on 'Proposed Electoral Reforms.'**

- Firstly, the **law must be amended** to explicitly provide that

PEPPER IT WITH:

Election Expenditure Limits, State Funding of Elections, Electoral Reforms,

'financial assistance' by a political party to its candidate should also be within the candidate's prescribed election expenditure limits.

- Secondly**, there should be a **ceiling on political party expenditures**. This may be kept at not more than the expenditure ceiling limit provided for a candidate multiplied by the number of candidates of the party contesting the election.
- Finally, **additional judges** may be appointed in high courts to speed up the **disposal of election-related cases**, which would act as a deterrent against violating these norms.

Exit Polls and Missed Predictions

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						

Recent elections in India, including those in **Haryana, Jammu and Kashmir**, and the national **Lok Sabha** polls, have highlighted the **discrepancies** between exit poll predictions and actual results. The inconsistencies have led to **renewed scrutiny** of polling methodologies, the pressures pollsters face, and the inherent unpredictability of voter behaviour.

Understanding Exit Polls

- Exit polls **provide insights** into how people vote in an election. They are based on **interviews** conducted with voters immediately after they leave polling stations.
- In India, **exit polls** hold almost as much public interest as the actual election results. Traditionally, exit polls are only **released after the final voting phase**, as mandated by the Election Commission of India (ECI), to avoid influencing remaining voters.

Methodology in Exit Polls

- Structured Questionnaire:** Exit polls rely on a structured questionnaire dating back to 1957 when the Indian Institute of Public Opinion conducted India's first exit poll. Data cannot be collected coherently or analysed systematically without a structured approach.
- Sample Size and Representativeness**
 - Evolution of Sample Size:** Exit polls have grown from samples of around 20,000 to millions today. However, a large sample alone does not guarantee accuracy.
 - Importance of Representativeness:** More critical than size is whether the sample reflects diverse voter profiles.
- Technological Aids:** Modern technology, such as callbacks, interview images, and field communication via WhatsApp, has helped improve data collection and minimise errors.

Regulation of Exit Polls

- Section 126A** of the **Representation of the People Act, 1951** prohibits the conduct of Exit polls and dissemination of their results using print or electronic

media during the period mentioned therein, i.e. between the hour fixed for the commencement of poll in the first phase and half an hour after the time fixed for the close of the poll for the last phase in all the States.

- According to the ECI, exit polls can only be conducted during a **specific period**. This period starts when the polling booths close and ends 30 minutes after the last booth closes.

Challenges with Exit Poll Accuracy

Euphoria Effect: Media and pollsters can form an echo chamber, overestimating a party's performance based on perceived momentum, as seen in recent state elections.

Complexity of Vote-Share-to-Seat Conversion: India's first-past-the-post system complicates converting vote shares into seat predictions, as even minor shifts in votes can significantly alter seat outcomes in tight races.

Social Desirability Bias: Marginalized groups may feel pressured to give socially acceptable responses, leading to distorted results.

Voter Fatigue: A proliferation of polling agencies can overwhelm voters, leading to disengagement and inaccurate responses

Voter Misreporting: Some voters may intentionally mislead pollsters or answer in ways they think are more socially acceptable, skewing data, particularly among specific communities

Prediction Challenges with Swing Models: Diverse factors, such as regional differences, caste, religion, alliance changes, and multi-party contests, complicate using past voting patterns to predict outcome.

Media and Commercial Pressures: Pollsters face pressure to quickly release data and conform to market expectations, which can lead to groupthink and potentially sacrifice accuracy for speed.

Keynesian Curse

- The tendency for pollsters to base their **forecasts on the expectations** of other pollsters can lead to narrow, inaccurate projections.
- It **creates a loop** where pollsters rely on their own forecasts of other forecasts rather than purely on statistical models.
- **For instance** - In recent **Lok Sabha elections**, this led to exaggerated forecasts of the NDA's seat share, with some pollsters predicting as many as 400 seats, far exceeding the actual 293 seats won by the alliance.

Way Forward

- **Strengthen ECI Regulations and Oversight:** The Election Commission could enhance its oversight role by potentially introducing standards for exit poll accuracy and enforcing rules that protect against the premature release of partial data.
- **Enhance Sampling Representativeness:** Ensure samples reflect India's diverse demographics, especially underrepresented groups. Move beyond sample size alone and prioritise representativeness to capture regional, caste, and socioeconomic variations more accurately.

- **Mitigate Social Desirability Bias:** Employ indirect questioning techniques and anonymised data collection methods to reduce response bias, particularly among marginalised groups, allowing for more honest responses.
- **Limit Keynesian Influence with Transparency:** Encourage pollsters to openly publish methodologies, sample demographics, and assumptions.
- Transparency in how predictions are made can reduce reliance on peer forecasts and diminish the "Keynesian curse" effect.

PEPPER IT WITH:
Electoral Transparency, Commercialisation of Polls, Electoral Integrity, Election Commission of India (ECI).

Under-Representation of Women in the Judiciary

News Excerpt

The lack of women's representation in India's judiciary has been widely discussed. Despite various **entry-level**

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

measures to increase female participation, **retention** and **support** within the judiciary remain inadequate.

Current State of Women's Representation in the Judiciary

- **District Judiciary Progress**
 - The Supreme Court of India's **State of the Judiciary report (2023)** shows that 36.3% of judges in the district judiciary are women, marking some progress at this level.
 - In **14 states**, over 50% of the candidates recruited into the civil judge (junior) division were women, indicating effective entry-level measures in these regions.
- **Higher Judiciary Disparities**
 - Women's representation is significantly lower at higher judiciary levels. As of **January 2024**, women comprised only **13.4% of High Court judges** and **9.3% of Supreme Court judges**.
 - Disparities exist across states; Bihar, Chhattisgarh, Jharkhand, Manipur, Meghalaya, Odisha, Tripura, and Uttarakhand have either no women judges or only one woman judge in their High Courts.
- **Representation in the Bar**
 - Data from 2022 by the Department of Legal Affairs shows that women make up approximately **15.31% of enrolled advocates**.
 - Women are severely underrepresented as senior advocates, advocates-on-record, and Bar Council members, resulting in fewer female candidates for elevation to higher judicial roles.

Significance of Female-Centric Perspective in Judiciary

- **Course Correction for Inclusive Policies**
 - **Public-Private Divide Theory:** Carole Pateman's theory highlights that as women enter traditionally male-dominated public spheres, laws and policies often lag, failing to cater to their specific needs.
 - Applying a **"female gaze"** in policy design and implementation would:
 - Recognise women's unique needs. Shift from an all-male perspective to a gender-sensitive policy approach, making the judiciary more inclusive.
 - Address the unintended impacts of neutral policies that indirectly discriminate against women.
- **Breaking the "Male Standard" in Judicial Administration**
 - Most administrative decisions in the judiciary are male-dominated, affecting women's comfort and safety.
 - A female-centric lens in judicial infrastructure and policy planning would prioritise **gender-sensitive needs** and support **women's entry and retention**.
- **Reducing Bias in Rulings:** Their perspectives can help counter gender biases and stereotypes that may unconsciously influence judgments, promoting fairer outcomes.
- **Empowering Women to Seek Justice:** Women in the judiciary can make female litigants feel more comfortable and confident in approaching courts, knowing their issues will be understood and fairly addressed.

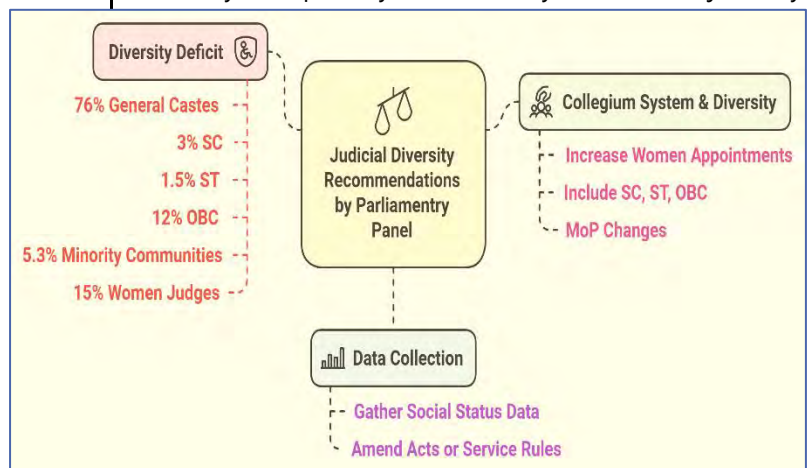
Policy Gaps and Structural Challenges

- **Vicious Cycle of Under-representation**
 - High Court Building Committees and other administrative bodies lack female representation. Women's under-representation perpetuates itself as the few women in the judiciary often lack the power to effect meaningful changes.
- **Challenges at Two Levels:**
 - **Entry:** Direct recruitment remains challenging due to policies requiring **"continuous" practice**, which makes it difficult for women to manage family responsibilities without adequate maternity support.
 - **Retention:** Career growth for women is hindered by an unsupportive environment, harsh transfer policies, and the traditional expectation of women as primary caretakers.
- **Infrastructural Barriers in the Judiciary**
 - Basic court facilities are inadequate, especially for women judges, lawyers, and staff.

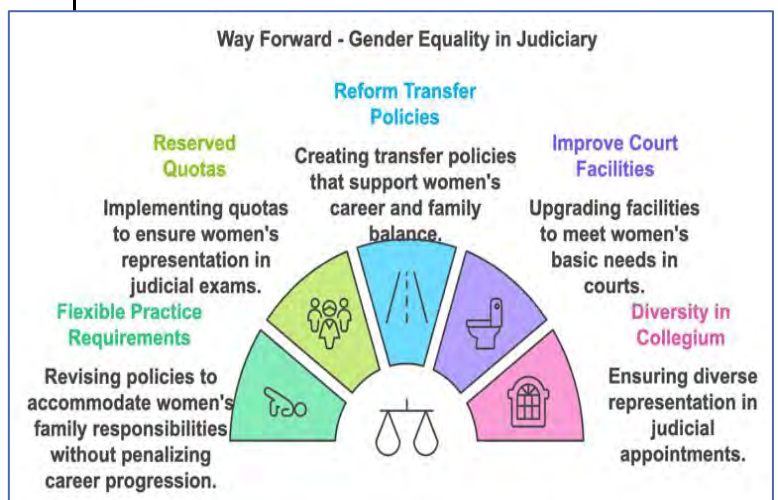
- A 2019 Vidhi Centre for Legal Policy survey found that nearly 100 district courts lack **dedicated washrooms** for women.
- Facilities such as washrooms, sanitary provisions, and hygienic waste disposal are **insufficient** in prominent High Courts.
- Courts lack family-friendly amenities like **feeding rooms** and **creches**, limiting access for women with familial responsibilities. Although some courts have taken steps in this regard, the limited availability of resources results in restrictions that render them ineffective. For example, the Delhi High Court's crèche only caters to children younger than six years.
- **Gender insensitivity in Judicial Roles and Administration:** Justice Hima Kohli noted unconscious gender bias in judicial administration, with women judges often sidelined from key duties.

PEPPER IT WITH:
Gender Sensitivity, Gender Bias, Structural Barriers in Judiciary,

Recommendations by Parliamentary Panel on Judicial Processes and Reform: A report by a Parliamentary Panel in August 2023 has recommended measures to improve diversity, transparency, and efficiency within India's judiciary.



Way forward:



SOCIAL ISSUES

Rethinking Workplace Culture

News Excerpt

In July, a **young, chartered accountant** working for a leading consultancy firm tragically **passed away**. Her untimely death, which her family attributes to **extreme work stress**, has reignited the debate on **toxic workplace culture** in India's corporate sector. Despite the outcry, the **inquiry report** of the Ministry of Labour promised within 10 days remains **pending**.

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

Roots of Toxicity in Corporate India

- Historically, India's **liberalisation** in **1991** invited foreign investment and global management practices. While this opened doors for economic growth, it also **introduced work cultures** often unsuited to India's socio-economic realities.
- Many MNCs operating in India are deeply **influenced by the American work culture**, characterised by **long hours** and a relentless focus on productivity.
 - This culture has its roots in **Protestant ethics**, which glorify hard work and link it to moral and spiritual fulfilment.
- German sociologist **Max Weber** traced this ethos to early capitalism in Northern Europe, later epitomised by American industrial practices.
- Karl Marx's** critique of capitalism resonates in the current context. He argued that extending the working day or intensifying work boosts profits under capitalism.

Cultural Differences in Workplace Dynamics: A Comparative Analysis

- Per Capita Income and Quality of Life**
 - U.S.:** With a per capita income of **\$85,000**, American employees **enjoy a lifestyle** that includes comfortable housing, efficient transportation, access to quality healthcare, and opportunities for leisure. These factors significantly enhance their productivity and well-being.
 - India:** At a per capita income of **\$2,700**, the quality of life for Indian employees is markedly lower. In metropolitan cities, employees often endure **hours-long commutes**. Securing **school admissions, coaching classes** for children, and **caring for elderly parents** adds another layer of logistical and financial burden.
- Long Working Hours:** Long working hours are common in the U.S. and India, but the reasons and implications differ.
 - U.S.:** Extended hours are often linked to **high-performance expectations** but are offset by better work-life balance practices, such as flexible or remote work options.
 - India:** Extended hours frequently arise from inefficient management, micromanagement, and a **culture of presenteeism**, where employees feel

compelled to stay late to demonstrate dedication, irrespective of their productivity.

• Communication Styles

- U.S. and Europe:** Workplace communication is governed by clear norms of **professionalism**. Any deviation—such as raising one's voice, using unprofessional language, or making employees feel intimidated—can result in formal complaints and legal action.
- India:** In contrast, hierarchical structures dominate Indian workplaces, where superiors often feel entitled to speak **harshly** or even **abusively**. Employees may endure such treatment to avoid losing their jobs or damaging their careers, as there are **limited avenues** for redress.

• Legal Protections for Employees

- U.S. and Europe:** Employees have robust legal frameworks to address workplace **grievances**, including **harassment** and **bullying, discrimination**, and **mental stress** caused by toxic work environments.
 - Successful lawsuits** often result in substantial settlements, reinforcing accountability and deterring undesirable behaviours.
- India:** India lacks comprehensive legal protections for employees against workplace harassment or bullying. While some laws, like the **Sexual Harassment of Women at Workplace Act (2013)**, exist, they address **specific issues** rather than general workplace misconduct.

Case Study: Dominic Raab Incident

- Dominic Raab, the **Deputy Prime Minister of the U.K.**, was accused of bullying during his tenure in various ministerial positions. An enquiry found him **"aggressive"** and **"intimidating."** Despite this, he **resigned** to uphold the norms of civil behaviour expected of public officials.
- This case highlights the **high behavioural standards** in workplaces in countries like the **U.K.**, where even perceived aggression can lead to severe consequences, irrespective of the individual's rank or achievements.
- If such standards were **enforced in India**, many senior leaders across the corporate and public sectors would face scrutiny, leading to significant changes in workplace dynamics.

Issues in Indian Corporate Work Culture

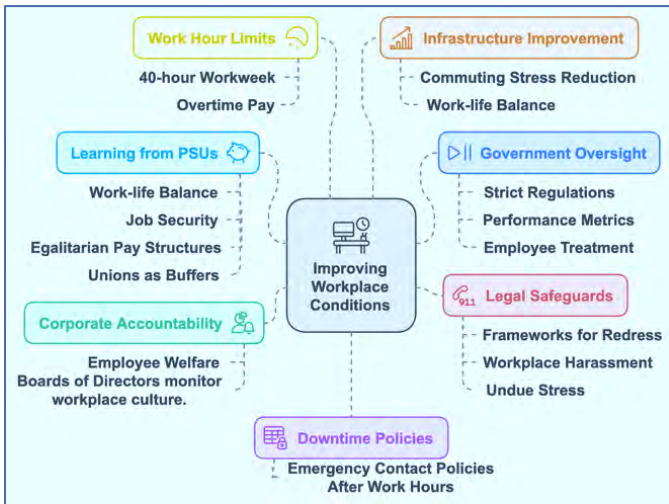


Global Comparison

- Data from the **International Labour Organization (ILO)** highlights that countries such as France, Norway, and Denmark enforce a **standard workweek of 35 to 40 hours**, emphasising a balanced approach to work and life.
- Interestingly, in 2023, the **U.S. ranked 12th globally in Gross National Product (GNP) per capita, lagging behind** several Western **European nations** and Singapore. These countries enjoy higher or comparable living standards despite their shorter work hours.
- This demonstrates a crucial insight: **high productivity and economic prosperity do not necessarily require excessively long working hours.**

PEPPER IT WITH:
Social Security, Employee Rights, Labour Laws Malpractices, Mental Health.

Way forward:



Global Multidimensional Poverty Index (MPI) 2024

News Excerpt

Global Multidimensional Poverty Index (MPI) 2024, jointly published by the **United Nations Development Programme (UNDP)** and the **Oxford Poverty and Human Development Initiative (OPHI)**.

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 Highlights Of MPI

- The report overlays **violent conflict data** with **multidimensional poverty data** to better understand their interlinkages across countries and over time with the theme **"Poverty Amid Conflict"**.
- Across **112 countries** and 6.3 billion people, **1.1 billion people** (18.3%) live in acute multidimensional poverty.
- With **234 million, India** has a **0.105 MPI value (23.8% incidence)**. It is the country with the **largest** number of people in extreme poverty.

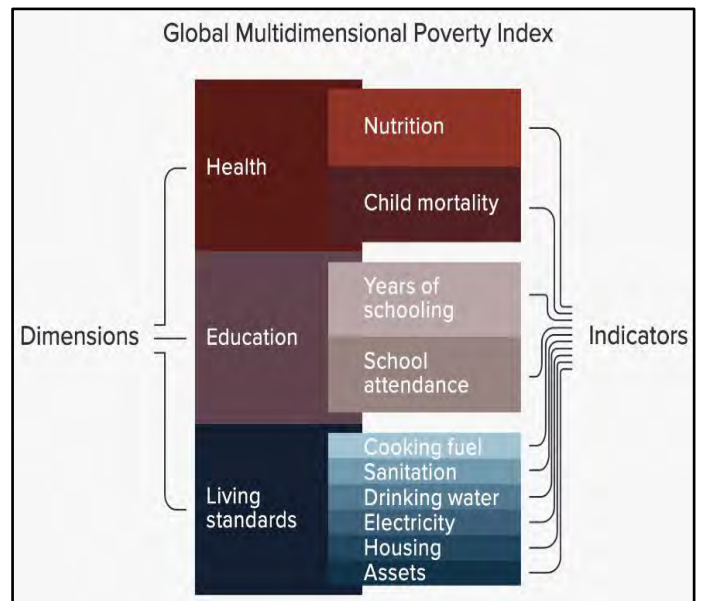
- Pakistan** has a 0.198 MPI value, with 93 million people living in poverty (38.3% incidence), **Nepal** has a 0.092 MPI value, with about 7.5 million people living in poverty (22.5% incidence) and **Bangladesh** has a 0.104 MPI value, with 41.7 million people living in poverty (24.6% incidence).

Who are the poorest?

- Over half of the **1.1 billion poor people are children** under the age of 18 (584 million). Globally, 27.9% of children live in poverty, compared with 13.5% of adults.
- 83.7%** of poor people live in **rural areas**. Overall, 28.0% of the global rural population is poor, compared with 6.6% of the urban population.
- 83.2%** of the world's 1.1 billion multi-dimensionally poor people live in Sub-Saharan Africa and South Asia. **553 million** people in **Sub-Saharan Africa** live in poverty and **402 million** in **South Asia**.
- Nearly **two-thirds** of poor people live in **middle-income countries** (749 million, 65.2%).

What deprivations do poor people experience?

- Large proportions of the **1.1 billion** poor people **lack adequate sanitation** (828 million), housing (886 million) and cooking fuel (998 million).
- Well over **half of the 1.1 billion** poor people live with an **undernourished person in their household** (637 million). In South Asia, 272 million poor people live in households with at least one undernourished person, and in Sub-Saharan Africa, 256 million do.
- Around half of all poor people **lack electricity** (579 million), and over half live in a household where no one has completed **six years of schooling** (590 million).
- Nearly half of all poor people do not have an improved source of **drinking water** (513 million).
- 482 million poor people live in households where one or more children are **out of school**.



How has poverty changed?

- Of **86 countries** with harmonised data, 76 significantly reduced poverty according to the MPI value in at least one time period.
- Of **17 countries** with trend data that end in 2021/22 or later, spanning at least part of the COVID-19 pandemic, **only 9** (Benin, Cambodia, Comoros, the Kingdom of Eswatini, Kenya, Mozambique, the Philippines, the United Republic of Tanzania, and Trinidad and Tobago) experienced **significant reductions** in both MPI value and incidence of poverty.

Do conflict-affected countries fare worse in poverty?

- Of the 1.1 billion poor people, **218 million** (19.0%) live in **war-affected countries**. Nearly 40.0% of poor people (455 million) live in countries experiencing war, fragility and/or low peacefulness, according to at least one of three widely used definitions.
- While national rates vary, overall, in countries affected by war (using conflict definitions from UCDP), the **incidence of poverty is 34.8%**, much higher than the 10.9% in countries not affected by war or minor conflicts. Multidimensional poverty is also **more than twice as high** in fragile and conflict-affected countries.
- On average, the percentage of poor people deprived in each of the 10 global MPI indicators is higher in conflict settings (as defined by UCDP) than in other countries;
 - **For example**, in **non-conflict-affected countries**, 5.6% of the population is poor and lacks access to electricity. In **war-affected countries**, this figure jumps to 26.9%. Similarly, while 4.4% of the population in non-conflict-affected countries are poor and have a child not attending school, the proportion increases to 17.7% in war-affected countries.
- **Poverty reduction** tends to be **slowest** in the settings most affected by conflict - where poverty is the highest. So, people living in these contexts are being left behind in terms of multidimensional poverty.
- In **Afghanistan**, the incidence of **poverty rose** by more than 5 percentage points from 2015/2016 to 2022/2023. In 2022/2023, nearly two-thirds of Afghans were poor (64.9%), and almost three of every five poor people were children.
- The difficulty of gathering data in countries and subregions affected by conflicts means **multidimensional poverty is likely underestimated**.

PEPPER IT WITH:
Nutrition, (SDGs), Poverty, Social Safety Nets.

About Global Multidimensional Poverty Index

- The global MPI is a key international resource that **measures acute multidimensional poverty** across more than 100 developing countries.
- First launched in **2010** by the **Oxford Poverty and Human Development Initiative** (OPHI) at the University of Oxford and the Human Development

Report Office of the **United Nations Development Programme**, the global MPI advances **SDG 1** —ending poverty in all its forms everywhere- and measures interconnected deprivations across indicators related to **SDGs 1, 2, 3, 4, 6, 7, and 11**.

- Computation of the global MPI begins by constructing a deprivation profile for each household and person, covering 10 indicators of health, education, and standard of living.
- All indicators are equally weighted within each dimension, so the **health and education indicators are weighted 1/6 each**, and the **standard of living indicators are weighted 1/18 each**.
- A **person's deprivation score** is the **sum** of the weighted deprivations she or he experiences.
- The global MPI identifies people as multi-dimensionally poor if their **deprivation score is 1/3 or higher**. Global MPI values decline when fewer people are poor or when poor people have fewer deprivations.
- By identifying who is poor, the nature of their poverty (their deprivation profile) and how poor they are (their deprivation score), the global MPI complements the **international \$2.15 a day poverty rate**, bringing into view interlinked nonmonetary deprivations.

More than half of Indian women remain outside labour force due to care duties

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						

According to the **International Labour Organization's** (ILO) latest report, **The Impact of Care Responsibilities on Women's Labour Participation**, 53% of women in India remain outside the labour force due to caregiving responsibilities, compared to only 1.1% of men.

Current Scenario in India:

- **Female Labour Force Participation:** According to the Periodic Labour Force Survey (PLFS) 2023-24, **36.7%** of women and **19.4%** of the total workforce are engaged in unpaid work in household enterprises.
- **Time Use Patterns in Domestic and Care Work:** The Time Use Survey (2019) by the National Statistical Office (NSO) highlights the substantial burden of unpaid domestic and care work on women:
 - **81%** of women aged 6+ spend over five hours daily on unpaid domestic services.
 - The proportion rises significantly in the **15-59 age group**, where **92%** of women engage in unpaid domestic work, reflecting peak years for family and caregiving responsibilities.
 - By comparison, men dedicate just over one hour daily to unpaid domestic services, with **24.5%** of men aged 6+ participating.

Caregiving:

- **26.2%** of women aged 6+ spend more than two hours daily on unpaid caregiving for household members, double the proportion of men (**12.4%**).
- Among younger women aged **15-29**, caregiving burdens rise, with **38.4%** providing over two hours of unpaid care daily.

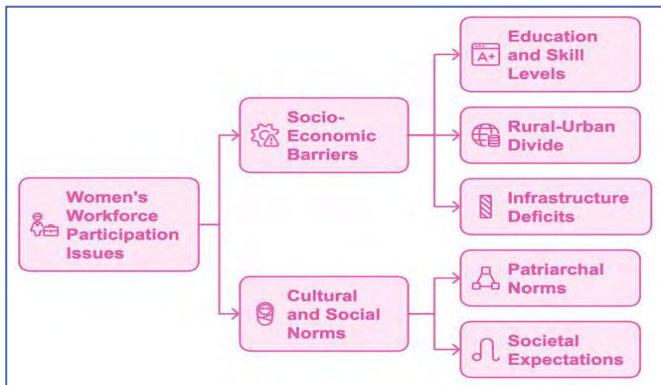
Underlying Factors in India

Socio-Economic Barriers

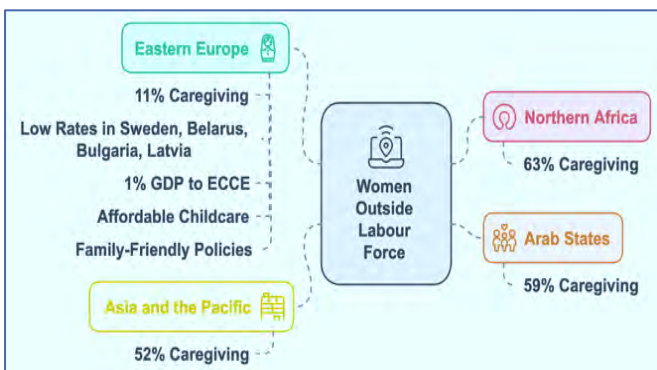
- **Education and Skill Levels:** Women with lower education levels are more likely to remain in unpaid work or drop out of the workforce entirely.
- **Rural-Urban Divide:** Rural women face greater obstacles, including limited access to formal job markets and care services.
- **Infrastructure Deficits:** Inadequate childcare centres and poor transport infrastructure in rural and semi-urban areas exacerbate the problem.

Cultural and Social Norms

- **Patriarchal norms** assign caregiving and household responsibilities primarily to women.
- **Societal expectations** often discourage women from pursuing formal employment, particularly after marriage or childbirth.



Unpaid Care Work Affecting Women's Lives



- When women devote **too much time to unpaid care work**, they lack crucial time to increase sustainable productivity, better access markets, claim their rights, participate in decision-making, and rest.
- When women spend **less time on unpaid care work**, they have more time for paid work, farming, improving

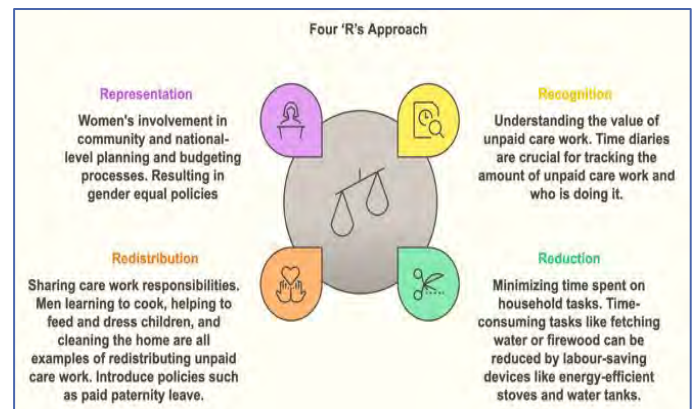
their homes or farms, socialising, advocating for their rights, participating in family and community decision-making, and resting.

Compromising Women's Economic Empowerment

- Women's **economic empowerment goals** are entirely **incompatible** with the continued **gendered nature of unpaid care work**: poor rural women, in particular, are severely constrained in their ability to access economic opportunities, a key requirement for women's economic empowerment.
- In particular, women engaged in care work carry out a number of **care-related tasks** in the morning (5 am - 11 am), which has also been identified as prime time to secure paid work.
- Women then often **have to settle** for precarious, flexible, and poorly paid work to balance their care burden. Thus, poor rural women face several obstacles to accessing fair and reasonably paid employment.

Double Burden of Paid Work and Unpaid Care Work

- When women enter the paid workforce to access economic empowerment, they are confronted by a double burden: **balancing household, childcare, and eldercare** responsibilities with **paid work** responsibilities.
- This often results in women and girls **forgoing** their basic rights to access education, healthcare, decent work and leisure time.
- This perpetuates **cycles of dependency** (mostly on male members of the family), can reinforce gender inequality and violence against women, and keeps women and girls disproportionately tied to conditions of poverty.



Role of Unpaid Care Work in Society

- Unpaid care work is essential for society to function. It isn't the problem; **inequality** is.
- Childcare, cooking, and caring for sick or vulnerable people are all **essential services** for society, but this is **not acknowledged** at the policy or household levels. Without care, society would come to a halt.
- When unpaid care work is **invisible, unvalued, disproportionate** and left exclusively to women, then it is a problem.

Way Forward

● **Scaling Up Investment in the Care Economy**

PEPPER IT WITH:
 Women Empowerment, Gendered Time Poverty, Human Capital Development.

- **Early Childhood Care and Education (ECCE):** Expand access to affordable, quality childcare and early education centres, especially in rural and underserved areas. Investing in ECCE has a dual impact: it reduces the burden on caregivers and improves early childhood development outcomes.
- **Elder and Disability Care Services:** Establish community-based support systems for elderly and disabled care to reduce the caregiving burden on families.
- **Skill Development and Employment Programs:** Focusing on skilling and reskilling women, especially in rural areas, to improve employability.

Tackling Learning Disabilities Head-on

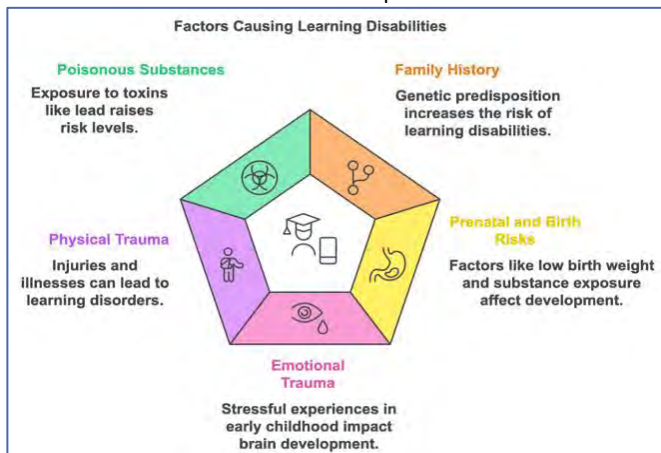
News Excerpt

Recent data suggest that **8-15%** of school-going **children** in India (50 million children) have been reported to have some form of **learning disability**, which impedes their ability to learn and participate in class.

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									

Learning Disabilities

- Learning disabilities are **medical disorders** characterised by **dysfunction** in the brain’s processing, analysing, storing, and producing output based on received information. Common types include:
- **Types of Learning Disabilities and Their Effects**
 - **Dyslexia:** Often misunderstood as merely mixing up letters, dyslexia involves complex challenges such as difficulties in decoding language, impaired comprehension, and even struggles in social settings due to misunderstood communication cues.
 - **ADHD (Attention Deficit Hyperactivity Disorder):** Beyond restlessness, ADHD hampers focus, impulse control, and task completion, creating barriers in conventional classroom setups.



Challenges Faced by The Children

- **Educational Challenges**
 - **Comprehension and Retention Issues:** Difficulty understanding instructions, grasping abstract concepts, or retaining information for long-term use.
 - **Curricular Inflexibility:** The rigid education system for neurotypical students leaves little room for tailored approaches.
- **Psychological Challenges**
 - **Anxiety and Depression:** A study in the Indian Journal of Psychiatry found that children with LDs experience significantly higher rates of anxiety, depression, and feelings of isolation.
 - **Internalized Failure:** Without proper understanding and support, these children often blame themselves for their struggles, leading to diminished self-worth and long-term psychological scars.
- **Social Challenges**
 - **Difficulty in Social Interaction:** Struggle with understanding social cues, leading to awkward or inappropriate behaviour.
 - **Bullying and Stigmatization:** LD children are often targets of bullying due to their perceived “differences” in learning or behaviour.
- **Systemic Challenges**
 - **Lack of Early Diagnosis and Intervention:** Many LDs go undiagnosed due to a lack of awareness among parents and teachers, delaying necessary support.
 - **Unprepared Educators:** Most Indian teachers, particularly in rural areas, receive little to no training in identifying or supporting students with LDs.
- **Challenges Exacerbated by COVID-19**
 - **Disrupted Learning:** The pandemic shifted education online, where pre-existing issues worsened. Many teachers could not adapt their methods to suit neurodiverse learners in virtual environments.
 - **Access Barriers:** Students in rural or economically weaker sections faced difficulties accessing digital learning tools and resources.

Steps Taken to Tackle Learning Disability

- **Government Measures and Legislative Framework**
 - **Legal Recognition:** The **Rights of Persons with Disabilities Act, 2016**, includes specific learning disabilities in its **21 recognised categories**, highlighting their societal importance.
 - **NEP 2020:** Acknowledges the need for inclusive education and digital learning frameworks. However, implementation remains a challenge.
 - **Diagnostic Tools for Adults:** The government has announced a diagnostic test for adult learning disabilities to address LDs beyond childhood.

Early Intervention and Support Systems

o **Cross-Disability Early Intervention Centres (CDEIC):** Currently, 22 centres nationwide focus on early diagnosis and intervention.

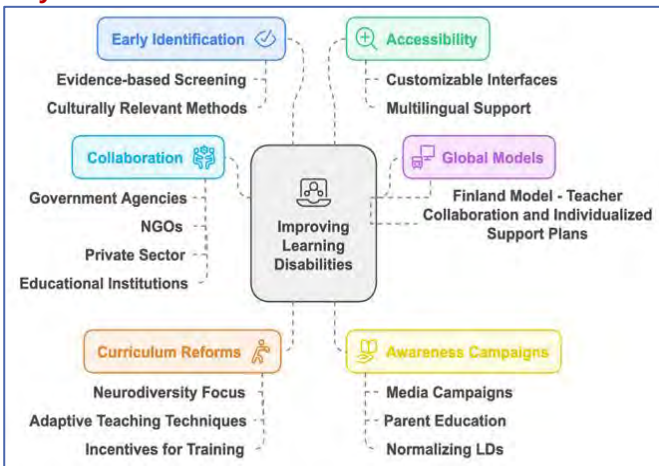
PEPPER IT WITH:
Rights of Persons with Disabilities Act, 2016, National Education Policy (NEP) 2020.

o **Kerala’s Model:** While initially centred on hearing impairments, Kerala’s success provides a blueprint for broader LD interventions across India.

Role of Technology

- o **Assistive Technologies:** Tools like text-to-speech software and AI-based personalised learning platforms help students with LDs overcome barriers.
- o **Digital Learning Initiatives:** **PM e-Vidya, DIKSHA, and e-Pathshala**, under the Digital India framework, aim to deliver inclusive education.

Way Forward:



arrests of men in Assam whose wives were minors when they married.

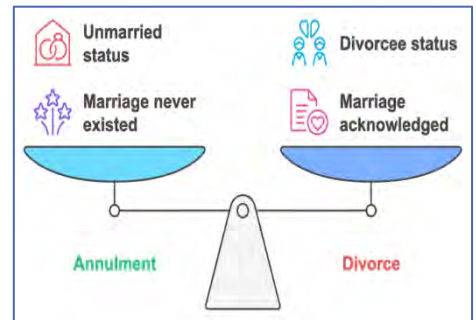
Legal Framework on Child Marriage

o **Prohibition of Child Marriage Act, 2006 (PCMA):** Defines “child marriage” as one in which either the **husband is under 21** years of age or the **wife is under 18**.

- o Such a marriage is “**voidable**,” that is, the party who was a child at the time of the marriage has the option to annul it—until such annulment occurs, the marriage is valid and subsists.
- o PCMA also provides for **other civil remedies** such as maintenance, residence orders, and the return of gifts exchanged at the wedding.
- o In **Karnataka** and **Haryana**, state-specific amendments have made all child marriages void from the beginning.

o **Protection of Children from Sexual Offences Act (POCSO), 2012:**

Criminalises sexual activity with minors, including within a child marriage.



o **Bharatiya Nyaya Sanhita (BNS), 2023:** Reinforces punitive measures.

Concerns About Criminalizing Child Marriage

o **Unintended Harm to Victims:** Criminal action can leave the girl vulnerable without support systems. Fear of criminal repercussions may deter families from seeking sexual and reproductive healthcare for the minor.

o **Criminalization of Self-Initiated Marriages:** Studies indicate a significant number of child marriages are self-initiated, often by adolescents seeking to escape abuse, neglect, or forced marriages.

o **Partners for Law in Development Study (2008-2017):** PCMA’s criminal provisions were used twice as often in self-initiated marriages as arranged marriages.

o **Enfold Proactive Health Trust Study (2024):** Of 174 PCMA cases from Assam, Maharashtra, and Tamil Nadu, 49.4% involved self-initiated marriages.

o **Barriers to Autonomy:** Many young couples elope to assert their agency in a patriarchal society. However, criminal prosecution often disregards the complex social dynamics behind such decisions.

Way Forward

o **Empowering Victims:** The SC judgment directs the introduction of a special scheme for skill development, vocational training, and economic stability for women

SC Ruling on Child Marriage

News Excerpt

The Supreme Court’s recent judgement in the **Society for Enlightenment and Voluntary Action v. Union of India** case marks a pivotal moment in addressing child marriage. The Court emphasized moving **beyond a punitive approach** and focusing on empowering victims to reclaim their agency.

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

Trends in Child Marriage in India

- o According to **National Family Health Survey** data, the percentage of women aged 20-24 who were married before 18 declined from 47.4% in 2005 to 26.8% in 2016 and further to **23.3% in 2021**.
 - o Nonetheless, the United Nations’ Sustainable Development Goal (SDG) of **eliminating child marriage by 2030** appears ambitious.
- o The institutional response has focused mostly on prevention and, of late, prosecution — such as the **mass**

who leave child marriages, rehabilitation services, monitoring and follow-up support to ensure reintegration, and a call to consider compensation for these women under **victim compensation schemes**.

- **Supporting Victims Within Marriages:** Recognizes that some women may choose to remain in child marriages. The SC proposes **Reproductive rights education, Employment opportunities, and Education support** to help them reclaim their agency within the marriage.
- **Sex Education for Adolescents:** The judgment emphasises sex education, empowering young individuals to navigate relationships responsibly and understand their rights.

PEPPER IT WITH:
 Prohibition of Child Marriage Act, 2006 (PCMA), (SDGs-5), Reproductive Rights.

Teen Social Media Addiction

News Excerpt

Meta, the parent company of Facebook and Instagram, is now **facing lawsuits** filed by U.S. states accusing the company of contributing to **mental health problems** among teenagers. The lawsuits claim that Meta **deliberately** designed its platforms to be **addictive**, leading to issues such as anxiety, depression, and body image concerns in adolescents.

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

What is Social Media Addiction?

- Social media addiction refers to the **compulsive and excessive use** of social media platforms. Similar to other forms of **behavioural addiction**, it can have harmful effects on the brain and interfere with everyday life.
- **Key Characteristics**
 - **Compulsive Checking:** An overwhelming urge to repeatedly check social media feeds.
 - **Interference with Daily Activities:** Neglecting work, studies, or personal relationships due to excessive social media usage.
 - **Emotional Dependence:** Feeling anxious or distressed when unable to access social media.



Advantages of Social Media

- **Enhanced Learning Opportunities:** Access to educational content, tutorials, and resources. It also encourages participation in academic discussions and knowledge-sharing forums. For example, Platforms like YouTube offer tutorials on various subjects.
- **Social Connectivity:** It helps children and teenagers stay connected with friends and family. It provides platforms to join communities with shared interests, fostering a sense of belonging.
- **Exposure to Diverse Perspectives:** Social media introduces young users to different cultures, viewpoints, and ideas, fostering open-mindedness and global awareness.
- **Support Groups:** Platforms offer anonymity for those seeking help or advice on sensitive issues. It enables teenagers to find peer support groups, such as communities for LGBTQ+ youth or those dealing with specific challenges like chronic illness.
- **Opportunities for Expression:** It provides a platform for self-expression through writing, art, music, or videos, helping to build confidence and identity.
- **Skill Monetization:** Platforms like YouTube, Instagram, and TikTok offer opportunities to monetise talents and skills through content creation, helping teens explore entrepreneurship.

Disadvantages of Social Media

- **Mental Health Concerns:** Linked to anxiety, depression, and low self-esteem, especially from cyberbullying or body image issues. Excessive use can lead to social comparison, contributing to feelings of inadequacy.
- **Privacy and Security Risks:** There is a risk of exposure to inappropriate content, online predators, or cyberbullying. Sharing personal information can lead to identity theft or data misuse.
- **Reduced Face-to-Face Interaction:** Over-reliance on digital communication may hinder the development of interpersonal skills. This can lead to feelings of isolation despite the illusion of social connection.
- **Desensitization to Violence:** Exposure to violent or graphic content may lead to emotional desensitization or normalization of harmful behaviours.
- **Commercial Exploitation:** Teenagers are often targeted by ads and influencers promoting products, sometimes leading to impulsive spending or unhealthy lifestyle choices.
- **Long-Term Psychological Effects:** Early exposure to curated and idealised content can influence long-term self-perception, relationships, and decision-making.

Way Forward

- **Regulatory Frameworks and Legal Reforms:** Governments should enforce stricter regulations on social media companies, mandating transparency in algorithms and data usage while penalising platforms that harm young users' mental health.

- **For example**, the European Union's **Digital Services Act** includes provisions to protect minors from harmful content and ensure platform accountability.
- **Platform Accountability and Ethical Design:** Advocate tech companies to design platforms that prioritise user well-being by reducing addictive features such as infinite scrolling and frequent notifications.
- **Encouraging Offline Engagement and Hobbies:** Schools and communities can promote extracurricular activities like sports, arts, etc. **For example**, programs like "**Fit India Movement**" encourage young people to engage in physical activities, promoting overall well-being.
- **Parental Guidance and Monitoring:** Encourage parents to set screen time boundaries and monitor their children's social media activities using parental control tools.

PEPPER IT WITH:
 Digital Desensitization,
 Mental Health,
 Interpersonal Skills,
 Curated Content.

ECONOMY

As banks' AI 'scores' surge, why the RBI is flagging concerns of systemic risks

News Excerpt:

Dovetailing artificial intelligence (AI) and machine learning (ML) tools progressively into core operations, India's bank sector players are leveraging AI to improve customer experience, pare costs, manage risks and drive growth through chat bots such as 'iPal' and 'ILA'.

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									

More detail about news:

- **'iPal', an omnichannel bot fielded by ICICI Bank** – tackles general banking queries from customers, including transactions such as bill payments and fund transfers, helping users navigate within the bank's app or website or extending personalised product offers.
- **'ILA', SBI Cards'** interactive live assistant, too can aid customers through the process of filling out a new application for a credit card.

Core operations tools:

- **AI and ML Adoption in Banking:** Indian banks are integrating AI and ML into their core operations.
- **Improved Customer Experience:** Tools like chatbots (iPal, ILA) enhance customer experience.
- **Cost Reduction and Risk Management:** AI is being used to streamline processes and identify potential risks.
- **Credit Assessment:** AI-powered tools are being used to assess creditworthiness of potential customers.
- **Increased Regulatory Scrutiny:** The use of AI in credit assessment raises concerns about potential biases and the need for regulatory oversight.

- **Growing Emphasis on AI:** The usage of AI-related keywords in annual reports of private sector banks has increased significantly (nearly six-fold) between 2015-16 and 2022-23.
- **Public Sector Banks:** Even public sector banks have shown increased emphasis on AI and other technologies in their annual reports.

Does this rapid embrace of AI tools pose a risk?

- **Risks of Rapid AI Adoption in Banking:** The Reserve Bank of India (RBI) has raised concerns over heavy reliance on AI in the financial sector. RBI Governor has stated that dependence on AI could lead to concentration risks due to dominance by a few major technology providers. Das highlighted that systemic risks could be amplified if AI systems experience failures or disruptions, with potential ripple effects across the financial sector.
- **Specific Vulnerabilities Introduced by AI:** Increased susceptibility to cyberattacks and data breaches. Opacity of AI algorithms makes it difficult to audit or interpret decisions, creating potential for unpredictable consequences in financial markets.

ANALYTICS USE IN BANKS

Customer facing bots:

For fielding general banking queries from customers, helping users navigate within the bank's app or website or extending personalised product offers.

Pre-approved loans:

Existing customers deemed eligible are informed through SMS/email and instant loans are sanctioned through internet/mobile banking without need for documentation and even without visiting the branch.

Eligibility tests:

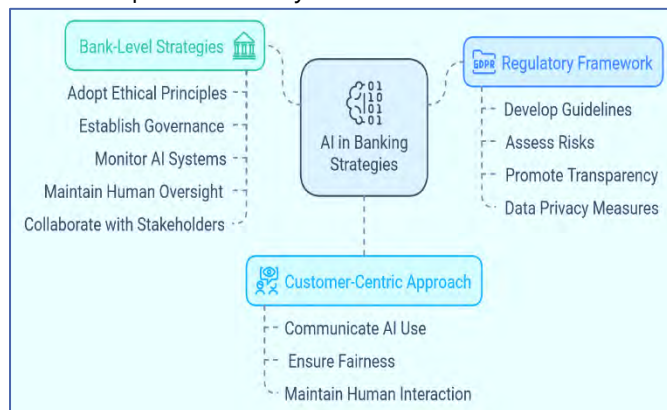
Transactions in existing accounts are scrutinised and qualifying customers identified. Preapproved offers are then sent through internet banking. If the customer accepts the offer, loan will be approved after minimal documentation.

Early warning System:

Indications of stress in standard accounts are identified early and alerts then sent to operating staff. Early identification helps bank to take corrective action and curb slippages, thus mitigating credit risk

- **Warning for Banks:** Das emphasized that banks should leverage AI and Bigtech responsibly, ensuring that these technologies serve as tools for the banks rather than allowing AI providers to control banking processes.
- **Current AI Usage in Indian Banking:** AI is primarily used to enhance customer experience, such as through chatbots, and to drive growth with customized banking solutions. In some cases, AI is used to screen new customers for product access, such as loans. Progresses and current trends of AI/ML uses in banks:
- **Initial AI/ML Adoption in Banks:** In FY16, public sector banks were as proactive as private sector banks in mentioning and considering AI/ML technologies in their annual reports, reflected in a similar AI score.
- **Increase in Private Sector AI Adoption (2016–2021):** Between 2016 and 2021, private sector banks showed a marked increase in AI-related word usage in their annual reports. This shift may be attributed to:
 - Recognition of additional use cases for existing AI technologies.

- Greater agility in adopting newer, advanced AI techniques and models in the private sector.
- **Significant Rise in AI Mentions (2022-23):** In 2022-23, the use of AI-related keywords in private sector bank reports was nearly six times higher than in 2015-16. Public sector banks also saw a three-fold increase in AI emphasis from 2015-16 to 2022-23.
- **Focus Areas from Word Cloud Analysis:** Word cloud analysis of the banks' annual reports revealed a strong focus on:
 - Automation to enhance efficiency and minimize human intervention.
 - Data analytics for applications like fraud detection and predictive analytics.



- **Correlation Between AI Score and Bank Asset Size:** The study found that the AI score was positively related to the asset size of banks, indicating higher adoption by larger banks.
- **Larger banks likely benefit from:**
 - Higher net gains through AI adoption and data integration.
 - Greater motivation for AI adoption due to potential efficiency improvements.
- **Challenges for Smaller Banks:** Smaller banks face challenges in adopting AI technologies due to:
 - Higher fixed costs associated with AI implementation.
 - Lack of economies of scale, making adoption relatively more challenging.

Way forward:

- **Regulatory Framework:** Develop comprehensive guidelines for the ethical and responsible use of AI in banking. Establish robust frameworks for assessing and mitigating risks associated with AI systems. Promote transparency and explainability in AI algorithms to enhance trust and accountability. Implement stringent data privacy and security measures to protect sensitive customer information.
- **Bank-Level Strategies:** Adopt ethical principles for AI development and deployment, including fairness, accountability, and transparency. Establish strong

governance structures and oversight mechanisms for AI initiatives.

- **Customer-Centric Approach:** Clearly communicate the use of AI to customers and address their concerns. Ensure that AI algorithms are designed to be fair and unbiased.

PEPPER IT WITH:
AI and ML Banking core operations Bots
Regulatory Framework

The shifting sands within global supply chains

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						

Proposed U.S. rules on Chinese connected car tech and Israel's pager attacks indicate the changing focus of global supply chains — from resilience to security.

More detail about news:

- **Inflection Point for Global Supply Chains:** Global supply chains are experiencing a significant transformation due to recent global disruptions.
- **Pre-Pandemic Focus:** Before the COVID-19 pandemic, the primary focus of supply chains was on efficiency. This led to a "just-in-time" approach, minimizing inventory to reduce costs.
- **Pandemic-Induced Shift:** The COVID-19 pandemic exposed vulnerabilities in this system, prompting a shift towards resilience with a "just-in-case" approach. This model emphasizes inventory buffers and diverse sourcing to withstand future disruptions.
- **September 2024 Developments:** Two notable developments indicate another emerging shift in supply chain strategy.
 - **New Shift Toward Security:** The latest evolution is a focus on security—ensuring that supply chains are not just resilient but also safeguarded against geopolitical and economic risks. This approach is termed "**just to be secure.**"
 - **Just to Be Secure Approach:** This strategy prioritizes supply chain security through investments in local or allied-country sourcing, reducing dependencies on potentially unstable regions.

Moves by the U.S. and Israel's pager attack:

U.S. Actions:

- **Ban on Chinese Connected Car Tech:** The U.S. Department of Commerce proposed rules to ban the import and sale of connected vehicle systems designed, developed, manufactured, or supplied by Chinese entities.

- **Potential for Remote Control and Surveillance:** The U.S. is concerned that malicious actors could exploit vulnerabilities in connected car systems to remotely control or monitor vehicles.

Israeli Pager Attack:

- **Targeted Attack:** Israel launched a cyberattack that targeted pagers and walkie-talkies used by Hezbollah in Lebanon.
- **Widespread Impact:** The attack resulted in significant casualties and highlighted the vulnerability of even basic communication devices to cyberattacks.
- **Broader Implications:** The attack raised concerns about the security of advanced technologies and the potential for cyberattacks to cause physical harm.

Global Implications:

- **Increased Scrutiny of Supply Chains:** Both the U.S. and Israel's actions have intensified global scrutiny of supply chain security, particularly for critical technologies and infrastructure.
- **Focus on Diversification:** Countries are seeking to diversify their supply chains to reduce reliance on specific suppliers, especially those from countries perceived as potential adversaries.
- **Strengthening Cybersecurity Measures:** Governments and businesses are investing more in cybersecurity measures to protect critical infrastructure and sensitive information.
- **Geopolitical Tensions:** These actions have further fueled geopolitical tensions between the U.S. and China, as well as other countries involved in the global technology supply chain.

From efficiency to resilience to security:

Era of Globalization and Efficiency (1980s-2010s):

- During this period, supply chains were designed for maximum efficiency.
- Complex, global supply networks were created, with components sourced and assembled across multiple locations to optimize costs.
- These "just in time" supply chains aimed to minimize inventory and were largely immune to geopolitical tensions.
- China became a major hub in these supply networks, centralizing production and exports.

Shifts in Late 2010s and Early 2020s:

- Key factors, including the U.S.-China rivalry, technology decoupling, and the COVID-19 pandemic, exposed vulnerabilities in the "just in time" model.
- The dependency on Chinese exports raised concerns in regions like the U.S., Europe, and India.

- This led to a shift toward supply chain resilience, adopting a "just in case" model with inventory buffers and alternative suppliers.

Security Concerns and Technological Risks:

- Security risks, particularly around Chinese telecom infrastructure, sparked further shifts from resilience to security-focused supply chains.
- The Israel supply chain attack reinforced the need for secure, controlled supply chains, particularly in critical technology sectors.
- Current strategies emphasize "just to be secure" approaches, reducing dependencies and addressing potential geopolitical and technological vulnerabilities.

India and Supply Chain Security: A Balanced Approach

Trust but Verify:

- Implement rigorous security audits and inspections for critical technologies and services.
- Establish robust verification mechanisms to ensure compliance with national and international security standards.
- Monitor the supply chain for potential vulnerabilities and threats.

Zero Trust Approach:

- Assume that all technology products and services, especially those used by critical infrastructure, military, and intelligence agencies, are potentially compromised.
- Implement strict security measures, such as encryption, access controls, and regular security assessments.
- Diversify suppliers and reduce reliance on single sources.

Supply Chain Diversification:

- Reduce dependence on specific countries or regions for critical components and technologies.
- Explore alternative suppliers and manufacturing hubs to mitigate risks and Promote domestic production and self-reliance in critical sectors.

Investment in Domestic Manufacturing:

- Invest in domestic manufacturing capabilities to reduce reliance on imports.
- Encourage domestic production of critical components and technologies.
- Provide incentives and support to domestic manufacturers.

PEPPER IT WITH:

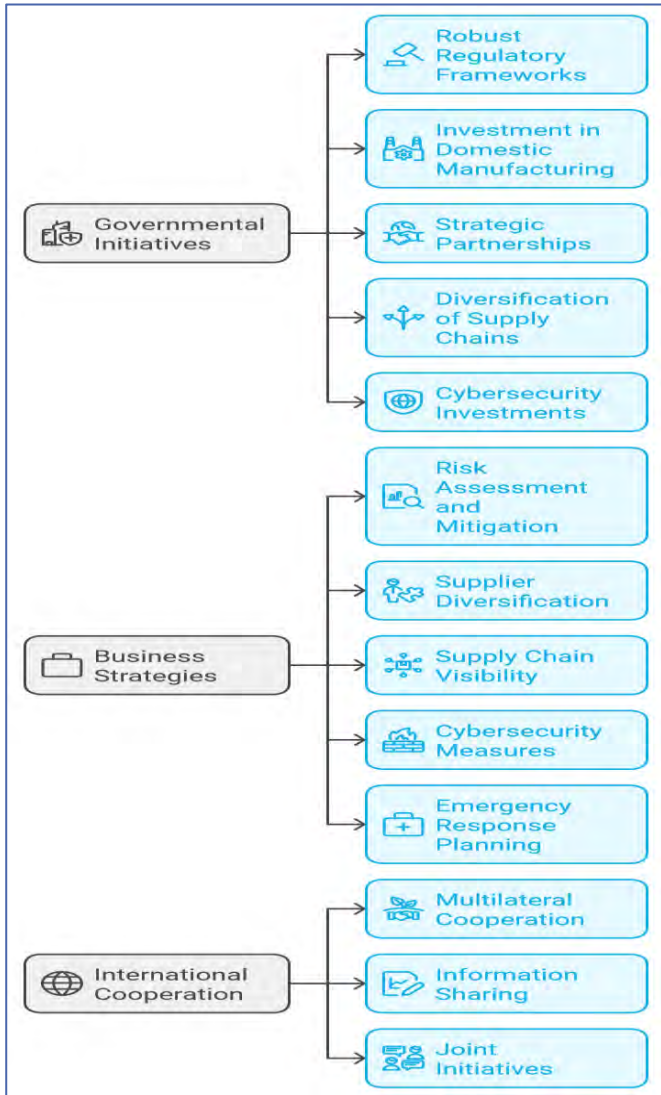
Global Supply Chains,
Trade and Security,
Business Strategies

Strengthening Cybersecurity:

- Invest in cybersecurity infrastructure and personnel to protect against cyberattacks.

- Develop robust cybersecurity policies and regulations.
- Promote cybersecurity awareness and training programs.

Way Forward:



Export Push: Govt working on easier loans for SMEs, ecommerce exporters

News Excerpt:

India is developing a new collateral-free, pre-shipment loan scheme for SME and ecommerce exporters to help achieve \$2 trillion in exports by 2030.

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 New Provisions:

- **Government Initiative:** The Indian government is working on a new scheme to support exporters.
- **Collateral-Free Loans:** The scheme will primarily offer collateral-free loans to exporters.
- **Credit Based on Track Record:** The eligibility for loans will be based on the exporter's past performance and creditworthiness.

- **Expanded Export Credit:** The goal is to increase the availability of export credit, making it easier for exporters to access financing.
- **New Financing Instruments:** The government aims to introduce innovative financing instruments to cater to the specific needs of exporters.
- **Lower Interest Rates:** The scheme seeks to reduce interest rates for exporters, making borrowing more affordable.
- **Collaboration with Financial Institutions and RBI:** The government is working closely with financial institutions and the Reserve Bank of India to implement this scheme effectively.



Challenges Faced by Exporters:



Proposed Government Initiatives:

- **Collateral-Free Loans:** The government is considering a scheme to offer collateral-free loans to exporters based on their track record.
- **Pre-Packaging Loans:** These loans will finance the purchase of raw materials, labor, manufacturing, and packaging of goods before shipment.
- **Increased Insurance Cover:** The insurance cover for working capital loans has been increased from 60% to 90%, reducing risk for banks.
- **Reduced Interest Rates:** The government aims to reduce interest rates for exporters to make borrowing more affordable.
- **Working Capital Guarantee Program:** The government is working on a revamped WCGP to address the significant working capital needs of MSMEs.

Rationale for Track Record-Based Lending:

- E-commerce orders often require immediate production, making it difficult for banks to conduct traditional due diligence with buyers.

- By assessing the exporter's past performance and creditworthiness, banks can make informed lending decisions.

Way Forward:



Meal costs are rising faster than earnings: Data

News Excerpt:

The cost of a healthy diet has risen faster than wages and salaries, affecting casual labourers more than salaried classes. As a result, a larger share of an average person's earnings is now spent on food compared to last year.

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

More detail about news:

- Increase in Meal Costs:** The average cost of a healthy meal rose by 52% in October 2024 compared to the same month in 2023.
- Wage Increase:** Average salaries and wages increased by only 9 to 10% over the past year, significantly lower than the increase in meal costs.
- Disproportionate Impact on Casual Laborers:** Casual labourers allocate a larger portion of their income to food than salaried workers, and this spending gap has further widened over the last year.
- Households with Female Breadwinners:** Households where women are the sole earners face a heavier financial burden, as they typically have lower incomes than households with male breadwinners.
- Assumption on Dietary Needs:** It is assumed that an average Indian family meets daily dietary needs with food equivalent to two vegetarian thalis per day distributed across breakfast, lunch, and dinner. Non-vegetarian items were excluded due to a lack of consistent historical data.

Soaring costs: Retail price hike of 13 items

- Data Sources:** Vegetable prices were sourced from the National Horticulture Board's dashboard. Prices for non-

vegetable items were obtained from the Department of Consumer Affairs' dashboard.

- Vegetable Price Increases:** Vegetable prices have significantly contributed to the rise in thali costs.
 - Tomato prices increased by 247%.
 - Potato prices surged by 180%.
 - Garlic prices rose by 128%.
 - On average, the retail price of all vegetables collectively increased by 89%.



- Non-Vegetable Price Changes:** Non-vegetable items in the thali showed a minor average price increase of 1.5%.
- Key Takeaway:** The soaring thali prices are directly related to the sharp increase in vegetable prices, while non-vegetable item prices have largely remained stable with minor increases or reductions.

Share in wage: Measuring affordability:

- Income Data for Workers:** For regular workers, the average monthly salaries in Maharashtra were used. For casual labourers, average daily earnings (excluding public works) were considered.
- Data Sources:** Income data was obtained from the Periodic Labour Force Survey (PLFS) report for the October to December quarter of 2023.
- 2024 Earnings Projection:** The 2024 data was estimated by applying the compound annual growth rate over the previous five October to December quarters.
- Assumptions in Analysis:** It was assumed that casual labourers received daily wages on all days of the month, including rest days, although this may not reflect reality.
- Purpose of Analysis:** This analysis helps measure the affordability of basic food (thalis) relative to the average income of different worker categories, highlighting the income share spent on food by both regular workers and casual labourers.

Average wage/salary:

- Daily Wage Increase:**
 - Men:** Average daily wage rose from ₹451 in Oct-Dec 2023 to ₹492 in Oct-Dec 2024.
 - Women:** Average daily wage rose from ₹293 in Oct-Dec 2023 to ₹324 in Oct-Dec 2024.
- Monthly Wage Calculation for Labourers:** Wages were extrapolated over 30 days to estimate monthly earnings for casual labourers:
 - Men:** Approximate monthly earnings calculated as ₹14,760 in Oct-Dec 2023, rising to ₹14,760 in Oct-Dec 2024.
 - Women:** Approximate monthly earnings calculated as ₹8,790 in Oct-Dec.

Cost of meals as a share of wages:

- Impact on Casual Labourers:**

- **Male Casual Labourers:** Food cost as a share of monthly earnings rose from 22.6% in 2023 to 31.4% in 2024 — an 8.8-point increase.
- **Female Casual Labourers:** Food cost as a share of monthly earnings rose from 34.7% in 2023 to 47.6% in 2024 — a 12.9-point increase.
- **Impact on Regular Workers:**
 - **Male Regular Workers:** Food cost as a share of monthly salary rose from 12.6% in 2023 to 17.5% in 2024 — a 4.9-point increase.
 - **Female Regular Workers:** Food cost as a share of monthly salary rose from 16% in 2023 to 22% in 2024 — a 6-point increase.
- **Gender Disparity in Food Cost Burden:** Households with female sole breadwinners face a higher food expense burden.

Key takeaways:

- **Disproportionate Impact:** The impact of rising food prices is more severe for casual labourers, particularly women, who have lower incomes and a higher proportion of expenditure on food.

PEPPER IT WITH:
Casual Laborers, Dietary Needs, Retail price hike

- **Wage-Price Imbalance:** The increase in food costs has outpaced wage growth, eroding the purchasing power of individuals and households.
- **Policy Implications:** The government and policymakers need to address the rising cost of living, particularly for vulnerable groups. This may involve measures such as targeted subsidies, price controls, and social safety nets.
- **Food Security Concerns:** The rising cost of food poses a threat to food security, especially for low-income households. It is essential to implement policies that ensure access to affordable and nutritious food for all.

Conclusion: The analysis reveals a concerning trend of escalating food costs, particularly for essential commodities like vegetables. This surge in prices, coupled with relatively modest wage increases, has led to a significant rise in the proportion of income spent on food, especially for low-income households.

Why inflation on prices of tomatoes, onions, and potatoes particularly remains a pain point for RBI

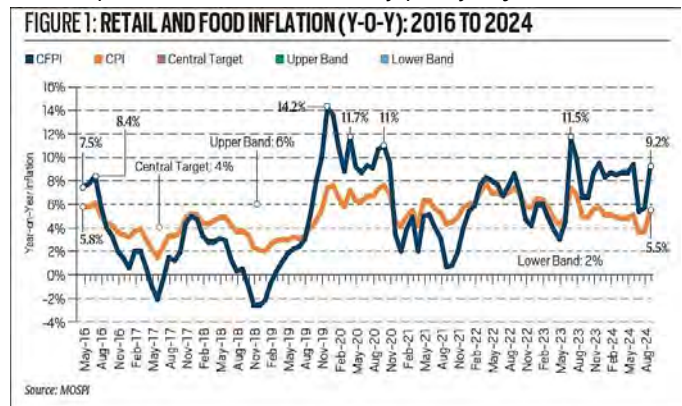
News Excerpt:

The RBI Governor categorically stated in the minutes of the last Monetary Policy Committee meeting that it is risky to reduce the repo rate as inflation is still not at a comfortable level of 4 per cent.

More detail about news:

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						

- **September Inflation Data:** Overall Consumer Price Index (CPI) inflation surged to 5.5% in September. Food inflation reached 9.2%, affecting a large segment of the population.
- **Food Inflation Driven by Vegetables:** The primary driver of food inflation is vegetable prices, which have increased by 36%. Vegetable inflation contributes 42.8% to the overall CPI inflation.
- **Top Contributors to CPI Inflation:** The top 10 commodities contributing to CPI inflation in September are all vegetables.
- **Impact on RBI's Inflation Control Measures:** The reliance on vegetables as a primary inflation driver has limited RBI's options for controlling inflation, creating a complex situation for monetary policy adjustments.



Factors impacted CPI inflation during above mentioned period:

- **Historical Factors Impacting CPI Inflation:** Between 2016 and 2019, CPI inflation was kept below 4% due to: Falling international prices, for crude oil and food items. Inflation surged due to **supply chain disruptions** during COVID-19 and the Russia-Ukraine conflict in 2022, affecting both global and domestic prices.
- **Impact of Consumer Food Price Index (CFPI) on CPI:** CFPI's strong influence on CPI inflation is due to the outdated weight of food and beverages in the CPI basket. Current weightings (from the 2011-12 consumption survey) assign 45.9% to food and beverages, with food alone making up 39%.
- **India's Inflation Compared to Emerging Markets:** Despite challenges, India's inflation in 2024 was 4.4%, lower than the EMDE average of 7.9% (IMF data). This suggests that India has managed inflation better than many other emerging economies.
- **Challenges of High Food Weighting in CPI:** High proportion of food in CPI makes it difficult for monetary policy alone to control inflation. Adjusting food weights could help improve the effectiveness of inflation control measures.

Current food inflation:

- **Vegetable Inflation and Food Inflation Contribution:** In September 2024, vegetable inflation contributed 63%

to overall food inflation (CFPI). Significant year-on-year price increases were noted for:

- Tomatoes: 42.4%
- Onions: 66.2%
- Potatoes: 65.3%

● **Structural Weaknesses in Agricultural Supply Chains:** The high inflation in vegetables reflects inefficiencies and vulnerabilities in agricultural supply chains. Climatic conditions further exacerbate these issues, highlighting the need for urgent policy interventions.

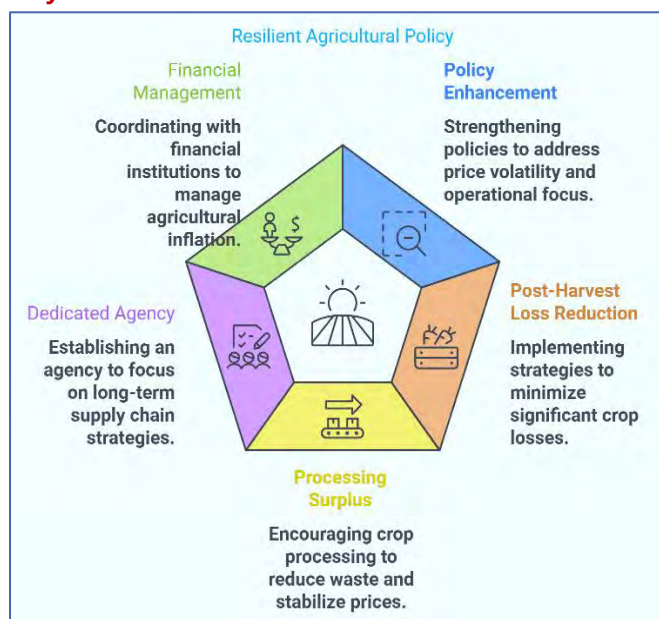
● **Tomato Inflation - Cobweb Model:** Tomatoes follow a “cobweb model” of price cycles due to their perishable nature and sensitivity to supply fluctuations. Current prices are due to delayed kharif arrivals from heavy rains in Karnataka and Andhra Pradesh..

PEPPER IT WITH:
 Monetary Policy Committee, Consumer Price Index, Inflation Food inflation.

● **Onion Inflation - Supply Disruptions:** Retail prices of onions are currently at Rs 50-60/kg due to severe supply issues. Among the three growing seasons, only the rabi crop can be stored long-term (March to October), acting as a buffer. Onion storage is lower than the previous year, with 1.3 LMT loss reported in Maharashtra. Incessant rainfall in Maharashtra, Karnataka, Telangana, and Andhra Pradesh damaged the kharif crop, delaying arrivals and tightening supplies.

● **Potato Inflation - Stock and Mandi Arrivals:** Stored potatoes are released from May to November, with peak releases in October as rabi potatoes start to perish. Lower arrivals to mandis have driven up prices, partially due to a low base effect from the previous year.

Way Forward:



India to take on China on GI listings by tapping goods district-wise

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						

With an eye on China, India is intensifying efforts to expand the number of Geographical Indication (GI) products to scale up exports and secure premium pricing in global markets.

GI Products and India's Export Promotion Strategy:

● **Role of GI Products in Export Promotion:** GI (Geographical Indication) products promote unique qualities linked to specific regions, cultures, and production methods. They enhance export potential by showcasing distinct regional characteristics.

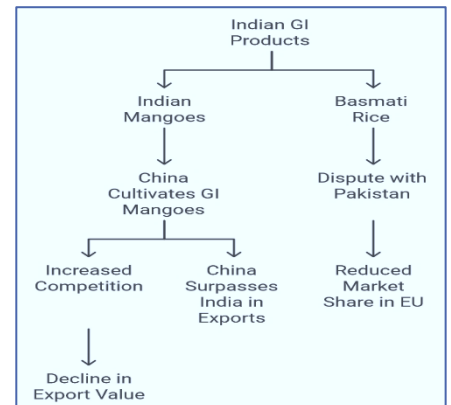
● **Competition with China:** China currently leads with a significantly larger GI portfolio, surpassing India. India aims to close the gap with China through targeted registration of unique products.

● **ODOP Plan:** India's One District One Product (ODOP) plan aims to register unique products across 761 districts. Launched in 2018, the ODOP scheme promotes district-specific products, supports local businesses, and aims to increase exports.

● **Current Status of ODOP:** As of now, 1,102 products are registered under the ODOP scheme.

● **India's GI-Tagged Products:** India has over 640 GI-tagged products, which is significantly lower compared to China's 7,247 GI products.

● **Global GI Product Count:** There are a total of 69,900 GI products registered globally.



Challenges in Protecting India's GI Products:

● **Growing Competition for Indian GI Mangoes:** Indian GI varieties of mangoes are now cultivated in other countries, including China, and exported as products from those nations. This competition affects the export value and recognition of Indian mangoes in global markets

● **China's Rise in Mango Exports:** China has surpassed India in mango exports, intensifying market competition for Indian mangoes internationally.

● **Basmati Rice Dispute with Pakistan:** India's GI-tagged Basmati rice is facing competition from Pakistan in the European Union (EU). Both India and Pakistan claim

rights over Basmati, leading to a dispute in the EU market. Pakistan's push for its own recognition of Basmati in the EU has affected India's dominance in Basmati exports to Europe, impacting market share and sales.

Government's Focus on Boosting Trade of Unique Products in India:

- **Promotion of GI Products for Premium Pricing:** The Indian government aims to boost trade of unique, GI-tagged products to help them command premium prices globally. Diverse climatic conditions in India offer a wide potential for unique products suited for export.
- **Example of GI-Tagged Products with Export Potential:**
 - **Ladakh's Raktsey Karpo Apricot:** Known for its unique taste, is seen as having significant global export potential.
 - **ODOP and GI Tag Synergy:** Among the 1,102 products under the ODOP scheme, some already have GI tags, while others are undergoing registration. The government encourages states to register unique products as GI to enhance their market value and recognition.
 - **Economic Goals Linked with ODOP Initiative:** The ODOP scheme aligns with India's goals of becoming a \$7 trillion economy by 2030 and achieving \$1 trillion in merchandise exports. By leveraging local resources, ODOP aims to enhance resource efficiency, create employment opportunities, and uplift the socioeconomic landscape across districts.
 - **India's Export Figures:** India's total goods exports were \$443.72 billion in FY23, which declined to \$433.09 billion in FY24 due to economic disruptions and a global slowdown.
- **Notable Indian GI-Tagged Products:**
 - **Darjeeling Tea (West Bengal):** Known for its muscatel flavor.
 - **Kanchipuram Silk Sarees (Tamil Nadu):** Made from pure mulberry silk with intricate designs.
 - **Mysore Silk (Karnataka):** Famous for its vibrant colors and fine craftsmanship.
 - **Kashmir Saffron:** Known for its aroma and flavor, considered the world's most expensive spice.
 - **Odisha Rasagola:** A cottage cheese-based sweet showcasing local confectionery skill.
 - **Basmati Rice:** Valued for its aroma and taste.
 - **Tirupati Laddu (Tirumala):** A sacred sweet with exclusive GI-tagged production.
- **Challenges for Indian GI Products:** According to Ajay Srivastava, founder of the Global Trade Research Initiative (GTRI), Indian GI products lack global brand recognition and strong marketing strategies. Many remain unknown internationally due to limited promotion and restricted access to global markets.

Unlike France and China, where GI products are marketed as premium heritage items, India's GI products are often confined to niche markets.

PEPPER IT WITH:
Geographical Indication (GI), One District One Product (ODOP), Trade of Unique Products

Way Forward:



Just energy transition

News Excerpt:

For a just transition away from coal, India will require over \$1 trillion or Rs 84 lakh crore over the next 30 years, according to a study by environment and climate change research think-tank iFOREST (International Forum for Environment, Sustainability and Technology).

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

More detail about news:

- The first-of-its-kind study, published, attempted to estimate the cost of phasing down coal mines and coal plants, along with the costs of ensuring socio-economic stability in coal-dependent regions.
- Coal will be central to India's energy mix for at least another decade, and moving away from it poses a massive challenge.

Understanding a 'Just' Energy Transition in India:

- **Definition of a Just Transition:** A "just" energy transition refers to an equitable and inclusive shift to a low-carbon economy, prioritizing the well-being and

interests of workers and communities reliant on fossil fuels.

- **India's Position in Coal Production:** India is the second-largest coal producer globally, with a significant workforce engaged in the coal industry. According to a PIB press release from March, public sector coal-producing entities employ 3.7 lakh people.
- **Employment in Fossil Fuel-Related Sectors:** Beyond public sector employment, many more people are involved in the private sector, coal-based thermal power plants, transportation, and logistics linked to coal.
- **India's Renewable Energy Goals:** As India expands its renewable energy capacity to achieve net zero emissions by 2070, it aims to offset greenhouse gases in the atmosphere through renewables and technology.
- **Importance of an Inclusive Approach:** A just transition will require addressing the needs of those dependent on coal for livelihoods to prevent economic displacement.
- **Cost of the Transition:** Transitioning to a low-carbon economy that does not leave coal-reliant workers behind will be a costly process, requiring strategic investments in reskilling, social support, and economic diversification.

Costs Associated with a Just Energy Transition in India:

- **Study Basis:** The cost analysis is based on assessments of four coal-dependent districts in India and a review of just transition plans in South Africa, Germany, and Poland.
- **Eight Key Cost Components:** The study identifies eight broad cost components essential to ensure an equitable transition:
- **Estimated Total Cost:** The study estimates that \$1 trillion will be required over the next 30 years to address these costs and support a fair transition.
- **Primary Cost Allocation:** Approximately 48% of the total costs will be allocated towards green investments in building energy infrastructure to replace coal mines and coal-fired plants.

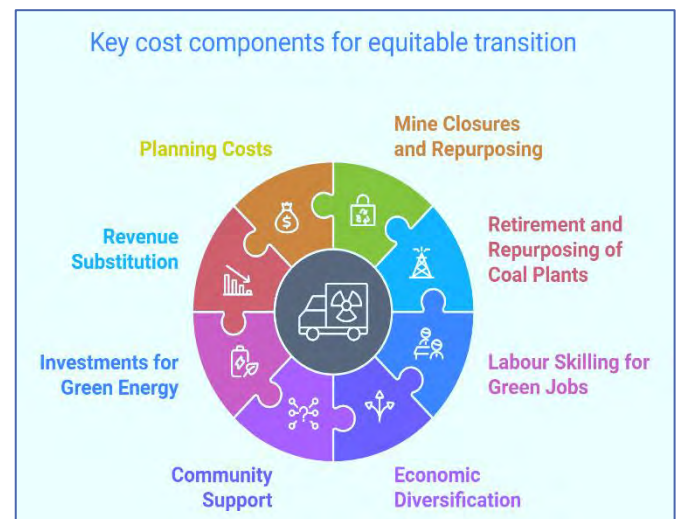
Funding Sources for a Just Energy Transition:

- **Combination of Public and Private Funding:** Funding will come from a mix of public grants, subsidies, and private investments in green energy infrastructure and plants.
- **Public Funding for Non-Energy Costs:** Most public funds will be directed towards "non-energy" expenses, which include:
 - **Community Resilience:** Supporting communities during the transition phase.
 - **Worker Skilling:** Training coal industry workers for green jobs.
 - **Economic Support for New Businesses:** Assisting new ventures to replace traditional coal-based industries.

- **District Mineral Foundation Funds:** India has \$4 billion in district mineral foundation (DMF) funds sourced from mining activities, which could be utilized to: Support new businesses in coal-dependent regions. Aid community welfare and resilience efforts.
- **Corporate Social Responsibility (CSR) Funds:** CSR funds from companies can be allocated to bolster community support initiatives and stimulate new business development in coal districts.
- **Private Investments for Energy Costs:** Private sector investments will primarily cover "energy costs," focusing on: Funding new clean energy projects. Developing green energy infrastructure required for the transition from coal-based energy systems.

Approaches to a Just Transition in Other Countries:

- **Legislation and Investment Plans:** Both developed and developing nations have adopted laws or investment plans, often with international funding, to gradually reduce coal use.
- **South Africa's Just Energy Transition Investment Plan (JET-IP):**
 - South Africa's JET-IP receives financial support from the UK, France, Germany, the US, the EU, the Netherlands, and Denmark.
 - An estimated \$98 billion will be required over 20 years for the country's energy transition.
 - \$8.5 billion is allocated for the 2023-2027 period, with most funds directed towards green energy investments.
 - Funding sources include concessional loans, grants,



and public-private partnerships.

- **Germany's Legislative Approach:** Germany passed laws to phase out coal power by 2038. It committed over \$55 billion to fund the closure of coal mines and power plants. The plan also includes

PEPPER IT WITH:
Renewable energy, carbon offsetting, green

support for the economic development of coal-dependent regions.

- **Types of Funding:** Countries use a mix of international funding, concessional loans, grants, and public-private partnerships to support their just transition goals.
- **Focus on Green Energy:** In all cases, a significant portion of the funds is allocated to green energy investments and the development of clean energy infrastructure.

AGRICULTURE

A case for food subsidies: An investment, not a waste

News Excerpt:

India's farm sector needs increased investment in R&D. It needs to increase crop productivity, develop varieties that can withstand climate change, and ensure food security.

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

More detail about news:

- **Food Security for Poor Households:** For households with an income below Rs. 20,000, government food transfers play a critical role in sustaining food security.
- **Impact Beyond Grain Consumption:** These transfers do not necessarily lead to increased grain consumption.
- **Releasing Funds for Other Essentials:** By securing basic grain needs, the transfer allows households to allocate more of their income toward other essential foods like pulses and milk, improving overall nutrition.

About Food Subsidies:

	Food	Fertiliser	Fuel	Total
2014-15	1,17,671.16	71,075.62	60,268.82	2,49,015.6
2015-16	1,39,419	72,415.17	29,999	2,41,833.17
2016-17	1,10,172.96	66,312.93	27,538.71	2,04,024.6
2017-18	1,00,281.69	66,467.57	24,460.49	1,91,209.75
2018-19	1,01,327	70,604.8	24,836.95	1,96,768.75
2019-20	1,08,688.35	81,124.33	38,528.78	2,28,341.46
2020-21	5,41,330.14	1,27,921.74	38,454.64	7,07,706.52
2021-22	2,88,968.54	1,53,758.1	3,422.6	4,46,149.24
2022-23	2,72,802.38	2,51,339.36	6,817.37	5,30,959.11
2023-24BE	1,97,350	1,75,099.92	2,257.09	3,74,707.01
2023-24RE	2,12,332	1,88,893.8	12,240	4,13,465.8
2024-25BE	2,05,250.01	1,63,999.8	11,925.01	3,81,174.82

- **Argument for Reducing Food Subsidy Bill:** The author suggests reducing the food subsidy coverage to fund agricultural R&D investments. This approach aims to free resources by either cutting expenditures or raising new taxes.
- **Alternative Funding Sources:** Rather than food subsidies alone, funds could also be obtained from reducing expenditures on production-linked incentives (PLIs) that subsidize firms in specific sectors. The question is raised: why prioritize reducing food subsidies over other expenditures?

- **Possible Reasons for Targeting Food Subsidies:** Food subsidies may be targeted for reduction because they compete with agricultural R&D funds. Alternatively, it may be suggested that food subsidies offer limited or no long-term value, though these assumptions are debatable.
- **Food Subsidies as Part of Farmer Support:** Food subsidies are a significant component of farmer support alongside price support and input subsidies (e.g., for fertilizer and electricity). Some view these subsidies as wasteful and propose redirecting them to agricultural R&D, which could yield long-term benefits for both farmers and consumers.
- **Question of Equating Food Subsidies with Other Subsidies:** A key question is whether food subsidies can or should be treated similarly to other subsidies, like fertilizer and electricity, given their role in food security and support to low-income households.

The Dual Role of Food Subsidies:

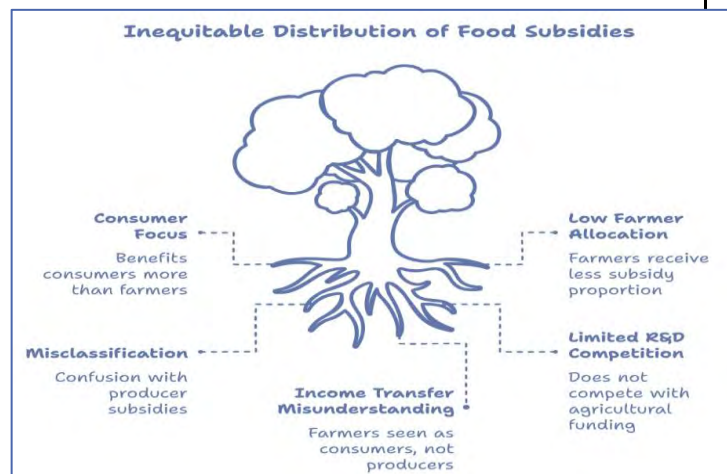
- **Dual Role of the Food Subsidy Bill:** The food subsidy bill serves both consumers and farmers, facilitated by the Food Corporation of India (FCI), which subsidizes both groups.
- **Conceptual Separation of Subsidies:** Consumer and farmer subsidies within the food subsidy bill can be conceptually separated, despite being part of the same budget.
- **Lower Subsidy Component for Farmers:** Studies show that the proportion of subsidies directly allocated to farmers within the food subsidy bill is significantly less than input subsidies, such as for electricity and fertilizer.
- **Limited Competition with Agricultural R&D Funding:** Since the food subsidy primarily benefits consumers, it does not directly compete with funding for agricultural R&D or other agricultural government expenditures.
- **Consumer-Centric Benefit of Food Subsidies:** According to Gulati, food subsidies mainly benefit consumers rather than farmers, highlighting the primary focus of these subsidies on consumer welfare.
- **Misclassification with Producer Subsidies:** It is incorrect to group food subsidies with other subsidies aimed at producers, such as input subsidies, as food subsidies serve a different purpose.
- **Subsidized Rice for Rice-Producing Farmers:** Questioning why rice-producing farmers receive subsidized rice through the PDS is misguided, as these farmers are receiving it as consumers, effectively an income transfer rather than a production-based subsidy.

The Economic Impact of Food Subsidies:

- **Questioning the Wastefulness of Food Subsidy:** Debating whether food subsidy expenditure is wasteful brings into question the values society holds regarding essential support for vulnerable populations.

- **Economic Support for Families:** For a family of four receiving 20 kg of rice or wheat, the subsidy translates to approximately Rs. 700–Rs. 800 per month.
- **Significance for Poor Households:** For households earning less than Rs. 20,000 per month, this subsidy is a substantial aid, ensuring a level of food security.
- **Reallocation of Household Spending:** The food subsidy frees up household spending that can then be directed to other essential foods, such as pulses and milk, which support better nutrition.
- **Investment in Health:** By enabling access to essential nutrition, the food subsidy acts as an investment in the health and well-being of vulnerable segments of the population.
- **Critical Support During the COVID-19 Crisis:** The importance of food subsidies was highlighted during the COVID-19 crisis, where even critics recognized its role in sustaining food security during challenging times.

Need for food subsidies:



- **Scheme for Food Subsidies:** There is a question of whether a large portion of the population requires food subsidies. The expansion of the Public Distribution System (PDS) under the National Food Security Act (NFSA) addressed the significant exclusion errors that existed in the previously targeted system.
- **Arguments Supporting Wide Coverage:** Supporters of the NFSA argued that identifying the poor with precision is nearly impossible, hence wider coverage is necessary to minimize exclusions. This moral argument for broader coverage remains relevant even today.
- **Misconceptions about NFSA's Impact on Grain Procurement:** Critics incorrectly assumed that the food security bill post-NFSA would necessitate increased grain procurement, leading to overestimated projections.
- **NFSA's PDS Coverage Increase:** The NFSA expanded PDS coverage from 44.5% to 67% of the population. However, the grain supply per beneficiary decreased from 7.9 kg to 5 kg, which negated the need for significant additional grain procurement.

- **NFSA's Financial and Production Impact:** Contrary to critics' beliefs, the NFSA did not inflate the food subsidy expenditure nor require increased grain production.
- **High Returns of Agricultural R&D:** Agricultural R&D has a high rate of return, especially when focused on foods like pulses, milk, eggs, vegetables, and fruits that help address nutritional deficiencies.
- **Benefits of Agricultural R&D for All:** Gains from agricultural R&D benefit both producers and consumers, making it a sound investment in the lower-income segments.
- **Complement to Welfare Measures:** Investment in agricultural R&D complements existing welfare measures for low-income populations and supports nutritional improvements.
- **Need for Alternative Expenditure Trade-Offs:** Expenditure trade-offs should be considered in areas other than food subsidies to allow for increased investment in agricultural R&D.

PEPPER IT WITH:
Food Security, Food Production, Social Safety Nets

Way forward:

- **Targeted Subsidies:** Implement robust mechanisms to identify the most vulnerable households who truly need food subsidies.
- **Agricultural R&D Investment:** Increase investment in agricultural R&D to develop climate-resilient crops, improve productivity, and enhance nutritional value.
- **Diversify Food Production:** Encourage farmers to diversify their crops to reduce risk and improve income. Invest in horticulture to increase the production of fruits, vegetables, and high-value crops.
- **Strengthen Supply Chains:** Invest in infrastructure, such as roads, storage facilities, and cold chains, to reduce post-harvest losses and improve market access.
- **Social Safety Nets:** Implement a comprehensive social safety net to support vulnerable populations, including cash transfers, employment programs, and healthcare.

Farmers in Madhya Pradesh, India's 'soya bean State', battered by rain and betrayed by prices

News Excerpt:

Recently, the Farmers across the State protested and demanded an MSP of ₹6,000 per quintal.

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

Soybean Production in India:

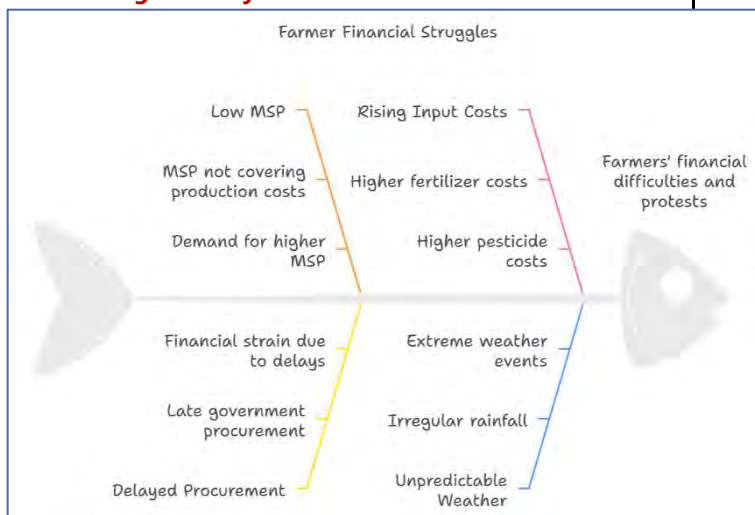
- **Major Producing States:** Madhya Pradesh and Maharashtra are the leading producers of soybean.
- **Annual Production:** India produced 13.98 million tonnes of soybean in 2023.

- **Quality Factors:** Moisture content, soil particle content, and seed health are crucial factors affecting soybean quality and price.

Farmer Concerns and Demands:

- **Low MSP:** Farmers are dissatisfied with the MSP of ₹4,892 per quintal, claiming it does not cover their production costs.
- **Delayed Procurement:** Late government procurement further exacerbates farmers' financial difficulties.
- **Rising Input Costs:** Increased costs of inputs like fertilizers and pesticides have eroded profit margins.
- **Unpredictable Weather:** Irregular weather patterns have added to the challenges faced by farmers.
- **Farmer Protests:** Farmer organizations, such as the Samyukta Kisan Morcha, have been protesting to demand a higher MSP of ₹6,000 per quintal.

The Challenges of Soya bean:



- **Impact of Unseasonal Rain on Soya Bean Crop:** Irregular and unseasonal rains, especially in September, have affected the productivity and quality of soya bean crops due to increased moisture levels.
- **Challenges in Selling the Crop:** Farmers cannot afford to wait for government procurement due to the lack of storage space and the need for immediate funds for the next crop (wheat). Farmer mentions that government procurement covers only 40% of the crop, making it difficult to sell the remaining portion if market rates drop.
- **Rising Production Costs:** Farmers face high input costs, including increased prices for pesticides and fertilizers. Soya bean crops require multiple pesticide layers, adding to expenses.
- **Post-Rain Harvesting Issues:** Rain complicates the use of harvesters due to waterlogged fields and muddy soil. In such conditions, farmers must resort to manual labor, which increases harvesting costs further.
- **Storage Constraints:** Farmers have stored their crops for three years in hopes of better prices but may now need to sell it to make room for wheat storage. Only a few

farmers have personal godowns, allowing them to store grains until market prices improve, while many lack such facilities and must sell promptly.

India's low soya bean yield:

- **Declining Soya Bean Yield:** Productivity concerns due to decreasing soil fertility in Dewas district; no alternative crops found.
- **Challenges with Waterlogging:** Yield reduced in lower-elevation fields due to waterlogging, producing only about two quintals per affected land section post-rain.
- **Low Productivity in India Compared to Other Countries:** Indian yields around 2.5 to 3 quintals per bigha are low compared to global standards, ranking 5th in soya bean production after China, Brazil, Argentina, and the U.S.
- **Long-term Goals for Yield Improvement:** IISR's 'Vision 2050' aims to boost productivity to 2,500 kg/ha by addressing issues like weather, crop duration, diseases, and management.

Climate and Weather-Related Yield Fluctuations:

Reliance on seasonal rainfall; prolonged dry spells (10-15 days) negatively impact yields, as demonstrated by a month-long dry spell in Maharashtra in 2022.

Soil Health and Disease Challenges:

Continuous soya bean farming in Madhya Pradesh has degraded soil health, increasing susceptibility to diseases like the yellow mosaic virus, although resistant varieties have been developed by IISR.

Preference for Short-Duration Crops:

Indian farmers favor short-duration crops (90-100 days) for multiple annual crops, while countries with higher yields grow longer-duration crops (120-140 days).

Impact of Subtropical Climate on Soil Fertility: India's subtropical climate leads to lower soil organic content and fertility, with many marginal farmers lacking resources for effective crop management.

The Crop's Potential:

- **Soya Bean as Oilseed Crop:** India's government raised import duties on crude (0% to 20%) and refined soya bean oil (12.5% to 32.5%) to enhance domestic oilseed production.
- **Use of Soya Bean Cake:** Post-oil extraction, soya bean cake (soymeal/khali) serves mainly as cattle feed and is also exported to West Asia and Europe.
- **Limited Food Use of Soya Bean:** Only 6-7% of soya bean production is used as a vegetarian protein source, despite it being a complete protein with all essential amino acids.
- **Historical and Regional Aspects:** Soya bean production began in India during the 1970s, with black

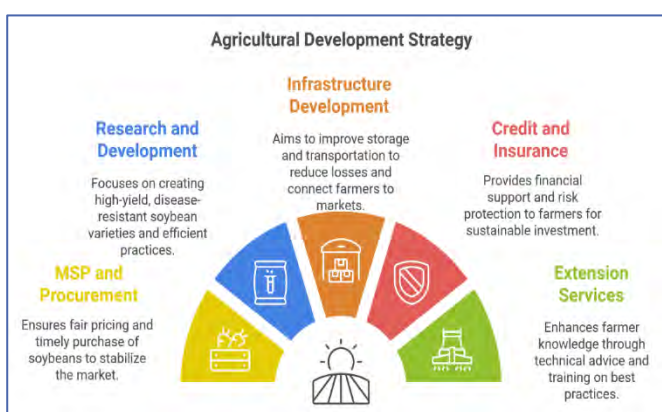
PEPPER IT WITH:
MSP, Crop Production
Monsoon, Agri Infrastructure

soya bean traditionally grown in the Himalayan and northeastern regions.

- **Encouraging Research and Food Integration:** Advocate for research on soya bean food products tailored to Indian tastes, including incorporating it into government school meal programs.
- **Emerging Market for Edamame:** Edamame (green soya bean) is a popular plant-based protein in Southeast Asia, harvested earlier (70 days) with higher water content than regular soya beans.

Way forward:

Rising demand for high-protein foods suggests a promising future for soya bean, supported by government plans to turn India into a protein food manufacturing hub



Livestock census

News Excerpt:

Recently, the Union Minister of Fisheries, Animal Husbandry and Dairying, launched the **21st Livestock Census in New Delhi.**

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						

About livestock census:

- **Purpose of the Livestock Census:** The Livestock Census is conducted **every five years** to carry out a headcount of domesticated animals, poultry, and stray animals in the country. It gathers data on species, breed, age, sex, and ownership status of the animals.
- **History of the Livestock Census:** The first livestock census was conducted in 1919. A total of 20 livestock censuses have been carried out so far.
- **21st Livestock Census:** The enumeration for the 21st Livestock Census will take place from October 2024 to February 2025.
- **Enumerators and Coverage:** Around 87,000 enumerators will be involved in the census. Enumerators will visit each independent house, apartment, enterprise, and institutions such as gaushalas (cattle sheds), dairy farms, poultry farms, veterinary colleges, and defence establishments.

- **Expected Coverage:** The census is expected to cover approximately 30 crore households across India.

Which animals will be counted in the 21st census?

- According to the Department of Animal Husbandry and Dairying, information on **sixteen animal species will be collected in the 21st census.** These include **cattle, buffalo, mithun, yak, sheep, goat, pig, camel, horse, ponies, mule, donkey, dog, rabbit, and elephant.** In total, the census will capture information on 219 indigenous breeds of these sixteen species recognised by ICAR-National Bureau of Animal Genetic Resources (NBAGR).
- Besides these, the census will also carry out a **headcount of poultry birds** such as fowl, chicken, duck, turkey, geese, quail, ostrich, and emu.

Objectives of the livestock census:

- **Role of the Livestock Sector:** The livestock sector is a significant source of employment in rural areas. In terms of productivity, poultry and animal husbandry contribute approximately 30% of the Gross Value Added (GVA) in the agriculture sector. Overall, the livestock sector contributes about **4.7% to the national GVA, whereas the agriculture sector contributes roughly 15% to the total GVA.**
- **Objectives of the Livestock Census:** The primary objective is to estimate the GVA from the livestock sector. The census will help in the formulation and implementation of policies related to livestock management.
- **Sustainable Development Goals (SDGs):** The data from the census will help track progress toward achieving Sustainable Development Goals (SDGs) set by the United Nations. Specifically, the census will contribute to Goal 2 (Zero Hunger) and Target 2.5 related to maintaining genetic diversity in food and nutrition.

How will the 21st livestock census be different from the previous exercises?

- The census this time will be fully digitized.
- This will include **“online data collection through a mobile application,** monitoring at various levels through a digital dashboard, capturing the latitude and longitude of data collection location, and generation of livestock census report through software.”
- The 21st census will capture several new data points. These include:
 - **Data on pastoral animals, pastoralists:** The census will, for the first time, collect data on the contribution of pastoralists to the livestock sector, their socio-economic status, and livestock holding.

What did the 2019 Livestock Census find?

- 535.78 million was the total livestock population of India. This included:

- **192.9 million cattle**
- **148.88 million goats**
- **109.85 million buffaloes**
- **74.26 million sheep**
- **9.06 million pigs**
- All other animals taken together contributed just 0.23% of the total livestock population in India.

PEPPER IT WITH:
Animal Husbandry, SDG, Agriculture, Alternative income.

Conclusion: The 21st Livestock Census is a crucial step towards understanding the current state of India's livestock sector. By collecting comprehensive data on various animal species, breeds, and their distribution, the census will provide valuable insights for policymakers to formulate effective strategies for the sustainable growth of the sector. The digitization of the census process will enhance data accuracy and facilitate timely analysis.

INTERNATIONAL RELATIONS

Donald Trump Wins U.S. Elections 2024

News Excerpt

Donald Trump secured a historic victory with **312 Electoral College votes**, becoming the **47th President of the United States**. At **78 years**, he joins Grover Cleveland as the only U.S. President to serve **non-consecutive terms**. Trump achieved a clean sweep in all seven key swing states: **Georgia, North Carolina, Pennsylvania, Arizona, Michigan, Wisconsin, and Nevada**

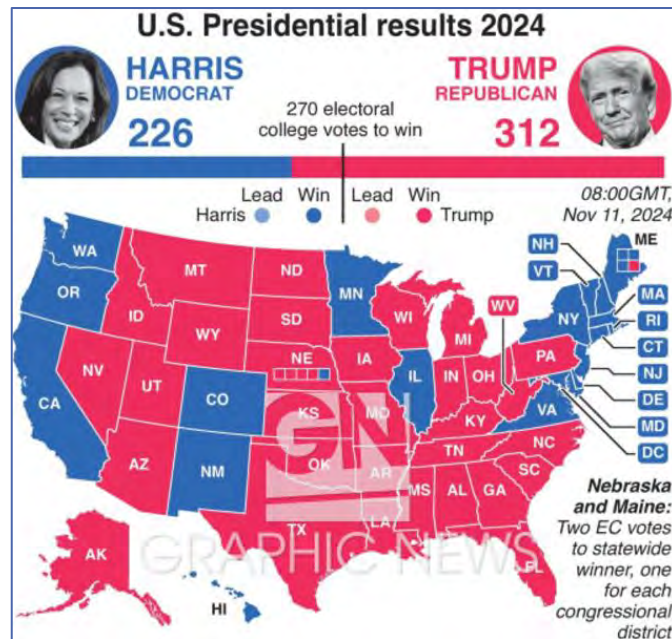
GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV	GS	I
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

Present India-U.S. Relations

- **Trade and Economic Ties**
 - **Trade Surplus:** India holds a trade surplus of **\$36.74 billion** with the U.S., its largest among major trading partners.
 - **Bilateral Trade:** The U.S. is India's second-largest trading partner, with trade volume at **\$118.3 billion**.
 - **FDI Contributions:** The U.S. remains the largest source of Foreign Direct Investment (FDI) into India, contributing **\$103 billion** last fiscal year, indicating deep economic ties.
- **Strategic and Defence Partnerships**
 - **Military Hardware:** India has purchased significant U.S. military equipment, including Apache helicopters and C-130 aircraft, under previous Trump administration deals.
 - **Quad Cooperation:** The strategic importance of the **Quad (India, U.S., Japan, and Australia)** aligns both nations in countering China's growing influence in the Indo-Pacific.

Positive Outlook for India-U.S. Relations Under Trump

- **Defence and Strategic Relations**



- **China Counterstrategy:** The Trump administration was the first to label China as a "strategic threat." This policy could lead to enhanced India-U.S. collaboration in defence and strategic domains.
- **Quad Strengthening:** India's partnership in the Quad could be further solidified to ensure a free and open Indo-Pacific.
- **Crackdown on Khalistani Groups:** Trump's strong stance on separatist movements could result in action against pro-Khalistani groups operating in the U.S., supporting India's internal security.
- **Economic Relations**
 - **Renewed FTA Talks:** Under Trump, stalled negotiations for a Free Trade Agreement (FTA) could resume, paving the way for reduced trade barriers and increased bilateral trade.
 - **Replacement of Chinese Imports:** Trump's proposed **60% tariffs on Chinese goods** could open U.S. markets to Indian products, particularly in manufacturing and technology.
 - **Increased FPI:** India's geopolitical importance as a counterweight to China could attract increased Foreign Portfolio Investments (FPI) from the U.S.
- **Human Rights and Diplomatic Dynamics**
 - **Reduced Scrutiny on Human Rights:** Trump has historically refrained from criticising India's internal policies, including its stance on **Jammu and Kashmir** and actions against terrorism.
 - **India-Canada Dispute:** Given Trump's strained relationship with Canadian PM Justin Trudeau, the U.S. is unlikely to pressure India over the **Nijjar assassination allegations**, easing diplomatic concerns.
- **Other Potential Benefits**

- **Immigration Reforms:** Trump’s proposal to grant automatic **Green Cards** to foreign graduates of U.S. universities could benefit Indian students, facilitating greater talent retention.
- **Market Boost:** Trump’s election has historically been seen as market-friendly. The 2024 victory led to a **2.5% surge in the S&P 500**, while Indian markets (Nifty 50 and Sensex) also saw gains, reflecting global investor confidence.

Potential Challenges for India-U.S. Relations Under Trump

- **Trade Disputes**
 - **Tariff Pressures:** Trump’s “America First” agenda may intensify demands for India to lower tariffs on U.S. goods. Industries like **IT, textiles, and pharmaceuticals** could face increased scrutiny.
 - **Harley Davidson Example:** During his first term, Trump strongly criticised India’s high tariffs on Harley Davidson motorcycles.
 - **Hydroxychloroquine:** India faced pressure to lift its export ban during the COVID-19 pandemic.
 - **WTO Complaints:** The Trump administration’s preference for unilateral trade action and WTO disputes could reignite tensions if India’s trade practices are challenged.
 - **Impact on Exports:** The Generalized System of Preferences (GSP) was revoked under Trump’s first term, affecting **12% of India’s exports** to the U.S. Restoration of this status remains uncertain, posing a challenge to India’s exporters.
- **Immigration Policies**
 - **Stricter Immigration Controls:** Trump’s hardline stance on illegal immigration could lead to mass deportations, including Indian nationals.
 - **Impact on H-1B Visas:** Stricter controls on work visas could hurt Indian IT professionals, a key segment of India-U.S. economic ties.

Economic and Geopolitical Implications

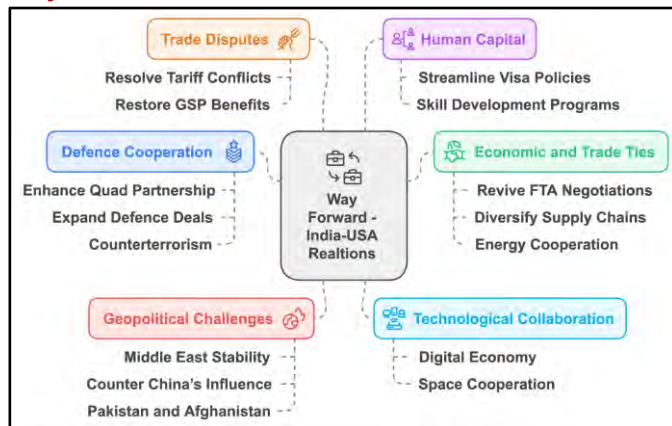
- **Economic Impacts**
 - **Inflation and Market Volatility:** A U.S.-China trade war could increase global inflation, destabilising markets. India’s **RBI** may face challenges in maintaining low interest rates amid global financial uncertainty.
- **Geopolitical Realignments**
 - **Middle East Conflicts:** Trump’s support for Israel may escalate tensions in **West Asia**, impacting India’s energy security and diaspora.
 - **China Containment Strategy:** Trump’s tariffs and strategic initiatives against China could disrupt global supply chains, creating challenges and opportunities for India.
 - **Pakistan and Neighbouring Countries:**

- **Reduced U.S. Aid to Pakistan:** Trump’s previous cuts to Pakistan’s aid could continue, aligning with India’s stance on counterterrorism.
- **Bangladesh:** Trump’s comments on minority protection may raise diplomatic sensitivities in South Asia.
- **Nepal, Bhutan, Maldives:** Attention towards these nations may decrease compared to the Biden administration’s outreach.

PEPPER IT WITH:
Indo-Pacific Strategy, Geopolitical Realignments, West Asia Stability,

- **Climate and Multilateral Agreements**
 - **Paris Climate Agreement:** Trump’s scepticism on climate issues could hinder global cooperation and impact India’s climate commitments and renewable energy goals.

Way Forward:



India-Spain Relations

News Excerpt

The **President of the Government of Spain**, Mr. Pedro Sanchez, visited India in October 2024. This was President Sanchez’s **first visit** to India and the first visit by a Spanish president to India after 18 years.

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						

Background of India-Spain Relations

- Spain recognised India’s independence in **1956**, but their partnership gained traction in the **early 2000s** and evolved to include robust economic, technological, and cultural ties.
- **Bilateral Trade and Investment:** In 2023, bilateral trade reached approximately US\$8.25 billion, with India’s exports to Spain totalling **US\$6.33 billion** and imports amounting to **US\$1.92 billion**, showcasing a robust trading relationship.
 - Major **Indian exports** include mineral fuels, chemicals, iron and steel, electrical machinery, and

textiles. Conversely, India imports industrial machinery and mechanical appliances from Spain.

- **Foreign Direct Investment (FDI):** Spain ranks India's **16th largest investor**, with a cumulative FDI stock of about US\$ 4.2 billion, primarily in sectors like renewable energy and infrastructure.

Key Highlights of India-Spain Joint Statement

- **Defense Partnership:** PM Modi and President Sanchez jointly inaugurated the **C-295 aircraft assembly line** in Vadodara, Gujarat, advancing India's "Make in India" initiative.
- **Investment Facilitation:** Establishment of a **Fast Track Mechanism** in India's DPIIT and Spain's Directorate General of International Trade and Investment to promote mutual investments. The **India-Spain CEOs Forum and Business Summit** was held in Mumbai to speed up mutual trade and investment.
- **India-Spain Year of Culture, Tourism, and AI (2026):** 2026 was designated as a special period to promote cultural exchange, tourism, and cooperation in artificial intelligence between the two nations. Cultural Exchange Programme launched for 2024–2028.
- **Consular Expansion:** Plans were announced for a Spanish Consulate in **Bengaluru**, alongside the operationalisation of an Indian Consulate in **Barcelona**.
- **Global and Regional Cooperation:** Both leaders underscored the importance of multilateralism, mutual support for their **UNSC candidacies**, and collaboration on climate action and renewable energy initiatives.
- **Commitment to EU-India Relations:** India and Spain strongly supported the **India-EU Free Trade Agreement** and the India-Middle East-Europe Economic Corridor (**IMEEC**) Project.

Significance of India-Spain Relations

- **Defence Cooperation**
 - **Modernisation and Technology Transfer:** Spain is vital in India's defence modernisation, particularly in aerospace and naval technology. Key contributions include:
 - **Submarine Technology:** Spanish companies like Navantia are involved in technology transfers for submarine construction, aiding India's naval defence capabilities.
 - **Military Aircraft:** Collaboration in military aviation, including co-development and component supply for fighter jets and transport aircraft, bolsters India's air defence.
 - **Support for 'Make in India':** Spanish involvement in defence production aligns with India's aim to enhance domestic manufacturing, reduce import dependency, and foster self-reliance.
- **Counter-Terrorism**

- **Intelligence Sharing and Cooperation:** India and Spain actively collaborate in counter-terrorism efforts, recognising terrorism as a global threat. Key aspects include:
 - **Intelligence Exchange:** Sharing real-time intelligence on terrorist activities, funding, and networks.
 - **Joint Training and Exercises:** Enhancing the capabilities of law enforcement and security forces through joint counter-terrorism exercises.
- **Coordinated Response to Global Terrorism:** Both countries advocate for comprehensive international frameworks to combat terrorism, supporting initiatives at the UN and other multilateral platforms.
- **Sustainable Development and Climate Action**
 - **Commitment to the Paris Agreement:** India and Spain are proactive in addressing climate change, with both nations adhering to their commitments under the Paris Agreement.
 - **Renewable Energy Collaboration:** Spain's leadership in renewable energy technologies complements India's goals of achieving 50% power capacity from non-fossil fuel sources by 2030.
 - **Sustainable Development Goals (SDGs):** Spain's invitation for India to join the International Drought Resilience Alliance (IDRA) signifies mutual commitment towards sustainable development and climate resilience. Both nations engage in joint initiatives aimed at achieving SDGs, focusing on:
 - Climate resilience and disaster management.
 - Sustainable urban development, including smart cities and green infrastructure.
 - **Innovative Environmental Solutions:** Partnerships in innovation-driven solutions for water management, waste recycling, and energy efficiency help both nations address environmental challenges.

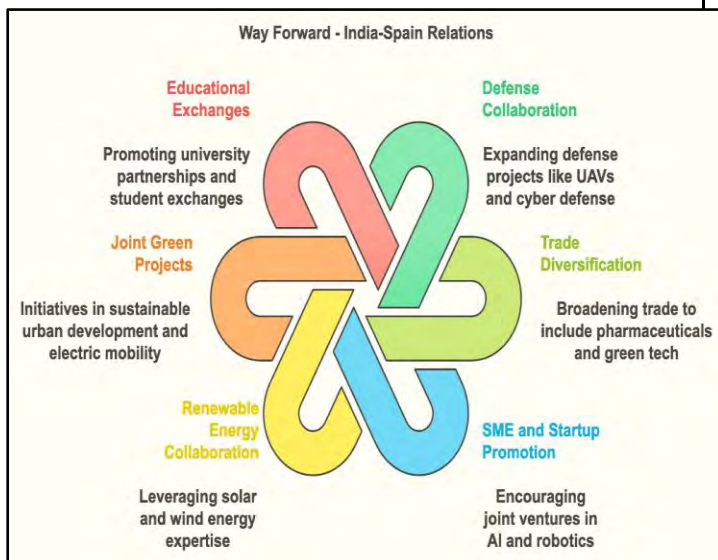
Challenges in India-Spain Relations

- **Geopolitical Differences:** Spain's primary geopolitical focus lies in Europe and Latin America, while India is more engaged in the Indo-Pacific. This divergence in regional priorities sometimes limits strategic alignment on global issues.
- **EU Dynamics:** Spain's policies are often shaped by broader EU strategies, which may not always align with India's interests, particularly in trade negotiations or climate-related commitments.
- **Trade Imbalance:** While bilateral trade has grown, it remains skewed, with a significant deficit on one side. Diversifying trade to reduce imbalances and dependency on limited sectors (e.g., textile and machinery) remains challenging.

- **Complex Regulatory Frameworks:** India's complex bureaucratic processes, including stringent labour and tax regulations, pose difficulties for Spanish companies looking to invest or expand operations.
- **Lack of Ease in Doing Business:** Despite improvements, navigating the Indian market remains challenging for Spanish firms due to land acquisition issues, contract enforcement, and infrastructure gaps.
- **Cultural and Language Barriers:** While cultural exchanges have grown, there remains limited mutual understanding of societies, traditions, and business cultures. Language barriers can further complicate interactions, particularly in business and education.

PEPPER IT WITH:
India-EU (FTA), Make in India, India-Middle East-Europe Economic Corridor (IMEEC),

Way Forward:

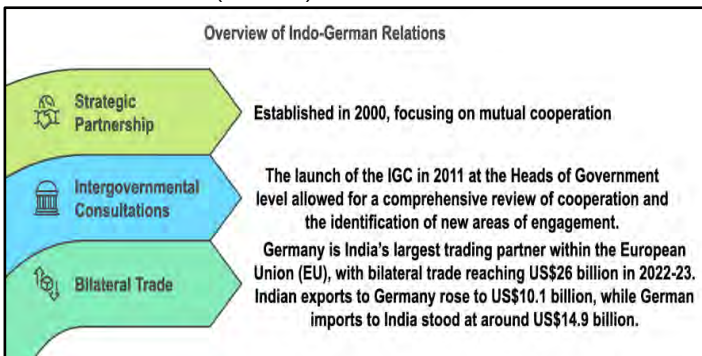


India-Germany Relations

News Excerpt

German Chancellor **Olaf Scholz** was on a **three-day visit** to India. PM Modi and Scholz co-chaired the seventh round of **India-Germany Intergovernmental Consultations (7th IGC)**.

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

- **Rethinking German Geopolitics:** Germany is undergoing a strategic transformation in response to **Russian expansionism, Chinese assertiveness, and uncertainties in U.S. policies**. Scholz's visit reflected Berlin's growing willingness to take on greater regional and global responsibilities, especially in Eurasia and the Indo-Pacific.
- **Ukraine Factor:** Despite India's neutral stance and continued energy trade with Russia, Germany acknowledged the need to build bridges with India. Both countries discussed avenues for dialogue and potential joint initiatives aimed at a peaceful resolution to the Ukraine crisis.
- **Germany's 'Focus on India' Strategy:** Ahead of the visit, the German Foreign Office released a **rare, country-specific policy paper** outlining a new strategic approach to India. This document emphasised India's role as a rising global power and a leader of the **Global South**, underscoring Germany's intention to deepen ties.

Key Highlights of the German Chancellor's Visit:

- **Whole-of-Nation Approach:** Both nations highlighted shifting from a "whole of government" to a "whole of nation" approach, which signifies broader, deeper collaboration.
- **Visa Expansion for Skilled Indians:** Germany will increase annual visas for skilled Indians from 20,000 to 90,000, recognising India's skilled workforce as a crucial asset for Germany's economic growth.
- **India as a Hub for Global Manufacturing:** PM Modi promoted India as an emerging hub for trade and manufacturing, encouraging German businesses to "Make in India, Make for the World."
- **Enhanced Defence and Security Cooperation:** Key agreements on exchanging and protecting classified information were signed, signalling a deepening mutual trust in defence and security. The **Mutual Legal Assistance Treaty (MLAT)** in criminal matters aims to bolster cooperation on legal issues and enhance India and Germany's ability to address security challenges.
- **Green Hydrogen Roadmap:** The roadmap marks a significant step in renewable energy collaboration and contributes to both nations' climate goals.
- **Joint Research and Development (R&D):** A Joint Declaration of Intent supports cooperation in R&D on advanced materials, underscoring a shared commitment to technological innovation.
- **Indo-Pacific security and China's influence:** PM Modi and Scholz emphasised the importance of a rules-based order and the need for maritime freedom. Both nations agreed to tackle regional security challenges jointly.

- **Reducing Dependency on China:** In light of global geopolitical shifts, Chancellor Scholz emphasised avoiding "**one-sided dependencies**," particularly in strategic areas such as critical raw materials. Both leaders aligned on positioning India as a pivotal partner to diversify supply chains.
- **Russia-Ukraine conflict:** PM Modi underscored India's position on peaceful conflict resolution and commitment to contribute towards peace. Scholz urged India to support a political solution to the Ukraine crisis, lauding India's stable role in South Asia.
- **West Asia:** Both leaders stressed the importance of avoiding further escalation, advocating for a ceasefire and a two-state solution for resolving the Israeli-Palestinian conflict.
- **Reform of Global Institutions:** Both leaders underscored the need for reform in multilateral organisations like the UN Security Council to better address contemporary challenges.

Broader Implications for India-Europe Relations

- Scholz's visit underscored a broader trend:
 - Europe is no longer peripheral to India's foreign policy. Over the past decade, India has strengthened ties with several European nations, including **France, Italy, and Poland.**
 - Germany's deeper engagement fills a critical gap, enhancing India's partnerships across the continent. This evolving dynamic is driven by shared concerns over **China's rise, a weakened Russia,** and the need for a stable, multipolar world order.
 - As India balances its relations with major powers, a strong partnership with Europe, anchored by Germany and France, **adds significant value.**

Challenges in India-Germany Relations

- **Trade Imbalances:** Despite strong trade ties, there is a significant trade imbalance, with India running a trade deficit with Germany. It affects the perception of equitable benefits from bilateral trade.
- **Market Access and Regulatory Barriers:** German companies often face challenges in navigating India's complex regulatory environment, including issues related to taxation, intellectual property rights, and investment protection. Indian companies face barriers in accessing the German market, especially in sectors like pharmaceuticals and IT services.
- **Labour and Visa Issues:** Despite demand, Indian professionals face hurdles in Germany in obtaining long-term work visas due to stringent immigration laws. Indian degrees and professional qualifications are not always recognised in Germany.
- **Differences in Climate and Energy Policies:** While Germany pushes for aggressive climate action, India, as

a developing country, emphasises its reliance on coal and the principle of climate justice, seeking more technological and financial support. India views EU policies like the **Carbon Border Adjustment Mechanism (CBAM)** as protectionist.

● **Geopolitical Differences:**

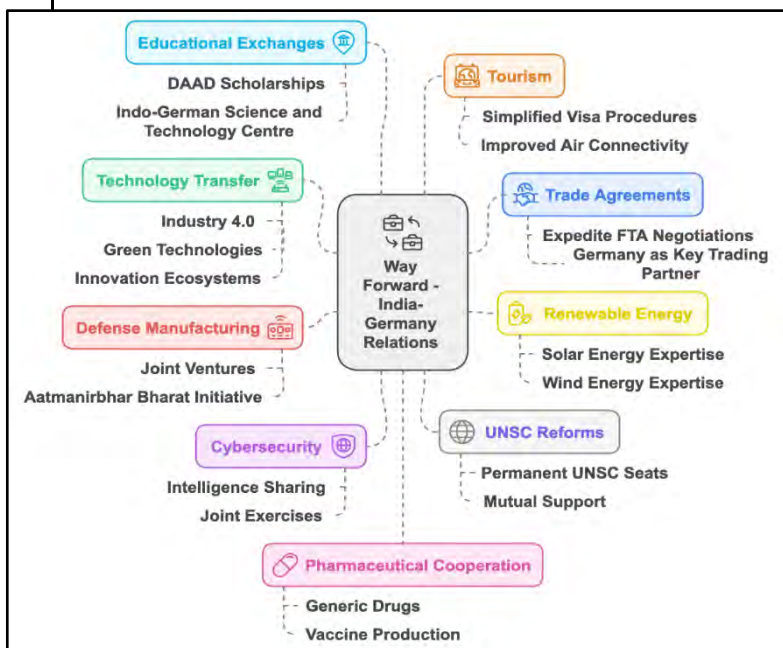
Germany's strong stance on Russia, especially following the Ukraine conflict, sometimes contrasts

PEPPER IT WITH:
Mutual Legal Assistance Treaty (MLAT), India-EU (FTA), Green Hydrogen Roadmap.

with **India's neutral stance** due to its historical and strategic ties with Russia. While both countries are wary of China's rise, their strategies in

- dealing with China differ, with Germany being cautious due to its economic ties.
- **Human Rights and Democratic Values:** Germany occasionally raises concerns over issues like **freedom of speech, human rights,** and the **treatment of minorities** in India. India sees such criticisms as interference in its internal affairs.

Way Forward:



India-Canada Relations

News Excerpt

Recently, Canada and India each **expelled their top diplomats** due to the fallout from Canadian Prime Minister Justin Trudeau's allegation last year that there were possible links of Indian intelligence with the killing of Hardeep Singh Nijjar, a **Khalistani leader** in Canada.

Contemporary Political Context

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						

- **Sikh Influence in Canadian Politics:**
 - Sikhs form about **2% of Canada's population** but hold significant political influence due to their geographic concentration in areas like **British Columbia** and **Ontario**.
 - Historically, Sikhs have been **well-represented** in Canadian politics, including in Trudeau's cabinet.
- **Khalistani Activism in Canada:**
 - Canada's legal system allows **advocacy for separatism** under **freedom of expression**, as long as it does not incite violence. This includes Khalistani referendums, which India vehemently opposes.
 - Canada has **faced criticism** for tolerating **public displays** of Khalistani symbols and figures, including those glorifying individuals linked to **terrorist acts**, like Talwinder Parmar.
 - Canada's internal approach to dissent, exemplified by its handling of **Quebec separatism**, differs fundamentally from India's external sovereignty concerns.
- **India's Perspective:**
 - India views Khalistani separatism, especially when supported from foreign soil, as a **direct threat** to its **sovereignty** and **territorial integrity**.
 - India's stance reflects a broader trend among rising powers, where safeguarding sovereignty overrides traditional diplomatic norms.

Concerns Stemming from the India-Canada Diplomatic Fallout

- **Bilateral Trade Relations:** Canada accounts for **1% of India's total trade** and supplies **25% of India's pulses** and **5% of its fertilisers**. Diplomatic tensions could affect essential imports, potentially leading to price volatility in India's domestic market.
- **India-Canada Free Trade Agreement (FTA):** Discussions on the proposed Comprehensive Economic Partnership Agreement (CEPA) to boost bilateral trade have been paused. With bilateral trade valued at **\$9.69 billion** in 2022-23, the FTA was expected to unlock new opportunities, especially in technology, agriculture, and pharmaceuticals.
- **Canadian Investment in India:** From 2020 to 2023, Canada ranked as the **18th-largest foreign investor** in India, contributing **\$3.31 billion**. Canadian pension funds, such as **CPPIB** and **CDPQ**, have invested over **\$75 billion** with stakes in firms like **Kotak Mahindra Bank**, **Paytm**, and **Infosys**. The fallout creates potential risks for future Canadian investments.
- **Indian Remittances:** India received **\$125 billion** in remittances in 2023, with Canada among the top contributors. In **2021-22**, Canada accounted for **0.6%** of total remittances. Strained relations could impact remittance flows, affecting Indian households reliant on this income.

- **Indian Students in Canada:** Canada hosts **427,000 Indian students**, the largest international student group, contributing significantly to Canada's education sector and economy. Diplomatic tensions raise concerns over **visa delays** and potential restrictions, **disrupting**

INDIA AND CANADA, IN NUMBERS

Canada accounts for just 0.56% of the total FDI in India.

DPIIT data show total FDI equity inflow between April 2000 to June 2023 was \$645,386.0884 mn, of which only \$3,642.5243 mn came from Canada.

But Canada is home to 5.26% of overseas Indians

Of the 3,21,00,340 overseas Indians, 5.26% (16,89,055) are in Canada, including 1,78,410 NRIs and 15,10,645 PIOs, according to MEA data.

And every 7th Indian student abroad is in Canada

In 2022, of the estimated 13,24,954 Indian students abroad, 13.83% (1,83,310) were in Canada, according to Ministry of External Affairs data.

Canada is 4th largest source of tourists in India (2021)

Canada accounted for 5.3% (80,437) of Foreign Tourist Arrivals (FTAs) in India in 2021; 72.6% of Canadian FTAs were members of the Indian diaspora. FTAs from Canada rose to 3,51,859 in the pre-pandemic year 2019 from 88,600 in 2001. Arrivals from Canada fell sharply post pandemic.

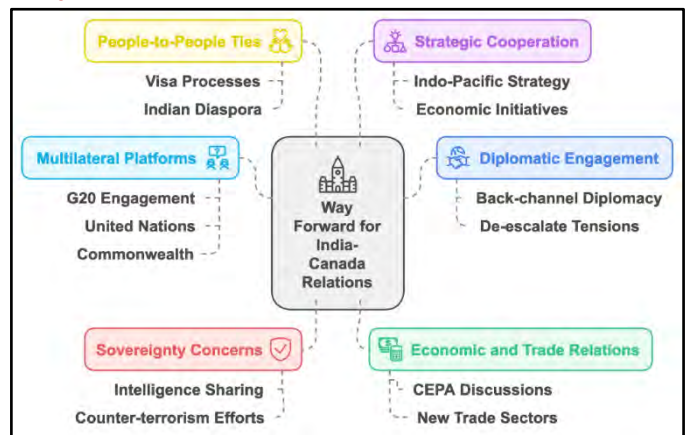
Bilateral trade is tiny; its balance is in India's favour

India's trade with Canada was \$8,161.02 mn during FY 2022-23, just 0.70% of India's total trade of \$1,165,000.88 mn. Canada was India's 35th biggest trading partner. The balance of trade is in India's favour; in 2022-23, India's exports to Canada stood at \$4,109.74 mn, and imports at \$4,051.29 mn.

HARIKISHANSHARMA

education and affecting Canada's higher education revenues.

Way Forward:



SCO Summit 2024

News Excerpt

Islamabad, Pakistan, hosted the **23rd Meeting** of the Shanghai Cooperation Organization (SCO) **Council of Heads of Government**.

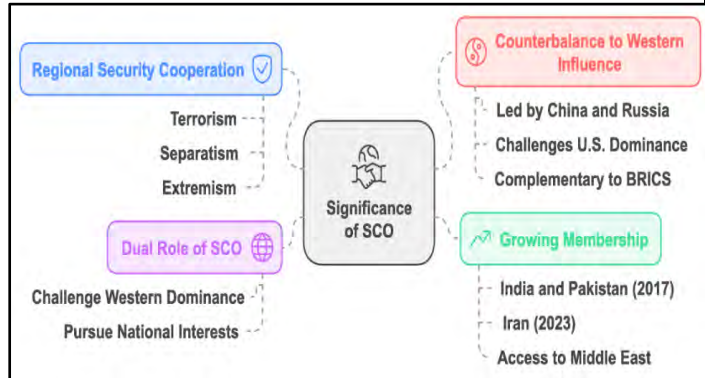
GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
					M						

About Shanghai Cooperation Organisation

- Its origins lie in the **"Shanghai Five"**, formed in **1996** and consisting of China, Russia, Kazakhstan, Kyrgyzstan and Tajikistan.
 - With the dissolution of the USSR in 1991 into 15 independent countries, concerns in the region about extremist religious groups and ethnic tensions

emerged. To manage these issues, a grouping was created to **cooperate on security matters**.

- Based on this, SCO was established in **Shanghai on June 15, 2001**, as an international organisation, and **Uzbekistan** was added as a **sixth** member.
- SCO **member** countries are India, China, Pakistan, Russia, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Belarus. Afghanistan and Mongolia hold **Observer** Status.



Key Highlights of the Meeting

- Regional Security and Cooperation:** India emphasised the importance of combating terrorism, separatism, and extremism, aligning with the SCO's foundational goals.
- India's Opposition to the Belt and Road Initiative:** The joint communique endorsed BRI, but India withheld support, marking a continued divergence in regional consensus.
 - India has consistently opposed the BRI, citing concerns over **territorial sovereignty** and the potential for participating countries to fall into a **"debt trap."**
- Criticism of Unilateral Sanctions:** SCO members, including Russia and Iran, criticised Western sanctions, labelling them as detrimental to global economic stability and incompatible with international law.
- Impact on Trade:** Sanctions against countries like Iran and China limit smaller nations' ability to engage in trade without facing repercussions.
- China's Tariff Dispute:** China voiced discontent over high tariffs imposed by the U.S. and Canada. China has retaliated with its tariffs, escalating global trade tensions.

Relevance of SCO for India

- Counterterrorism and Regional Security:** The SCO's **Regional Anti-Terrorist Structure (RATS)** is vital for India to collaborate on counter-terrorism, drug trafficking, and combating organised crime, especially in light of its concerns over cross-border terrorism from Pakistan and the destabilising situation in Afghanistan.
- Engagement with Central Asia:** The SCO provides India a platform to engage with Central Asian states, a region crucial for India's strategic depth and energy security.

- Energy Security:** Central Asia, particularly countries like Kazakhstan and Turkmenistan, is rich in oil, gas, and minerals. Through the SCO, India can enhance its energy partnerships and gain access to these resources.
- Connectivity Projects:** The SCO aligns with India's goals for regional connectivity, mainly through projects like the **International North-South Transport Corridor (INSTC)** and potential linkages to the **Chabahar Port**.
- Balancing China's Influence:** India's active participation helps balance China's dominance in the organisation and ensures that its interests are safeguarded in critical regional decisions.
- Platform for Dialogue with Pakistan:** The SCO provides a non-bilateral platform for India and Pakistan to discuss regional issues, though it has limitations in resolving bilateral disputes.
- Promoting People-to-People Ties:** Through SCO initiatives, India can strengthen its cultural ties and historical connections with Central Asian nations, enhancing soft power diplomacy.

Challenges for India in the SCO

- Tensions with China:** The border standoff, particularly in eastern Ladakh, has strained India-China relations.
- Hostile Relations with Pakistan:** India frequently accuses Pakistan of supporting terrorism, making bilateral cooperation challenging.
- Limited Mechanisms to Address Bilateral Disputes:** The SCO lacks a framework for resolving bilateral conflicts. This limits its ability to:
 - Facilitate dialogue on India's disputes with China and Pakistan.
 - Address security concerns like terrorism and border disputes constructively.
- Growing U.S.-China Rivalry:** As tensions rise between the U.S. and China, India faces pressure to balance its strategic partnerships. Aligning with the U.S. in initiatives like the Quad while remaining active in SCO creates conflicting demands.

PEPPER IT WITH:
Regional Anti-Terrorist Structure (RATS), Belt and Road Initiative (BRI), Chabahar Port.

Way Forward:



India-China LAC Agreement

News Excerpt

India and China have agreed on “**patrolling arrangements**” along the Line of Actual Control (LAC), leading to **disengagement** and resolving the issues that had arisen in these areas in 2020.

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 LAC

- The LAC is the **demarcation** that separates Indian-controlled territory from Chinese-controlled territory. India considers the LAC to be **3,488 km long**, while the Chinese consider it to be only around 2,000 km.
- It is divided into three sectors: the **eastern sector**, which spans Arunachal Pradesh and Sikkim; the **middle sector** in Uttarakhand and Himachal Pradesh; and the **western sector** in Ladakh.

Key Highlights of the Agreement

- Restoring Pre-2020 Status:** Troops will resume patrolling in contested regions like



Depsang and **Demchok**. This means that Indian troops can patrol up to **patrolling point (PP) 10 to 13** in the Depsang Plains and the Charding nullah of Demchok.

- These regions are crucial for their proximity to key military assets like India’s **Daulat Beg Oldi (DBO) base**, which safeguards the critical **Karakoram Pass** linking China’s Xinjiang region with India’s Ladakh.
- Earlier, China had agreed on disengagement at other friction points — PP 14 (**Galwan Valley**), PP 15 (**Hot Springs**), PP 17A (**Gogra**), and the north and south banks of **Pangong Tso**.
- Dismantling Temporary Infrastructure:** Both nations will dismantle forward posts and temporary camps established after 2020, reducing immediate confrontation risks.
- Patrolling Pact:** It is the key pillar of the agreement. Patrolling is one of the key elements of border management between India and China. Since **no physical line** on the ground corresponds to maps, Indian troops are expected to go up to the Indian perception of the border before returning to base.
 - Typically, soldiers walk or drive up to the patrolling points and **leave behind a sign of their presence there**. This could be anything Indian — perhaps an empty packet of cigarettes or a matchbox made in India.
- Trust-building Process:** It has set a process of trust-building in motion. If China keeps its word, it will be at

least a couple of years before the entire three-step process of **disengagement, de-escalation, and de-induction** of troops is completed and ties return to normal.

Factors Leading to Agreement

• China’s Strategic Calculations

- Easing border tensions may help China mitigate external pressures, especially as it faces a domestic economic slowdown, real estate sector challenges, and Western restrictions on Chinese goods and technology.
- Improved ties with India could prevent further restrictions on Chinese investments, preserving economic interdependence.

• India’s Economic Priorities

- A stabilised border allows India to channel resources toward economic growth, particularly manufacturing and infrastructure.
- Despite tensions, China remains India’s largest trading partner, with bilateral trade surging from \$65 billion in 2020 to \$118 billion in 2024.

• Domestic Economic Considerations

- Indian businesses, particularly those in electronics, machinery, and pharmaceuticals, continue to rely on Chinese imports.
- Corporates advocated for selective Chinese investments to boost India’s manufacturing ambitions and integrate into global supply chains.

• U.S.-India Strategic Partnership

- The U.S. views India as a key partner in countering China’s influence in the Indo-Pacific.
- India’s participation in platforms like the Quad reflects shared concerns over China’s regional assertiveness.

Challenges in the India- China Relations

- Divergent Regional Visions:** India aspires for a greater role in global governance, seeking permanent membership in the UN Security Council (**UNSC**). China’s strategic focus on consolidating influence through platforms like the Shanghai Cooperation Organization (**SCO**) and **BRI** reflects its regional ambitions.
- Cybersecurity Threats:** China-linked cyberattacks targeting Indian power grids and critical infrastructure highlight vulnerabilities.
- Strategic Rivalry in the Global South:** Both nations vie for influence in South Asia and the Indo-Pacific, often at odds. China’s Belt and Road Initiative (BRI) projects in neighbouring countries like Pakistan and Nepal raise India’s security concerns.
- Infrastructure Buildup Along the LAC**
 - China’s Dual-Use Strategy:** Construction of villages and infrastructure near the border serves civilian and military purposes.

- **India's Response:** Projects like the Sela Tunnel enhance year-round connectivity to border areas, and road network reinforcement ensures rapid troop mobilisation.

PEPPER IT WITH:
Galwan Valley Conflict, Karakoram Pass, Quad and Indo-Pacific Strategy, Sela Tunnel.

- **Unresolved Border Dispute:** The LAC remains a contested boundary with no clear resolution. The October 2024 agreement reduces immediate conflict risks but does not address the core territorial disputes.

Way forward:



BRICS Summit 2024

News Excerpt

The **16th annual BRICS summit** was held in **Kazan, Russia**, from October 22 to October 24, 2024. The summit **theme** was "Strengthening Multilateralism for Just Global Development and Security."

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

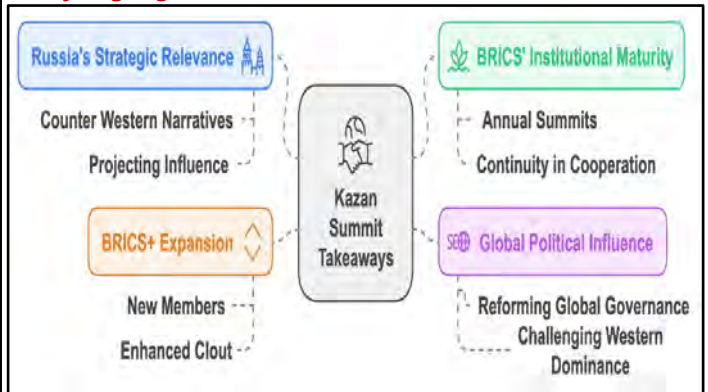
About BRICS

- Essentially, BRICS has been envisaged as a **grouping of non-Western countries** that can act as a counterweight to institutions like the World Bank and the International Monetary Fund, which are dominated by the Global North.
- **Goldman Sachs** first used the **acronym BRIC** in 2001. The grouping was **formalised** during the first meeting of BRIC foreign ministers in 2006, held on the margins of the **UNGA** in New York.
- The **first BRIC Summit** was held in **Yekaterinburg, Russia**, in 2009. In **2010**, it was decided to include **South Africa** at the BRIC Foreign Ministers' meeting in New York.
- On **January 1 this year**, BRICS admitted four new members: **Egypt, Ethiopia, Iran** and the **United Arab Emirates**. Saudi Arabia has accepted the invitation but delayed formal joining. Argentina, whose new President Javier Milei is more pro-West, declined.
- The organisation now represents almost **half the world's population** and almost **one-quarter of the world's economy**.

Significance of BRICS

- **Championing Global Governance Reforms:** BRICS has consistently pushed for reforms in major multilateral institutions like the UN, IMF, and World Bank to democratise global governance.
- **Successful Institutional Development:** Despite its heterogeneity, BRICS has established functional institutions such as the New Development Bank (NDB), which has funded projects worth \$30 billion since its inception in 2015. The CRA can provide liquidity support to member countries during financial crises, reducing dependence on Western financial institutions like the IMF.
- **Global Economic Presence:** BRICS collectively accounts for 26% of the global landmass, 42% of the global population, and 18% of the global exports, with intra-BRICS exports growing faster than the global average.
- **Proactive Approach to Integration:** Strengthened trade and investment relationships with other developing countries. BRICS Contact Group on Economic and Trade Issues (CGETI) promotes sustainable development-oriented investments.
- **Catalyst for Global South Development:** By enhancing investment and economic cooperation, BRICS can potentially drive inclusive development. Focus on capital formation, technology transfer, and employment generation.
- **Emerging Rival to the G7:** BRICS is seen as a potential rival to the G7, with the capacity to disrupt the G20's functioning. The bloc uses its platform to address discrimination and hierarchies in the international system, specifically highlighting underrepresentation in the UN Security Council (UNSC), International Monetary Fund (IMF), and World Bank.
- **Economic and Political Implications:** The expanded BRICS+ now represents major energy-producing and consuming countries, paving the way for potential negotiations on future energy corridors. The inclusion of oil-rich nations strengthens BRICS' role in global energy markets.

Key Highlights from the Kazan Declaration



- **On Ukraine Conflict:** Emphasis on all states acting consistently with the Purposes and Principles of the UN

Charter. Recognition of mediation and good offices proposals aimed at resolving the conflict through dialogue and diplomacy.

- **On the Middle East:** Grave concern over the humanitarian crisis in Gaza and the West Bank due to Israeli military actions. Condemnation of mass killings, injuries to civilians, forced displacement, and destruction of civilian infrastructure.
- **On Western Sanctions:** Expressed concern about the disruptive effects of unlawful unilateral coercive measures. Highlighted how such sanctions harm the global economy and international trade and hinder the achievement of Sustainable Development Goals (SDGs).
- **On International Financial System Reform:** Stressed the importance of restructuring the international financial architecture. Aim to make global economic governance more inclusive and equitable.
- **On BRICS Grain Exchange:** Welcomed Russia's proposal to establish a BRICS Grain Exchange. Plans for expansion to include other agricultural sectors, enhancing food security and trade within BRICS nations.
- **On BRICS Cross-Border Payment System:** Acknowledged the benefits of faster, cost-efficient, transparent, and inclusive cross-border payment systems. Supported using local currencies for transactions between BRICS countries and their trading partners to reduce trade barriers and promote financial inclusivity.
- **On Conservation of Big Cats:** Appreciated efforts by BRICS nations to protect rare species. Noted India's initiative to create an International Big Cats Alliance. Encouraged collaboration among BRICS countries to contribute further to big cat conservation.

Challenges faced by BRICS

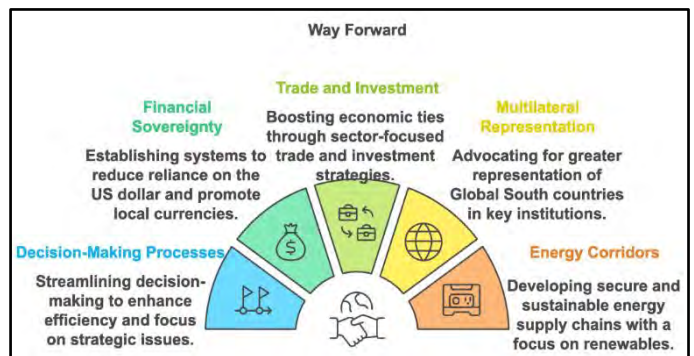
- **Challenges of Diversity:** BRICS is an unusual and diverse grouping, with members varying significantly in terms of geography, culture, political systems, and economic size.
 - For instance, **China's GDP** (\$18 trillion) dwarfs that of other members, including India (\$4 trillion) and South Africa (~\$400 billion).
 - The grouping includes **democracies** (India, South Africa), **authoritarian regimes** (China, Russia), and **monarchies** (Saudi Arabia).
- **Challenges in Decision-Making:** BRICS operates on a consensus-based decision-making process. With more members, achieving consensus will become increasingly difficult, leading to delays in decision-making.
 - The Global South has seen **similar challenges** in large groupings like the **Non-Aligned Movement**

PEPPER IT WITH:
 Global South, Alternative Payment Systems, Western Dominance, New Development Bank,

(NAM) and **G77**, which still exist but have diminished influence due to internal divisions and slow decision-making.

- **Internal Rivalries:** Geopolitical rivalries, particularly in West Asia, could spill over into BRICS, complicating its functioning. Tensions among new members could undermine the group's unity.
- **Russia's Push for an Alternative Payment System:** Russia, which was excluded from the SWIFT system due to sanctions, is keen to develop an alternative payment system for intra-BRICS trade. BRICS states broadly support trade in national currencies but are less enthusiastic about creating a common BRICS currency.
- **Perception of Anti-West Sentiment:** BRICS' push for reforms in institutions like the United Nations Security Council (**UNSC**) and International Monetary Fund (**IMF**) risks being perceived as an attempt to undermine or replace them.
- This perception could alienate potential partners, particularly in the Global South, who rely on these institutions for support.
- This perception would also pose a risk to India, as the **US provides** access to **cutting-edge technology** to ramp up **manufacturing** and add **jobs**.

Way Forward:



ENVIRONMENT

Emissions Gap Report 2024

News Excerpt:

The Emissions Gap Report is an annual report published by the **United Nations Environment Programme (UNEP)**.

Executive Summary:

Global GHG emissions reached a record high of 57.1 GtCO₂e in 2023, a 1.3% rise from 2022, exceeding the pre-pandemic average annual growth rate of 0.8%. Nearly all sectors saw increases, except for CO₂ emissions from **Land Use, Land-Use Change, and Forestry (LULUCF)**.

- **Definition:** The emissions gap is the difference between projected global GHG emissions under current NDCs and

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

levels required for pathways aligned with the Paris Agreement (2°C and 1.5°C goals).

The **power sector** remained the top emitter at 15.1 GtCO_{2e}, followed by **transport (8.4 GtCO_{2e})** and **agriculture/industry (6.5 GtCO_{2e} each)**. International aviation emissions surged 19.5%, nearing pre-pandemic levels. Rapid growth was observed in fugitive fuel emissions, road transport, and energy-related industries.

There are significant disparities between the current, per capita and historical emissions of major emitters and world regions:

- **Disparities in GHG Emissions:** Major discrepancies exist in current, per capita, and historical emissions across regions and top emitters.
- **G20 Emissions:** GHG emissions across G20 countries rose in 2023, with the group contributing 77% of global emissions.
- **Contribution of African Union and Least Developed Countries:** Adding all African Union nations to the G20 increases global emissions by just 5%, reaching 82%. Least developed countries contribute only 3% of global emissions.
- **Per Capita Emissions:** Per capita emissions in the U.S. and Russia are nearly three times the global average of 6.6 tCO_{2e}, whereas they are much lower in the African Union, India, and least developed countries.
- **Consumption-Based Emissions:** Consumption-based emissions remain unequal, highlighting disparities in emissions driven by consumption patterns across countries.

Progress in ambition and action since the initial NDCs plateaued, and countries are still off track to deliver on the globally insufficient mitigation pledges for 2030:

- Progress in meeting 2030 mitigation pledges under the Paris Agreement has plateaued, with 90% of countries updating their initial NDCs, mostly before COP26 in 2021.
- Despite calls for stronger targets, only one country has updated its 2030 goals since COP28. Current policies project **global emissions of 57 GtCO_{2e} by 2030**, exceeding unconditional NDCs by 2 GtCO_{2e} and conditional NDCs by 5 GtCO_{2e}. G20 nations remain off-track, with 11 members likely to miss their NDC targets and projected emissions exceeding targets by 1 GtCO_{2e}. More robust policies and assessments of recent climate actions are essential to bridge the gap and align with 2°C or 1.5°C goals.

Implied emissions trajectories of the G20 members towards net zero show reasons for concern:

- **Global Net-Zero Pledges:** By June 1, 2024, 101 parties (107 countries) covering 82% of global GHG emissions adopted net-zero pledges. Twenty-eight adopted through law, 56 via policy documents (e.g., NDCs, strategies), and 17 through announcements.

- **G20 Net-Zero Commitments:** All G20 members except Mexico and the African Union have set net-zero targets. Progress on legal implementation, detailed plans, and alignment with trajectories remains limited.
- **Peaking Emissions for Net-Zero:** Seven G20 members (China, India, Indonesia, Mexico, Saudi Arabia, South Korea, Türkiye) have not peaked emissions. These countries must peak emissions sooner and reduce them rapidly.

Table ES.1 Total, per capita and historical emissions of selected countries and regions

	Total GHG emissions in 2023	Change in total GHG emissions, 2022-2023	Per capita GHG emissions in 2023	Historical CO ₂ emissions, 1850-2022
	MtCO _{2e} (% of total)	%	tCO _{2e} /capita	GtCO _{2e} (% of total)
China	16,000 (30)	+5.2	11	300 (12)
United States of America	5,970 (11)	-1.4	18	527 (20)
India	4,140 (8)	+6.1	2.9	83 (3)
European Union (27 countries)	3,230 (6)	-7.5	7.3	301 (12)
Russian Federation	2,660 (5)	+2	19	180 (7)
Brazil	1,300 (2)	+0.1	6.0	119 (5)
African Union (55 countries)	3,190 (6)	+0.7	2.2	174 (7)
Least developed countries (45 countries)	1,720 (3)	+1.2	1.5	114 (4)
G20 (excl. African Union)	40,900 (77)	+1.8	8.3	1,990 (77)

- **Countries with Peaked Emissions:** Ten G20 members (Argentina, Australia, Brazil, Canada, EU, Japan, Russia, South Africa, UK, USA) have already peaked. They need accelerated decarbonisation after 2030 unless 2030 NDC targets are exceeded.
- **Urgent Need for Accelerated Action:** Early action reduces cumulative emissions and avoids unfeasibly rapid decarbonisation later. The transition window for countries yet to peak emissions is narrower, demanding swift reductions.

The emissions gap in 2030 and 2035 remains large compared with pathways limiting warming to 1.5°C and to 2°C:

- **Current Status:** The emissions gap for 2030 and 2035 remains unchanged due to no significant NDC updates. Full implementation of unconditional NDCs reduces emissions by 4% by 2030 (compared to 2019 levels), while conditional NDCs could achieve a 10% reduction.
- **Emissions Gap for 2030:** 2°C Goal: 14 GtCO_{2e} reduction needed. 1.5°C Goal: 22 GtCO_{2e} reduction needed; fully conditional NDCs could narrow this by 3 GtCO_{2e}.
- **Emissions Gap for 2035:** 2°C Goal: Gap increases by 4 GtCO_{2e}. 1.5°C Goal: Gap increases by 7 GtCO_{2e}.
- **Required Reductions:2030:** 28% reduction (2°C goal) and 42% reduction (1.5°C goal) from 2019 levels. 2035: 37% reduction (2°C goal) and 57% reduction (1.5°C goal) from 2019 levels.
- **Urgency:** Without reductions below current levels by 2030, achieving the temperature goals becomes nearly impossible. Starting enhanced actions in 2024 requires annual reductions of 4% (2°C) and 7.5% (1.5°C) until 2035. Delaying until 2030 increases required annual

reductions to 8% (2°C) and 15% (1.5°C) between 2030-2035.

Time lost since 2020 increases global warming projections and reduces the feasibility of bridging the gap:

- **Pathways Assumption:** Least-cost pathways to limit warming to 1.5°C, 1.8°C, or 2°C assumed strong mitigation starting in 2020, requiring significant reductions in this decade.
- **COVID-19 Impact:** Post-COVID recovery led to rising global GHG emissions, delaying essential climate action.
- **Carbon Budget Reduction:** By 2024, the remaining budgets are 900 GtCO₂ for a >66% chance of staying below 2°C. 200 GtCO₂ for a >50% chance of staying below 1.5°C.
- **Additional Emissions (2020–2030):** Delayed action adds 20–35 GtCO₂ compared to Paris-aligned pathways, increasing warming by 0.01–0.02°C.
- **Challenges of Inaction:** Lock-in of carbon-intensive infrastructure. Less time for necessary emission reductions. Reduced feasibility of meeting 2030 targets.
- **Long-Term Risks:** Delays heighten risks of temperature overshoot, amplifying severe and potentially irreversible climate impacts.

Immediate action matters: temperature projections based on the conditional NDC scenario are 0.5°C lower than those based on existing policies:

- **Current Policies:** Warming capped at 3.1°C (range: 1.9–3.8°C) by 2100.
- **NDC Scenarios:** Unconditional NDCs: Limit warming to 2.8°C (range: 1.9–3.7°C). Conditional NDCs: Reduce further to 2.6°C (range: 1.9–3.6°C).
- **Challenges to 1.5°C Goal:** All scenarios exceed 1.5°C by mid-century. Up to a 1-in-3 chance of exceeding 2°C.

Likelihood of warming exceeding a specific temperature limit (%)			
Scenarios	1.5°C	2°C	3°C
Current policies continuing	100% (85–100%)	97% (28–100%)	37% (1–80%)
Unconditional NDCs continuing	100% (86–100%)	94% (28–100%)	22% (1–75%)
Conditional NDCs continuing	100% (77–100%)	79% (19–100%)	10% (0–69%)
Conditional NDCs + all net-zero pledges	77% (64–97%)	20% (64–97%)	0% (0–6%)

- **Post-2100 Warming:** Warming continues as CO₂ emissions remain above net-zero levels.
- **Optimistic Scenario:** Full implementation of conditional NDCs and net-zero pledges limits warming to 1.9°C (range: 1.8–2.3°C). Stabilisation occurs only in this scenario.

- **Immediate Action Impact:** Reduces peak warming by 0.5°C compared to current policies. Enhances net-zero achievement likelihood.
- **Need for Support:** Enhanced international support is critical for conditional NDC implementation. Overachieving 2030 targets and raising ambition in future NDCs are key to limiting warming.

The G20 has a key responsibility in closing the emissions gap. It is both cost-effective and fair for the G20 to reduce emissions faster than the global average:

- **G20 Responsibility:** The G20 must reduce emissions faster than the global average to achieve cost-effective and equitable alignment with Paris Agreement goals.
- **NDC Flexibility:** The Paris Agreement enables countries to adapt global goals to national actions using both global models and national scenarios, emphasising equity and fairness.
- **Current G20 NDC Misalignment:** The G20 NDCs do not align with fair-share or cost-effective pathways to meeting Paris temperature targets.
- **National Decarbonization Scenarios:** These scenarios align mitigation with national development priorities, demonstrating the potential for higher 2030 and 2035 ambitions.
- **Informing Future NDCs:** National scenarios can guide countries to reflect the "highest possible ambition" in future NDC updates per the Paris Agreement's Article 4.
- **Fairness and Transparency:** Clear and transparent approaches to shaping NDCs help evaluate their fairness and ambition.

Emission reduction potentials for 2030 and 2035 are substantial, but time is short and realising the potentials requires overcoming persisting challenges and massively boosting policies, support and finance:

- **Mitigation Potential:** 2030: 31 GtCO₂e/year (range: 25–35). 2035: 41 GtCO₂e/year.

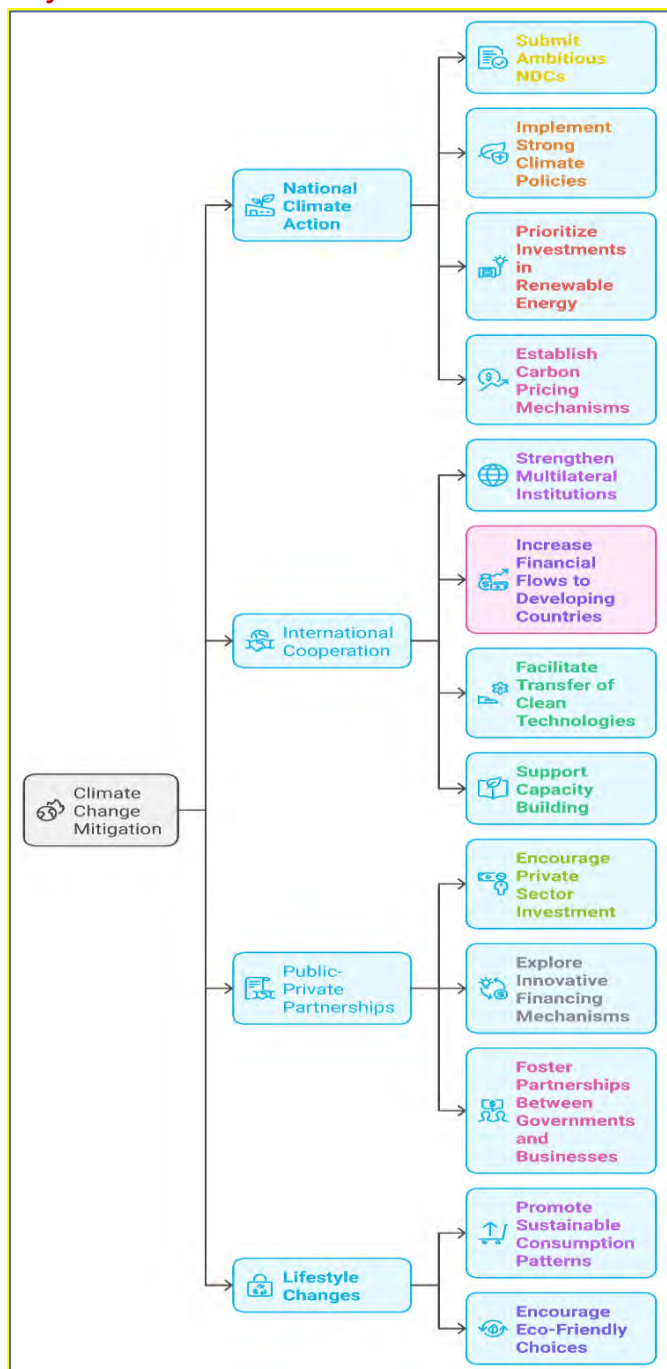
Key Mitigation Options:

- **Renewables:** Solar and wind energy contribute 27% (2030) and 38% (2035) of the potential.
- **Forestry:** Includes deforestation reduction, reforestation, and forest management (19% in 2030, 20% in 2035).
- **Other Options:** Demand-side measures, efficiency improvements, electrification, and fuel switching.
- **Challenges:** Insufficient progress on sectoral benchmarks for 1.5°C pathways. Need ambitious sectoral targets in upcoming NDCs. Requires unprecedented global policy action focused on sustainability.
- **Policy and Stakeholder Role:** Policies must remove barriers and engage the public and private sectors. They must also consider multi-stakeholder needs and enhance socio-environmental co-benefits.

- **Investment Requirements:** Net-Zero Transition: US\$0.9–2.1 trillion/year (2021–2050).
- Current investments (~US\$110 trillion globally) can accommodate these needs. Stagnated investment growth in emerging markets since 2008 demands reallocation, especially to developing economies.
- **Critical Actions:** Accelerate policy and financial shifts towards mitigation. Increase global investment at least sixfold to meet 1.5°C targets.

PEPPER IT WITH:
 United Nations Environment Programme, Greenhouse Gas Emissions, NDC, Net-Zero

Way forward:



Living Planet Report 2024

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						

The **Worldwide Fund for Nature (WWF)** publishes the **Living Planet Report every two years**. The 2024 Living Planet Report was published in October 2024. ZSL manages the Living Planet Index in a collaborative partnership with WWF.

About WWF and ZSL:

- **WWF (Worldwide Fund for Nature):**
 - **Mission:** Stop environmental degradation and promote harmony between people and Nature.
 - **Focus:** Conserving biodiversity. Ensuring sustainable use of renewable resources, reducing pollution and wasteful consumption.
 - **Scope:** Active in 100+ countries with 38M+ supporters.
- **ZSL (Zoological Society of London): Founded in 1826.**
 - **Mission:** International conservation charity focused on protecting species, restoring ecosystems, and fostering human-wildlife coexistence.
 - **Work:** Uses science, conservation zoos (London & Whipsnade), and public engagement to protect wildlife and inspire future conservationists.

Executive Summary:

Nature is being lost – with huge implications for us all

- **Global Biodiversity Decline:** Over the past 50 years, the average size of wildlife populations has decreased by 73%, with freshwater species declining the most (85%). Terrestrial and marine populations have also significantly declined (69% and 56%, respectively).
- **Regional Differences:**
 - **Latin America and the Caribbean:** 95% decline in wildlife populations.
 - **Africa:** 76% decline.
 - **Asia and the Pacific:** 60% decline.
 - **Europe and Central Asia:** 35% decline, with some stabilisation due to conservation efforts.
 - **North America:** 39% decline, with partial recovery due to conservation.
- **Key Threats:** Habitat loss, overexploitation, invasive species, climate change, disease, and pollution. The global food system is a significant driver of habitat degradation.
- **Living Planet Index (LPI):** This index tracks changes in species population sizes and serves as an early warning of extinction risks. Population declines impact ecosystem functions like pollination, grazing, and nutrient cycling.
- **Ecosystem Resilience:** Stable species populations increase resilience against disturbances. The global decline in biodiversity undermines ecosystem services critical for food security, clean water, carbon storage, and other human benefits.

Dangerous tipping points are approaching:

- **Nature's Decline:** The Living Planet Index (LPI) reveals rapid global biodiversity decline. Though sometimes gradual, environmental changes accumulate and can lead to tipping points—thresholds where small changes trigger significant, often irreversible impacts.
- **Tipping Points:** These are critical thresholds where cumulative environmental changes cause self-sustaining, catastrophic shifts. Examples include:
- **Biosphere:** Coral reef die-offs and Amazon rainforest collapse could destabilise ecosystems, release carbon, and disrupt global weather.
- **Ocean Circulation:** The collapse of the subpolar gyre could alter weather patterns in Europe and North America.
- **Cryosphere:** Melting ice sheets (Greenland, West Antarctica) and permafrost thawing could cause massive sea-level rise and release greenhouse gases.
- **Regional Examples:**
 - **Western North America:** Climate change exacerbates pine bark beetle infestations and forest fires, threatening forest ecosystems.
 - **Great Barrier Reef:** Repeated coral bleaching events and rising sea temperatures threaten global coral reefs, with a potential loss of 70–90% worldwide.

We are falling short of our global goals:

- **Global Sustainability Goals:** Nations have set ambitious goals to halt biodiversity loss (CBD), limit temperature rise to 1.5°C (Paris Agreement), and eliminate poverty (SDGs), but progress is falling short.
- **Current Progress:**
 - **SDGs:** Over half of the 2030 targets are on track to be missed, with 30% showing no improvement or worsening since 2015.
 - **Climate Commitments:** Current pledges may lead to a nearly 3°C temperature rise by 2100, risking catastrophic tipping points.
 - **Biodiversity:** National strategies lack adequate financial and institutional support, hindering effective action.
- **Risks and Solutions:**
 - **Isolated Approaches:** Addressing climate, biodiversity, and development separately increases risks of conflicts, such as land use competition for food, conservation, or energy.
 - **Coordinated Approaches:** A coordinated, inclusive approach can reduce trade-offs, avoid conflicts, and create opportunities to tackle climate change, conserve Nature, and improve human well-being together.

The scale of the challenge demands transformation:

- To maintain a living planet where people and Nature thrive, we need action that meets the scale of the challenge. We need more effective conservation efforts

while systematically addressing the significant drivers of nature loss. That will require nothing less than a transformation of our food, energy and finance systems.

Transforming conservation:

- **Conservation Impact:** While wildlife populations are generally declining, targeted conservation efforts have helped stabilise or increase some populations.
- **Limitations:** Current efforts, though beneficial, have been isolated successes and insufficient in addressing biodiversity loss. Long-term success requires integrating local communities' rights, needs, and values.
- **Protected Areas:** Cover 16% of land and 8% of oceans but are unevenly distributed and poorly managed. Expanding and improving these areas is key, with adequate funding and community respect.
- **OECMs:** Flexible conservation approaches like OECMs, beyond formal protection, are encouraged to scale conservation efforts.
- **Indigenous Peoples:** Manage 25% of global land, including significant protected areas. Supporting their rights is vital for large-scale biodiversity conservation.
- **Nature-Based Solutions (NBS):** NBS can address societal issues and advance climate, biodiversity, and sustainable development goals. NBS could reduce GHG emissions by 10–19% annually, benefiting ecosystems and livelihoods.

Transforming the food system: Global Food System

Paradox: The global food system degrades biodiversity, depletes water resources, and contributes to climate change, yet fails to meet global nutritional needs. Despite record food production, 735 million people face hunger, and a third of the global population lacks adequate nutrition, while obesity rates rise.

- **Environmental Impact:** Food production occupies 40% of habitable land, uses 70% of water resources, and contributes over 25% of global GHG emissions.
- **Hidden Costs:** The food system's negative impacts generate hidden costs of US\$10–15 trillion annually, about 12% of global GDP in 2020.
- **Threat to Food Security:** The current food system undermines future food security and is a significant driver of environmental degradation yet remains under-addressed mainly in global policies.
- **Needed Actions:**
 - **Nature-Positive Production:** Increase sustainable food production without harming Nature.
 - **Dietary Shifts:** Promote plant-based diets, reduce animal product consumption, and address global food security.
 - **Reduce Waste:** Cut the 30–40% of food that goes uneaten, which wastes resources and contributes to emissions.

- **Financial and Governance Changes:** Redirect subsidies to support sustainable practices and reduce waste while maintaining food access for all.

Transforming the energy system: Energy System and Climate Change: Energy production is the leading cause of climate change, impacting people and ecosystems. A rapid transition from fossil fuels to renewable energy is crucial to halving emissions by 2030 and keeping the 1.5°C climate target within reach.

- **Key Aspects of the Energy Transition:**
 - **Speed:** The transition must be accelerated.
 - **Sustainability:** It must be environmentally responsible.
 - **Equity:** Energy access and inequality must be addressed.
- **Progress and Goals:** While global renewable energy capacity has doubled in the last decade, the current pace is insufficient. By 2030, renewable capacity must triple, energy efficiency must double, and 20–40% of vehicles must be electrified. Investments must increase from US\$1.5 trillion in 2022 to at least US\$4.5 trillion annually.
- **Environmental and Social Challenges:** The transition must be carefully planned to avoid environmental damage, such as river fragmentation and land-use changes. Energy access inequity remains a key issue, with 770 million people lacking electricity and 3 billion relying on polluting fuels. A just transition requires fair access to clean energy and addressing socio-economic disparities.

Transforming the finance system:

- **Redirecting Finance for Sustainability:** Shifting finance from harmful activities to sustainable business models is essential for a livable planet. Over half of global GDP (55%) depends on Nature, but the economic system undervalues Nature, leading to exploitation and environmental harm.
- **Current Funding Imbalance:** Around US\$7 trillion is spent annually on activities that worsen climate change and biodiversity loss, while only US\$200 billion goes toward nature-based solutions. Redirecting just 7.7% of harmful finance flows could bridge the funding gap for nature-based solutions, benefiting Nature, climate, and human well-being.
- **Climate Finance Needs:** Global climate finance for energy reached US\$1.3 trillion in 2021/22, but the required annual investment for both mitigation and adaptation through 2030 is around US\$9 trillion.
- **Sustainable Food Systems:** Transitioning to sustainable food systems requires an additional annual investment of US\$390–455 billion, a fraction of what is currently spent on harmful agricultural subsidies.

PEPPER IT WITH:
Global Biodiversity, Paris Agreement, Sustainable Food System

- **Two Financial Transformation Approaches:**
 - **Financing Green:** Mobilising large-scale finance for conservation and climate impact through green finance solutions, such as bonds, insurance, and nature-positive business investments.
 - **Greening Finance:** Aligning financial systems to support sustainable development by accounting for Nature's value and addressing related risks.

Way forward:



Key takeaways from COP-16

News Excerpt:

The 16th Conference of the Parties (COP16) to the United Nations Convention on Biological Diversity (CBD) was a meeting held in Cali, Colombia from October 21 to November 1, 2024.

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

Conference of the Parties (COP) Background:

- The Conference of the Parties is the governing body of the Convention and advances its implementation through its decisions at its periodic meetings.
- To date, the Conference of the Parties has held 14 ordinary meetings and one extraordinary meeting (the latter, to adopt the Biosafety Protocol, was held in two parts).

Key Highlight of the COP16:

- **Background of the Convention:** This Convention follows the 2022 meetings in Montreal, Canada, where countries agreed on ambitious biodiversity targets for 2030.
- **30-by-30 Agreement:** Countries committed to protect 30% of land and water by 2030. At the time of the agreement, only 17% of land and 10% of marine areas were protected.
- **Kunming-Montreal Global Biodiversity Framework (KMGBF):** Formerly known as the KMGBF, it set 23

action-oriented global targets to address biodiversity loss and environmental issues by 2030 urgently.

- **Actionable Targets:** The framework calls for immediate initiation and completion of actions by 2030.
- **Key targets include:**
 - Reducing invasive alien species introductions by 50% and minimising their impacts.
 - Lowering pollution risks and impacts from all sources to acceptable levels by 2030.
 - Establishing a mechanism for benefit-sharing from digital genetic resources and traditional knowledge.
- **Biodiversity in Policy and Planning:** Integrating biodiversity into national policies, regulations, planning, and development processes is a priority target.
- **Implementation and Funding Challenges:** A major focus of COP-16 is on mechanisms to implement these targets and secure adequate funding. Though estimates suggest an annual need of \$200 billion to meet these goals, less than one-tenth of this funding has been committed so far.
- **Indigenous Inclusion in Conservation:** Negotiators agreed to establish a subsidiary body to include Indigenous groups and peoples in discussions on conservation and biodiversity.
- **Digital Sequence Information (DSI) Agreement:** A key topic was "benefit-sharing" related to the Digital Sequence Information (DSI), which concerns the equitable sharing of benefits from commercial products (like medicines) derived from the DNA of living organisms found in local communities.
 - Discussions were held on creating a multilateral mechanism for DSI, but no consensus was reached on which countries or corporations should contribute or how the sharing would be managed.
- **Formal Adoption of Major Texts: Key agreements formally adopted include:**
 - Biodiversity and climate change integration.
 - Mainstreaming biodiversity across sectors.
 - Measures to control invasive species.
 - Technical requirements for implementing the Kunming-Montreal Global Biodiversity Framework (KMGBF).
- **Focus on Implementation Needs:** Decisions highlighted the need to address technical and support requirements to ensure the successful implementation of the KMGBF targets.

India's contribution to COP-16:

- **Indian Delegation and Leadership:** India's delegation to COP-16 was led by the Minister of State for Environment, Kirti Vardhan Singh.

Updated Biodiversity Funding Plan:

- India presented an updated biodiversity plan, stating an expected expenditure of ₹81,664 crore for biodiversity and conservation from FY 2025-30.
- Previously, from FY 2018-22, India spent ₹32,207 crore solely through central government allocations for conservation and biodiversity-linked programs.

Need for International Financial Support:

- India highlighted the need for additional funding sources beyond routine government expenditure to meet its biodiversity goals.
- Indian officials emphasised the necessity of international finance to support the National Biodiversity Strategy and Action Plan (NBSAP) as outlined in Target 19 of the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**, which aims to mobilise \$200 billion annually, including \$30 billion from international finance.
- India launches updated **National Biodiversity Strategy and Action Plan (NBSAP) at COP 16** to the Convention on Biological Diversity (CBD) in Colombia.

India's Updated NBSAP:

- Aligned with the Kunming-Montreal Global Biodiversity Framework.
- It aims to halt and reverse biodiversity loss by 2030.
- Vision of living in harmony with Nature by 2050.
- Adopts a '**Whole-of-Government**' and '**Whole-of-Society**' approach.
- Focuses on ecosystem restoration, species recovery, and community-driven conservation.
- Prioritises the restoration of degraded ecosystems, wetland protection, and sustainable marine and coastal area management.
- **India's Biodiversity Governance Framework:**
 - The Biological Diversity Act 2002 and its 2023 amendments provide a strong legal framework.
 - The three-tier institutional structure ensures effective implementation.
 - MoEFCC plays a central role in coordinating biodiversity conservation efforts.
- **Extensive Consultation Process:**
 - The updated NBSAP was developed through a consultative process involving various stakeholders.
 - Twenty-three central ministries, state-level organisations, communities, and other stakeholders participated.
- **Key Features of the Updated NBSAP:**
 - Ecosystem-based management approach.
 - Bottom-up implementation approach.
 - Mainstreaming biodiversity into various sectors.
 - Inter-agency cooperation for effective implementation.

- Assessment of India's biodiversity status and trends.
- Analysis of existing policy and institutional frameworks.
- Exploration of potential biodiversity finance solutions.
- **Global Wildlife Conservation Efforts:** India highlighted its significant global contribution by establishing the International Big Cat Alliance to protect the seven major big cat species, which are indicators of a healthy ecosystem and rich biodiversity.
- **Increase in Ramsar Sites:** India has increased its Ramsar sites (ecologically important wetlands) from 26 in 2014 to 85, with a target to reach 100 soon.

PEPPER IT WITH:
Nations Convention on Biological Diversity, KMGBF, Digital Sequence Information.

Conclusion: COP16 advanced global biodiversity goals with strong commitments like the 30-by-30 Agreement. India's updated NBSAP emphasizes ecosystem restoration and international funding, aiming for biodiversity harmony by 2050.

Protected Planet Report 2024

News Excerpt:

The first thorough assessment of the State of protected and conserved places worldwide is the Protected Planet Report 2024, which is created by the IUCN and its World Commission on Protected places (WCPA) and the UNEP-World Conservation Monitoring Centre (UNEP-WCMC).

Executive Summary:

- The **Protected Planet Report 2024** is the first global assessment of protected and conserved areas under Target 3 of the **Kunming-Montreal Global Biodiversity Framework (KMGBF)**. It compiles the latest data from governments and stakeholders and focuses on expanding protected areas to cover **30% of the planet by 2030**.
- Key aspects of Target 3 include ensuring these areas are effective in conserving biodiversity, well-connected, and strategically placed. The report evaluates both progress toward this 30% coverage goal and the quality of protected areas, emphasising equitable approaches that respect Indigenous and local community rights.

The key findings from the report are:

Overarching:

- Global protected and conserved areas now cover:
 - 17.6% of terrestrial and inland water areas.
 - 8.4% of marine and coastal areas.

- While there has been progress in expanding coverage, this expansion needs to accelerate significantly to meet the 2030 target.
- Beyond coverage, efforts must be increased on other quality-focused elements of Target 3 to improve the effectiveness and functionality of protected areas.
- Expanding protected and conserved areas should include commitments to:
 - Respecting human rights,
 - Ensuring equitable governance,
 - Recognising Indigenous and traditional territories to promote inclusive and sustainable conservation.

Coverage:

- **Global Expansion:** Since 2020, 629,000 km² of terrestrial and inland waters and 1.77 million km² of marine and coastal areas have been officially protected.
- **National-Level Progress:** 51 countries and territories have achieved over 30% coverage of protected and conserved areas on land. 31 countries and territories have surpassed 30% coverage in marine areas, demonstrating strong national efforts.
- **Remaining Requirements to Meet 2030 Goals:** To achieve 30% global coverage, an additional 16.7 million km² (12.4%) of terrestrial and inland waters and 78.3 million km² (21.6%) of marine and coastal areas need protection.
- **Need for Accelerated Efforts:** Meeting the target by 2030 will require a substantial increase in the rate of expansion of protected areas seen since 2020.

Location:

- **Coverage of Key Biodiversity Areas (KBAs):** Over two-thirds of KBAs are at least partially covered by protected and conserved areas. 32% of KBAs remain completely outside these protected zones, indicating a need to improve conservation efforts for key biodiversity sites.
- **Protection of Ecoregions:** 25% of ecoregions have achieved over 30% protection. However, many ecoregions lack adequate representation in the protected area network, highlighting the need for an ecologically representative system of conserved areas.
- **Protection of Critical Ecosystem Services:** The majority of areas essential for ecosystem services (critical natural assets) remain unprotected. Currently, less than 20% of these vital areas have formal protection, underlining a gap in safeguarding ecosystem functions and services.

Connectivity:

- According to all metrics used in this report, the global system of protected and conserved areas is not yet well-connected.
- Based upon indicators described in this report, only 8.52% of land is both protected and connected.

Effectiveness:

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

- **Protected Area Management Assessments:** 177 countries and territories have completed and reported assessments of management effectiveness in at least one protected area.
- **Marine Protected Areas (MPAs):** Only 5.7% of the ocean is covered by MPAs that are operational with management plans in place or actively managed. Only 2.8% of the ocean falls under fully or highly protected MPAs, where no or minimal extractive activities with low environmental impact are allowed.

Equitable Governance:

- **Data on Equitable Governance:** Limited data is available, with governance assessments reported for only 0.22% of protected land areas and 0.001% of marine areas.
- **Governance by State and Non-State Actors:** National governments and state actors govern the majority of protected and conserved areas. Non-state governance (e.g., by Indigenous Peoples and local communities) is limited, covering 3.95% of protected and conserved areas. Shared governance arrangements cover 11.84% of protected and conserved areas.
- **Indigenous and Traditional Territories:** Outside designated protected areas, Indigenous and traditional territories span at least 13.6% of global terrestrial areas, highlighting their role in biodiversity conservation.

Integrated into the wider landscapes:

- **Integration into Wider Landscapes:** To ensure long-term success in biodiversity conservation, protected and conserved areas must be integrated into broader landscapes, seascapes, and ocean ecosystems.
- **Sustainable Use and Conservation:** The integration should promote sustainable use of resources, aligning with conservation outcomes to maintain biodiversity.
- **Key Requirements:** Integrated spatial planning is necessary to connect protected areas with the surrounding environment. Strong governance and collaborative management are crucial for successful integration. The approach should balance biodiversity protection with the enhancement of local livelihoods.

Conclusion: The Protected Planet Report 2024 underscores the need for accelerated efforts to expand and effectively manage protected areas to achieve 30% global coverage by 2030, emphasizing equitable governance and integration into broader ecosystems for sustainable conservation.

Adaptation Gap Report 2024

News Excerpt:

The United Nations Environment Programme (UNEP) released the Adaptation Gap Report 2024. It provides its annual assessment of progress in adaptation planning, implementation and finance.

Summary of the report:

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 Adaptation Gap is widening as climate impacts intensify, with adaptation actions failing to keep pace with rising needs. As global temperatures near 1.5°C above pre-industrial levels, climate events grow more frequent and severe. This exacerbates the costs of adaptation, disproportionately affecting vulnerable groups.
- The Adaptation Gap Report (AGR) 2024 highlights progress in planning, but implementation lags due to a gap in adaptation finance. **COP 29 in Baku will address the New Collective Quantified Goal (NCQG)** for climate finance and emphasise capacity-building and technology transfer to improve adaptation efforts. The Azerbaijan Presidency is focusing on means of implementation, aiming to strengthen adaptation and resilience, aligned with the UAE Framework for Global Climate Resilience established at COP 28.

Four headlines - main topics of the AGR 2024:

1. Progress in adaptation planning, implementation and finance:

The quality of adaptation planning is improving, but reaching global coverage of national adaptation planning instruments will be difficult.

- Adaptation planning has improved over the past two decades, with 87% of countries having at least one national adaptation instrument (policy, strategy, or plan). However, challenges remain, particularly in fragile or conflict-affected countries, where 10 still lack planning instruments.
- Only 68% of NAPs are partially aligned with Nationally Determined Contributions (NDCs), and 16% show no alignment. Aligning these plans is crucial for strategic investments and reducing redundancy.

Progress in adaptation implementation is slow and marred with problems. Countries need to ramp up their ambitions to prepare for increasing climate risks.

- Progress in climate adaptation is slow, with annual fluctuations in implementation despite a slight upward trend. There's an urgent need for countries to ramp up their ambitions and enhance support for adaptation in future Nationally Determined Contributions (NDCs).
- Evaluation of adaptation actions shows that about half are unsatisfactory or unsustainable without continued funding. Barriers to progress include institutional, regulatory, financial, and capacity constraints.

The adaptation finance gap remains extremely large, and bridging this gap is a priority for the NCQG for climate finance.

- The adaptation finance gap remains significant, with an estimated need of US\$215–387 billion annually. While international public adaptation finance increased from US\$22 billion in 2021 to US\$28 billion in 2022, aligning with the Glasgow Climate Pact's goal to double finance by 2025, this increase still falls short.

- Even if the doubling goal is achieved, it would only reduce the gap by 5%. Additionally, debt interest payments in developing countries often exceed adaptation finance needs, suggesting the potential for debt reform to support adaptation actions.

2. Bridging the adaptation finance gap

Meeting the climate challenge will require scaling up adaptation finance and a more strategic approach to investment.

- The Adaptation Gap Report (AGR) 2024 highlights the need for a strategic scaling up of adaptation finance. It outlines different types of adaptation and associated financing challenges.
- Easier-to-finance adaptations include reactive, incremental measures and market-sector-based approaches. More challenging adaptations involve anticipatory and transformational strategies, especially in non-market sectors and for vulnerable populations.
- The report emphasises shifting focus from reactive, project-based financing to anticipatory and transformational adaptation.

Only around one-third of the adaptation finance gap is in areas typically financed by the private sector, but there is still ample opportunity for private sector investments.

- Over two-thirds of adaptation finance needs are in areas that require public sector funding, as they involve public goods or non-market sectors, like social infrastructure. Without increased public finance or innovative financing approaches, countries will struggle to meet their adaptation goals outlined in NDCs and NAPs.
- Additionally, private investment will be crucial in areas not fully addressed by current adaptation finance estimates, including infrastructure needs, cooling requirements, and temperature-related labour productivity impacts.

Enabling factors are key for unlocking adaptation finance, especially for the private sector.

- Emerging financial instruments such as risk finance, insurance-linked instruments, resilience bonds, and debt-for-adaptation swaps aim to define adaptation outcomes, create incentives, and attract investment.
- Private sector enabling factors include climate risk disclosure frameworks, transition planning, and blended finance to de-risk investments. Additionally, adaptation accelerators and platforms can help develop bankable projects.

3. Enhancing capacity-building and technology transfer to improve the effectiveness of adaptation actions

Capacity-building and technology transfer are central to enhancing adaptation action in developing countries, but their effectiveness is uncertain.

- Capacity-building and technology transfer are essential for effective adaptation to climate change, yet current efforts are often uncoordinated, costly, and short-term.

- To address these issues, better integration and targeted support are needed, alongside enhanced cooperation through South-South, North-South, and triangular partnerships. These solutions should be included in updated Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) for more coordinated and effective adaptation action.

Developing countries express the need for more capacity and technology across all aspects of adaptation planning and implementation, focusing on water, food and agriculture.

- Increased capacities are needed across all aspects of adaptation planning and implementation, with food and agriculture being the most common sectors in National Adaptation Plans (NAPs). Other priority sectors for capacity-building include environment, water, and health. Agriculture and water also top the list for technology needs, followed by coastal zone protection.
- Technology-related adaptation finance has grown from \$5.7 billion in 2018 to \$12.7 billion in 2022, reflecting a shift toward supporting adaptation through new technologies. Agriculture receives a significant portion (31%) of adaptation-related finance.

PEPPER IT WITH:
COP, Climate finance, Nationally Determined Contributions

4. Insights into aspects of the UAE FGCR

Countries are making progress towards the targets of the UAE FGCR, but increased efforts will be needed to reach them in time.

- National Adaptation Plans (NAPs) largely incorporate the **thematic targets of the UAE Framework for Global Climate Resilience (UAE FGCR), though targets like poverty eradication and cultural heritage protection are less frequently addressed.**
- Sectoral coverage in NAPs shows unevenness, particularly due to data gaps and insufficient capacity to assess climate impacts. This hampers effective decision-making and the development of early warning systems.

Conclusion: It is difficult to assess progress towards any of the thematic targets in the absence of specific indicators and metrics, the adoption of clear timeframes for the achievement of the dimensional targets shows that efforts in impacts, vulnerability and risk assessments, planning, implementation, monitoring, evaluation and learning need to be ramped up if these targets are to be met.

Torches and tension on elephant corridors

News Excerpt:

South Bengal has been dealing with a human-wildlife problem for the past three decades. With densely populated habitations between forest patches, deaths and injuries to both people and animals are common.

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						

Current Situation:

- **Attempt to Drive Away Elephants:** Around 30 villagers and a special monitoring team, known locally as a **'hula (torch) party,'** attempted to drive away elephants using sticks and flaming torches. Thousands of people gathered, shouting and jeering at the elephants, which escalated the situation. The forest department managed to tranquillise one elephant, but another got trapped near the college campus.
- **Tragic Incident:** Two members of the hula party allegedly threw torches at the trapped elephant, setting it on fire. The elephant, in distress, ran frantically as flames engulfed its body, eventually collapsing and dying.
- **Postmortem and Additional Fatality:** A postmortem on August 17 revealed that the deceased elephant was pregnant. An elderly man was also killed during the chaotic confrontation between humans and elephants.
- **Ongoing Human-Elephant Conflict:** The incident highlights a long-standing human-elephant conflict in **the Jangalmahal region of southwestern West Bengal, where around 200 elephants inhabit 59,497 hectares of forest.** 99 human fatalities from elephant encounters have occurred in West Bengal in 2024.
- **Protests and Arrests:** Wildlife activists condemned the brutality of the killing, criticising the methods used by hula parties and demanding change.
- **Jhargram as a Conflict Hotspot:** Jhargram, located approximately 174 km southwest of Kolkata, has become a focal point of human-elephant conflict. Dense forests in the area making it challenging for people to detect elephant herds until they are too close.

Elephant Movement patterns:

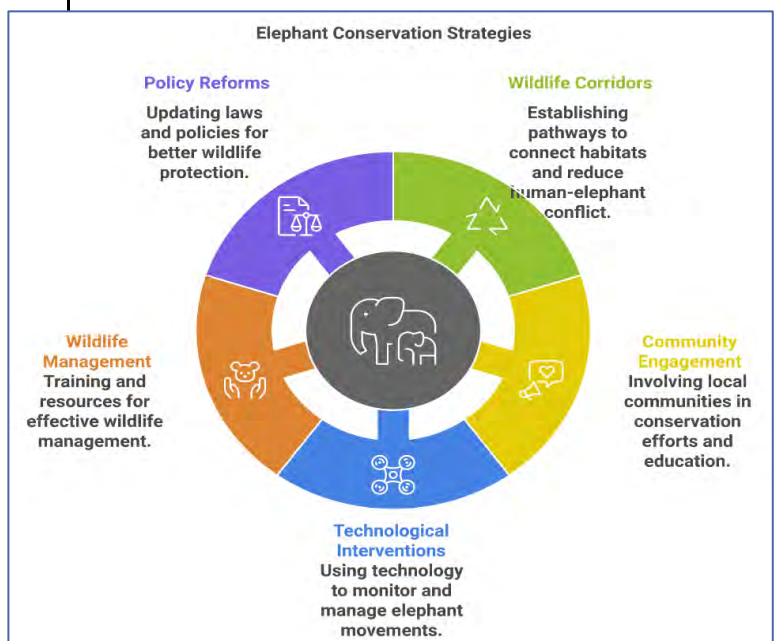
- **Historical Context of Elephant Movement:** Drought in 1986-87 likely triggered large-scale elephant migration from Jharkhand to southern Bengal, as Professor Raman Sukumar from IISc, Bengaluru, noted.
- **Forest Department's Conflict Mitigation Efforts:** The imam suggests minimising human-elephant interaction to enable coexistence, including increasing forest plantations to prevent elephants from foraging in villages.
- **Legal Restrictions on Fencing and Hula Parties:** Sagnik Sengupta, director of Sage Foundation, highlights that **using electric fencing on Schedule I animals like elephants is illegal under India's Wildlife Protection Act, 1972,** which prohibits harm to listed species. Hula parties are intended only to block elephants from entering towns, not to drive them out, as reinforced by a 2018 Supreme Court order banning fire torches for driving elephants.

- **Tranquillization Protocol:** The tranquillisation of a **Schedule I animal like the elephant requires prior approval** from the principal chief conservator of forests and the chief wildlife warden.
- **Mining and Habitat Disruption:** Local activist states that before the 1980s, elephants rarely stayed in the region, returning to the Dalma mountain range in Jharkhand. Mining in Dalma has reportedly driven elephants from their natural habitat, leading them to settle in Jhargram.
- **Elephant Corridors and Human Habitation:** In 2023, West Bengal recorded **the highest number of elephant corridors, with 26 total across northern and southern parts of the State.** These corridors passing through human habitations exacerbate the conflict, making it more complex than simply controlling elephant movement.

Lives and livelihoods lost:

- **Tragic Incident:** Jiten Khiladi recalls the death of his brother, Chadu Khiladi, who was killed by elephants while trying to save his son's shop, which the animals damaged. Despite receiving ₹5 lakh as compensation, the family has struggled financially, with no job provided to them as promised by the State government.
- **Loss of Livelihoods:** Shyamsundar, a farmer, has lost large quantities of cashew and mango crops to elephants, who have adapted to eating these crops due to food scarcity.
- **Community Initiatives for Protection:** Villagers have formed over 15 WhatsApp groups to share updates on elephant sightings, helping track movements and provide warnings. However, misinformation through unverified photos and videos often spreads panic, leading to potential conflicts with elephants.

Way forward:



On the new coastal zone plan of Kerala

News Excerpt:

The Union Ministry of Environment, Forest and Climate Change has approved the **Coastal Zone Management Plans (CZMPs) of 10 coastal districts of Kerala: Kasaragod, Kannur, Kozhikode, Malappuram, Thrissur, Ernakulam, Kottayam, Alappuzha, Kollam, and Thiruvananthapuram.**

More details about news:

The plan, prepared in accordance with the provisions of the Coastal Regulation Zone Notification, 2019, permits coastal districts to take advantage of the relaxed Coastal Regulation Zone (CRZ) rules and initiate development activities, including building construction towards the seaward side.

Process for Coastal Regulation Zone (CRZ) Clearance:

- **Ministry's Directive:** The Ministry has instructed the State government to make signed copies of the approved Coastal Zone Management Plans (CZMPs) for all 10 coastal districts publicly available within one month. The copies are to be published on the Kerala Coastal Zone Management Authority website.
- **CRZ Clearance Consideration:** Applications for CRZ clearance received after the approval of the CRZ 2019 will be processed according to the CRZ Notification, 2019.
- **Purpose of CRZ Declaration:** The process aims to declare designated areas as Coastal Regulation Zones (CRZ) to:
 - Conserve and protect the unique environment of coastal stretches and marine areas.
 - Provide livelihood security to fishing and other local communities in coastal areas.
 - Promote sustainable development based on scientific principles, considering natural hazards and sea-level rise due to global warming.

Implications of CRZ Notification for Kerala:

- **Coastline and Population Density:** Kerala has a coastline of approximately 590 km, with nine out of its 14 districts situated along the Arabian Sea. The population density of Kerala, as per the 2011 Census, is 859 persons per square kilometre, more than double the national average of 382 people per square kilometre. The coastal areas of Kerala have a particularly high population density compared to other regions in the State.
- **CRZ Regime Coverage:** It is estimated that five corporations, 36 municipalities, and 245 grama panchayats in the ten coastal districts will be brought under the CRZ regime.
- **Challenges in Compliance:**
 - The high demographic pressure has led to widespread violations of CRZ rules along Kerala's coastline.

- Numerous illegal land modifications have been reported, including the reclamation of wetlands and encroachments.
- Hundreds of constructions have been built in blatant violation of the CRZ rules.
- **Previous Focus of CRZ Regime:** The CRZ 2011 regime, which was in place until the approval of the Coastal Zone Management Plans (CZMP), focused on:
 - Conserving the coastal ecosystem. Protecting the livelihoods of millions of fishers and coastal communities who depend on these ecosystems for survival.

Benefits of the CZMP Approval for Kerala:

- **Direct Benefits to People:** The approval of the CZMP is estimated to benefit around 10 lakh people in Kerala.
- **Pre-condition for CRZ 2019 Implementation:** The approval of the CZMP was required for the State to implement CRZ 2019 and benefit from its provisions.
- **Reduction of No Development Zone (NDZ):** In at least 122 local bodies in Kerala, the NDZ around tidal-influenced water bodies has been reduced from 100 metres to 50 metres. This will provide more space for development while still protecting coastal ecosystems.
- **CRZ-III A Classification:** 37 village panchayats will be classified as CRZ-III A, where the NDZ has been reduced to one-fourth of its previous size. CRZ-III A areas are densely populated rural regions, with a population density of 2,161 per square kilometre (as per the 2011 Census). The NDZ in CRZ-III A will be 50 metres from the High Tide Line, compared to 200 metres in the CRZ 2011 notification.
- **Inclusion of Village Panchayats in CRZ-2:** 66 village panchayats will now fall under the CRZ-2 category, which allows for the construction of both commercial and residential buildings along the building line of authorised structures.
- **Reduction in Overall NDZ Area:** The total NDZ in Kerala's CRZ areas will be reduced to 108.397 sq. km, compared to 239.431 sq. km under the CRZ 2011 notification.

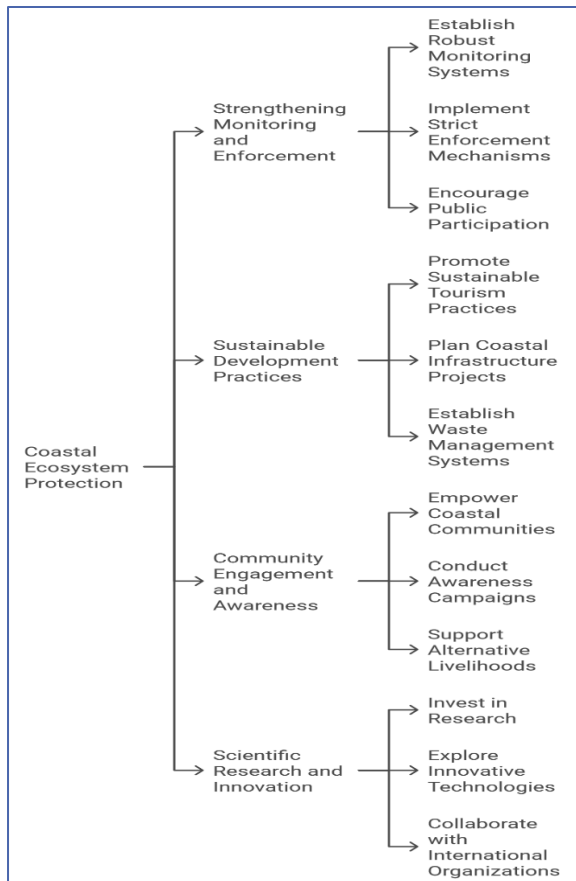
Impact of the 2019 CRZ Notification on Mangroves:

- **Reduced Protection for Government-Owned Mangroves:** The 2019 notification limits the legal protection of government-owned mangrove areas of over 1,000 sq. metres to a 50-metre buffer zone. This reduced protection could expose mangrove areas to exploitation.
- **Reduction in Buffer Zones for Mangroves:** The new regime reduces the buffer zone around mangroves in Kerala to 2,500 hectares, down from the previous 4,300 hectares. This decrease in the protected area could compromise the health of mangrove ecosystems.

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									

- **Impact on Mangroves in Private Holdings:** The new rules remove the mandatory buffer zone around mangrove vegetation located in private holdings. While private landowners may benefit from this, it could have a disastrous impact on the already-depleting mangrove vegetation in these areas.
- **Potential for Loss of Mangrove Vegetation:** The reduction in protections could lead to the destruction of large tracts of mangrove vegetation, which are vital for coastal ecosystems and as breeding grounds for many species.

Way forward:



SCIENCE & TECHNOLOGY

RNA editing promises to go where DNA editing can't

News Excerpt

Wave Life Sciences, a **biotechnology company** based in Massachusetts, recently achieved a significant milestone by becoming the first to **treat a genetic condition** through **RNA editing** at the clinical level.

About RNA

- Ribonucleic acid (RNA) is a **nucleic acid** found in all living cells. It shares structural **similarities with DNA** but differs in key ways, particularly in its single-stranded form and distinct sugar and base composition.
- **Structure of RNA**

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

- **Single-Stranded:** Unlike double-stranded DNA, RNA typically exists as a single strand, which allows it to fold into various complex structures.
- **Composition:** Composed of alternating phosphate groups and ribose sugars (in contrast to the deoxyribose in DNA).
- **Nitrogenous Bases:**
 - Adenine (A)
 - Uracil (U) (replaces thymine found in DNA)
 - Cytosine
 - Guanine (G)

Types of RNA:

Messenger RNA (mRNA): Carries genetic instructions from DNA to ribosomes for protein synthesis.

Ribosomal RNA (rRNA): Forms the structural and functional core of ribosomes, where proteins are assembled.

Transfer RNA (tRNA): Delivers amino acids to ribosomes, ensuring the correct sequence during protein synthesis.

Regulatory RNAs: Include small RNA molecules like microRNAs (miRNAs) and small interfering RNAs (siRNAs), which regulate gene expression by preventing or altering translation.

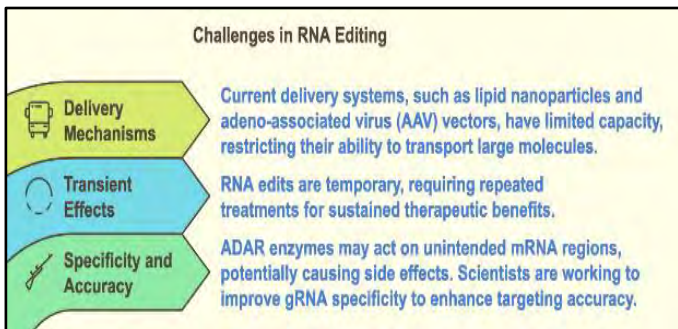
Functional Roles of RNA

- **Gene Expression Regulation:** RNA is central to RNA interference, where small RNA molecules inhibit gene expression.
- **Protein Synthesis:** RNA serves as a blueprint (mRNA), a catalyst (rRNA), and a delivery agent (tRNA) in protein production.
- **Catalytic Activity:** Some RNA molecules, called ribozymes, can catalyse biochemical reactions.
- **Immune Response:** Certain RNAs play roles in detecting and responding to viral infections.
- **RNA in Viruses**
 - **Genomic Material:** Several viruses, including retroviruses (e.g., HIV) and coronaviruses (e.g., SARS-CoV-2), use RNA as their genetic material.
 - **High Mutation Rates:** RNA viruses mutate more rapidly due to the lack of proofreading during replication, contributing to their adaptability.
- **RNA's Role in Biotechnology**
 - **RNA Interference and CRISPR-Cas9:** RNA molecules guide the CRISPR-Cas9 system for precise gene editing, highlighting RNA's essential role in genetic engineering.
 - **mRNA Vaccines:** The development of mRNA vaccines, such as those for COVID-19, has showcased RNA's potential in rapid and targeted vaccine production. These vaccines instruct cells to produce a

harmless piece of the virus, prompting an immune response.

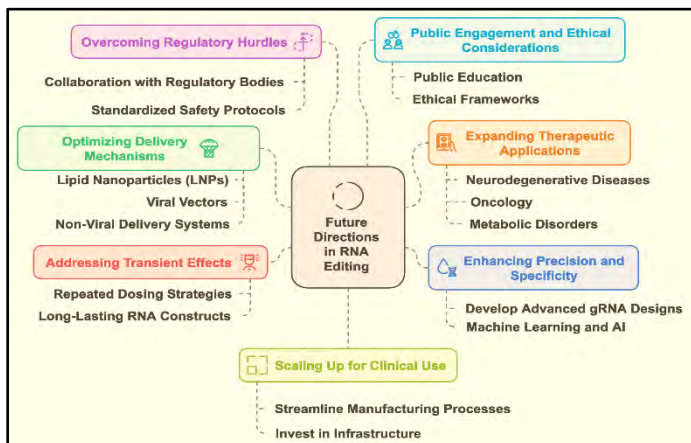
What is RNA editing?

- **Role of RNA in Protein Synthesis:** RNA, specifically messenger RNA (mRNA), plays a crucial role in translating the genetic instructions from DNA into functional proteins. Errors during the transcription process can lead to faulty mRNA, resulting in the production of defective proteins that cause genetic disorders.
- **Mechanism of RNA Editing:** RNA editing corrects errors in mRNA after transcription but before translation. A key technique involves **adenosine deaminase acting on RNA (ADAR)** enzymes. ADAR converts adenosine (A) in RNA into inosine (I), which mimics guanosine (G), thereby restoring the mRNA's function.
- **Guide RNA (gRNA) Technology:** Scientists use gRNA to direct ADAR to specific sites on the mRNA, ensuring precise corrections. This approach can target single-point mutations, potentially treating various genetic conditions.



RNA Editing in Development

- **Breakthrough:** Wave Life Sciences' therapy, **WVE-006**, targets **α -1 antitrypsin deficiency (AATD)**, a genetic disorder affecting the liver and lungs. Using gRNA, ADAR enzymes correct the mRNA sequence in the **SERPINA1** gene, enabling the production of functional α -1 antitrypsin protein.



- **Expanding Applications:** Wave Life Sciences plans to extend RNA editing to treat - Huntington's disease, Duchenne muscular dystrophy, and Obesity.

- **Extending RNA Editing:** Researchers also extend RNA editing to change the exon. mRNA is made up of portions called introns and exons.

- Exons eventually code for a protein, whereas the introns are non-coding parts that are removed from the RNA before it's used to make a protein.

RNA vs. DNA Editing

- **Advantages of RNA Editing**

- **Temporary Edits:** RNA edits are reversible, reducing long-term risks.
- **Lower Immune Response Risk:** Unlike DNA editing, RNA editing uses ADAR, which is naturally present in the human body, minimising immune reactions.

PEPPER IT WITH:
 CRISPR-Cas9, Genetic Disorders, Genetic Engineering, Precision Medicine.

- **Limitations of DNA Editing**

- **Permanence:** DNA edits are irreversible, posing higher risks of unintended consequences.
- **Potential Immune Reactions:** DNA editing tools, such as CRISPR-Cas9, involve bacterial proteins, which may trigger immune responses.

Conclusion: Wave' RNA editing breakthrough offers a promising, reversible approach to treating genetic disorders. By harnessing RNA's flexibility and lower immune risk, this advancement could revolutionize therapies for conditions like Huntington's disease and obesity.

World Intellectual Property Indicators 2024 Report

News Excerpt

The **World Intellectual Property Organization (WIPO)** has published the World Intellectual Property Indicators (WIPI) 2024, underscoring global trends in intellectual property (IP) filings.

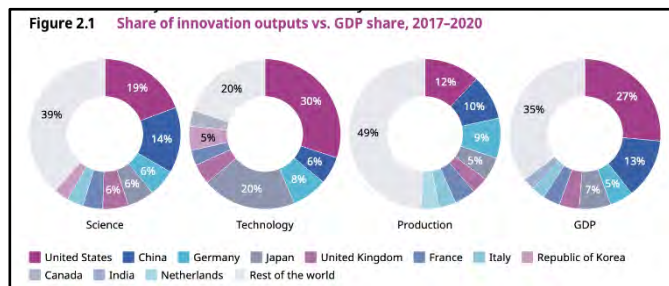
GS CONNECT											
GS	I	II	III	IV	GS	I	II	III	IV		
1					7						
2					8						
3					9						
4					10						
5					11						
6					M						

About World Intellectual Property Organization (WIPO):

- A **specialised UN agency** headquartered in **Geneva, Switzerland**, established in **1967**.
- **Objective:** Ensures the IP framework evolves with global needs, fostering innovation and economic growth.
- **Membership:** Comprises **193** member states, making it a nearly universal body.
- **Role and Functions:**
 - Serves as a global forum for **discussions** on intellectual property issues.
 - Facilitates IP **cooperation** between governments, industries, and civil society.
 - Hosts **standing committees** and **working groups** for members to negotiate changes and draft new IP rules.

Key Highlights of the Report
Global Patenting Activity

- **Total Applications:** For the first time, global patent applications surpassed 3.5 million, marking a significant milestone in intellectual property (IP) innovation.
- **Growth Trend:** This represents the fourth consecutive year of growth, indicating the resilience of global innovation despite headwinds from inflation, supply chain disruptions, and geopolitical tensions.
- **Top Filers:**
 - **China** led by a wide margin, filing 1.64 million applications, reflecting its strategic focus on technological advancements.
 - The **United States** ranked second with 518,364 applications, emphasising its continued emphasis on high-tech and biotech industries.
 - **Japan** (414,413), **Republic of Korea** (287,954), and **Germany** (133,053) rounded out the top five, each maintaining their strong positions in R&D-intensive sectors.



Industrial Design Filing Activity

- **Total Filings:** 1.52 million industrial design filings, marking a 2.8% growth compared to the previous year.
- **Double-Digit Growth:** Seven out of the top 20 countries showed impressive double-digit growth, indicating a surge in product and aesthetic innovation globally.
- **Sectoral Trends:** Growth was particularly strong in consumer goods, electronics, and automotive design, reflecting evolving consumer preferences and technological integration.

Trademark Filing Activity

- **Total Filings:** Trademark filings reached 15.23 million classes globally.
- **Decline:** Although filings declined by 2% compared to 2022, the drop was less severe than the previous year's, signalling a gradual stabilisation in the global business environment.
- **Brand Protection:** Trademark filings remain a key indicator of business expansion and brand establishment, particularly in e-commerce and digital platforms.

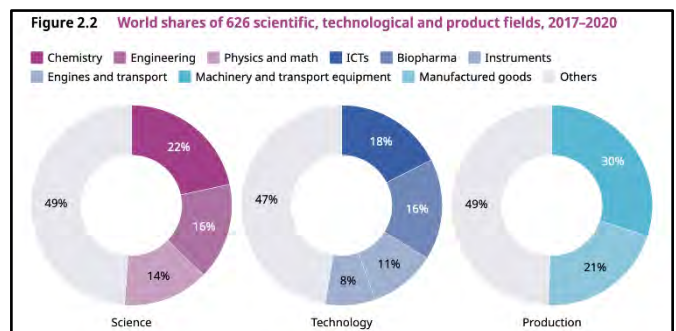
Regional Dominance of Asia

- **Asia's Share:** Offices in Asia accounted for a dominant share of global IP filings:
 - **Patents:** 68.7% of global filings.
 - **Trademarks:** 66.7% of global filings.

- **Industrial Designs:** 69% of global filings.
- **Concentration within Asia:**
 - **China, Japan, and the Republic of Korea** were responsible for the majority of Asia's IP activity:
 - 91.1% of Asian patent filings.
 - 77.0% of Asian trademark filings.
 - 87.2% of Asian industrial design filings.
- This concentration highlights the region's innovation hubs and their strategic focus on IP to drive economic growth.

India Related Findings

- **Top 10 Global Ranking in All Major IP Rights**
 - **Patents, Trademarks, and Industrial Designs:** India has joined the global top 10 in all three key intellectual property categories, showcasing its expanding innovation landscape.
- **Rapid Growth in Patents**
 - **Fastest Growth:** Patent applications grew by 15.7%, the fastest among the top 20 origins in 2023, marking five consecutive years of double-digit growth.
 - **Global Ranking:** India ranks 6th globally with 64,480 patent applications.
 - **Resident Filings:** For the first time, 55.2% of filings were by Indian residents, indicating a robust domestic innovation environment.



- **Patent Grants:** A remarkable 149.4% increase in patents granted compared to 2022, signalling significant efficiency improvements in the patent office.
- **Surge in Industrial Design Applications**
 - **Steady Growth:** Industrial design applications rose by 36.4%, reflecting India's focus on product design, manufacturing, and creative industries.
 - **Key Sectors:** Textiles and Accessories, Tools and Machines, and Health and Cosmetics

PEPPER IT WITH:
IP Ecosystem in India, Technological Advancements, Startups and MSME Innovation, Make in India.

 - These three sectors accounted for almost half of all design filings, aligning with India's emphasis on innovation in both traditional and modern industries.

- **Consistent Growth in Trademark Filings**
 - **Global Rank:** India is now the 4th largest for trademark filings, with a **6.1% increase** in 2023.
 - **Resident Filings:** Nearly 90% of trademark applications were by Indian residents.
 - **Leading Sectors:**
 - **Health:** 21.9% of filings.
 - **Agriculture:** 15.3%.
 - **Clothing:** 12.8%.
 - **Active Registrations:** India holds the second-largest number of active trademark registrations globally, with over 3.2 million trademarks in force.
- **IP Ecosystem Evolution**
 - **Patent and Industrial Design Doubling:** Between 2018 and 2023, patent and industrial design filings more than doubled.
 - **Trademark Filings:** Increased by 60% over the same period.
 - **Patent-to-GDP Ratio:** This metric rose from 144 to 381 in the past decade, indicating that intellectual property growth is scaling alongside economic development.

antimicrobial resistance risk and **socioeconomic impacts**.

- The study reconfirms longstanding **priorities** for vaccine research and development (R&D), including for **HIV, malaria, and tuberculosis** - three diseases that collectively kill nearly 2.5 million people each year.
- The study also identified pathogens such as **Group A streptococcus** and **Klebsiella pneumoniae** as top disease control priorities in all regions, highlighting the urgency to develop new vaccines for pathogens increasingly resistant to antimicrobials.
- Pathogens **nearing regulatory approval** or political recommendation for their vaccines include the **dengue virus, Group B Streptococcus, extra-intestinal pathogenic Escherichia coli, Mycobacterium tuberculosis**, and the respiratory syncytial virus.
- The study is in line with the goal of the **Immunization Agenda 2030**, which is to ensure that everyone in all regions can benefit from vaccines that protect them from serious diseases.

Need for Vaccines Against Priority Pathogens

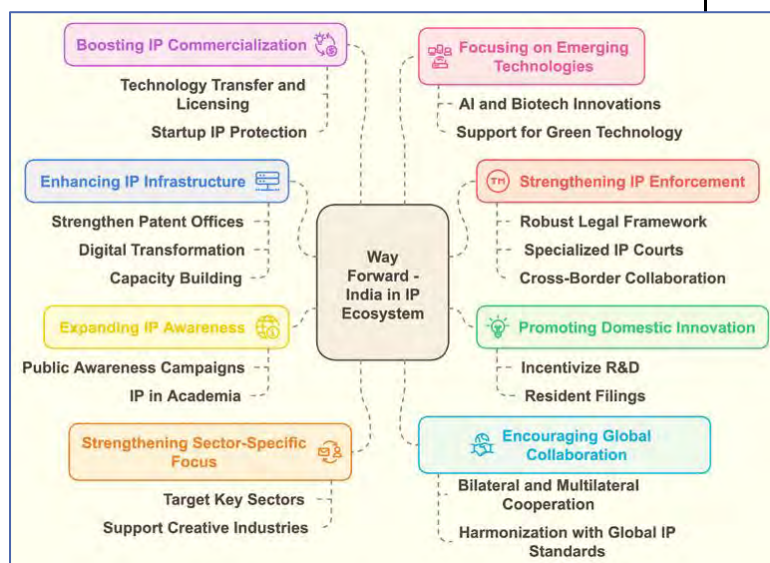
- **High Disease Burden:** **HIV, Malaria, and Tuberculosis (TB)** collectively cause around **2.5 million deaths annually**, particularly in low- and middle-income countries (LMICs).

○ Despite decades of efforts, effective vaccines for HIV and malaria are still in the development stages, while existing TB vaccines (like BCG) offer limited protection.

- **Emerging Pathogens:** Dengue Virus causes up to **400 million infections annually**, leading to severe illness and death in tropical regions. **Respiratory Syncytial Virus (RSV)** is a leading cause of severe respiratory illness in infants and older adults, causing over **100,000 deaths annually** in these groups.

● **Growing Antimicrobial Resistance (AMR):** **Klebsiella pneumoniae** is a major cause of hospital-acquired infections and is increasingly resistant to last-resort antibiotics like carbapenems. **Group A Streptococcus** and **ExPEC** are common pathogens becoming harder to treat due to growing resistance to first-line antibiotics.

- **Protection for Vulnerable Populations:** **Group B Streptococcus (GBS)** is a leading cause of **neonatal** infections, including sepsis and meningitis. A vaccine could prevent life-threatening conditions in newborns. **RSV** disproportionately affects **infants** and **older adults**, causing severe respiratory illnesses and hospitalisations.
- **Healthcare Costs:** Treating infectious diseases places a significant financial burden on families and healthcare systems, especially in **LMICs**. **Lost productivity** due to illness impacts economic growth.



WHO Identifies 17 Pathogens in Urgent Need of Vaccines

News Excerpt

A new World Health Organization (WHO) study published in BioMedicine has listed **17 pathogens** that regularly cause diseases in communities as **top priorities** for new vaccine development.

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 Highlights of the Study

- The WHO study is the **first global effort** to systematically **prioritise endemic pathogens** based on criteria that include **regional disease burden**,

- **Potential for Future Outbreaks:** Many of the identified pathogens have the potential to cause widespread outbreaks or pandemics, particularly if drug-resistant strains become dominant.
 - **For example,** new, more virulent **Group A Streptococcus** or **Klebsiella pneumoniae** strains could emerge, overwhelming healthcare systems.

Challenges in Vaccine Production

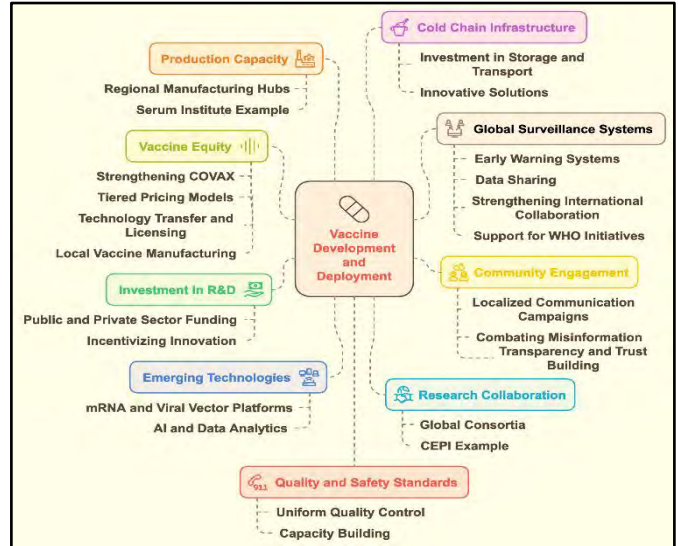
- **Complexity of Pathogens:** Pathogens such as **HIV** and **malaria parasites** exhibit high genetic diversity, making it difficult to develop vaccines that provide broad protection. **Influenza virus** requires annual updates to vaccines due to frequent mutations. Some pathogens, like **malaria**, have complex life cycles involving multiple stages and hosts, complicating vaccine development.
- **AMR-Related Challenges:** Pathogens like **Klebsiella pneumoniae** have developed resistance to existing treatments, but creating a vaccine that targets drug-resistant strains requires advanced antigen identification and validation processes.
- **Long Development Timelines and High Failure Rate:** Vaccine development typically spans several years, moving through **Preclinical Trials, Phase I-III Clinical Trials,** and **Regulatory Approval.** Many vaccine candidates fail during the preclinical or clinical stages due to insufficient immune response or unforeseen safety concerns.
 - **For example,** numerous HIV vaccine candidates have shown promise in early trials but failed in larger clinical studies.

● **Intellectual Property (IP) and Licensing:**

PEPPER IT WITH:
 Antimicrobial Resistance, One Health Approach, Pandemic Preparedness, Universal Health Coverage.

- Proproprietary technologies and patents can delay the widespread production of vaccines in low-income regions—for example, licensing mRNA vaccine technology was delayed during the COVID-19 pandemic.
- **Specialised Facilities:** Vaccine production often requires highly specialised infrastructure to handle biological materials, maintain sterile conditions, and ensure quality control. Many vaccines require **cold storage** throughout production, distribution, and administration.
 - **For example,** mRNA vaccines like those for COVID-19 need ultra-cold storage, posing challenges in regions with limited infrastructure.
- **Limited Market Incentives:** The **WHO** highlighted that global vaccine decisions are often driven by **return on investment** rather than the potential to save lives. Pharmaceutical companies **hesitate to invest** due to low returns for diseases prevalent in low-income regions (e.g., malaria, TB, Group B Streptococcus).

- **Vaccine Hesitancy and Misinformation:** Misconceptions about vaccine safety and efficacy lead to **public reluctance.** For example, misinformation about vaccine side effects has fueled hesitancy, even for life-saving vaccines like measles and COVID-19.
- **Cultural and Social Barriers:** Cultural beliefs or misinformation can hinder vaccine acceptance in some regions. For example, certain **communities resist polio vaccination** due to mistrust in health authorities.



Telcos Cast Satellite Internet as a Threat to Terrestrial Networks

News Excerpt

The **Telecom Regulatory Authority of India (TRAI)** hosted a six-hour open house discussion where telecom operators and satellite Internet providers debated the regulation of services like **SpaceX’s Starlink** and **Amazon’s Kuiper.**

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

What is Satellite Internet?

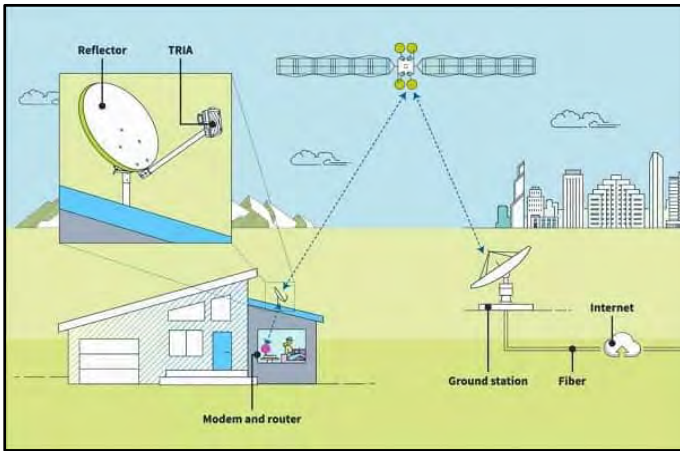
Satellite internet works by providing **internet access** through communication satellites. Internet access is usually provided through **geostationary satellites** that can offer relatively **high data speeds**, up to 506 Mbit/s.

Internet signals are relayed by satellites, which are then caught by a **home-based antenna kit.**

How Does Satellite Internet Work?

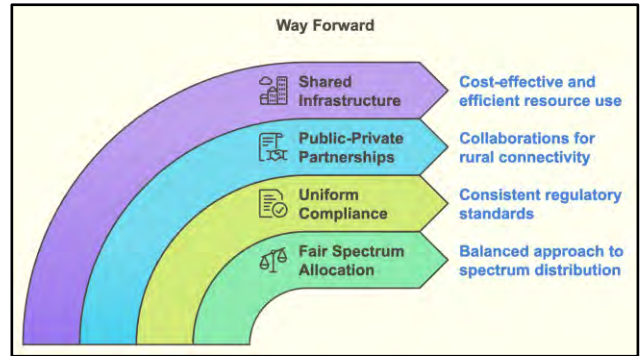
- Satellite-based internet usually relies on **three components** – a **satellite, ground stations,** and a pack of small **antennae and transceivers each subscriber owns.**
- The **ground stations,** known as gateways, relay Internet data to and from the satellite via radio waves. These waves are received by satellites and relayed back to individual antennas and transceivers.

- The system also includes a **modem** at the user end, which links the user's network with the transceiver, and a **centralised network operations centre (NOC)** to monitor the entire system.



Spectrum Allocation: Auction vs. Administrative Assignment

- Telecom Operators** argued that the **Telecommunications Act 2023** does not exempt satellite Internet operators from participating in **spectrum auctions**.
 - They emphasised that allowing administrative spectrum assignment to satellite providers could lead to unfair advantages, undermining the competitive balance.



INTERNAL SECURITY

Cyberfraud losses could amount to 0.7% of GDP, projects Ministry's study

News Excerpt:

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

Indians are likely to lose over ₹1.2 lakh crore over the next year due to cyber frauds, according to a projection made by the Indian Cyber Crime Coordination Centre (I4C), which runs under the Union Ministry of Home Affairs (MHA).

More detail about news:

- International Money Transfer in Scams:** A large portion of defrauded money is moved out of India, with many scams linked to China or Chinese-connected entities. Some scams are domestically operated, involving multiple account transfers before withdrawing money from ATMs.

- Geographical Origins of Cyber Crimes:** Nearly 50% of cybercrime complaints received by Indian authorities have origins in China, as well as in regions of Cambodia and Myanmar.

- I4C's Investigative Role:** The Indian Cyber Crime Coordination Centre (I4C), led by Chief Executive Rajesh Kumar, actively monitors and investigates these cybercrime sources.

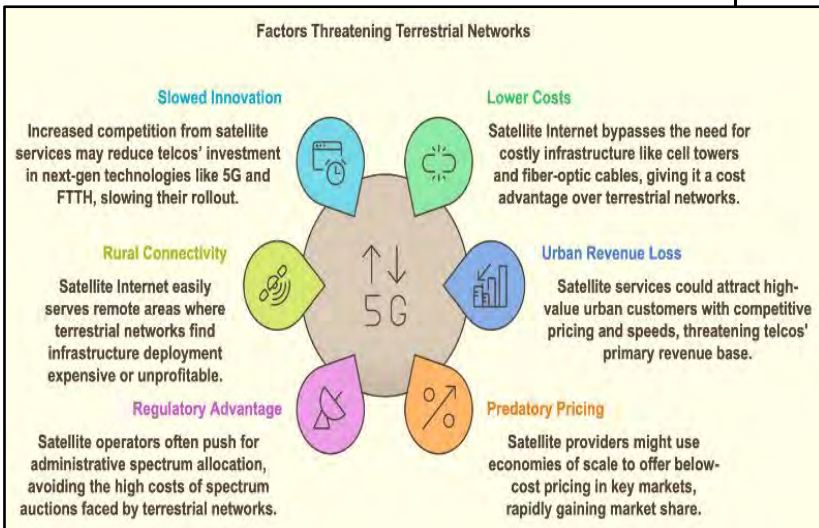
- Mule Bank Accounts:** As part of its investigations, I4C identifies approximately 4,000 mule bank accounts daily, which are used for laundering money through scams and cyber fraud.

Crippling Scams:

- Economic Threat from Cyber Scams:** Cyber scams pose a severe risk to India's economy, with the potential to facilitate terror financing and money laundering activities.

- Cryptocurrency-Based Laundering:** Between March and May, Indian accounts were used to purchase ₹5.5 crore in cryptocurrency. This cryptocurrency was laundered abroad through an international crypto exchange in over 350 transactions.

- Financial Losses in 2023:** During the first half of 2023 (until June 30), total losses from financial frauds reported



- Satellite Operators** countered that spectrum for satellite services should be allocated via **shared administrative assignment** rather than auctions.

- They argued that auctioning spectrum for satellites, similar to terrestrial networks, would not reflect its value, given the **different use cases** and **global low pricing trends** for satellite spectrum.

PEPPER IT WITH:
 Geostationary Satellites, Fiber-to-the-Home (FTTH), Rural Connectivity, Digital Divide.

via the **Ministry of Home Affairs' (MHA)** cybercrime portal and helpline (1930) reached ₹11,269 crore.

- **Integrated Support System:** The MHA's cybercrime portal and helpline are connected to State police systems as well as over 200 financial intermediaries, including banks and digital wallets.
- **Underreporting of Cases:** Some cases are registered separately by the police, and many incidents go unreported, highlighting a gap in crime reporting and recording.

Global Scamsters:

- **Identification of ATM Hotspots:** The Citizen Financial Cyber Fraud Reporting and Management System under I4C has identified 18 ATM hotspots across India where fraudulent cash withdrawals are common.
- **International ATM Withdrawals:** Cash has also been withdrawn from overseas ATMs using debit cards linked to mule accounts in locations such as Dubai, Hong Kong, Bangkok, and Russia.
- **Scam Compounds in Southeast Asia:** "Scam compounds" resembling call centers have been identified in Cambodia, Myanmar, and Laos, emerging as hubs for investment scams. These compounds serve as bases for fraudsters, including a significant number from India, who use Indian mobile numbers to target and deceive people.
- **Emerging Scam Hub in Azerbaijan:** Recently, Azerbaijan has also been identified as a location for scam compounds, adding to the global network of scam centers.

Curbing mule accounts:

- **Planned Meeting to Address Mule Accounts:** The Ministry of Home Affairs (MHA) is likely to convene a meeting with the Union Finance Ministry and the Reserve Bank of India (RBI) to develop a mechanism to control mule accounts.
- **Role of Banks in Monitoring:** Mule accounts often involve unusually high-value transactions, typically in accounts with low balances or salaried accounts.
- **Updating Bank Systems for Enhanced Monitoring:** Banks are advised to update their systems to detect multiple logins from a single Internet Protocol (IP) address. Alerts should be triggered if the IP address is located outside India. Sudden changes in the volume and frequency of transactions should be flagged to assist law enforcement in curbing mule account operations.
- **Freezing of Mule Accounts:** Approximately 4.5 lakh mule accounts linked to cybercrimes have been frozen, with a significant number found in public sector banks. Distribution of Mule Accounts by Bank:
 - **State Bank of India (SBI):** Around 40,000 mule accounts detected.

- **Punjab National Bank (PNB) (including Oriental Bank of Commerce and United Bank of India):** Approximately 10,000 mule accounts.
- **Canara Bank (including Syndicate Bank):** About 7,000 mule accounts.
- **Kotak Mahindra Bank:** Around 6,000 mule accounts.
- **Airtel Payments Bank:** Approximately 5,000 mule accounts.
- **Methods of Fraudulent Withdrawals:** Fraudsters are using three primary methods for withdrawing defrauded money:
 - Cheques
 - Digital transactions
 - ATM withdrawals
- **Reported Cybercrime Complaints and Financial Losses:** Since January 2023, around 1 lakh cybercrime complaints have been recorded on the National Cybercrime Reporting Portal. Approximately ₹17,000 crore in cash has been defrauded over the past year through these cyber scams.

Way forward:

- **Enhanced Cyber Security Awareness:** Launch public awareness campaigns to educate people about common cyber threats, such as phishing, hacking, and malware.
- **Strengthened Law Enforcement and International Cooperation:** Ensure that laws and regulations are updated to address emerging cyber threats.
- **Advanced Technological Solutions:** Utilize AI and ML to detect and prevent cyberattacks. Invest in robust cybersecurity infrastructure to protect critical systems and data.
- **Secure Digital Transactions:** Promote the use of strong authentication methods, such as biometrics and multi-factor authentication.

PEPPER IT WITH:
 Cyber Scams, Ministry of Home Affairs, Indian Cyber Crime Coordination Centre, Mule Accounts

PM Modi cautions people against 'digital arrest' scam

News Excerpt:

Prime Minister recently cautioned people against the 'digital arrest' scam that defrauded victims of their hard-earned money and asked them to report such cases to the cyber helpline.

About news:

About digital arrest:

- A digital arrest scam is an online scam that defrauds victims of their hard-earned money.

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 scammers intimidate the victims and falsely accuse them of illegal activities.
- They later demand money and puts them under pressure for making the payment.

How the Digital Arrest Scam Works:

- **Impersonation of Law Enforcement Officials:** Scammers pose as officials from agencies such as CBI, Income Tax Department, or Customs Department. They initiate contact with victims through phone calls.
- **Transition to Video Communication:** Victims are asked to switch to video communication on platforms like WhatsApp or Skype to add legitimacy to the interaction.
- **Threat of a Digital Arrest Warrant:** The scammers threaten victims with a fake digital arrest warrant, citing allegations such as:
 - Financial misconduct.
 - Tax evasion.
 - Other legal violations.
- **Creation of a Realistic Setup:** Fraudsters sometimes use a police station-like setup during the video call to appear authentic.
- **Coercion to Make Payments:** Victims are coerced into transferring money under various pretexts, such as:
 - Clearing their name.
 - Assisting with an investigation.
 - Paying a refundable security deposit or escrow account.
- **Use of Payment Channels:** Victims are directed to transfer money to specified bank accounts or UPI IDs.
- **Financial Loss and Identity Theft:** Once the payment is made, the scammers disappear. Victims face financial loss and risk of identity theft due to the personal details shared during the scam.

Be aware of such scams and remain cautious about suspicious communications:

- **Be Skeptical of Calls from Fake Officials:** Real law enforcement agencies will never demand payment or ask for banking details over the phone or video calls.
- **Resist Pressure Tactics:** Scammers often create a sense of urgency to force quick decisions. Do not succumb to their threats or demands for immediate action.
- **Verify the Caller's Identity:** If you are suspicious, contact the relevant agency directly using official contact details. Stay calm and avoid panicking during such calls.
- **Protect Personal and Financial Information:** Never share sensitive personal or financial details (like bank account numbers or UPI IDs) over the phone or video calls with unknown numbers.
- **Recognize Official Communication Channels:** Government agencies do not use platforms like WhatsApp or Skype for official communications.

- **Report Suspected Scams:** If you suspect a scam, immediately report it to: Local police authorities. Cybercrime helpline (1930) or cybercrime portal (www.cybercrime.gov.in).
- **Follow CERT-In's Advisory:** Stay vigilant and informed, as advised by the Indian Computer Emergency Response Team (CERT-In).

What to do if you are a victim of digital arrest scam and lost money?

- If you are a victim of digital arrest scam, the first step is to immediately report your bank and freeze your account.
- File a complaint with the National Cyber Crime Reporting Portal (cybercrime.gov.in).
- Always keep whatever evidence you have — call details, transaction details, messages, etc.
- Seek help from a lawyer if needed.

PEPPER IT WITH:
Digital Arrest Scam, CERT-In, Law Enforcement, Digital India

Conclusion:

To combat scams effectively, enhance public awareness, strengthen law enforcement capabilities, and leverage technology. Promote financial literacy, collaborate internationally, and refine legal frameworks. Empower banks to safeguard customers, fostering a vigilant society resilient to emerging fraudulent tactics.

The demand for greater autonomy for Eastern Nagaland districts

News Excerpt:

Recently, the Nagaland government stated that it was ready to forward its comments on the Centre's draft Memorandum of Settlement on an arrangement for greater autonomy for the state's six eastern districts.

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

Demand for Greater Autonomy in Eastern Nagaland:

- **Geographical Context** - Eastern Nagaland consists of six districts: Kiphire, Longleng, Mon, Noklak, Shamator, and Tuensang.



- The region is home to seven tribes: Konyak, Khiamniungan, Chang, Sangtam, Tikhir, Phom, and Yimkhiong.
- **Demographic and Political Significance:** The population of these districts makes up over 30% of Nagaland's total population. They hold 20 out of 60 seats in the Nagaland Legislative Assembly.
- **Historical Demand for a Separate State:** The demand for a separate state for eastern Nagaland has been ongoing for decades. The Eastern Nagaland People's Organization (ENPO) formally escalated the demand in November 2010, submitting a memorandum to the Prime Minister's Office.
- **Reasons Behind the Demand - Development Deficit:** Eastern Nagaland lags significantly in terms of infrastructure, education, healthcare, and overall development. The perceived neglect by the state government has been the primary driving force behind the demand. The ENPO sought a separate state with special status and provisions to address these disparities.
- **Key Challenges:** The region's demand for greater autonomy reflects its long-standing frustration over inequitable distribution of resources and opportunities. A lack of developmental initiatives has heightened calls for self-governance and autonomy to ensure the region's progress.

Current Status of the Demand for a Separate State in Eastern Nagaland:

- **Renewal of the Demand Ahead of 2023 Assembly Elections:** The demand resurfaced before the Nagaland Legislative Assembly polls in February 2023. In August 2022, the Eastern Nagaland People's Organization (ENPO) passed a resolution to boycott the Assembly elections unless the demand for a separate state was met.
- **Withdrawal of Election Boycott:** Weeks before the polls, the ENPO withdrew the boycott call after receiving an assurance from the Union Ministry of Home Affairs (MHA). The MHA promised a "mutually agreed solution" would be implemented after the elections.
- **Post-Election Developments:** Since the elections, multiple meetings have taken place between the ENPO and the MHA. The Centre sent a draft Memorandum of Settlement to the Nagaland government earlier this year, seeking its comments. Progress on the matter has stalled at this stage.
- **Boycott of Lok Sabha Elections in April 2024:** Dissatisfied with the lack of resolution, the ENPO called for a boycott of the Lok Sabha elections unless their demand was resolved. Minimal voting occurred in the six eastern districts during the elections.
- **Accusations of Delays:** The ENPO accused the state government of delaying the matter. The Nagaland government claimed it had sought deliberations with the

ENPO and the Eastern Nagaland Legislators' Union (ENLU), but the issue remained unresolved at that stage.

- **Recent Progress:** Last week, Nagaland Parliamentary Affairs Minister K G Kenye stated that discussions with the ENPO and ENLU had taken place in recent weeks. The state government is now ready to forward its case to the Centre for further action.

Proposed Arrangement for Autonomy in Eastern Nagaland:

- **Proposal for a 'Frontier Naga Territory':** Discussions between the **Eastern Nagaland People's Organization (ENPO)**, the Centre, and the state government have focused on a "unique arrangement".
 - The proposed 'Frontier Naga Territory' would:
 - Be located within Nagaland.
 - Have a separate legislature along with executive and financial powers.
- **State Government's Perspective**
 - Nagaland Minister K G Kenye stated the arrangement would be centred in the state capital, Kohima, with:
 - A regional council headquartered in East Nagaland.
 - The council would have power over local issues.
 - This proposal aligns with the existing provision of a regional council for the region under Article 371(A) of the Constitution.

ENPO's Stance: ENPO President A Chingmak Chang clarified that the organization is:

- Not privy to the Centre's proposal sent to the state government.
- Open to reviewing the proposal only when it is sent directly to ENPO by the Ministry of Home Affairs (MHA).
- **Process of Discussion The proposal sent by the Centre was meant for the state government's comments.**
 - Once the state submits its comments, the MHA is expected to: Invite stakeholders, including ENPO, for further discussions. ENPO has emphasized its willingness to discuss directly with the Centre rather than the state government.

Provision for a Regional Council in Eastern Nagaland:

- **Origin of Nagaland:** Nagaland was carved out of Assam in 1963. This was based on the 16-point agreement between the Naga People's Convention and the Union of India.
- **Special Constitutional Provision:** Article 371(A) was introduced to provide special constitutional provisions for Nagaland. These include the protection of Naga customary laws.
- **Provisions for Tuensang District:** At the time of Nagaland's formation, the undivided Tuensang district (now six districts) was considered relatively backward.

- **As per the agreement and Article 371(A):** Tuensang was to be governed directly by the Governor. This was intended to address the region's lack of administrative capability compared to other parts of Nagaland.
- **Duration of Special Governance:** The arrangement was to last for 10 years. The aim was to continue it until the tribes of Tuensang were deemed capable of managing an advanced system of administration similar to other parts of Nagaland.

Way forward:

- **Dialogue and Consensus:**
 - **Direct Negotiations:** The Centre, the Nagaland government, and the ENPO should engage in direct and transparent negotiations to build trust and find common ground.
- **Constitutional Framework:**
 - **Special Category Status:** Granting special category status could provide additional financial and administrative benefits.
- **Addressing Development Disparities: Special Development Packages:** Allocate specific funds and resources to address the region's unique challenges.
- **Protecting Indigenous Rights and Culture:**
 - **Safeguarding Indigenous Knowledge:** Recognize and protect the indigenous knowledge and cultural practices of the region. Ensure secure land rights for tribal communities and prevent encroachment on their traditional lands.
 - **Environmental Conservation:** Promote sustainable development practices and protect the region's biodiversity.

PEPPER IT WITH:
Nagaland, Demand for a Separate State, Regional Council.

GEOGRAPHY

Cyclone Dana

News Excerpt:

Recently, Cyclone Dana made Landfall in Odisha and West Bengal.

More detail about news:

- Odisha successfully averted significant damage and casualties.
- Heavy rainfall and gusty winds were experienced in the affected regions.

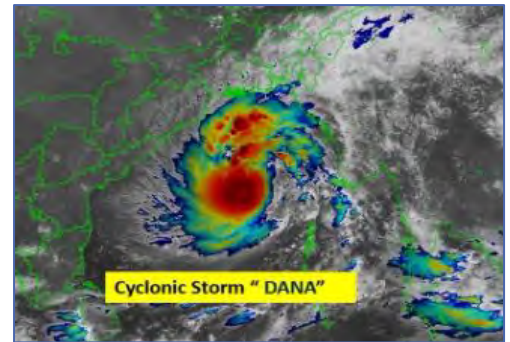
About Landfall of a cyclone:

- **Definition of Landfall:** Landfall is when a tropical cyclone moves from water onto land.

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

- **IMD Explanation:** According to the India Meteorological Department (IMD), Landfall occurs when the centre or "eye" of the storm crosses the coastline.

- **Difference from a 'Direct Hit':** Landfall should not be confused with a 'direct hit,' where the cyclone's strongest winds or eyewall impact the coast without the storm's centre moving ashore.



- **NOAA Clarification:** The U.S. National Oceanic and Atmospheric Administration (NOAA) notes that cyclones' strongest winds are not always at their centre, so they can impact land even without the storm fully making Landfall.

Damage caused by a cyclone's Landfall:

- **Severity of Damage:** Damage from cyclone landfall varies based on the cyclone's intensity, primarily determined by wind speed.
- **Potential Impact of Cyclone Dana:**
 - Extensive damage to kutcha (non-permanent) houses.
 - Partial disruption of power and communication networks.
 - Minor disruptions to rail and road transport.
 - Risk from flying debris and possible flooding of escape routes.
- **Causes of Damage:**
 - **Strong Winds:** Capable of damaging structures and causing debris to become airborne.
 - **Heavy Rainfall:** Leads to flooding in affected areas.
 - **Storm Surges:** Raise sea levels, resulting in coastal flooding and worsening flood impact.

How long does a cyclone landfall last:

- **Duration of Cyclone Landfall:** Landfall typically lasts a few hours and is influenced by wind speed and storm size. Cyclone Dana's landfall process is expected to last about 5-6 hours.
- **Wind Speed during Cyclone Dana's Landfall:** Winds are expected to reach approximately 125 km per hour, with widespread regional impact.
- **Intensity Reduction Post-Landfall:** Cyclones weaken upon moving inland due to reduced moisture supply and increased surface friction. Though Landfall is often the

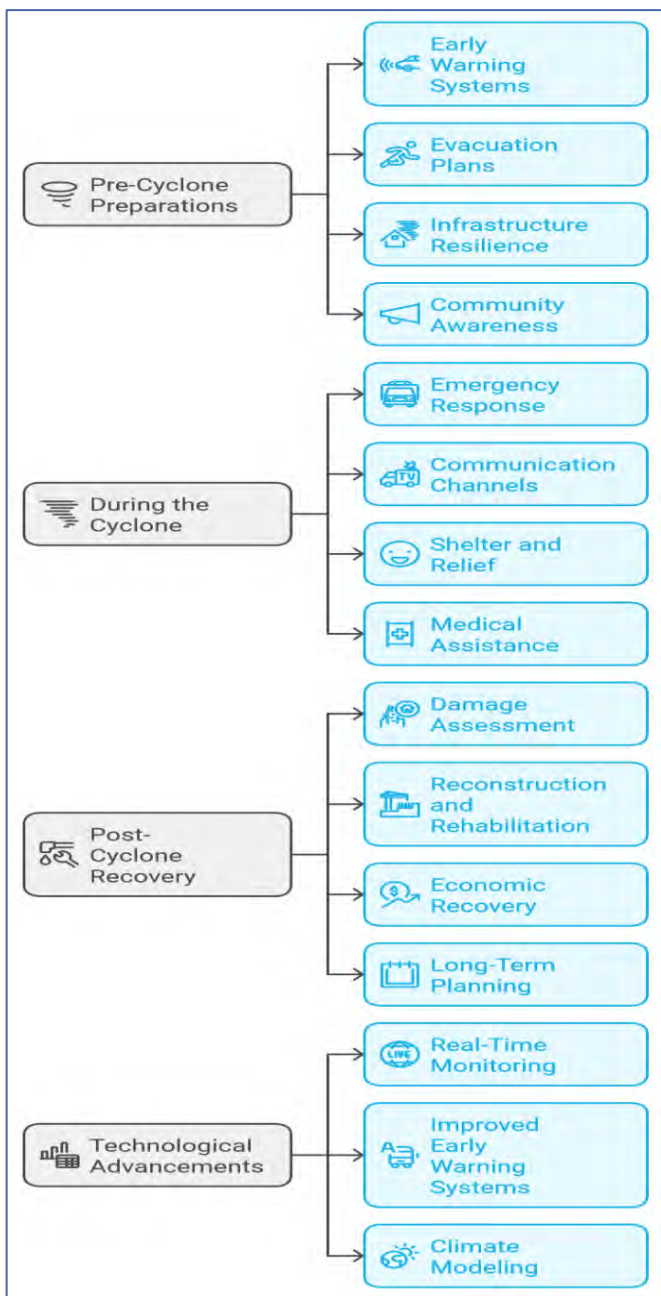
most destructive phase, it also signals the cyclone's gradual dissipation.

Mangroves protect against cyclones:

- **Mangroves as a Natural Barrier Against Cyclones:** Mangroves act as barriers against storm surges caused by cyclones, reducing the impact of rising sea levels and large waves. Their roots, husks, and leaves obstruct water flow, providing natural protection, as noted by the World Bank Group.
- Some mangrove species, like *Sonneratia apetala*, significantly reduce surge heights By 4 cm to 16.5 cm with mangrove strips 50 m to 2 km wide.

PEPPER IT WITH:
Tropical cyclone, IMD, Early Warning system,

Way forward:



Black hole in a triple system

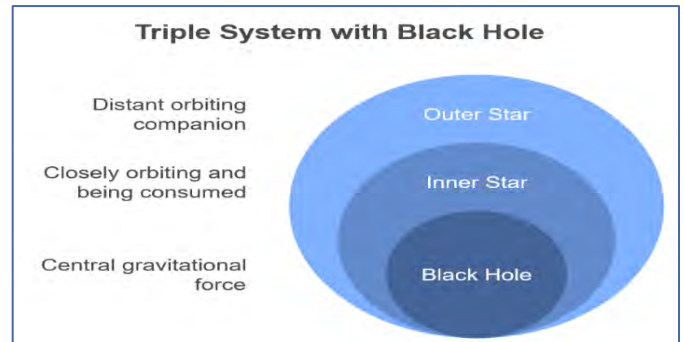
News Excerpt:

According to a study published in the journal Nature, astronomers have stumbled upon something remarkable: a black hole that's not just part of a binary system but part of a trio.

More detail about news:

- **Discovery of Unusual Black Hole System:** Scientists have discovered a unique system containing a black hole and two stars. One star orbits very close to the black hole, while the other orbits much farther away.
- **Significance of the Discovery:** This is the first time such a configuration has been observed. The finding challenges long-held theories about black hole systems.
- **Research by Kevin Burdge:** The study was led by Kevin Burdge, a Pappalardo Fellow at MIT's Department of Physics. His research is raising new questions regarding black hole formation and evolution.
- **Implications for Black Hole Formation:** The discovery suggests that black holes may form differently than previously thought. Some black holes might form without the intense explosions of a supernova, possibly emerging through quieter processes.

Block hole in a triple system:



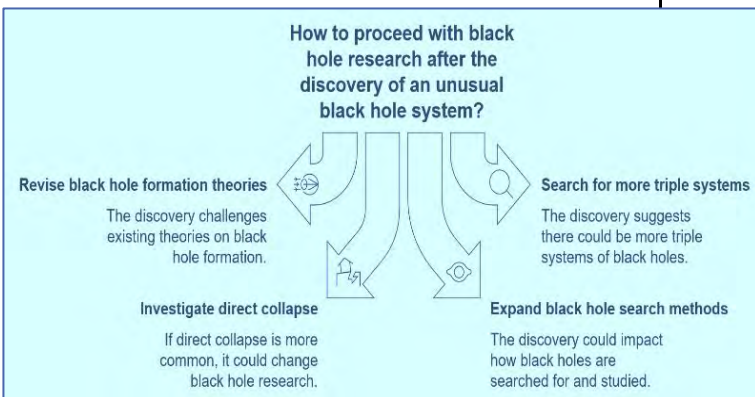
- **Typical Black Hole Systems:** Most black holes are found in binary systems, with a close companion star or another black hole due to strong gravitational attraction.
- **Unique Triple System Discovery:** In this new system, a black hole is at the centre, and two stars orbit it, forming a triple system.
- **Close Star's Orbit:** A small star orbits closely around the black hole and is being consumed by it. This inner star completes its orbit every 6.5 days, common for black hole systems.
- **Outer Star's Unusual Orbit:** An outer star also orbits the black hole at a much greater distance. This outer star takes approximately 70,000 years to complete one orbit.
- **Extreme Distance from the Black Hole:** The outer star is about 3,500 astronomical units (AU) away from the black hole. This distance is 3,500 times the distance between Earth and the Sun or roughly 100 times the distance between Pluto and the Sun.

Challenge to the Supernova Theory:

- **Traditional Understanding of Black Hole Formation:** Current theory suggests that black holes typically form from the violent explosion of a dying star, known as a supernova.
- **Impact of a Supernova Explosion:** The energy released in a supernova would typically expel any nearby objects that are not tightly bound to the black hole. Therefore, an outer star should logically be ejected due to the intense force of the explosion.
- **Implications of This Discovery:** This unusual system, with a distant outer star still in orbit, raises doubts about the necessity of a supernova in black hole formation. The discovery may indicate alternative processes and open new questions about black hole evolution.
- **Potential for More Triple Systems:** Researcher Kevin Burdge suggests that this finding could mean more triple systems like this one, challenging and expanding current theories on black hole formation.

Direct Collapse Theory:

- **Nature of Direct Collapse:** In direct collapse, a massive star collapses inward on itself, **forming a black hole** without the explosive force of a supernova.
- **Advantages of Direct Collapse:** This gentle collapse does not generate a powerful blast so that it wouldn't



expel nearby objects. As a result, any distant companion stars can remain in orbit, unaffected by the collapse.

- **Significance in Astrophysics:** Though direct collapse has been theorized in astrophysics, observational evidence to support it has been limited.
- **Potential Evidence:** If this black hole formed through direct collapse, it may be the first strong observational support for this theory, marking a significant discovery in black hole research.

How did astronomers find it?

- **Discovery Process:** The discovery was made almost by chance while astronomers used Aladin Lite, an online tool that compiles astronomical images from multiple telescopes.
- **Search for New Black Holes:** Burdge and his team were searching for new black holes within our galaxy when they focused on V404 Cygni, a black hole about 8,000 light-years away from Earth.

- **V404 Cygni:** V404 Cygni was one of the first confirmed black holes, identified in 1992, and has been extensively studied with over 1,300 scientific papers written about it.
- **The Unexpected Discovery:** While examining optical images of V404 Cygni, Burdge noticed two blobs of light close together.
- **Components of the System:** The first blob corresponded to the known black hole and its closely orbiting star. The second blob was identified as a distant star not previously associated with the V404 Cygni system.

Connecting the dots in this black hole system:

- **Analyzing the Outer Star:** To confirm if the outer star was part of the system, the team used data from the Gaia satellite, which tracks the motions of stars.
- **Motion Sync:** The team found that the inner and outer stars moved in perfect sync over the last 10 years, with the odds of this happening by chance being about one in 10 million.
- **Conclusion of the Analysis:** The two stars follow each other due to a gravitational connection, confirming it's a triple system.
- **Simulations to Test Theories:** Tens of thousands of simulations were done to test different scenarios (e.g., a supernova explosion or direct collapse) to understand how the system could form without losing the outer star.

Results of the Simulations: The simulations strongly suggested that the direct collapse theory is the most likely formation scenario.

Old star, new tricks:

- **Outer Star's Evolution:** The outer star is in the process of becoming a red giant, which occurs late in a star's life.
- **Age of the System:** Based on the outer star's evolution, the team estimated that the system is about 4 billion years old.

- **Insight into Black Hole Lifecycle:** Knowing the age of the system provides valuable insights into the lifecycle of black holes and their companions.
- **Key Takeaway:** Burdge emphasized that this discovery confirms that V404 Cygni is part of a triple system formed from direct collapse and is about 4 billion years old.

PEPPER IT WITH:
Astronomical units, Supernova Explosion, V404 Cygni

Conclusion: The study highlights the importance of continued exploration and observation of celestial objects to gain deeper insights into the universe. As technology advances, we can expect to uncover more extraordinary phenomena and push the boundaries of our understanding of the cosmos.

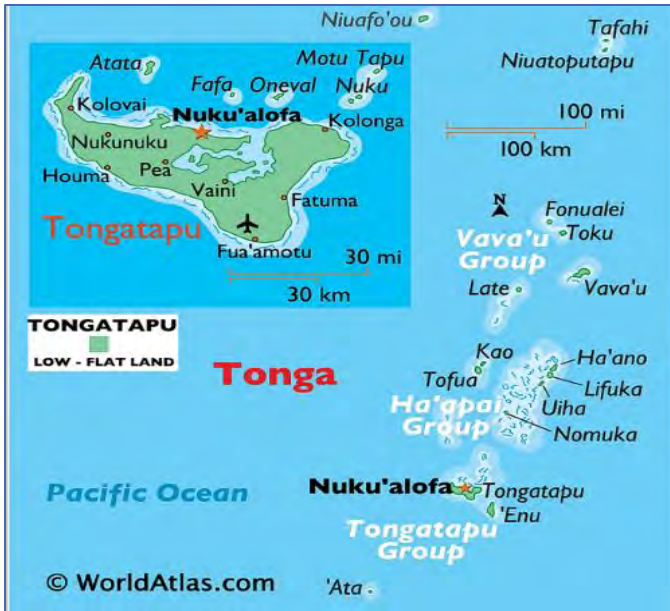
DISASTER MANAGEMENT

Connections established between Volcanic Eruption & Ionospheric Disturbances

News Excerpt:

A new study has revealed a previously unexplored ionospheric connection between the massive eruption of the

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									



Tonga volcano, a submarine volcano in the South Pacific, on 15 January 2022 and the formation of Equatorial Plasma Bubbles (EPBs) or an ionospheric phenomenon near the Earth's geomagnetic equator at night time over the Indian subcontinent.

Impact of Volcanic Eruptions on Ionospheric Disturbances and Space Weather:

- Volcanic Eruptions and Space Weather:** Volcanic eruptions can lead to disturbances in the ionosphere, impacting space weather.
- Effect on Satellite Communication and Navigation:** Ionospheric disturbances can disrupt satellite-based communication and navigation systems. Such systems are vital for numerous sectors in today's interconnected world.
- Importance of Understanding Ionospheric Impact:** Understanding how natural disasters like volcanic eruptions affect the ionosphere is crucial. This knowledge helps predict and mitigate potential disruptions to satellite systems.
- Previous Studies on Equatorial Plasma Bubbles (EPBs):** EPBs have previously been identified as satellite signal disruptors. However, the influence of terrestrial events, like volcanic eruptions, on space weather has not been thoroughly explored.
- Need for Research on Terrestrial Events and Space Weather:** Studying the role of terrestrial events in shaping space weather could improve prediction and management of communication and navigation disruptions.

Tonga Volcanic Eruption and Formation of EPBs:

- Tonga Volcano Eruption:** On January 15, 2022, the Tonga volcano, located 65 km north of Tongatapu, erupted with intense force. The eruption sent shock

waves through the atmosphere, capturing scientists' attention.

- EPB Formation Over India:** Following the eruption, Equatorial Plasma Bubbles (EPBs) formed over the Indian region during the evening hours.
- Research by Indian Institute of Geomagnetism (IIG):** Scientists at IIG, Navi Mumbai, explored the connection between the Tonga eruption and EPB formation. IIG is an autonomous institute under India's Department of Science and Technology.
- Cause of EPB Formation:** The eruption generated strong atmospheric gravity waves that reached the upper atmosphere. These waves created ionospheric conditions conducive to the formation of EPBs.
- Satellite Data Confirmation:** Satellite data from Swarm B and C recorded significant electron density depletions, confirming the link to EPB formation.
- Analysis of Data:** Scientists examined multiple atmospheric and ionospheric data sources to understand how the eruption's disturbances contributed to EPB generation.

Study on Volcanic Eruption Impact on Space Weather and Satellite Systems

- Published in the Journal of Geophysical Research:** Space Physics, the study combines ground-based and satellite data

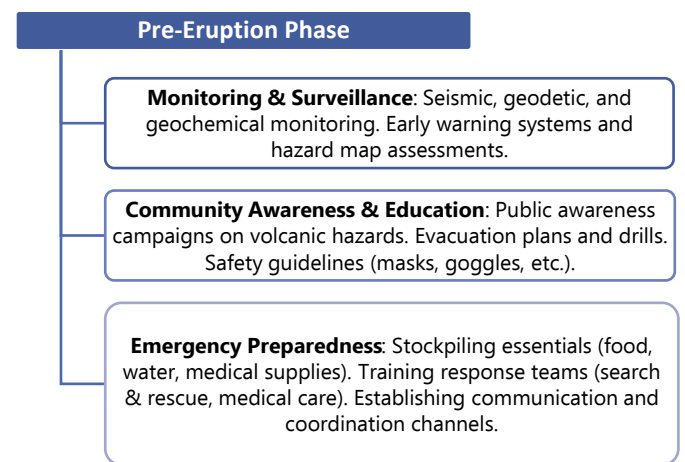
PEPPER IT WITH:

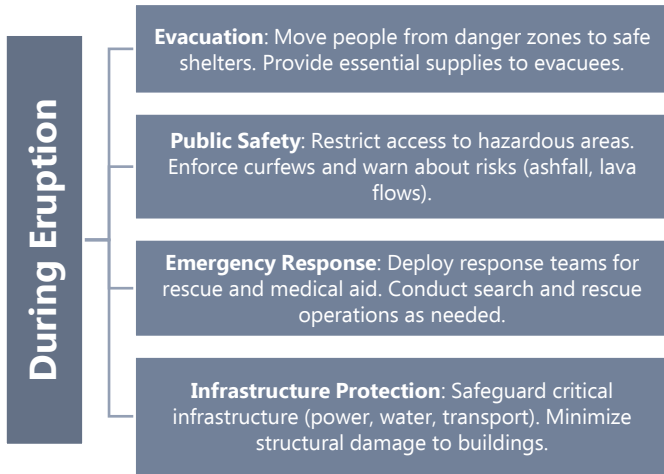
- Natural Disasters,
- Satellite-Based Navigation Systems,
- Geomagnetism.

to reveal how volcanic eruptions influence space weather. This shows that natural disasters, like the Tonga volcanic eruption, can cause significant ionospheric disturbances that impact satellite communication and navigation systems.

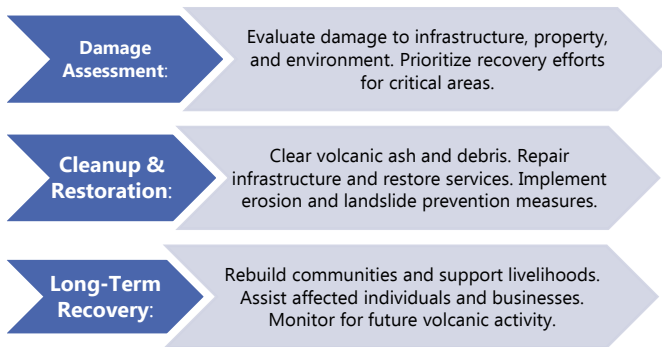
- Impact on Satellite-Dependent Sectors:** This research is crucial for sectors like defence, agriculture, aviation, and disaster management that rely on GPS and satellite-based technologies. The findings enhance understanding of the link between geological events and ionospheric disturbances relevant to these sectors.

Standard Operating Procedure (SOP) for Volcanic Eruption Response

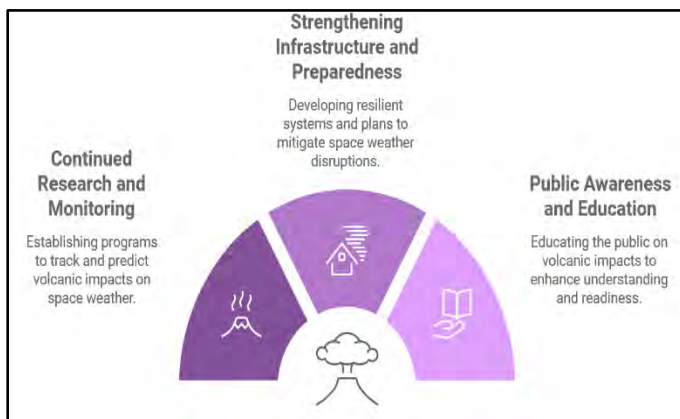




Post-Eruption Phase



Way forward:



Italy Flood

News Excerpt:

Italy has been grappling with significant flooding due to persistent and heavy rainfall, particularly in regions like Emilia Romagna and Veneto.

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						

About details about Italy Flood:

- Flooding in Catania and Nearby Areas:** Continuous rainfall led to significant flooding and infrastructural damage in Catania and its surrounding regions in Sicily, Italy, on November 13, 2024.

- Casualty Reports:** No fatalities or missing persons have been reported.
- Infrastructural Damage:** In Acireale, a perimeter wall collapsed. Fortunately, no injuries or deaths were reported.
- Impact on Catania Metropolitan Area:** Torrential rain caused severe flooding, dragging vehicles into the sea, trapping motorists, and inundating homes.
- Firefighters' Emergency Response:** Catania Provincial Firefighters' Command responded to 64 weather-related incidents since 07:00 UTC. Their efforts included 13 critical interventions for rescues, assistance, structural stabilisation, and vehicle recovery.
- Rainfall Data:** Giarre recorded an alarming 400 mm (15.7 inches) of rainfall within six hours.
- Affected Municipalities:** Giarre, Acireale, and Linguaglossa reported substantial damage.
- Emergency Efforts in Catania Province:** Firefighters in the province undertook numerous rescue and recovery operations, including assisting those trapped by floods or in unstable structures.

Government measures to mitigate the impacts of floods:

- Strengthening Flood Management Infrastructure:** Governments build barriers along rivers and coastlines to contain rising waters (e.g., embankments along the Brahmaputra River in Assam). Designed to regulate water flow during heavy rainfall (e.g., Hirakud Dam in Odisha).
- Urban Drainage Systems:** Enhancing stormwater drains in cities prone to urban flooding, like Mumbai and



Chennai. Advanced technologies like Doppler radar, satellite imagery, and river gauge data are used for accurate flood predictions. Agencies like the Central Water Commission (CWC) in India issue flood alerts to vulnerable regions. Training local communities to respond effectively to flood warnings.

- Climate-Resilient Urban Planning:** Governments prohibit construction in flood-prone areas. They promote permeable surfaces, rainwater harvesting, and urban wetlands to absorb excess rainwater. They also plant mangroves and afforestation in catchment areas to reduce storm surges and soil erosion.

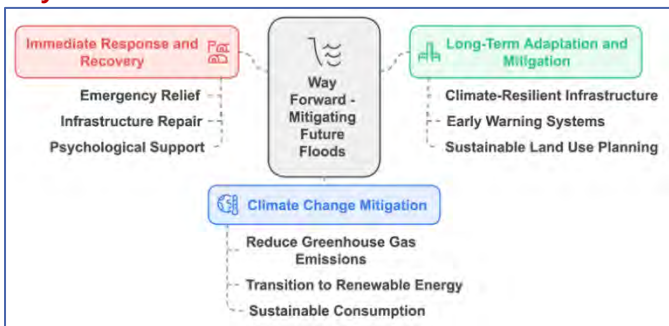
Integrated Water Resource Management (IWRM):

Coordinating water usage and flood control across states and regions sharing a river (e.g., Ganga River Basin Project) and protecting natural wetlands to act as buffers for floodwaters.

PEPPER IT WITH:
 Extreme Weather Events, Urban Planning, Flood Mitigation, Sustainable Infrastructure Development.

Disaster Preparedness and Capacity Building: Governments develop and implement frameworks for disaster risk reduction (e.g., India's National Disaster Management Authority [NDMA] guidelines). Conducting mock drills, creating evacuation routes, and building shelters in flood-prone areas. Establishing dedicated funds for immediate relief and rehabilitation.

Way Forward:



Wayanad Landslides and Gaps in India's Disaster Management Framework

News Excerpt

The Union government informed Kerala that the July 30 **Wayanad landslides cannot be declared a national calamity** and expressed the view that sufficient funds are available with the state for relief operations.

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									

About Landslides

- A landslide is the **movement of rock, soil, or other debris** down a slope due to gravity. **Heavy rainfall** can saturate the soil and make it more unstable, increasing the likelihood of landslides.
- As per the **Geological Survey of India (GSI)**, nearly **12.6%** of India's **land area** is prone to landslides.
 - The **northward movement** of the **Indian tectonic plate**, coupled with the **heavy rains** and **climate change**, makes the Himalayan regions susceptible to landslides.
 - Western Ghat** is another region of landslides due to its steep western slopes and the **erosion of the laterite cap**.
- Out of a total of 3,782 landslides in India between **2015 and 2022**, the **highest** 2,239 were reported in **Kerala**,

followed by **West Bengal** (376), **Tamil Nadu** (196), **Karnataka** (194), and **Jammu & Kashmir** (184).

- According to experts, **sudden heavy rains** due to climate change also increase landslides. Around **73% of landslides** in the **Himalayan region** are attributed to heavy rains and reduced water-absorbing capacity of the soil.
- According to satellite data by **ISRO**, **Rudraprayag** and **Tehri Garhwal** in Uttarakhand are the country's most landslide-prone districts.

About the News

- Kerala Government's Request for Central Assistance:** In the aftermath of the disaster, the Kerala government appealed to the Union government for financial support of **Rs 900 crore** to manage the extensive relief and rehabilitation operations.
- Union Government's Response**
 - Legal Framework and Policy Constraints:** The Union government responded to Kerala's request, outlining the legal and procedural limitations under the current disaster management framework.
 - No Provision for National Calamity Declaration:** Under the Disaster Management Act and the guidelines for SDRF and NDRF, there is no legal mechanism for declaring a disaster a "national calamity."
 - Primary Responsibility on State:** The Union government reiterated that disaster management, including preparedness, mitigation, and response, is primarily the responsibility of state governments, with the Centre offering logistical and financial support.
 - Financial relief for affected individuals comes from the SDRF for **12 notified natural disasters**, including floods and landslides.
 - Additional funds** can be allocated from the NDRF in severe disasters after an **Inter-Ministerial Central Team (IMCT)** assessment.

Key Challenges and Criticisms

- Policy Limitations:** The absence of a mechanism to declare disasters as national calamities has been criticised, especially in cases of large-scale destruction. A national calamity status could potentially unlock higher and faster financial support.
- Disaster Preparedness and Mitigation:** Kerala's vulnerability to natural disasters, especially during the monsoon season, highlights the need for:
 - Enhanced early warning systems.
 - Sustainable land-use planning to prevent landslides in vulnerable areas.
 - Strengthened disaster preparedness and response mechanisms.

PEPPER IT WITH:
 Sustainable Land-Use Planning, Tectonic Movements, Monsoon.

- **Role of SDRF/NDRF:** The current disaster management framework relies heavily on the SDRF and NDRF for financial assistance during emergencies. However, the Wayanad landslides have exposed certain gaps:
 - The funds under SDRF/NDRF may not always scale adequately with the severity of disasters.

Way Forward:



Disaster Risk Insurance

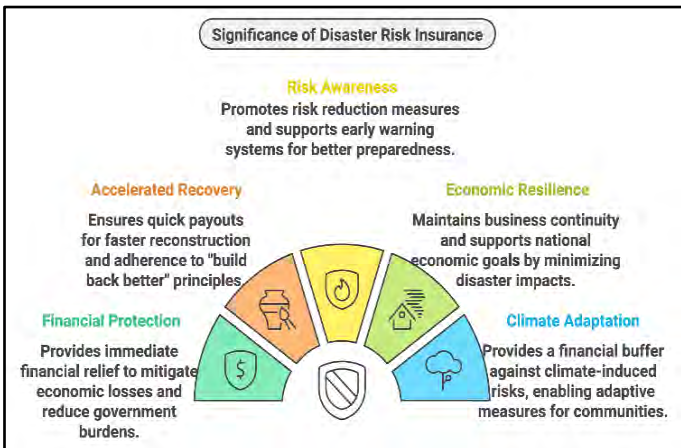
News Excerpt

The National Disaster Management Authority (NDMA) recently hosted a workshop with insurance companies and financial experts to develop disaster insurance models that meet the needs of all stakeholders—individuals, businesses, and the government.

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									

Role of Disaster Risk Insurance

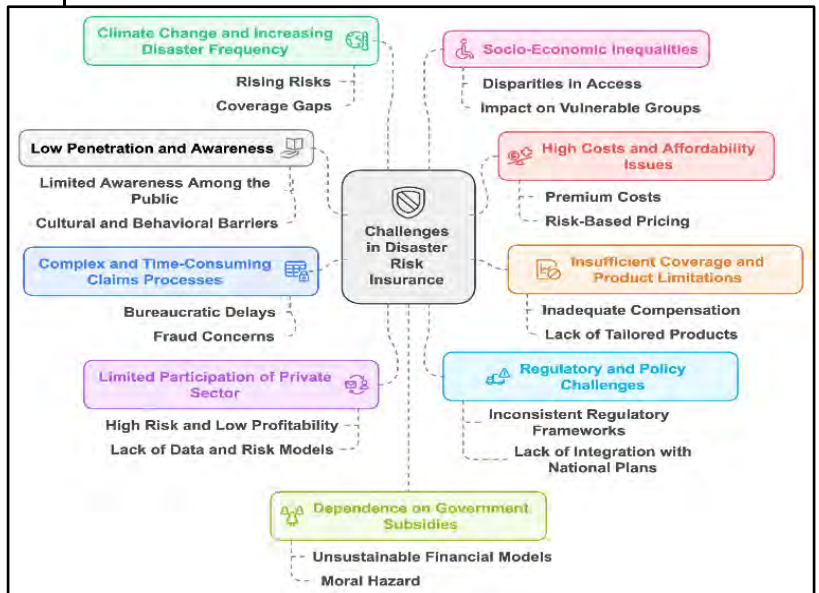
- **Prime Minister’s Ten-Point Agenda for DRR:** During the **Asian Ministerial Conference on Disaster Risk Reduction (2016)**, PM Narendra Modi emphasised a holistic approach to disaster management.
 - The second point of the Agenda states: “Risk coverage must include all, starting from small households to SMEs, to multinational companies”.
- **Understanding Risk Coverage:** Risk coverage encompasses two critical dimensions:



- **Physical Safety:** Ensures safety through early warning systems, disaster mitigation strategies, and efficient response mechanisms.
- **Financial Security:** Provides compensation for losses to rebuild lives and infrastructure. Insurance mechanisms reduce the burden on the state, which often struggles to fully compensate affected individuals and businesses.

Way Forward - Parametric Insurance

- Parametric insurance is an innovative insurance model that provides payouts based on the occurrence of **predefined triggers** rather than the actual loss incurred. These triggers are measurable parameters such as
 - **Rainfall levels** exceeding a certain threshold.
 - **Earthquake magnitude** surpasses a specific level.
 - **Wind speeds** during hurricanes or cyclones.
 - Once these parameters are met, the payout is automatically initiated without traditional loss assessment.

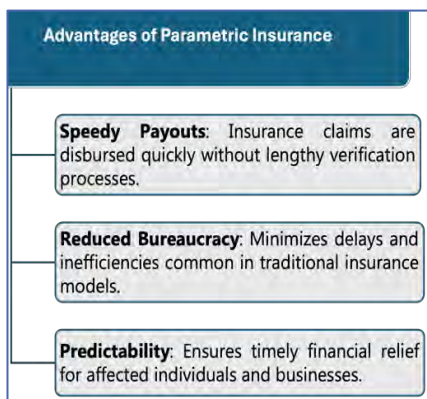


Global Examples of Parametric Insurance

- **Caribbean Catastrophe Risk Insurance Facility (CCRIF):** Provides parametric insurance for Caribbean nations, covering hurricanes, earthquakes, and excess rainfall. Quick payouts after disasters have helped countries recover faster.
 - **African Risk Capacity (ARC):** Offers parametric insurance for droughts and other climate-related risks to African nations. Supports government-led disaster response and reduces reliance on external aid.
- **Potential in India:** India’s vulnerability to natural disasters, including floods, cyclones, and droughts, makes parametric insurance a promising tool.

PEPPER IT WITH:
Disaster Risk Financing, Post-Disaster Recovery, Insurance Models.

- **Agriculture Sector:** Parametric insurance could provide timely support to farmers, mitigating risks from erratic monsoons.



- **Disaster-Prone Regions:** Areas like the Himalayas (prone to landslides and earthquakes) and coastal regions (cyclones and floods) could benefit from quick financial relief.
- **Government Programs:** Parametric insurance could complement government disaster relief schemes, ensuring faster and more efficient fund disbursement.

ART & CULTURE

First Asian Buddhist Summit 2024

News Excerpt:

The Ministry of Culture and the International Buddhist Confederation (IBC) recently organised the First Asian Buddhist Summit.

Highlights of the First Asian Buddhist Summit:

- **Theme:** "Role of Buddha Dhamma in Strengthening Asia."
- **Participation:** Representatives from 32 countries attended, including 160 international participants and 700 delegates. Participants included members of the Mahasangha, monks, nuns, diplomats, professors, experts, and scholars.
- **Key Messages from Prominent Speakers:**
 - **Most Ven. Thich Thien Tam (Vietnam):** Reaffirmed India's role in preserving the Buddhist legacy. Highlighted the enduring relevance of Buddha Dhamma in addressing global challenges like peace, compassion, and unity.
 - **Most Ven. Waskaduwe Mahindawansa Mahanayake Thero (Sri Lanka):** Called to spread the values of non-violence and peace to counter global destruction.
 - **Ven. Khenpo Chimed (Nepal):** Proposed setting up a Himalayan academic institution for monastic education to pass wisdom to future generations.
 - **His Eminence Kyabje Yongzin Ling Rinpoche (Dharamshala, India):** Stressed preserving Tibetan culture and the Nalanda tradition for global collaboration.

- **Shatse Khensur Jangchup Choeden (Secretary General, IBC):** Advocated promoting Buddhist values for regional and global harmony.
- **Key Outcomes and Recommendations:**
 - **Strengthening Bonds:** Enhance ties between Asian nations through Buddha Dhamma principles.
 - **Preservation of Literature:** Focus on Pali literature, Buddhist philosophy, and practices.
 - **Holy Buddha Relics:** Promote the exposition of Buddha relics for spiritual continuity.
 - **Youth Engagement:** Foster value-based societies by actively involving youth.
 - **Buddhist Heritage:** Share the journey of Buddhist art, architecture, and heritage.
 - **Pilgrimage Circuits:** Connect Asian Buddhist circuits for pilgrimage and living heritage.
 - **Scientific and Medical Relevance:** Recognise the scientific aspects of Buddha Dhamma.
 - **Delhi Declaration:** Summarised insightful discussions, emphasising the need for compassionate, harmonious, and inclusive Asia.

The Summit reaffirmed the role of Buddha Dhamma in ethical governance, compassion, and sustainable development. Collective commitment from Buddhist nations and the IBC to uphold the teachings of Buddha for a harmonious and prosperous future.

Ganga Utsav 2024 to be held at Chandi Ghat, Haridwar

News Excerpt:

The celebration of Ganga Utsav 2024 was organised by the National Mission for Clean Ganga (NMCG) at Chandi Ghat in Haridwar.

Highlights of Ganga Utsav 2024

- **Objective and Significance:**
 - Commemorates the anniversary of declaring the Ganga as the 'National River.'
 - It aims to promote river conservation, highlight cultural and spiritual significance, and raise awareness about cleanliness.
 - Marks the eighth edition of the event and the first one celebrated on the riverbank.
- **Geographic Scope:** Celebrations across 139 districts in the Ganga basin states, organised by District Ganga Committees. Each Ganga basin state will host a main event.

Key Activities:

- **Ganga Women Rafting Expedition:** Flag-off for a 50-day expedition, in collaboration with BSF, traversing 9 cities/towns. Concludes at Ganga Sagar,

coinciding with district-level activities across five Ganga basin states.

- **River City Alliance:** Participation from 145 river cities aiming to promote healthy urban rivers. Focus on pollution-free rivers and sustainable urban development.
- **Key Sessions:**
 - **Ganga Samvad:** Discussions with prominent figures, spiritual leaders, and youth on river conservation and awareness.
 - **Technical Session:** Experts discuss challenges and solutions for river rejuvenation.
- **Goals of the Festival:**
 - Promote public connection with the Ganga River and conservation efforts.
 - Enhance understanding of the Ganga's heritage and significance.
 - Encourage collective efforts for cleanliness and pollution prevention.
 - Aim to restore the Ganga to its pristine state while preserving its historical and sacred essence.

Raigad Fort

News Excerpt:

The fort of Raigad is part of the 12 forts nominated for UNESCO World Heritage under the title "Maratha Military Landscapes of India"

Key Information About Raigad Fort:

- **UNESCO Nomination:** Part of the 12 forts nominated under the title "Maratha Military Landscapes of India." It is recognised as a classic example of Maratha architecture and a representation of a hilltop capital fort.
- **Rashtriya Ekta Divas Theme:**
- For 2024, the Raigad Fort is the theme of Rashtriya Ekta Divas celebrations in Kevadiya, Gujarat. A replica of Raigad Fort has been created at the venue to honour Chhatrapati Shivaji Maharaj's valour, deeds, and innovative warfare techniques.
- **Historical Significance**
 - **1653 CE:** Captured by Maratha forces from the Mores'. Reconstruction was assigned to Hiroji Indulkar to make it a capital fort.
 - **June 6, 1674 CE:** Shivaji Maharaj's coronation as "Chhatrapati" took place here. It served as Shivaji Maharaj's second capital and was the administrative hub of the Maratha Kingdom.
- **Cultural and Religious Importance:** Known as Durgaraj (King of Forts) and Shiva Teerth, it symbolises Maharashtra's glorious history. It is a holy shrine for Shivbhakts, drawing visitors for its heritage, architecture, and connection to Shivaji Maharaj.

- **Celebrations:** Anniversaries of Shivaji Maharaj's coronation (Shivrajyabhishek). His death anniversary (Punyatithi).
- **Strategic Location:** Located on an inaccessible hilltop, accessible from only one side and established as the capital of Hindvi Swaraj after being wrested from Chandra Rao More in 1656 CE. Shivaji ruled from Raigad Fort for six years (1674–1680 CE).

International Abhidhamma Divas

News Excerpt:

The International Abhidhamma Divas is a celebration on October 17 that marks the Buddha's "Higher Teaching," or Abhidhamma.

Background of Buddhism and its Teachings:

- **Historical Significance:** India is the birthplace of Buddhism and the land where Gautama Buddha attained enlightenment. Its profound spiritual legacy continues to influence global understanding of peace and introspection.
- **Sacred Buddhist Sites:** Bodh Gaya, where Buddha achieved Nirvana, is among the most revered sites. These sacred locations are not just places of worship but serve as symbols of Buddha's journey toward liberation, inspiring followers to reflect on his path.
- **Cultural and Spiritual Legacy:** The country's connection to Buddhism is deeply embedded in its history and culture, reflecting the universality of Buddha's teachings.
- **Buddha's Teachings – Focus on Abhidhamma:** The Abhidhamma, a critical part of Buddha's teachings, delves into philosophical, mental discipline, and self-awareness. It extends beyond ethical conduct, guiding individuals toward profound mental clarity and discipline.

About International Abhidhamma Divas:

- International Abhidhamma Divas, observed globally, celebrate this philosophical cornerstone, recognising its timeless relevance in guiding ethical conduct and mental discipline.
- The occasion underscores the enduring bond between Buddhism and India, where Buddha's teachings continue to inspire spiritual seekers and those pursuing a life of mindfulness and inner peace.

Abhidhamma Divas: Historical Background and Significance

- **Commemoration:** Abhidhamma Divas marks the event when Lord Buddha descended from the celestial realm, Tāvātimsa-devaloka, to Sankassiya (modern Sankisa Basantapur, Uttar Pradesh).
- **Asokan Elephant Pillar:** The Asokan Elephant Pillar at Sankassiya is a historical marker of this significant occasion.

- **Teachings in Tāvatiṃsa:** According to Theravāda Buddhist texts, Buddha spent three months in Tāvatiṃsa teaching the Abhidhamma to deities, including his late mother.
- **Connection to the Rainy Retreat:** The event coincides with the conclusion of the first Rainy Retreat (Vassa) and the Pavāraṇā festival. At this ceremony, monks and nuns conclude their period of retreat.
- **Cultural and Spiritual Importance:** The day is celebrated to honour Buddha's teachings and his compassionate act of sharing the Abhidhamma with celestial beings.

Key Teachings of Abhidhamma:

- **Nature of the Abhidhamma:** Known as Buddha's "Higher Teaching," the Abhidhamma provides an in-depth analysis of mind and matter, focusing on mental phenomena and the processes of birth and death.
- **Contrast with Sutta Piṭaka:** Unlike the Sutta Piṭaka, which uses conventional language, the Abhidhamma employs an abstract and analytical framework to explore reality and guide practitioners toward insight and liberation.
- **Historical Transmission: Traditional belief:** Buddha first taught the Abhidhamma in Tāvatiṃsa Heaven to gods, including his mother. He later shared these teachings with Sariputta, one of his chief disciples, who elaborated on them in the six core books of the Abhidhamma Piṭaka.
- **Core Topics Covered:**
 - Moral and mental states.
 - Aggregates (khandas) and their interaction.
 - Causal relationships and dependent origination.
 - The path to spiritual emancipation.
- **Seven Treatises:** The Abhidhamma Piṭaka consists of seven treatises, with the Paññāhāna being a key text that examines causal relationships in exceptional depth.

Classical Status to Pali language:

Recognition: Pali was recently recognised as a Classical Language by the Government of India.

- This acknowledgement highlights its literary and historical significance, especially in the context of Buddhism and Jainism.

Historical Role: Originating from various ancient dialects, Pali served as a sacred medium for Lord Buddha's teachings around 500 B.C. It played a vital role in transmitting Buddhism's spiritual and philosophical messages.

- **Canonical Literature:** The entire body of Buddhist canonical literature is written in Pali, most notably the Tipitaka or "Threefold Basket":
- **Vinaya Pitaka:** Outlines monastic rules for ethical conduct and community living.
- **Sutta Pitaka:** A collection of Buddha's speeches and dialogues, offering wisdom and ethical guidance.

- **Abhidhamma Pitaka:** Delves into ethics, psychology, and the analysis of mind and reality.
- **Jataka Kathas:** Pali literature includes Jataka Kathas, stories of Buddha's previous lives. These stories convey moral values and reflect shared cultural narratives of ancient India.

Significance of Classical Language Status: The recognition facilitates efforts to revive Pali, promoting:

- Government initiatives for educational inclusion.
- Preservation of its rich literary heritage.
- Encourages research on its historical, spiritual, and cultural relevance.

Impact:

- Enhances scholarly engagement with Pali texts, especially in studying Buddhism and its teachings.
- Ensures Pali's continued relevance in India's linguistic and cultural landscape.
- Honours its contribution to philosophical and ethical discourse in Indian tradition.

Conclusion: The International Abhidhamma Divas, alongside Pali's recognition as a classical language, underscores India's commitment to preserving Buddhism's rich legacy. This acknowledgement ensures the continued relevance of Buddhist scriptures while fostering global engagement and scholarly exchanges. These initiatives reaffirm India's role as a key centre for Buddhist studies and nurture a deeper appreciation of Lord Buddha's enduring teachings.

Lady Justice

News Excerpt:

The Supreme Court has unveiled a new statue of "Lady Justice", reimagining the image — typically a blindfolded woman holding a set of scales in one hand and a sword in the other — synonymous with legal practice worldwide.

Key Points: New Statue of Lady Justice at the Supreme Court of India:

- **The Statue: Description:**
 - Six-foot-tall statue of a saree-clad woman.
 - She holds scales and a copy of the Constitution of India instead of a sword.
 - The statue lacks a blindfold, unlike traditional renditions.
- **Significance of the Design:**
 - Represents the idea that "Law is not blind; it sees everyone equally."



- Commissioned by Chief Justice of India, D. Y. Chandrachud.
- Designed by Vinod Goswami, a muralist and teacher at the College of Art, Delhi.
- **Context:** Symbolises ongoing legal reforms and the effort to "decolonise" India's legal framework. It aims to modernise and recontextualise the representation of justice.
- **Changing Interpretations of Lady Justice:**
 - **Origins in Mythology:** Rooted in Greek and Roman mythology:
 - **Themis:** Greek goddess of justice, wisdom, and good counsel; often depicted with scales and a sword.
 - **Justitia (Iustitia):** Roman goddess of justice introduced by Emperor Augustus.
 - **Historical Depictions:** Neither Themis nor Justitia wore a blindfold. The blindfolded justice first appeared in 1494 in Ship of Fools, a collection of satirical poems by lawyer Sebastian Brant. This early depiction was satirical, symbolising ignorance or corruption of justice.
 - **Modern Meaning:** By the 17th century, the blindfold had evolved to symbolise impartiality and objectivity in justice.
- **Lady Justice in India:**
 - **Colonial Influence:** The British Raj introduced the common law system and the iconography of Lady Justice. Many Indian courthouses still feature this imagery.
 - **Examples in Architecture:**
 - **Calcutta High Court (1872):** Features both blindfolded and unblindfolded depictions of Lady Justice.
 - **Bombay High Court:** Statue of Lady Justice without a blindfold adorns the top of one building.
 - **Supreme Court Premises:** A mural near the judges' entrance shows a saree-clad Lady Justice holding scales and a book alongside Mahatma Gandhi and a chakra. The new statue echoes this mural, reinforcing the Indianized version of Lady Justice.

'Shilp Samagam Mela 2024'

News Excerpt:

Recently, the Union Ministry of Social Justice and Empowerment held a grand opening for the 'Shilp Samagam Mela 2024' at Dilli Haat, New Delhi.

Shilp Samagam Event & Launch of TULIP

- **Organising Corporations:**
 - National Scheduled Castes Finance and Development Corporation (NSFDC).

- National Backward Classes Finance and Development Corporation (NBCDFC).
- National Safai Karmachari Finance and Development Corporation (NSKFDC).
- **Inauguration:** Union Minister for Social Justice and Empowerment (SJE) Dr. Virendra Kumar inaugurated the event and launched the TULIP (Traditional Artisans' Upliftment Livelihood Programme). Union Minister of State (SJE) Shri B.L. Verma and other senior officials also participated in the event.
- **Event Duration:** The fair is being held from 5th to 15th November. Features 105 stalls showcasing traditional handicrafts from 16 states.



TULIP Initiative:

- **Objective:** Empower marginalised artisans by providing global exposure and e-marketing platforms for their products.
- **Target Groups:** Artisans from Scheduled Castes (SC), Other Backward Classes (OBC), sanitation workers, and persons with disabilities.
- **Digital Platform:** TULIP is a Digital Platform for e-commerce to enhance artisans' economic self-reliance and market reach.
- **Highlights of the Fair:**
 - **Product Display:** Products include metal crafts, wooden artefacts, cane and bamboo items, pottery, handloom goods, jewellery, leather products, and textiles.
 - **Cultural Programs:** Colourful cultural performances are held each evening.

Supporting Initiatives:

- **Digital Tools:** PM-SURAKSHA Portal and PM-DAKSH Portal: Facilitate subsidised loan access and skill training for targeted groups.

- **Financial Assistance:** Vishwas Yojana and Namaste Yojana provide financial aid and protection to SC, OBC, and sanitation worker communities.
- **Marketing Impact:** Over 5.6 million individuals and families have benefited from loan assistance, 614,000 youth have received skill training and marketing opportunities have been created for over 1 lakh artisans.
- **'Rang Paridhan' Program:** Uniforms for personnel of the Ministry's corporations are crafted by local artisans. Celebrates the cultural diversity and skills of traditional artisans.

'Kutumb Prabodhan' is the Core Principle of Indian Culture

News Excerpt:

During his address in Ujjain, the Vice President of India emphasised the importance of focusing on 'Kutumb Prabodhan' (strengthening of families and family values) in society.

Key Points: Vice President's Address at the 66th All India Kalidas Festival:

- **Focus on 'Kutumb Prabodhan' (Strengthening Family Values):**
 - Emphasised the importance of family and community in Indian culture.
 - Urged people to pay attention to their families and neighbours, stating that "life is meaningful only when families and communities are cared for."
 - Warned against excessive materialism, stating that a nation thrives when families are nurtured.
- **Balancing Rights with Duties:**
 - Highlighted the importance of citizens fulfilling their civic duties alongside enjoying their rights.
 - Urged citizens to reflect on their responsibilities: "The nation must be placed above all, and every citizen must contribute to its prosperity."
- **Character Building in the Younger Generation:**
 - Stressed the importance of nurturing ethics and civic responsibility in children.
 - Advised parents to focus on children becoming "good citizens who value and fulfil their duties" alongside professional aspirations.
- **Commitment to 'Samajik Samrasta' (Social Harmony):**
 - Highlighted the challenges to social harmony in modern times.
 - Reinforced India's tradition of promoting world peace, the welfare of all, and the principle of Vasudhaiva Kutumbakam (the world is one family).
 - Reiterated India's global contributions, such as Yoga.
- **Environmental Conservation and Climate Action:**

- Drew lessons from Kalidas's works like Meghaduta, which emphasises the beauty of nature and the need for environmental conservation.
- Urged people to address climate change, reminding them that "we have no other planet to live on besides Earth."
- Promoted the Prime Minister's initiative, 'Ek Ped Maa Ke Naam', encouraging every citizen to plant and preserve a tree in their mother's name.
- **Preservation of Culture and Heritage:**
 - Stressed the importance of preserving India's cultural roots and heritage for the nation's longevity.
 - Described the Kalidas Festival as a symbol of India's unique cultural identity and a reminder of its rich civilisational legacy.
 - Asserted that culture teaches the essence and philosophy of life.

150th Birth Anniversary Year celebration of Bhagwan Birsa Munda

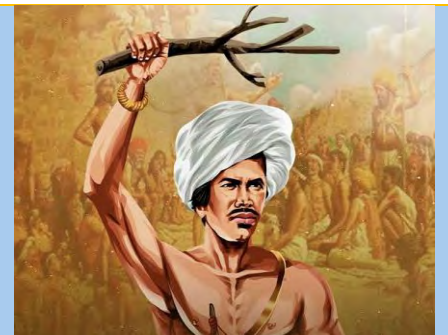
News Excerpt:

The Prime Minister marked the commencement of the 150th Birth Anniversary Year celebration of Bhagwan Birsa Munda on the occasion of **Janjatiya Gaurav Divas**.

Key Highlights of PM Narendra Modi's Visit to Jamui, Bihar for Janjatiya Gaurav Divas:

About Birsa Munda:

- **Identity and Background:** Folk hero and tribal freedom fighter. Belong to the Munda tribe in the Chhotanagpur Plateau region.



- **Role in Indian Independence Movement:** Played a pivotal role in the tribal resistance against British colonisation in Bihar and Jharkhand in the late 19th century.
- **Tribal Mobilisation:** Fought against British land-grabbing policies that impoverished tribals and forced them into bonded labour. Encouraged tribals to reclaim their traditions and rights over their land.
- **Munda Rebellion (Ulgulan):** Led the Tamar Revolt, also known as Ulgulan, against British oppressive policies like Forest Laws and heavy taxes. United various tribal groups under the banner of the "Munda Raj." Used guerrilla warfare tactics against British forces.
- **Religious and Social Reforms:** Founded the Birsait faith, blending animism and indigenous beliefs, emphasising

the worship of one god. Became a spiritual leader, nicknamed 'Dharti Aaba' (Father of the Earth).

- **Recognition as a Leader:** Revered as "Birsa Bhagwan" by his followers for his leadership and sacrifices.
- **Contribution to Policy Change:** His struggle influenced the enactment of the Chotanagpur Tenancy Act of 1908, which restricted the transfer of tribal land to non-tribals.
- **Legacy:** Passed away at the age of 25 on June 9, 1900. Jharkhand was created on his birth anniversary (November 15) in 2000. November 15 was declared 'Janjatiya Gaurav Divas' by the Indian government in 2021 in honour of his contributions.
- **Cultural Influence:** Integrated elements of Munda traditions, Christianity, and Hinduism in his leadership. Advocated for the cultural and spiritual revival of the tribal community.
- **Honouring Bhagwan Birsa Munda:** Commemorated the 150th birth anniversary of Dharti Aaba Bhagwan Birsa Munda. Unveiled a commemorative coin and postal stamp in his honour.
- **Development Projects Worth Over Rs 6,640 Crore:** Launched multiple initiatives aimed at uplifting tribal communities and improving infrastructure in rural and remote areas.
- **Key Healthcare Initiatives:** Inaugurated 23 Mobile Medical Units (MMUs) under **PM-JANMAN**. Launched an additional 30 MMUs under the **Dharti Aaba Janjatiya Gram Utkarsh Abhiyan (DAJGUA)** for tribal healthcare access.
 - 6 Centers of Competency for addressing Sickle Cell Anaemia launched.
 - 4. Housing and Community Development:
 - Participated in Grih Pravesh for 11,000 houses built under PM-JANMAN.
- **Sanctioned:**
 - 25,000 new houses under PM-JANMAN worth Rs 500 crore.
 - 1.16 lakh houses under DAJGUA worth over Rs 1,960 crore.
- **Laid the foundation stone for:**
 - 100 Multi-Purpose Centres (MPCs) under PM-JANMAN.
 - 50 new MPCs under PM-JANMAN.
- **Education and Tribal Empowerment:**
 - Inaugurated 10 Eklavya Model Residential Schools (EMRS) worth Rs 450 crore for tribal students.
 - Laid the foundation for 25 additional EMRS worth Rs 1,110 crore.
 - Sixty-six hostels under PM-JANMAN and 304 hostels under DAJGUA worth Rs 1,100 crore for tribal students.
 - 330 projects for upgrading Ashram Schools, Government Residential Schools, and hostels under DAJGUA.

- **Promoting Tribal Livelihoods:** 300 Van Dhan Vikas Kendras (VDVKs) were inaugurated to foster tribal entrepreneurship and livelihood.
- **Tribal Heritage Preservation:** Inaugurated two Tribal Freedom Fighters' Museums in Chhindwara and Jabalpur, Madhya Pradesh. **Opened two Tribal Research Institutes in Srinagar (Jammu & Kashmir) and Gangtok (Sikkim).**
- **Connectivity Improvement:** Laid the foundation stone for 500 km of new roads to enhance connectivity in tribal areas.
- **Anganwadi and Healthcare Support:** Sanctioned 65 Anganwadi Centres under PM-JANMAN. 55 MMUs and other welfare facilities launched.
- **Community Initiatives:** New initiatives under DAJGUA and PM-JANMAN to act as hubs for community empowerment and support for tribal regions.

Gotti Koya tribals

News Excerpt:

The National Commission for Scheduled Tribes has asked the Union Home Ministry and Chhattisgarh, Maharashtra, Andhra Pradesh, and Odisha to submit a detailed report on the status of the Gotti Koya tribals.

Issues Facing Displaced Gotti Koya Tribals:

- **Displacement Causes:** Gotti Koya tribals fled Chhattisgarh in 2005 due to violence between Maoist guerrillas and Indian security forces. An estimated 50,000 tribals now live in 248 settlements across Odisha, Andhra Pradesh, Telangana, and Maharashtra.
- **Current Challenges:** Living in difficult conditions, excluded from social security benefits. Allegations of land confiscation, home demolitions, and crop destruction by Forest Department officials, particularly in Telangana.

Actions Taken:

- **National Commission for Scheduled Tribes:** On November 8, 2024, letters were sent to the Union Home Ministry and affected States (Chhattisgarh, Maharashtra, Andhra Pradesh, Odisha). The Commission called for a meeting on December 9, 2024, with the Home Ministry's Secretary and Chief Secretaries of these States for a detailed report and requested the presence of tribal rights experts and representatives from the Forest Department.
- **Previous Engagements:** Issued a notice to the district magistrate of Bhadradi Kothagudem (Telangana) on November 7, 2022, seeking an action taken report. Held a meeting with the district magistrate on September 24, 2023, to discuss the allegations.
- **Government Survey Efforts:** Teams conducted surveys in adjoining districts of Telangana and Andhra Pradesh to identify displaced families.

- **Total displaced individuals:**

- Sukma: 9,702.
- Bijapur: 579.
- Dantewada: 208.

Government Reports:

- **Telangana Government's Stand:** Denied allegations of harassment, claiming the Gotti Koyas were encroaching on forest land, harming the environment and ecological balance. Stated that Gotti Koyas do not qualify as Scheduled Tribes in Telangana, rendering them ineligible for forest rights.
- **Union Minister of State for Tribal Affairs: July 2024:** Informed Parliament that displaced tribal families are unwilling to return to Chhattisgarh despite rehabilitation schemes and security measures.

Specific Concerns in Telangana:

- **Land and Livelihood Issues:** Reports of the State government reclaiming land from IDPs in 75 settlements. Loss of livelihoods and increased vulnerability for displaced families.
 - **Environment vs. Rights:** Forest officials argue that settlements on forest land harm natural resources and disrupt the ecological balance.

Manipur's Non-Naga Thadou community

News Excerpt:

The Thadous, one of the oldest and largest non-Naga tribes of Manipur, has extended support to the N. Biren Singh government's move to implement the National Register of Citizens (NRC).

Key Information About the Thadou Community Convention:

- **Convention Details:** Held in Guwahati on November 1 and 2, 2023. Participants adopted resolutions on various issues, including the ethnic conflict in Manipur and the National Register of Citizens (NRC) exercise. Support for Manipur Government's War on Drugs. The Thadou community expressed support for the Manipur government's anti-drug initiatives.
- **Position on NRC in Manipur:** The Thadous resolved to support the NRC exercise if initiated by the Centre. They view the NRC as a means to secure national interests and protect the rights of citizens and indigenous communities. However, the community emphasised the need to address tribal concerns about documentation and proof of citizenship before implementing the NRC, as tribal populations often lack proper records.
- **Ethnic Conflict in Manipur:** Since May 3, 2023, the Thadous have been caught in the ethnic conflict between the Meitei and Kuki-Zo communities. They assert a distinct identity, separate from the Kuki community,

which they perceive as including many settlers from Myanmar.

- **Call for Peace and Recognition of Identity:** The community called for peace and a non-violent resolution to the ethnic conflict. The Thadous identify as one of the 29 original native tribes of Manipur, recognised as an independent Scheduled Tribe under the 1956 Presidential Order.
- **Population and Historical Significance:** Since the 1881 census, the Thadous have consistently been recorded as the largest tribe in Manipur.
 - **Population as per the 2011 Census: Thadous: 2,15,913. Any Kuki Tribes: 28,342** (first time "Kuki" was recorded in a census).
- **Cultural and Historical Identity:** The Thadous emphasise their unique language, culture, traditions, and history, distinct from the Kukis. They prefer to be identified solely as Thadou, without prefixes or suffixes.

Bodo Tribe

News Excerpt:

Recently, the Prime Minister inaugurated the 1st Bodoland Mahotsav in New Delhi.

Key Highlights of the 1st Bodoland Mahotsav:

- **Event:** The event will take place over two days, focusing on language, literature, and culture.
- **Objectives:** Promote peace and harmony to build a vibrant Bodo society. Integrate indigenous Bodo people residing across Bodoland, Assam, West Bengal, Nepal, and other international border areas of the Northeast.
- **Theme: "Peace and Harmony for Prosperous Bharat".**
- **Focus on:** Rich culture, language, and education of the Bodo community. Contributions of other communities from the Bodoland Territorial Region.
- **Significance:**
 - Highlights the cultural and linguistic heritage of Bodoland.
 - Showcases ecological biodiversity and touristic potential of the region.
 - Marks the success of the Bodo Peace Accord (2020), which resolved decades of conflict in Bodoland.
- **Celebration of Progress:** Recognises the journey of recovery and resilience post the Bodo Peace Accord under the leadership of Prime Minister Modi. Highlights how the peace agreement catalysed other peace settlements in the region.
- **Participation:** Over 5,000 cultural, linguistic, and art enthusiasts across Bodoland and the Northeast. Attendees from Assam, West Bengal, Tripura, Nagaland, Meghalaya, Arunachal Pradesh, and other parts of India.

PRE-SHOTS
POLITY

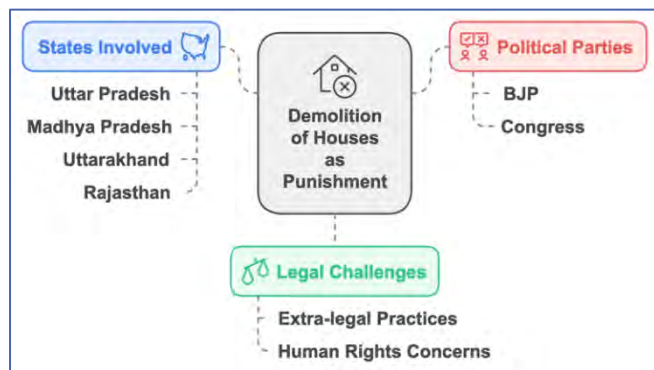
SC Issues Guidelines to Curb Illegal Demolitions

News Excerpt

The Supreme Court laid down guidelines to **curb the government's demolition** of people's **homes and private properties** "only on the ground that they are accused of a crime".

What was the case?

- The case pertained to a set of pleas that challenged the "extra-legal" practice of **demolishing houses** of people accused of criminal activities.
- The practice has been observed in recent years in **BJP-ruled states** such as **Uttar Pradesh, Madhya Pradesh, and Uttarakhand**. It was also seen in **Rajasthan** during **Congress rule in 2022**.



What are the guidelines?

- **PROVIDING NOTICE:** The SC said a **minimum of 15 days prior notice** must be given for a person to respond to before demolition is carried out, starting from the date that the owner or the occupier receives the notice. This notice must contain **details** of the structure, **why it is being demolished**, and a **date for a "personal hearing"** to allow owners to contest the demolition.
 - The SC said that as soon as the notice is served, the **local Collector or District Magistrate** should be **informed via email**, with an arrangement for an auto-reply acknowledgement of the email's receipt "[t]o prevent any allegation of backdating."
- **HEARING & FINAL ORDER:** After conducting a hearing where the minutes are properly recorded, the SC said the **final order** must **mandatorily contain** certain information. This includes the **arguments made by the owner or the occupier**, why the authority (such as the local municipal corporation) believes the case cannot be settled, and whether the entire construction or only a part is to be demolished. **Reasons** such as "why the extreme step of demolition is the only option available" **should also be mentioned**, the SC said.

'PUNISHING ACCUSED'S KIN IS ANARCHY'

“ For an average citizen, the construction of a house is often the **culmination of years of hard work, dreams, and aspirations...** If this is to be taken away, then the authority must be satisfied that this is the only option available

“ If the executive in an arbitrary manner demolishes the houses of citizens only on the ground that they are accused of a crime, then it acts **contrary to the principle of 'rule of law'**. If the executive acts as a judge... it **violates the principle of 'separation of powers'**. We are of the view that in such matters, the public officials who take the law in their hands should be made accountable



“ It is not only the accused who lives in such property or owns such property. If his spouse, children, parents live in the same house or co-own the same property, can they be penalised by demolishing the property? Punishing such persons... is **nothing but anarchy** and would amount to a violation of right to life

“ ... It is not a happy sight to see women, children and aged persons **dragged to the streets overnight**. Heavens will not fall on the authorities if they hold their hands for some period

- **THE AFTERMATH:** If the authority passes a final order for demolition, and after the property owner or the occupier receives the order, the SC said, "the order will not be implemented for a **period of 15 days**". This allows the owner or the occupier to either remove the construction or challenge the final order in court and seek a stay order.
 - At the end of this second 15-day period, if the final demolition order has **not been stayed** and the **construction has not been removed**, demolition can be carried out. However, the authority must take a **video recording** of the demolition and prepare both an "inspection report" before the demolition and a "demolition report" with a list of personnel involved in the demolition process.

What is the SC's reasoning for the guidelines?

- **SEPARATION OF POWERS:** The verdict stresses that the judiciary is entrusted with "**adjudicatory**" (decision-making) powers to decide if an accused person is guilty and whether any of the organs of the state have "**transgressed**" their limits. The judiciary then asks, "Can the officers of the State Government take upon themselves the adjudicatory function and without a person undergoing a trial be inflicted with a punishment of demolition of his properties."
 - According to the SC, it would be "**wholly impermissible**" for the state to decide that demolition can be a punishment for an accused

person. The SC said, "The **executive cannot replace the judiciary** in performing its core functions."

- **PUBLIC TRUST & TRANSPARENCY:** The SC said **public officials** must be held accountable for both their actions and inactions. **Officials who "take the law in their hands"** and pass demolition orders on the ground that the owner or occupier of the property is an accused "should be made **accountable** for such high-handed actions," according to the court.
- **RIGHT TO SHELTER:** The SC noted that the accused is not the only one who lives or owns such properties. It highlighted that the **right to life with dignity under Article 21** of the Constitution includes the **right to shelter**. Depriving this right of the other innocent people living in the same house as the accused would be "**wholly unconstitutional**", according to the SC.

Special Campaign 4.0

News Excerpt

The Government of India conducted Special Campaign 4.0



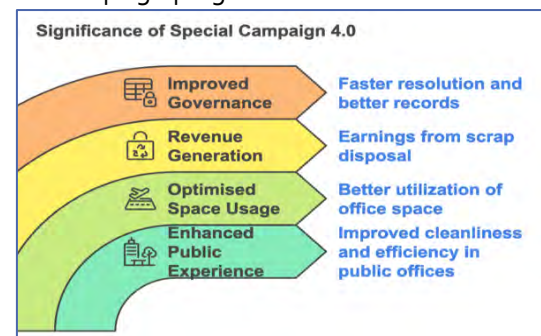
from **2 October to 31 October 2024**, focusing on **Swachhata** and **Reducing Government Pendency**.

About Special Campaign 4.0

- It was launched by the **Department of Administrative Reforms Public Grievances (DARPG)**.
- **Phases of Special Campaign 4.0**
 - **Preparatory Phase (16th - 30th September 2024):** During this phase, Ministries and Departments undertook the following:
 - Nominated Nodal Officers for each office.
 - Conducted training sessions for Nodal Officers.
 - Mobilised resources and ground functionaries.
- **Planned and Assessed:**
 - Identified pending references (MP, State Government, PMO, etc.).
 - Located cleanliness campaign sites.
 - Assessed redundant materials for disposal.

- Developed space management plans.
- **Implementation Phase (2nd - 31st October 2024):** This action phase focused on meeting the targets identified during the preparatory phase:
 - Conducted cleanliness drives at identified sites.
 - Disposed of scrap and redundant items.
 - Improved records management, including reviewing, categorising, and weeding out files.
 - Monitored daily progress through a centralised portal.
- **Nodal Officers:** Each Ministry/Department had a Nodal Officer (**minimum rank: Joint Secretary**) to coordinate the campaign within their jurisdiction, including field offices, PSUs, and autonomous bodies.
- **Monitoring and Reporting:** The **SCDPM portal** was used to track campaign progress.

Some of the best practices adopted under Special Campaign 4.0:



- Creating awareness on cleanliness through **nukkad natak**s.
- Organising a **Sapling Plantation Drive**.
- Fostering awareness about cleanliness, menstrual hygiene, and personal empowerment. Cleanliness and **Menstrual Hygiene Awareness Session** organised by **One Stop Centres**.
- The "**Making the Best out of Waste**" activity was conducted with the children at the Childcare Institution, encouraging creativity amongst the children to make useful items from recycled materials.
- Awareness drives on cleanliness in hospitals, focusing on maintaining hygiene to **prevent Dengue and Malaria**.
- Commitment to adopt sustainable and environmentally friendly practices such as using **energy-efficient light bulbs** and **reusing waste papers**.
- A pledge to realise not only garbage-free surroundings but also clean the society from menace to make **women feel safer**.

149TH ASSEMBLY OF INTER-PARLIAMENTARY UNION (IPU)

News Excerpt

The 149th Assembly of the Inter-Parliamentary Union (IPU) was held in **Geneva** from October 13 to 17, 2024.

Key Highlights of the Meeting

- The **theme** of the Assembly was "**Harnessing Science, Technology, and Innovation for a More Peaceful and Sustainable Future**".
- The Indian Parliamentary Delegation (IPD), led by **Lok Sabha Speaker Shri Om Birla**. Key Points of Shri Birla's Address:
 - **Commitment to Multilateralism:** Highlighted India's dedication to global cooperation and the critical role of parliamentary dialogue in addressing global challenges.
 - **Climate Change Initiatives:** Cited the "One Sun, One World, One Grid" initiative. Noted India's significant growth in renewable energy capacity.
 - **Support for Innovation:** Mentioned the Start-up India program, positioning India as the third-largest start-up ecosystem globally, with 118 unicorns valued at over \$355 billion.
 - **Digital Governance:** Explained the impact of JAM Trinity (Jan Dhan, Aadhar, Mobile) and Direct Benefit Transfer (DBT), which transferred ₹2.495 trillion under 314 welfare schemes, ensuring transparency and efficiency.
 - **Data Protection and Technology Legislation:** Stressed the importance of robust data protection frameworks and responsible use of technology, citing advancements like Digital Sansad.
- During this Assembly, **Jamaica** was welcomed as the **181st member** of the IPU. Jamaica had previously been a member of the IPU from 1983 to 1996.
- The next Assembly will be hosted by **Uzbekistan** in **Tashkent** from **April 5-9, 2025**.

About Inter-Parliamentary Union (IPU)

- The Inter-Parliamentary Union is an international organisation established in **1889**.
- It **aims** to promote **democratic governance, accountability, and cooperation** among its members. The IPU advocates for **gender parity** in legislatures, **youth participation** in politics, and **sustainable development**.
- As of 2024, the IPU includes national parliaments of **181 countries** as members and **15 regional parliamentary assemblies** as associate members.
- The IPU's structure includes the **Assembly**, the **Governing Council**, and the **Executive Committee**.
 - The Assembly, meeting biannually, consists of delegates from member parliaments.
 - The Governing Council, meeting twice a year, includes three representatives from each member parliament.
 - The Executive Committee, the administrative organ, includes the IPU President and 15 members from different parliaments.

Karmayogi Competency Model

News Excerpt

The **Capacity Building Commission (CBC)** has developed the **Karmayogi Competency Model** for civil servants, designed to aid their **transition** from a karmachari (employee) to a karmayogi (dedicated worker).

Mission Karmayogi National Program

- It is a flagship programme of the Government of India launched in **2020** for **training civil servants**. It intends to transform the Civil Services from a '**Rule-Based**' to a '**Role-Based**' way of functioning and Make Them **Citizen-Centric**.
- Mission Karmayogi has **six pillars**: Policy Framework, Institutional Framework, Competency Framework, Digital Learning Framework (Integrated Government Online Training Karmayogi Platform (iGOT-Karmayogi)), Electronic Human Resource Management System (e-HRMS), and Monitoring and Evaluation Framework.

About Karmayogi Competency Model

- The **Karmayogi Competency Model** is designed to transition civil servants from mere employees (**karmacharis**) to **karmayogis**, embodying selfless service and accountability. It aims to:
 - Enhance citizen-centric governance.
 - Build future-ready bureaucrats.
 - Foster a performance-driven culture in public administration.
- **Key Principles:** The model draws inspiration from four recurring themes in Prime Minister Narendra Modi's speeches:
 - **Vikas (Development)** – Focus on growth and progress.
 - **Garva (Pride)** – Instilling national and professional pride.
 - **Kartavya (Duty)** – Emphasizing responsibility and accountability.
 - **Ekta (Unity)** – Promoting cohesion and inclusivity.
- **Competency Framework:** It is benchmarked against global competency models from Australia, Singapore, and South Korea. The model classifies **34 Competencies** into two broad categories:
 - **Behavioural Competencies (13)**
 - **Core Competencies:** Essential for all civil servants - Self-awareness, Personal effectiveness, and Creativity and innovation.
 - **Leadership Competencies:** These are required for higher responsibilities, such as strategic leadership and visionary thinking.
 - **Functional Competencies (21):** These are role-specific and include - Citizen centricity, Policy architecture, Digital fluency, Financial management, and Data analytics.

Capacity Building Commission

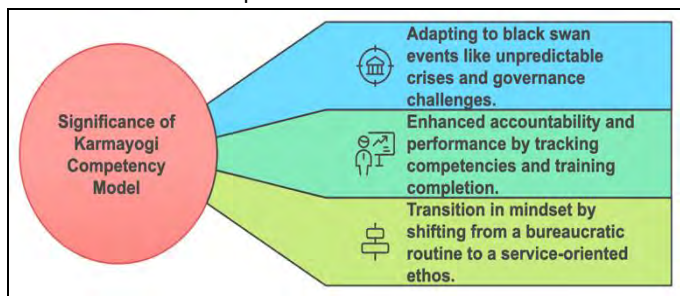
Establishment
The CBC was established in 2021 as part of the National Programme for Civil Services Capacity Building (NPCSCB), also known as Mission Karmayogi.

Composition
It is a three-member Commission supported by an internal Secretariat headed by a Secretary. Members have been appointed from diverse backgrounds, such as the private sector, academia, the public sector, and civil society.

Mandate
Its mandate is to drive the capacity-building agenda for Indian civil servants, focusing on creating a more efficient, citizen-centric bureaucracy.

Independence
The CBC operates as an independent body with executive powers.

- **Integration with iGOT Platform:**
 - **Competency-Based Learning:** Each competency is mapped to specific courses on iGOT. Employees undergo a proctored assessment to evaluate their competencies.
 - **Continuous Skill Development:** A minimum of 50 hours of training per year is mandatory. Course completion is tracked and tagged to the e-HRMS (Human Resource Management System).
 - **Algorithm-Driven Recommendations:** Post-assessment, employees are recommended courses aligned with their job roles and competency gaps. Real-time upskilling enables them to meet evolving job requirements efficiently.
- **Current Implementation:** The model was initially implemented for Central Government employees. States like Andhra Pradesh, Odisha, Maharashtra, and Madhya Pradesh have adopted it.



Supreme Court upheld constitutional validity of UP Madarsa Act, 2004

News Excerpt:

The Supreme Court **upheld** the constitutional validity of the Uttar Pradesh Board of Madarsa Education Act, 2004 (**Madarsa Act**), barring the provisions relating to higher education.

What is the Madarsa Act?

- Madarsas provide both **religious education** in Islamic tenets and practices as well as mainstream **secular education**. Most madarsas follow the National Council of Educational Research and Training (**NCERT**) curriculum.

- The Madarsa Act provides a **legal framework** for these institutions in UP. It has established the Uttar Pradesh Board of Madarsa Education (the Board), which **prepares and prescribes course material** and **conducts exams** for all courses.

- The Act also gives power to the **state government to create rules** to regulate madarsa education.

Why did Allahabad HC quash the Act?

- On March 22, the **Allahabad HC struck down** the Act in its entirety, saying it **violated** the **basic structure** of the Constitution as the law flouted the **principles of secularism**.
 - In **Kesavananda Bharati v State of Kerala (1973)**, the SC had held that Parliament cannot alter the Constitution's basic structure, and in **S R Bommai v Union of India (1994)** had ruled that secularism is part of the basic structure.
- The HC said the Act made it compulsory for students to **study Islam** and more **modern subjects** were made **optional**. It held that the state cannot "discriminate" by providing education based on religion.
- The HC also stated that the Act **violated** the **right to free and compulsory education** under **Article 21A** of the Constitution by denying "quality" education in modern subjects.
- It said the Board's powers to grant **higher education degrees** such as **Fazil and Kamil** — equivalent to a bachelor's and a postgraduate degree, respectively — under the Act conflicted with the **University Grants Commission Act, 1956** (UGC Act), a central law that takes precedence in matters related to education.

Why did SC uphold the Act?

The Supreme Court (SC) overturned the Allahabad HC's decision, except for the higher education provisions. The SC made the following points:

- **Basic Structure Doctrine Not Applicable**
 - The SC clarified that the basic structure doctrine applies **only** to **constitutional amendments**, not ordinary legislation.
 - Citing **Indira Gandhi v Raj Narain (1975)**, the court stated that striking down a law for vague violations of secularism requires a direct connection to specific constitutional provisions.
 - In the Madarsa Act case, the HC's reliance on secularism as a broad principle was deemed inappropriate.
- **State's Right to Regulate Madarsas**
 - The SC affirmed that states can regulate education in minority institutions as long as such regulations are **reasonable** and **do not infringe on their minority character**.

- It referred to **Entry 25** of the **Concurrent List**, which empowers both the state and central governments to legislate on education, including institutions providing religious education.
- **Right to Education and Minority Institutions**
 - The SC referred to its **2014 decision**, which excluded minority institutions from the ambit of the **Right to Education Act 2009**.
 - It upheld that madarasas, as minority institutions, have the constitutional right under **Article 30** to provide religious education and manage their own administration.

Why did SC strike down higher education provisions of the Act?


- The SC invalidated parts of **Section 9** of the Madarsa Act that allowed the Board to:
 - Prescribe coursework.
 - Conduct exams.
 - Grant higher education degrees like **Kamil** and **Fazil**.
- This was because:
 - **Section 22 of the UGC Act** specifies that only universities established under central or state legislation, or those deemed universities by the UGC, can grant degrees.
 - Since the **Madarsa Board is not a university**, its degree-granting powers were deemed unconstitutional.

95% of Land Records in Rural India Digitized

News Excerpt

Since 2016, nearly 95% of land records in **rural India** have been digitised, marking a critical advancement towards ensuring secure and accessible **land ownership** in rural areas.

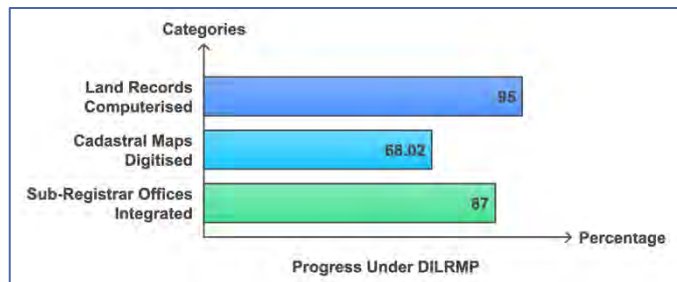
About Digital India Land Records Modernization Programme (DILRMP)

<p>● Erstwhile National Land Record Modernization Programme was revamped as Digital India Land Records Modernization Programme (DILRMP) in April 2016</p> 	<p>OBJECTIVE OF DILRMP</p> <ul style="list-style-type: none"> ● Improve real-time information on land ● Optimize use of land resources ● Benefit both landowners & prospectors ● Aids in policy & planning ● Reduce land disputes ● Check fraudulent/benami transactions
---	---

- The government **extended DILRMP until 2025-26**, adding new features like **Aadhaar-based integration** with land records and **computerisation of revenue courts**.

Key Initiatives under DILRMP

- **Unique Land Parcel Identification Number (ULPIN):** The ULPIN or "**Bhu-Aadhar**" provides a 14-digit alphanumeric code for each land parcel based on its geo-coordinates. Implemented in 29 States/UTs, it helps streamline real estate transactions, resolve property disputes, and improve disaster management efforts.
- **National Generic Document Registration System (NGDRS):** NGDRS or e-Registration provides a uniform process for nationwide deed/document registration, allowing online entry, payments, appointments, and document searches. So far, 18 States/UTs have adopted it, and 12 others share data with the national portal.
- **e-Court Integration:** Linking land records with e-Courts aims to provide authentic land information to the judiciary, aiding in faster case resolution and reducing land disputes. Integration has been cleared in 26 States/UTs.
- **Transliteration of Land Records:** To overcome language barriers to accessing land records, the program transliterates land documents into any of the 22 languages listed in Schedule VIII of the Indian Constitution. This is already in use in 17 States/UTs.



- **Bhoomi Samman:** Under this initiative, 168 districts across 16 States have achieved "Platinum Grading" for completing over 99% of the program's core components, including land record computerisation and map digitisation.

Significance of Digitization of Land Records

- The digitisation of land records in India has transformed **land management** by addressing traditional challenges like **disputes, fraud, and inefficient manual processes**.
- With the digitisation of land records, ownership information is easily accessible online, enhancing **transparency** and reducing **illegal encroachments**.
- Digitised records simplify **dispute resolution**, easing **court burdens** and empowering marginalised communities by improving access to **land rights**.
- Integration with **geospatial mapping** enhances land management, enabling accurate **surveys** and planning.
- During land acquisitions or disasters, **digital records** ensure fair and timely **compensation**.
- Overall, digitising land records will lead to a more transparent, accessible, and efficient **land governance system**.

SC rules that Aadhaar cannot be used as proof of date of birth

News Excerpt

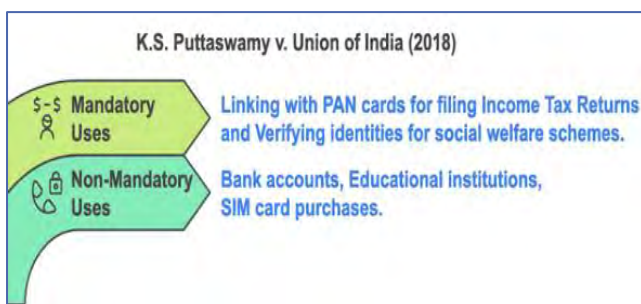
The Supreme Court ruled that **Aadhaar cards cannot be used as proof of age**, emphasising that other official documents, such as the **School Leaving Certificate**, must serve this purpose.

Case Background: Motor Accident Compensation

- The case arose from a **motorcycle accident** victim who passed away. In April 2015, the **Motor Accident Claims Tribunal (MACT)** in Rohtak, Haryana, directed an insurance company to pay **Rs 19.35 lakh** to the victim's family.
- Under the **Motor Vehicles Act, 1988 (MVA)**, compensation in fatal cases is calculated based on:
 - Age of the deceased (used to determine the multiplier).
 - Income of the deceased.
 - Number of dependants.
- The **Punjab & Haryana High Court** reduced the compensation to **Rs 9.22 lakh**, using the **Aadhaar card** to determine that the deceased was **47 years old**, applying a multiplier of **13**.

Supreme Court Ruling

- The **Supreme Court** restored the multiplier of **14**, awarding **Rs 15 lakh** as compensation.
 - The victim's family argued that according to the **School Leaving Certificate**, the victim was **45 years old**, warranting a higher multiplier of **14**.
- The SC referred to **Section 94** of the **Juvenile Justice (Care and Protection of Children) Act, 2015**, which specifies:
 - Matriculation or equivalent certificate** as the primary document to determine age.
 - In the absence of this, **School Leaving Certificates** are valid.
- The Court relied on the **2018 Constitutional Bench** ruling, which stated that Aadhaar is "proof of identity" and not proof of date of birth. A **UIDAI circular** reiterated that Aadhaar should not be considered valid evidence of age.



About Aadhaar

- Aadhaar is a **12-digit** individual identification number that serves as **proof of identity** and **address** anywhere in India.
- The Aadhaar card, a **biometric document**, stores an individual's **personal information** on a government database.
- It is issued by the **Unique Identification Authority of India (UIDAI)**.
- An Aadhaar card can be **issued to any person** residing in the country for more than **six months** continuously, provided he/she submits one of the 18 listed identity cards and an address proof. **Foreign nationals** can also obtain one.
- Despite court rulings, Aadhaar's scope has grown significantly:
 - It is mandatory to access **government schemes** like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MG-NREGS).
 - Private entities** also use it for verification (e.g., Amazon Pay and Aditya Birla Housing Finance).

Anomalies in MG-NREGS Implementation

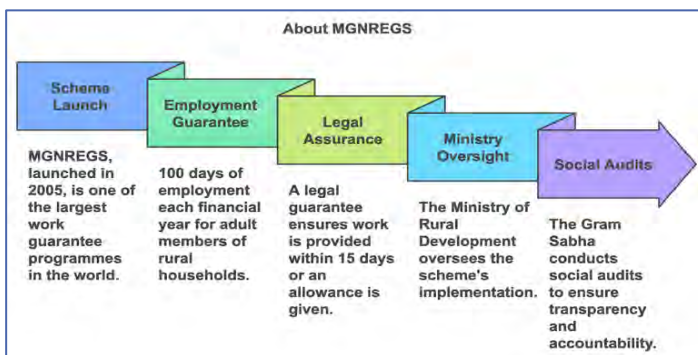
News Excerpt

The Internal Audit Wing (IAW) of the Union Ministry of Rural Development (MoRD) identified significant financial discrepancies under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MG-NREGS) during the fiscal year 2023-24.

Audit and Findings: Key Observations

- Scope of the Audit (2023-24)**
 - Total audits conducted:** 92 risk-based internal audits, the highest since the establishment of the IAW.
 - Purpose of the audits:**
 - Ensure transparent and judicious use of funds.
 - Verify whether the intended beneficiaries received the benefits.
 - Strengthen rural economic structures through proper scheme implementation.
- Annual Review of Performance Audit**
 - Prepared by:** Office of Chief Controller of Accounts
 - Shared with:** Ministry of Rural Development
 - Focus areas:** Internal audits of MG-NREGS, PMAY-G, PMGSY, and other schemes.
- Overview of Losses Detected in MG-NREGS (2023-24):** The losses totalled **Rs 35.37 crore**, with the highest amount detected in Tamil Nadu.
 - Virudhunagar district (Tamil Nadu):** Rs 34.02 crore
 - Nagaur district (Rajasthan):** Rs 1.09 crore
 - Morena district (Madhya Pradesh):** Rs 26 lakh

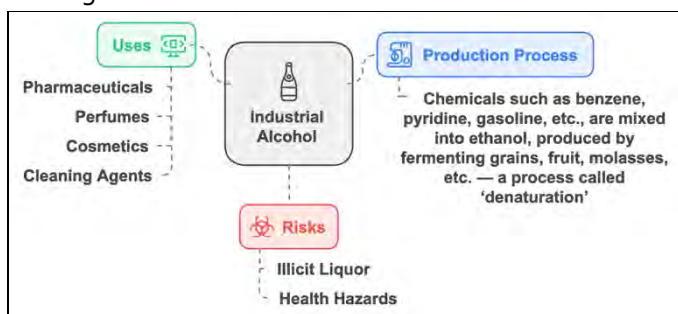
- **Losses in Other Rural Development Schemes (2023-24)**
 - **Pradhan Mantri Gramin Awaas Yojana (PMAY-G):** Pherzawl district (Manipur): Rs 5.20 lakh
 - **Pradhan Mantri Gram Sadak Yojana (PMGSY):** Losses and wasteful expenditures detected in multiple states.
- **Wasteful and Unauthorized Expenditure:** The IAW also flagged instances of wasteful and unauthorised expenditures across various schemes:
 - The **states involved** are Gujarat, Sikkim, Manipur, Odisha, Kerala, Himachal Pradesh, Mizoram, Andhra Pradesh, Assam, Madhya Pradesh, Rajasthan, and Bihar.
 - **Total amount reported:** Rs 15.20 crore.



Supreme Court Ruling: States Can Tax Industrial Alcohol

News Excerpt

A **nine-judge Bench** of the Supreme Court held in an **8:1 ruling** that states have the power to tax not just alcoholic beverages but also 'industrial' alcohol.



Constitutional Basis: Seventh Schedule

- The dispute revolves around two **"overlapping"** entries in the Seventh Schedule, which outlines the division of legislative powers between the Centre and the states.
- **Entry 8 of List II (State List):**
 - Grants states the power to control "production, manufacture, possession, transport, purchase, and sale of intoxicating liquors."
 - States argue that industrial alcohol can be misused to create consumable (potable) alcohol, necessitating their legislative control.

Entry 52 of List I (Union List)

- Empower the Centre to regulate industries, including non-potable alcohol, under the **Industries (Development and Regulation) Act 1961**.
- The Centre claimed it had exclusive regulatory control over industrial alcohol.

Key Points of the Ruling

Revenue Generation for States

- **Excise duty** on drinking alcohol has long been a primary revenue source for states.
- The court's ruling allows states to extend their tax net to include industrial alcohol, thereby adding to their financial resources.

Interpretation of 'Intoxicating Liquor'

- The central question addressed was whether "intoxicating liquor" in the Constitution could encompass industrial alcohol.
- Eight judges, including Chief Justice of India D Y Chandrachud, ruled in favour of the states, while Justice B V Nagarathna dissented, arguing that industrial alcohol regulation should remain under the Centre's purview.

Implications of the Ruling

- **State Revenue Enhancement:** The ability to tax industrial alcohol will increase states' revenue potential. Karnataka, for example, raised its Additional Excise Duty (AED) on Indian-made liquor by 20% in 2023 to boost its income.
- **Centre-State Relations:** The ruling underscores state autonomy in controlling subjects on the State List, even as the Centre broadly retains regulatory power over industries.
- **Overruling a Previous Judgment:** The court set aside the 1990 judgment in **Synthetics & Chemicals Ltd. v State of Uttar Pradesh**, which limited the term "intoxicating liquor" to potable alcohol, thus excluding industrial alcohol from state taxation.

Strengthening Gram Panchayats

News Excerpt

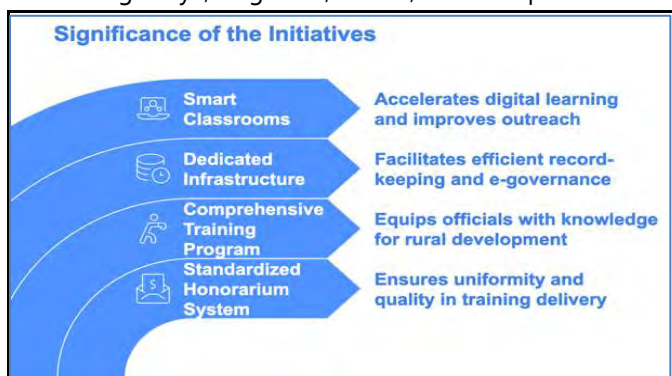
The **Central Empowered Committee (CEC)** of the **Rashtriya Gram Swaraj Abhiyan (RGSA)**, in its 8th meeting, made several significant decisions to strengthen Gram Panchayats.

Key highlights of the meeting

- **Adoption of Standardized Honorarium System under RGSA**
 - The CEC approved standardising honorarium rates for Master Trainers, Guest Faculties, and Eminent Resource Persons across States/UTs.
 - This decision ensures **equitable compensation** and fosters the availability of **high-quality trainers**, which is critical for improving training delivery and

capacity building across Panchayati Raj Institutions (PRIs).

- **Training Programs for Panchayat Officials**
 - "Funding for Long-Term Domestic Training Programs" for **up to one year** for PRIs and Panchayati Raj Department officials in the States/UTs under the State component of RGSA.
 - The **North East (NE) and Hilly States** can sponsor **10 candidates** each for higher learning, **UTs and Goa** can sponsor up to **5 applicants** each, while **other states** can sponsor up to **20 candidates** each.
- **Boost to Panchayat Infrastructure**
 - The CEC approved the construction of **3,301 Gram Panchayat Bhawans** with **Common Service Centre (CSC)** co-location and sanctioned 22,164 computers for Gram Panchayats across various States, including Andhra Pradesh, Chhattisgarh, Punjab, and Telangana.
- **Elected Representatives of Panchayats to be trained in Smart Classrooms**
 - Computer labs in **State Panchayat Resource Centers (SPRCs)** in 25 States and **District Panchayat Resource Centers (DPRCs)** in 395 Districts will be upgraded with more computers of the latest specification.
 - Approval has been given for installing technological **Educational Aids** in these SPRCs and DPRCs across States/UTs.
 - By integrating digital tools, such as projectors, LCDs, interactive panels, and PA systems, the training centres will be better equipped to deliver high-quality capacity-building programs.
- **Investment in Panchayat Infrastructure in the Vibrant Villages of the Border Areas of North East and Jammu and Kashmir**
 - A decision has been taken to construct 400 **Panchayat Bhawans-cum-Common Service Centers** in Arunachal Pradesh. Similarly, Panchayat infrastructure has been supported for the other States of the North-East, including Mizoram, Meghalaya, Nagaland, Assam, and Manipur.



Rashtriya Gram Swaraj Abhiyan (RGSA):

- It was launched on **24th April 2018**, '**National Panchayat Day**', an umbrella scheme of the **Ministry of Panchayati Raj**, Govt. of India.
- The RGSA scheme aims to **strengthen the capacities** of institutions for rural local governance to become more responsive to local development needs, prepare participatory plans leveraging technology, and efficiently utilise available resources for realising **sustainable solutions** to local problems linked to SDGs.
- It is being implemented as a core **Centrally Sponsored Scheme (CSS)**.

Not All Private Property Can Be Taken Over by the State for 'Common Good'

News Excerpt

A **9-judge Constitution Bench** of the Supreme Court, by an 8-1 majority, **set limits** on the government's **power to take over privately owned resources** for public distribution, ruling that only certain private resources that meet specific criteria as "**material resources of the community**" can be considered for state acquisition.

Constitutional Provisions Related to Right to Property

- **Article 39(b)** in **Part IV** provides that 'ownership and control of material resources of the community are so distributed as best to subserve the common good.'
 - Part IV of the Constitution contains the **Directive Principles of State Policy (DPSP)**, which states that the government should strive to achieve social and economic justice in our society.
- **Article 19(1)(f)** and **Article 31** originally guaranteed the **right to property** and **compensation for acquisition** as a Fundamental Right, respectively.
 - **Article 31C**, added through the **25th amendment in 1971**, provided an exception that laws made to fulfil the principles under Articles 39(b) and (c) shall not be void because it violated Fundamental Rights, including the right to property.
- In the **Kesavananda Bharati case (1973)**, a 13-judge Bench of the Supreme Court **upheld** the validity of **Article 31C** but made it subject to judicial review.
- By the **44th Amendment Act, 1978**, **Article 19(1)(f)** and **Article 31**, which protected the right to acquire, hold, and dispose of property, were abrogated, meaning it removed the Right to Property from the list of fundamental rights.
 - Property became a **constitutional right** under **Article 300A** in Chapter IV of Part XII.
 - Any **law** by the government to acquire private property should only be for a **public purpose** with adequate **compensation** meted out.

Background of the Case:

Maharashtra Housing and Area Development Authority (MHADA)

acquired old buildings in Mumbai for redevelopment under a state housing policy.

Property Owners'

Claimed violation of **Article 14** (Right to equality) and **Article 19** (Right to freedom).

MHADA's cited **Article 31C**, which protects laws implementing **Article 39(b)** (public welfare) from challenges under **Fundamental Rights**.

Earlier Judicial Intervention

In the **State of Karnataka vs. Ranganatha Reddy (1977)** case, the Supreme Court upheld the law nationalising private bus services, with Justice V.R. Krishna Iyer interpreting "material resource of the community" in Article 39(b) to include all national wealth.

This judgement influenced the **Sanjeev Coke Manufacturing Company vs. Bharat Coking Coal Limited (1982)** case, which supported nationalisation and was referenced in **Mafatlal Industries Limited vs. Union of India (1996)**.

Key Highlights of the Supreme Court Ruling

- **State's Power to Acquire Resources Is Not Absolute:** The Court ruled that **Article 39(b)** cannot be interpreted as a blanket authorisation for the State to acquire **all private property** for public benefit.
- **Criteria for Resource Acquisition:** The Court laid down specific **criteria** for determining when the State can acquire privately owned resources:
 - **Material Nature:** The resource must be essential and have a significant role in economic or social contexts.
 - **Community Element:** It must serve a broader **public purpose** or address **community welfare**.
- **Assessment of Resource Significance:** **CJI Chandrachud** highlighted that the **importance of a resource** must be evaluated in its specific **context**. For instance,
 - **Scarce or vital resources** like water or minerals are more likely to qualify for State intervention.
 - Resources concentrating **power** or wealth in private hands may also warrant State control to prevent inequities.

- Resources concentrating **power** or wealth in private hands may also warrant State control to prevent inequities.
- The Court referred to the **public trust doctrine**, which holds that the State must manage certain resources in trust for the public. This doctrine may guide assessing **whether a resource should remain in private hands** or be acquired for public use.
- **Commitment to Economic Democracy:** The Court reaffirmed the Constitution's commitment to **economic democracy**, ensuring equitable resource distribution without strictly adhering to **socialist** or **capitalist** ideologies.
- **Protection of Property Rights under Article 300A:** The Court emphasised the need to harmonise **Article 39(b)** with **Article 300A**. Any acquisition under Article 39(b) must respect the **due process** and **fair compensation** principles in Article 300A.

Narrowed Scope for State Acquisition: Limits the government's power to acquire private property under Article 39(b), emphasising individual property rights.

Support for Economic Democracy: Reinforces the Constitution's vision of equitable resource distribution while respecting individual freedoms.

Recognition of Evolving Market Realities: Acknowledges the shift in private property types, including data and space resources, stressing the need for adaptive legal frameworks.

DPSPs as Guiding Principles: Affirms that Directive Principles are guiding policies, not enforceable laws, to be balanced with constitutional rights.

Public Participation in Economic Policy: Highlights the role of public involvement in shaping India's economic direction amid global and domestic changes.

Protection for Marginalized Communities: Safeguards small farms and forest lands, ensuring responsible resource management and protecting vulnerable groups.

Market-Oriented Economic Model: Strengthens India's commitment to a market-driven economy while supporting targeted redistributive policies.

Boosted Investment Climate: Enhances investor confidence by protecting private property from excessive State intervention.

Positive Impact on Real Estate and Industry: Provides stability for high-value sectors, ensuring ownership security and encouraging economic growth.

- **Revisiting the Sanjeev Coke Case (1982):** The majority opinion overturned the **1982 Sanjeev Coke case**, which had broadly interpreted State powers under Article 39(b) based on **Justice VR Krishna Iyer's** ruling in the **1977 Ranganath Reddy case**.

Implications of the Supreme Court Ruling

Way Forward:



SOCIAL ISSUES

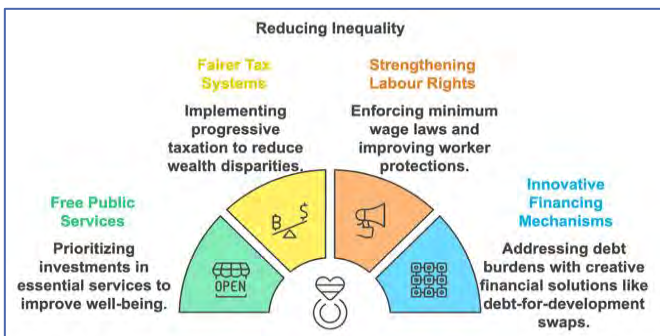
Commitment to Reducing Inequality (CRI) Index 2024

News Excerpt

Oxfam and **Development Finance International (DFI)** have released the Commitment to Reducing Inequality (CRI) Index 2024.

Key Highlights of the Index

- The report assessed **164 countries** on **three key pillars**:
 - Education, health, and social protection.
 - Progressive taxation.
 - Labour rights and wages.
- **Setback in Combating Inequality:** 9 out of 10 countries have regressed in their commitments to reducing inequality.
- **Major Cuts in Social Investments:** 84% of countries have reduced investment in education, health, and social protection. This decline impacts access to essential services, leading to poorer outcomes for marginalised communities.
- **Weaker Tax Systems:** 81% of countries have weakened their tax systems' ability to reduce inequality. Tax systems are becoming less progressive, disproportionately burdening the poor. Reliance on regressive taxes like Value Added Tax (VAT) increases inequality.



- **Deterioration in Labour Rights:** 90% of countries report a decline in labour rights and minimum wage protections:
 - Vulnerable employment has increased.
 - Workers face stagnating wages and diminished bargaining power.
- **Debt Crisis:** Many low-income countries are burdened by debt. 48% of budgets in these countries are allocated to debt servicing, severely limiting social spending.
- **Climate Shocks:** Climate shocks further exacerbate inequality, disproportionately affecting the poorest.
- **Stagnation in Universal Coverage**
 - Universal health coverage stands at 65%, a marginal increase from 64% in 2022.
 - Free education and social protection coverage have plateaued in most countries.
- **Impact on SDGs:** The slow progress poses a significant threat to achieving the 2030 SDG targets. Inequality undermines efforts across various goals, including poverty reduction, healthcare, and gender equality.

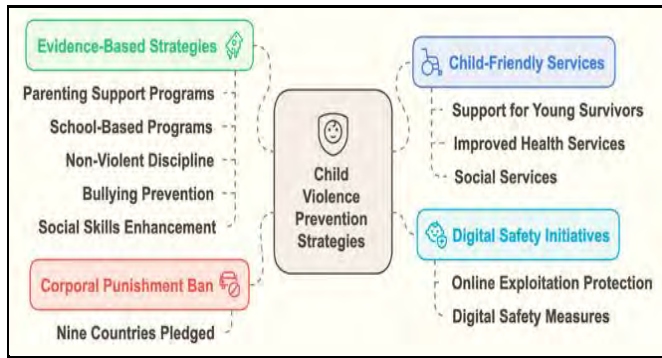
1st Global Ministerial Conference on Ending Violence Against Children

News Excerpt

1st Global Ministerial Conference on Ending Violence Against Children was held in **Bogota, Colombia**.

Key Highlights of the Conference

- Colombia and Sweden hosted it in partnership with UNICEF, WHO, and the UN Special Representative of the Secretary-General on Ending Violence Against Children.
- **Forms of Violence:**
 - Over half of all children aged two to 17 worldwide – some **one billion** – are estimated to suffer some form of violence, such as **child maltreatment** (including corporal punishment, the most prevalent form of childhood violence), physical or emotional abuse and sexual violence.
 - Some **three in five children** are regularly punished by physical means (such as **corporal punishment**) in their homes, and **one in five girls** and **one in seven boys** experience sexual violence.
 - **Every 13 minutes**, a child or adolescent dies as a result of **homicide** – equating to around 40,000 preventable deaths each year.
 - Violence, often involving **firearms** or other weapons, is now the **leading cause** of death among adolescent males.
 - Violence against children is also often hidden, with **WHO** estimates that **fewer than half** of affected children **tell anyone** they experienced violence, and **under 10% receive any help**.
- **Consequences of Violence:** Anxiety and depression, risky behaviours like unsafe sex, smoking and substance abuse and reduced academic achievement.



Global Education Monitoring Report 2024 and UNESCO–World Bank Education Finance Watch 2024

News Excerpt

The Global Education Monitoring Report 2024 and UNESCO–World Bank Education Finance Watch 2024 were released at the **Global Education Meeting**, organised by the United Nations Educational, Scientific and Cultural Organization (**UNESCO**) and hosted at Fortaleza, **Brazil** (Current G20 President).

Key highlights of UNESCO Global Education Monitoring Report 2024

- **110 million** more children and youth have **entered school** since the UN Sustainable Development Goal on education was adopted in 2015, with more children in school today than ever before.
- **Completion rates are also rising:** 40 million more young people are completing secondary school today than in 2015.
- The **out-of-school population** has **reduced** by only **1%** during the same period. As a result of this global stagnation, 251 million children and youth are still not in school worldwide.
- **Regional disparities remain stark:** 33% of school-aged children and youth in low-income countries are out of school, compared to only 3% in high-income countries.
- Over **half** of all out-of-school children and adolescents worldwide are in **sub-Saharan Africa**.

Key highlights of UNESCO–World Bank Education Finance Watch 2024

- The **key obstacle** in further broadening access to quality education globally remains the **lack of funding:** 4 in 10 countries spend less than 15% of their total public expenditure and less than 4% of GDP on education.
- The **education investment gap** between countries is also **staggering:** In 2022, low-income countries spent only \$55 per learner, compared to \$8,543 for high-income countries.
- There is concern about the **growing weight of debt servicing**.

- In **Africa**, countries spent almost as much on debt servicing in 2022 as they did on education.
- At the same time, the share of official development assistance going to education **globally** has dropped from 9.3% in 2019 to 7.6% in 2022.
- Innovative financing mechanisms, such as **debt-for-education swaps**, need to be leveraged. Countries should consider a multilateral platform dedicated to **converting debt into sustainable financing for education**.
 - Through this platform, countries burdened by unsustainable debt levels could negotiate their conversion into investments in education.

About Global Education Meeting

- It was organised by **UNESCO** and hosted by the **Government of Brazil** in Fortaleza (31 October-1 November).
- This is one of the largest international **education conferences** and the **fourth in a series** of meetings convened by UNESCO since 2018 to assess progress towards educational goals globally.

About UNESCO

- With **194 Member States**, the United Nations Educational, Scientific, and Cultural Organization contributes to peace and security by leading multilateral cooperation in education, science, culture, communication, and information.
- **Headquartered in Paris**, UNESCO has offices in 54 countries.
- UNESCO oversees over 2,000 **World Heritage sites**, **Biosphere Reserves**, **Global Geoparks**, and **Networks of Creative, Learning, Inclusive, and Sustainable Cities**.

World Survey on the Role of Women in Development 2024

News Excerpt

The 2024 World Survey on the Role of Women in Development, released by **UN Women**, analyses the glaring **gender disparities** in global social protection systems.

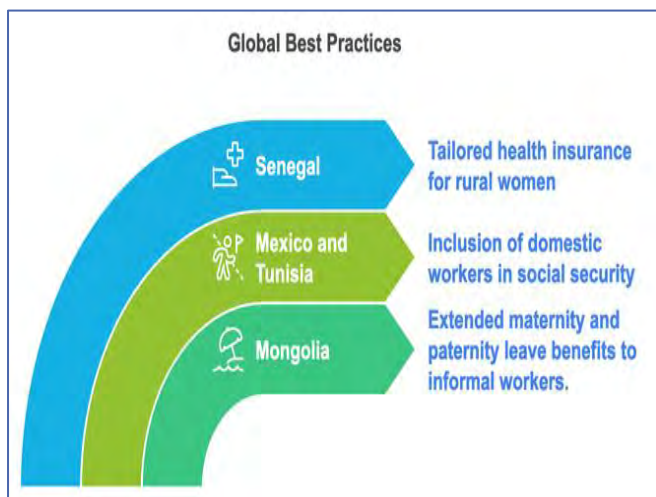
Key Highlights of the Report

- **Theme:** "Harnessing social protection for gender equality, resilience and transformation".
- **Lack of Social Protection: Two billion women and girls** lack access to essential social protection, such as - Cash transfers, Unemployment insurance, Pensions, and Healthcare benefits.
- **Maternal Health Disparities:** Globally, **63% of women** give birth without access to maternity benefits, a critical period that affects both women's economic stability and child welfare. The problem is more severe in **sub-Saharan Africa**, where **94% of women** lack such support.

- **Youth and Poverty:** Women aged **25-34** are **25% more likely** than men in the same age group to live in households facing **extreme poverty**.
- **Conflict and Climate Change:** Women in conflict zones or regions impacted by climate change face compounded risks:
 - **Displacement** and the **loss of livelihoods** leave them reliant on fragile or nonexistent social protection systems.
 - Women in fragile settings are **7.7 times more likely** to experience extreme poverty compared to those in stable environments.
- **Role of Multilateral Efforts:** Partnerships with organisations like the **International Labour Organization (ILO)** and **civil society** have been crucial in pushing for gender-responsive social protection systems.

Key Recommendations of the Report

- **Need for Gender-Responsive Social Protection**
 - **Maternity Benefits:** Providing income support during maternity leave reduces the risk of poverty for women during and after pregnancy.
 - **Targeted Social Safety Nets:** Programs catering to women in rural, informal, or conflict-affected settings.
 - **Empowerment and Resilience:** Economic security allows women to invest in education, health, and improved family living conditions.
- **Global Cooperation:** To implement a **basic social protection floor**, low-income countries would require an additional **\$77.9 billion annually**—approximately **15.9% of their GDP**. Many developing nations face limited fiscal space, making external support and international cooperation critical.
- **Call to Action:** The report urges governments to:
 - **Prioritise women and girls** in national social protection frameworks and crisis responses.
 - Invest in **sustainable social protection systems** that provide long-term pathways out of poverty.



About UN Women

- It is a **United Nations (UN) entity** dedicated to **gender equality** and **women empowerment**. In July **2010**, the UN General Assembly created UN Women.
- The main roles of UN Women are:
 - To **support intergovernmental bodies**, such as the Commission on the Status of Women, in formulating policies, global standards, and norms.
 - To help member states implement these standards, to provide suitable **technical and financial support** to those countries that request it, and to forge effective partnerships with civil society.
 - To hold the UN system accountable for its commitments to gender equality, including **regular monitoring** of system-wide progress.
- It works globally to make the vision of the **Sustainable Development Goals (SDGs)** a reality for women and girls and supports women’s equal participation in all aspects of life.

ECONOMY

G20 Independent Expert Group Report Card on Strengthening MDBs

News Excerpt:

According to the latest report of G20 Independent Expert Group, (Multilateral development banks) MDBs push for lending expansion but fall short of tripling targets.

More detail about news:

- MDBs have taken steps to increase lending capacity.
- These steps include leveraging their balance sheets and attracting additional capital.
- However, the increased lending is still insufficient to meet the growing needs, especially considering the expanded mandate of MDBs.
- The target of tripling lending volume remains challenging.

The 'G20 Independent Expert Group Report Card on Strengthening MDBs:

- **Progress Made:**
 - **Increased Lending Capacity:** MDBs have increased their lending capacity by 33%.
 - **Improved Balance Sheet Utilization:** MDBs have optimized their balance sheets and utilized guarantees more effectively.
 - **Climate Financing:** MDBs have increased their climate-related financing to \$75 billion in 2023.
 - **Joint Financing and Coordination:** MDBs are working on joint financing initiatives and have established a co-financing portal.
- **Areas for Improvement:**

- **Tripling Lending Volume:** MDBs have not achieved the ambitious target of tripling their lending volume.
- **Mobilizing Private Capital:** While there has been progress in mobilizing private capital, the actual amount falls short of the \$500 billion target.
- **Expanding Concessional Finance:** There is limited progress in increasing concessional finance to the poorest countries.
- **Harmonization and Standardization:** MDBs need to further harmonize their operations and standards to improve efficiency and effectiveness.
- **Engaging with the Private Sector:** MDBs need to actively engage with the private sector to attract more investments and innovative solutions.
- **Recommendations:**
 - **Accelerate Reforms:** MDBs should accelerate reforms to achieve their ambitious goals.
 - **Prioritize Climate Finance:** MDBs should prioritize climate finance and invest in sustainable infrastructure.
 - **Strengthen Partnerships:** MDBs should collaborate with governments, the private sector, and other development institutions to maximize impact.
 - **Improve Transparency and Accountability:** MDBs should enhance transparency and accountability in their operations.
 - **Adapt to Evolving Challenges:** MDBs should be agile and responsive to emerging challenges, such as climate change, pandemics, and geopolitical tensions.

'Poverty, Prosperity and Planet: Pathways out of the Polycrisis' report by World Bank Group

News Excerpt:

The World Bank Group report offers the first post-pandemic assessment of global progress toward these interlinked goals, and explores potential pathways out of today's polycrisis - an environment where multiple and interconnected challenges are impacting the world simultaneously.

Key finding:

Global Poverty Update and Outlook:

- **Current Extreme Poverty Levels:** As of now, 692 million people (8.5% of the global population) live in extreme poverty (below \$2.15/day). Progress has slowed due to low growth, COVID-19 setbacks, and increased fragility; poverty is worse in low-income countries than before the pandemic.
- **Poverty by Middle-Income Standards:** Approximately 44% of the global population lives on less than \$6.85 per day (a relevant measure for upper-middle-income countries). The number of people living below this

threshold has remained nearly stagnant since the 1990s due to population growth.

- **Regional Poverty Distribution:** In 2024, Sub-Saharan Africa has 16% of the world's population but 67% of the extreme poor. Including all fragile and conflict-affected countries, three-quarters of the world's extreme poor live in these areas. 72% of the world's extreme poor live in countries eligible for International Development Association (IDA) assistance.
- **Future Poverty Projections:** By 2030, an estimated 7.3% of the global population will live in extreme poverty. Approximately 69 million people are expected to escape extreme poverty between 2024 and 2030 (compared to 150 million from 2013 to 2019). Nearly 40% of the global population will likely live on less than \$6.85 per day without more inclusive growth.
- **Importance of Inclusive Growth:** Accelerated, inclusive growth is essential to eradicate extreme poverty. Investments in education, infrastructure, basic services, and job creation can help the poor benefit from and contribute to economic growth.

Shared Prosperity:

- **Importance of Inclusiveness:** Growth in average income alone is insufficient; shared prosperity measures inclusiveness by tracking the Global Prosperity Gap (how far incomes are from \$25/day). The COVID-19 pandemic has stalled progress in reducing this gap.
- **Inequality Trends:** Within-country inequality has generally decreased, and countries with high inequality (Gini index > 40) have declined since the 2000s. However, the percentage of people living in high-inequality economies remains around 22% (1.7 billion people).
- **Regional Concentration of Inequality:** High inequality persists in Sub-Saharan Africa and Latin America and the Caribbean.
- **Need for Faster and Inclusive Growth:** Without rapid inclusive growth, it could take a century for upper-middle-income countries to close the prosperity gap. Countries can reduce the time needed for prosperity by decreasing inequality alongside economic growth.
- **Structural Conditions for Mobility:** Promoting inclusive growth involves creating opportunities for everyone and enabling socioeconomic mobility. Fiscal redistribution alone is insufficient, especially for low- and lower-middle-income countries.

Livable Planet:

- **Climate and Poverty Interconnection:** 1 in 5 people face an extreme weather event in their lifetime, impacting poverty reduction efforts. Protecting people from these events requires enhanced risk management and reduction in greenhouse gas (GHG) emissions.
- **Country-Specific Climate Priorities:** Low-income countries need to focus on poverty reduction through

investments in human and physical capital. Middle-income countries should focus on vulnerability reduction and air pollution control. Upper-middle- and high-income countries (responsible for four-fifths of global GHG emissions) must shift to low-carbon economies while managing the cost of transition for the poor and vulnerable.

- **Importance of Global Cooperation:** International cooperation and financing are essential to support a sustainable, low-carbon, and resilient future. Achieving a world free of poverty on a livable planet requires immediate, serious efforts.

Monitoring the Interlinked Goals:

- **Need for Reliable Data:** Data is essential for effective policy and monitoring. Less than half of the world's countries had a household survey for poverty monitoring in 2020 or later, indicating coverage issues.
- **Expanded World Bank Vision:** The World Bank's new indicators for shared prosperity and a livable planet require better data quality, including coverage for income distribution, climate-related risks, and multidimensional poverty.
- **Data Modernization and Technology:** Investments are needed to modernize surveys and integrate data sources. Machine learning and AI models can help close data gaps and improve timely monitoring.

World Energy Outlook 2024

News Excerpt:

The IEA's flagship World Energy Outlook, published every year, is the most authoritative global source of energy analysis and projections. It identifies and explores the biggest trends in energy demand and supply, as well as what they mean for energy security, emissions and economic development.

Key Highlight of the report - Global Energy Landscape and Challenges

- **Geopolitical Risks and Energy Security:**
 - **Escalating Conflicts:** Ongoing conflicts in the Middle East and Ukraine highlight the vulnerability of energy supply chains.
 - **Fragmentation of Energy Markets:** Increasing trade restrictions and geopolitical tensions are leading to a fragmented energy market.
 - **Clean Energy Supply Chain Risks:** The concentration of clean energy supply chains poses risks to their security and resilience.
- **The Role of Clean Energy:**
 - **Accelerated Clean Energy Transition:** The world is witnessing a rapid shift towards clean energy sources.
 - **Policy and Market Drivers:** Government policies and market forces are accelerating clean energy adoption.

- **Challenges in Scaling Up:** Despite progress, challenges such as financing, infrastructure, and policy uncertainty remain.
- **Key Trends and Challenges:**
 - **Rising Electricity Demand:** Global electricity demand is increasing rapidly, driven by factors like electrification and economic growth.
 - **Electric Vehicle Adoption:** The growth of electric vehicles is impacting oil demand and reshaping the automotive industry.
 - **Natural Gas Dynamics:** The future of natural gas is uncertain, with potential for both growth and decline depending on various factors.
 - **Renewable Energy Growth:** Renewable energy sources, particularly solar and wind, are experiencing significant growth.
 - **Geopolitical Influences:** Geopolitical factors continue to shape the energy landscape, impacting supply chains, trade flows, and investment decisions.
- **Addressing Challenges and Securing a Sustainable Future:**
 - **Policy Support:** Strong government policies and supportive regulatory frameworks are essential for accelerating the clean energy transition.
 - **Investment in Infrastructure:** Investing in critical infrastructure, such as transmission and distribution networks, is crucial for integrating renewable energy sources.
 - **International Cooperation:** Collaborative efforts among countries are needed to address global energy challenges and promote sustainable development.
 - **Innovation and Technological Advancements:** Continued innovation in clean energy technologies is essential to drive down costs and improve efficiency.
 - **Addressing Social and Economic Impacts:** Ensuring a just transition for workers and communities affected by the energy transition is crucial.

Hand-in-Hand Investment Forum 2024

News Excerpt:

Innovative and targeted approaches to development are in ever-greater demand, as underscored by growing participation in the Hand-in-Hand Investment Forum 2024, which recently held in Rome during the World Food Forum.

Key point about forum:

- **Hand-in-Hand Initiative:** Launched by FAO Director-General QU Dongyu. Aimed at transforming agrifood systems and enhancing sustainable food security.
- **Global Participation:** 72 countries have joined the initiative. Focuses on supporting Small Island Developing States (SIDS), least-developed countries, land-locked countries, and countries in food crisis situations.

- **2024 Investment Forum:** Held at FAO headquarters. Features 29 countries and five regional initiatives showcasing agrifood investment cases.
- **Investment Opportunities:** 115 high-impact agrifood investment cases are being presented. Over 400 meetings scheduled with potential investors.
- **Investment Catalysis:** The initiative has catalyzed over \$3 billion in prioritized agrifood investments. Proposed investment cases have the potential to attract up to six times this amount.
- **Importance of Finance and Investment:** Finance and investment are critical for sustainable agrifood system transformations. The initiative aims to bridge financing gaps inclusively and equitably for targeted countries and regions.

FTAs strategy

News Excerpt:

India has pressed the pause button on all fresh free trade agreements as it is revisiting its negotiating strategy in order to have more "meticulously" planned pacts. The idea is to avoid giving unintended concessions, check third country goods (mostly from China) coming in from partner countries, help industry gain more market access, reject stringent sustainability rules and be more balanced in terms of give and take.

About news:

Overview of New FTA Strategy and SOPs:

- **Development of SOPs and Strategy:**
 - The Commerce Department has finalized Standard Operating Procedures (SOPs) for a new Free Trade Agreement (FTA) strategy.
 - A Cabinet note is being prepared to formalize the new approach.
 - Past FTAs, including those with the UAE and Australia, were studied to identify areas for improvement and errors.
- **Status of Current FTA Negotiations:**
 - Negotiations with Peru and Chile are temporarily on hold, pending high-level approval.
 - Talks with the UK and the EU continue as they are already at an advanced stage.
 - Analysis of Trade with FTA Partners:
 - Over the past five years, India's imports from FTA partners (ASEAN, UAE, SAFTA, Australia, South Korea, Japan, Mauritius) grew by 37.9% to \$187.92 billion.
 - Exports increased by 14.48% to \$122.72 billion, but certain partners like ASEAN, UAE, Japan, and SAFTA countries appear to have benefited more.
- **Key Focus Areas in the New Strategy:**
 - **Learning from Previous Experiences:** Issues faced in past FTAs, like gold, silver, and platinum imports from

the UAE, will be considered to avoid repeating mistakes in future agreements, such as with Oman.

- **Concession Risks:** The SOPs emphasize careful assessment of concession risks, considering future risks and opportunities, not just immediate gains.
- **Third-Country Product Concerns:** Emphasis on preventing rerouted products (e.g., Chinese goods) from entering India at concessional duties via partner countries.
- **Other Important Guidelines in SOPs:**
 - **Avoiding Non-Tariff Barriers:** The SOPs advise a cautious approach to sustainability requirements like labor and environmental standards, often advocated by developed nations.
 - **Balanced Approach with Smaller Nations:** In dealing with smaller nations like Sri Lanka or Bangladesh, the goal is to ensure that India also gains proportionately.
 - **A 'chintan shivir'** (brainstorming session) was organized in May by the Commerce Department, where officials and trade experts, including former negotiators, discussed and refined the new FTA strategy and SOPs.

AGRICULTURE

'Guidelines for Import of Live Seaweeds into India'

News Excerpt:

The Ministry of Fisheries, Animal Husbandry and Dairying has notified the 'Guidelines for Import of Live Seaweeds into India'.

More detail about news:

This initiative aims to bolster the development of seaweed enterprises as a key economic driver for coastal villages, ensuring livelihood sustainability and socio-economic upliftment of the fisher community while upholding environmental protection and biosecurity concerns at the core of all actions.

PMMSY Scheme:

- **Pradhan Mantri Matsya sampada Yoiana (PMMSY)**, the flagship scheme of Government of India envisaged to revolutionize the seaweed sector, aiming to increase seaweed production of the country over 1.12 million tonnes by 2025.
- Under the scheme, the Government have taken many steps to strengthen the seaweed farming activities the prominent of which is establishment of Multipurpose Seaweed Park in Tamil Nadu with the total investment of Rs 127.7 crore.

Key highlight of the Guidelines:

- **Objective of the Guidelines:**

- To facilitate the import of high-quality seaweed seed materials or germplasm, enabling domestic multiplication to ensure farmers have access to quality seed stock.
- Addresses the challenges of limited seed availability and quality degradation in commercially valuable seaweed species like Kappaphycus.
- **Key Processes Outlined:**
 - Provides a clear regulatory framework for importing live seaweed, ensuring transparency and accountability.
 - Includes strict quarantine procedures to prevent the introduction of pests and diseases.
 - Conducts risk assessments to identify potential biosecurity concerns.
 - Mandates post-import monitoring to strengthen ongoing risk assessment and monitoring.
- **Encouragement for Responsible Cultivation:**
 - Supports responsible and environmentally sustainable seaweed cultivation.



- Aims to boost economic growth in the seaweed sector.
- **Research and Development Opportunities:**
 - Importing new seaweed strains will stimulate R&D, enhancing production of various seaweed species (red, brown, and green algae).
 - Paves the way for developing downstream processing and value addition enterprises, potentially creating additional rural livelihoods.
- **Procedure for Import of Live Seaweed:**
 - Importers submit a detailed application to the Department of Fisheries.
 - Application is reviewed by the National Committee on Introduction of Exotic Aquatic Species into Indian Waters.
 - Upon approval, an import permit is issued within four weeks, allowing import of high-quality seaweed germplasm.

- **Comprehensive Regulatory Framework:**
 - The guidelines ensure the import of live seaweed is conducted safely, smoothly, and responsibly.
 - Encourages stakeholders—researchers, entrepreneurs, and farmers—to leverage these opportunities to contribute to the seaweed industry's growth in India.

New MIDH guidelines to support vertical farming, hydroponics among 4 components

News Excerpt:

The Union Government has reportedly decided to include four new components – Hydroponics, Aquaponics, Vertical Farming, and Precision Agriculture – under the **Mission for Integrated Development of Horticulture (MIDH)**.

Key Highlight:

- **Mission for Integrated Development of Horticulture (MIDH)** – a Central Sponsored Scheme (CSS) that promotes the cultivation of fruits, vegetables, root and tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.
- **MIDH Guidelines Revision:** The Ministry of Agriculture and Farmers' Welfare is revising the guidelines and cost norms for the Mission for Integrated Development of Horticulture (MIDH).
- **Increased Cost Norms:** The new cost norms are expected to be 20% higher than the current rates.
- **Outdated Guidelines:** The current guidelines and cost norms were last fixed in April 2014.
- **State Government Concerns:** States like Odisha have highlighted the need for revised guidelines to address rising costs.
- **Cabinet Approval:** The Union Cabinet has approved the rationalization of Central Sector Schemes (CSS) under the Ministry of Agriculture, including MIDH.
- **Timeframe for Notification:** The revised guidelines and cost norms are expected to be notified within a month.

New guidelines promote Ayurveda, regulate use of antibiotics in veterinary treatment

News Excerpt:

The Standard Veterinary Treatment Guidelines (SVTG), released recently by the Union Ministry of Animal Husbandry, aims to reduce and regulate the use of antibiotics to treat diseases found among livestock and poultry.

More detail about news:

- The SVTG also provides for the use of Ayurvedic drugs in veterinary treatment.

- It is for the first time that the Centre has come up with a standard set for treatment of almost all diseases of animals and birds.

About the Standard Veterinary Treatment Guidelines (SVTG):

- **Details in the SVTG:** The Standard Veterinary Treatment Guidelines (SVTG) include medicine details, dosage, predicted requirement, treatment duration, withdrawal period, and potential adverse reactions.
- **Aim to Minimize Antimicrobial Resistance:** Union Animal Husbandry Secretary Alka Upadhyay highlighted that the guidelines aim to minimize antimicrobial resistance and effectively control diseases in animals.
- **Inclusion of Ethnoveterinary Practices:** The SVTG includes ethnoveterinary practices to provide additional, cost-effective treatment options, particularly beneficial for marginal and small-scale farmers.
- **Broader Access to Quality Care:** The inclusion of ethnoveterinary practices helps ensure broader access to quality veterinary care for farmers with limited resources.
- **India's First Comprehensive Veterinary Guidelines:** According to Dr. Raj Kumar Singh, former Director and Vice-Chancellor of the Indian Veterinary Research Institute (IVRI), India is the first country to create structured guidelines covering almost all diseases in animals and birds across all segments.
- **Economic Importance of Animal Health:** Dr. Singh emphasized that animal health is crucial for the country's economy, with the SVTG aiming to minimize drug usage, especially antibiotics.
- **Reducing Economic Burden on Farmers:** The guidelines are designed to reduce the economic burden on farmers by making medicines more cost-effective.

States in the loop:

- **Expert Committee:** A team of 80+ professionals from veterinary and medical fields drafted the Standard Veterinary Treatment Guidelines (SVTG).
- **State Consultation:** States were consulted during the guideline preparation process.
- **Purpose of SVTG:** To provide precise and quality animal treatment services.
- **Focus on Ethnoveterinary Medicine:** The SVTG promotes the use of ethnoveterinary medicine and herbal drugs, especially for treating mastitis.
- **Scientific Basis:** The guidelines are based on research conducted by NDDDB and ICAR.
- **Benefits of SVTG:**
 - Harmonizes animal treatment practices.
 - Promotes the use of safe and effective treatments.
 - Reduces the use of antibiotics and harmful drugs.
 - Minimizes antimicrobial resistance.
 - Improves animal health and food safety.

NIFTEM-K Unveils SARTHI: Smart Reefer Transportation to Curb Post-Harvest Losses

News Excerpt:

The National Institute of Food Technology Entrepreneurship and Management, Kundli (NIFTEM-K), under the Ministry of Food Processing Industries (MoFPI), has introduced an innovative solution to reduce post-harvest losses in perishable food transportation.

About the Solar Assisted Reefer Transportation with Hybrid Controls and Intelligence (SARTHI):

• SARTHI: A Revolutionary Transportation Solution:

- Integrates IoT, sensors, and solar power.
- Monitors and controls temperature, humidity, ethylene, and CO2 levels.
- Dual compartments for optimal storage of fruits and vegetables.
- Real-time monitoring and remote control.
- Solar-powered air handling unit for energy efficiency.

• Benefits of SARTHI:

- Reduced post-harvest losses.
- Improved product quality.
- Extended shelf life.
- Reduced carbon footprint.
- Enhanced decision-making for transporters.

• Impact on the Food Supply Chain:

- Revolutionizes the transportation of perishable goods.
- Benefits farmers, retailers, food processors, and consumers.
- Contributes to sustainable and efficient food supply chains.

DAP crisis

News Excerpt:

The current nationwide shortage of di-ammonium phosphate (DAP) — with police being deployed to handle crowds at some distribution centres for this fertiliser — is symptomatic of a larger problem, involving both short-term planning failure and price controls harking back to an earlier era.

About DAP:

- **Phosphorus in DAP:** Di-ammonium phosphate (DAP) contains 46% phosphorus, essential for early root establishment and development in crops.
- **Application Timing:** Farmers typically apply DAP during sowing along with seeds.
- **Demand during Rabi Season:** Estimated demand for DAP during the rabi season (winter-spring) is about 60 lakh tonnes (lt), with most of it used between mid-October and mid-December.

- **Insufficient Opening Stocks:** Only 15-16 lt of DAP was in stock on October 1, compared to the recommended 27-30 lt, indicating poor advance planning.
- **Reduced Imports and Production:** Imports of DAP from April-September were 19.7 lt (down from 34.5 lt in the same period in 2023). Domestic production was also lower at 21.5 lt (down from 23.3 lt).
- **State Complaints of Supply Shortages:** Several states have reported insufficient DAP supplies or allocations, leading to shortages in key regions.
- **Farmers Facing Sowing Delays:** Farmers are facing delays and challenges obtaining DAP as the sowing window for crops like mustard, potato, and wheat narrows.
- **Favorable Conditions Increase Demand:** Good monsoon rains and favorable crop prices have increased farmer enthusiasm to plant, further driving demand for DAP.
- **Price Controls and Unviability of Imports:** The government's maximum retail price (MRP) for DAP is Rs 27,000 per tonne, with a subsidy of Rs 21,911. Together, these do not cover the total import and distribution costs (approx. Rs 65,000 per tonne), making imports financially unviable.
- **Farmer Protests and Price Hikes:** The DAP shortage has led to long queues and protests by farmers, who are reportedly paying Rs 250-350 above the government-fixed MRP of Rs 1,350 per 50-kg bag.

The DAP crisis highlights the futility of price controls:

- **Futility of Price Controls:** The DAP crisis highlights the ineffectiveness of price controls in addressing farmer needs, as such controls can be outdated and counterproductive.
- **Adverse Effects on Farmers:** Price controls can negatively impact farmers, as they may restrict access to adequate supplies and diversity of fertilizers, which limits options for better-quality nutrients.
- **Need for Competitive Fertilizer Market:** A competitive market among fertilizer suppliers could help ensure farmers have access to a wider variety of fertilizers, potentially improving availability and quality.
- **Discouraging Overuse of Urea, DAP, and MOP:** Farmers should be discouraged from overusing fertilizers like urea, DAP, and muriate of potash (MOP), which contain excessive levels of nitrogen, phosphorus, or potassium.
- **Alternative Fertilizer Options:** Complex and water-soluble fertilizers with lower quantities of these nutrients should be promoted, as they deliver nutrients more efficiently directly to the crop's root zone or as foliar sprays.
- **Elimination of Price Controls and Specific Subsidies:** It's suggested to remove price controls and product-

specific subsidies on fertilizers, which could lead to better alignment of supply with actual demand.

- **Proposal for Flat Per-Acre Payment:** Instead of subsidies, the proposal recommends a flat per-acre payment to farmers each crop season as a conditional incentive for nutrient purchase, which could offer more flexibility in fertilizer use.

Govt approves ₹10,700 crore equity infusion in FCI to strengthen agricultural sector

News Excerpt:

The Cabinet Committee on Economic Affairs (CCEA) has sanctioned an equity infusion of ₹10,700 crore for the Food Corporation of India (FCI) to address working capital needs for the financial year 2024-25.

About news:

- **Foundation and Initial Capital:** The Food Corporation of India (FCI) was founded in 1964 with an initial authorized capital of ₹100 crore.
- **Expansion of Authorized Capital:** FCI's authorized capital was increased over the years, most recently from ₹11,000 crore to ₹21,000 crore in February 2023 to support its expanded operations.
- **Growth in Equity:** FCI's equity rose from ₹4,496 crore in 2019-20 to ₹10,157 crore in 2023-24. An additional equity infusion of ₹10,700 crore is expected to further strengthen FCI's financial position, enabling its transformation and boosting operational efficiency.
- **Role in Food Security:** FCI plays a key role in India's food security by:
 - Procuring food grains at the Minimum Support Price (MSP).
 - Maintaining strategic reserves of food grains.
 - Distributing food grains under various welfare schemes.
 - Stabilizing market prices for food grains.
- **Impact of Additional Equity on Operations:** The additional equity is anticipated to enhance FCI's operational capabilities, allowing it to:
 - Reduce reliance on short-term borrowing.
 - Lower interest expenses.
 - Consequently, reduce the subsidy burden on the government.

Agrivoltaic farming focuses on simultaneous use of land for agriculture & solar energy

News Excerpt:

The Seventh Session of the International Solar Alliance (ISA) concluded in New Delhi.

About news:

- **Site Visit and Agrivoltaic Farming:** A visit to a farm site in Najafgarh was organized on the final day. Delegates witnessed agrivoltaic systems in practice, where land is used for both agriculture and solar energy generation.
- **Remarks from Delegates:** Uganda's Minister of State for Energy, Okaasai Opolot praised India as an innovative country and was impressed by growing crops alongside solar panels. A delegate from the Democratic Republic of Congo expressed satisfaction with energy utilization methods displayed at the event.
- **Session Details:** The session was held in New Delhi under India's presidency and France's co-presidency. It was attended by ministers, mission heads, and delegates from 120 Member and Signatory Countries, along with partner organizations and stakeholders.
- **Focus Areas:** The three-day event focused on energy access, security, and transition initiatives. The ISA alliance collaborates with governments globally to enhance energy access, promote energy security, and transition to sustainable solar power as part of a carbon-neutral future.

INTERNATIONAL RELATIONS

UN Relief and Works Agency for Palestinian Refugees

News Excerpt

Israel's parliament has **banned** the United Nations Relief and Works Agency for Palestine Refugees (**UNRWA**) from operating in Israel and the Palestinian territories and it has designated UNRWA as a **terrorist organisation**.

About UNRWA

- The UNRWA was established in **1949** to provide aid to about **700,000 Palestinians** who were forced to leave their homes during the 1948 Arab-Israeli war.
- UNRWA began operations on **May 1, 1950**. It **operates in Gaza** and the Israeli-occupied **West Bank**, as well as in **Lebanon, Syria, and Jordan** — where Palestinian refugees took shelter after their expulsion.
- It runs **education, health, relief and social services, microfinance** and emergency **assistance programmes** inside and outside refugee camps.
- An estimated 5.9 million Palestinian refugees — most of whom are descendants of the original refugees — currently access the UNRWA's services.
- The UN agency is mostly funded by **voluntary contributions from donor states** such as the United States, Germany, the European Union, etc. It also receives a **limited subsidy from the UN**, which is used only for administrative costs.

- UNRWA **employs some 30,000 Palestinians**. More than 200 of its staff members have been killed in Israeli attacks over the past year.

Why has Israel acted against the UNRWA?

- Israel has argued for decades that the **UNRWA's role is obsolete**, and its work to aid Palestinian refugees and their descendants has been an **impediment to a peace settlement**.
- Israel has also accused some of UNRWA's 13,000 employees in Gaza of participating in the **October 7, 2023, attacks on Israel by Hamas** that triggered the war. Israel has given the US a dossier identifying **12 UNRWA staffers**.
- Although **UNRWA fired nine employees** after an investigation, it has denied that it aids armed groups on purpose — the agency has been sharing the list of its employees with Israel for a long time.

China's Belt and Road Initiative (BRI)

News Excerpt

Brazil has decided against joining **China's Belt and Road Initiative (BRI)**, becoming the **second country after India** in the BRICS bloc not to endorse the mega project.

About China's Belt and Road Initiative (BRI)

- It is an **infrastructure investment project** launched in 2013 to improve connectivity, trade, and communication across **Eurasia, Latin America, and Africa** via land and maritime networks.
 - It encompasses many projects, including railways, ports, highways, and energy infrastructure.
- **Two principal components:** the Silk Road Economic Belt and the Maritime Silk Road.
 - **Silk Road Economic Belt:** It is dedicated to improving connectivity, infrastructure, and trade links across Eurasia through overland transportation routes.
 - **Maritime Silk Road:** It emphasises maritime connections and cooperation through ports, shipping routes, and maritime infrastructure projects.
- **Flexible Cooperation with Few Preconditions:** The BRI model allows countries to start projects **without** being tied to strict **legal frameworks** or transparent **financing terms**.
 - This might **appear beneficial** to host governments in the **short term**, but the countries take on substantial debt in the long term.
- **Financial Dependence on China:** Many BRI projects lead to long-term repayment **obligations**, creating financial dependence on China. China often prefers to **extend or renegotiate** loans rather than offer debt forgiveness, which allows China to maintain or even increase its influence over the host country.

First ASEAN-India Track 1 Cyber Policy Dialogue

News Excerpt

The First ASEAN-India **Track 1 Cyber Policy Dialogue** was held in October 2024 in **Singapore**.

Key Highlights of the Meeting

- During the Dialogue, both sides exchanged views on the **cyber threat landscape, national cyber policies, threat assessment**, and the recent developments in the ICT domain at the United Nations.
- The Dialogue explored cooperation in **capacity building and training** to identify specific areas of activities.
- The Dialogue strengthened the ASEAN-India Comprehensive Strategic Partnership by implementing the **ASEAN-India Joint Statement on Advancing Digital Transformation** issued during the ASEAN-India Summit in October 2024.

About Track 1 Dialogue

- Track 1 Diplomacy refers to **official diplomacy**, where **governments communicate**. Diplomats, heads of state, and other official authorities conduct formal discussions.
 - **For example**, negotiations are held at **international organisations** like the United Nations, and **bilateral negotiations** are between two countries.
- There are other tracks of diplomacy as well.
 - **Track 1.5 Diplomacy** occurs when **government representatives** and **non-governmental experts** engage in dialogue or meetings in less formal ways.
 - By bringing together **think tank experts, retired officials**, and active **government and military officials**, the dialogue led to a unique series of conversations where both sides could exchange views and build trust, even in the face of broader tensions.
 - **Track 2 Diplomacy** denotes a **purely unofficial** channel for dialogue between non-governmental experts without direct governmental involvement.
 - **For example**, the 1993 **Oslo Accords** between representatives of Israel and the Palestine Liberation Organization grew out of unofficial Track 2 discussions before transitioning into Track 1 negotiations.
 - **Track 3 Diplomacy** is **People-to-people** diplomacy undertaken by individuals and private groups. Beyond the media and political blur, many initiatives bring people closer—for example, **Bollywood**.

India-Middle East-Europe Corridor

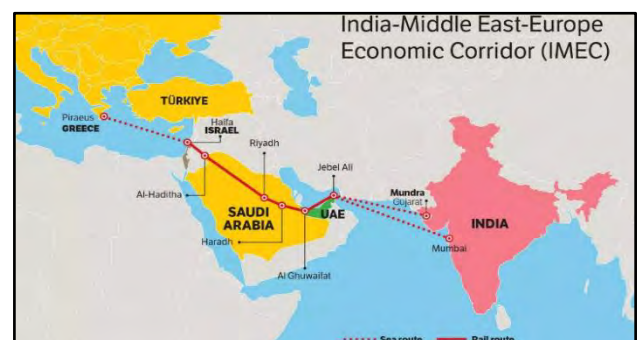
News Excerpt

The escalation of the **Israel-Palestine conflict** has **delayed progress** in the **northern part of IMEC**. Key stakeholders like Saudi Arabia and Jordan are cautious about engaging in

projects requiring close cooperation with Israel amidst heightened tensions.

About India-Middle East-Europe Economic Corridor

- The India-Middle East-Europe Economic Corridor (IMEC) Project was signed at the **G20 Summit** in **New Delhi**. It has been signed by India, the US, Saudi Arabia, the UAE, the European Union, Italy, France, and Germany.
- **It comprises two distinct corridors:**
 - **Eastern Corridor:** This corridor links **India with the Arabian Gulf**. It features railroads, ship-to-rail networks, and road transport routes.
 - **Northern Corridor:** This corridor connects the **Gulf region to Europe**. This incorporates similar transportation infrastructure, including rail, ship-to-rail links, and road networks.
- The IMEC corridor also includes an **electricity cable, a hydrogen pipeline** and a **high-speed data cable**.
- **Ports to be connected through IMEC are:**
 - **India:** Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai).
 - **Middle East:** Fujairah, Jebel Ali, and Abu Dhabi in the UAE as well as Dammam and Ras Al Khair ports in Saudi Arabia.
 - A railway line will connect Fujairah port (UAE) to Haifa port (Israel) via Saudi Arabia (Ghuwaifat and Haradh) and Jordan.
 - **Israel:** Haifa port.
 - **Europe:** Piraeus port in Greece, Messina in South Italy, and Marseille in France.
- The **primary objective** of the IMEC is to enhance **economic growth** through improved **connectivity** and **economic integration** among Asia, the Arabian Gulf, and Europe. The focus is strengthening manufacturing, ensuring food security, and optimising supply chains.



Significance of IMEC

- **Trade Efficiency:**
 - **Reduction in Transit Time:** IMEC is projected to reduce transit times by up to **40%** compared to the Suez Canal.
 - **Cost Savings:** Potential cost reduction of **30%**, enhancing global supply chain efficiency.
- **Strategic Shift:**

- It aims to shift the centre of global trade routes by connecting **India** with **Europe** through the **Middle East**, bypassing traditional choke points.
- Strengthens India's role as a key player in international trade, positioning it as an **alternative hub** in the global supply chain.

ENVIRONMENT

Great Indian bustard - Artificial Insemination birth in Jaisalmer

News Excerpt:

The birth of a great Indian bustard through artificial insemination at the **Sudasari Great Indian Bustard Breeding Centre** in **Rajasthan's Jaisalmer district** is an "extremely important step" in the conservation of the critically endangered species.

Key highlight:

● Conservation Efforts for the Great Indian Bustard (GIB):

- The artificial insemination of the GIB mirrors a project by the International Fund for **Houbara Conservation in Abu Dhabi**, which uses artificial insemination to hatch houbara bustards.



● Current Status of GIB:

- Fewer than 150 GIBs remain, mostly concentrated in Rajasthan, India. Major threats include increased human activity in their habitats, predation on eggs, and fatalities due to overhead power lines.
- GIBs, with limited frontal vision and large size, are especially vulnerable to **collisions with power lines**.

● Impact of Power Lines on Bird Mortality:

- A 2020 study by WII estimated that approximately 84,000 birds across various species die annually due to power lines in the 4,200 sq-km GIB habitat near Desert National Park, Rajasthan.
- In April 2021, the Supreme Court mandated that all power lines in GIB habitats **be placed underground**, but this order is under review as the central government found it impractical to implement over large distances.

● Captive Breeding Program:

- A captive breeding program was initiated in collaboration with the Centre, Rajasthan government, and WII, successfully using artificial insemination to produce a GIB chick.

● Challenges and Future Considerations:

- Wildlife biologist Sumit Dookia noted that while this captive breeding project is promising, it will take at least 25 years to achieve a sufficient population for a natural increase after release.
- Additionally, efforts to save GIBs will be ineffective without conserving their natural habitat, which faces ongoing threats from human expansion and development activities.

Biological diversity rules notified

News Excerpt:

The Centre has notified new Biological Diversity Rules to implement amended laws that fast-track research, support Indian Traditional Medicine, attract foreign investment, and exempt certain practitioners from benefit-sharing fees. The new rules, which take effect in two months, also replace imprisonment with substantial fines for violations.

About new rules:

● Biological Diversity Rules Notification:

- These Rules aim to fast-track research, encourage Indian systems of medicine, and attract foreign investments in biological resources.

● Exemption for Ayush Practitioners: Registered Ayush medical practitioners, vaidas, and hakims using codified traditional knowledge and cultivated medicinal plants are exempted from paying benefit-sharing fees.

● Amendments to the Biodiversity Act:

- The Biodiversity Act was amended to reduce compliance burdens without compromising national interests.
- The amendments aim to attract more foreign investments in research and the Ayush sectors.
- The law has been decriminalised to encourage more effective compliance.

● Regulation of Biological Resources: The Act regulates access to biological resources and associated traditional knowledge.

● National Biodiversity Authority (NBA): The Rules specify that the NBA will provide technical and legal advice to State Biodiversity Boards or UT Biodiversity Councils. The NBA will also administer the National Biodiversity Fund.

● Registration and Intellectual Property Rights: The Rules outline the procedure for registration and obtaining prior approval from the NBA before granting intellectual property rights over research outcomes.

● Monitoring and Regulating Use of Biological Resources: The Rules establish measures for monitoring and regulating the use of biological resources or associated traditional knowledge obtained from foreign countries.

- **Penalties for Violations:**
 - The amended Act decriminalised the law, replacing imprisonment with fines.
 - Violations can result in fines up to ₹50 lakh.
 - For continued contravention, an adjudicating officer can impose additional penalties of up to ₹1 crore.

Economics of Water

News Excerpt:

The Economics of Water report highlights the economic impacts of water scarcity and the need to treat water as a global common good.

More detail about news:

- **Global Water Crisis Predicted to Worsen:** The ongoing water crisis is expected to intensify in the coming years.
- **Financial Losses in Lower-Income Countries:** Lower-income countries are predicted to face financial losses amounting to up to 15% of GDP by 2050 due to the water crisis.
- **Global Average GDP Loss:** The estimated global average GDP loss due to the water crisis is about 8%.
- **Report by the Global Commission on the Economics of Water:** The findings were released in a report by the Global Commission on the Economics of Water on October 16, 2024.
- **Contributing Factors to the Crisis:** The water crisis is driven by a combination of factors, including:
 - Weak economic practices.
 - Unsustainable land use.
 - Persistent mismanagement of water resources.
 - Climate change impacts exacerbate the situation.

The Global Water Crisis and Proposed Solutions:

- **Human Activity Disrupting the Global Water Cycle:** For the first time in history, human activity is pushing the global water cycle out of balance, undermining human well-being and economic stability.
- **Need for Policy Reworking:** The water crisis demands a reworking of policy frameworks, necessitating a new economics of water.
- **Water as a Global Public Good:** The report stresses that water should be managed as a global public good, not a privately owned commodity.
- **Collective Action and Global Governance:** The new economics of water involves governing the water cycle as a global common good that requires collective, coordinated action across countries, boundaries, and cultures.
- **Water's Role in Dignified Living:** Essential health and hygiene require 50-100 litres of water per day, but a dignified life (including adequate nutrition) demands about 4,000 litres per person per day.
- **Water Scarcity Risks:** As water becomes scarcer, food security and human development are at significant risk.

- **Water Crisis as an Opportunity:** While the global water crisis is tragic, it also offers an opportunity to transform the economics of water by shifting the perspective on water scarcity and its benefits.
- **Distinction Between 'Green Water' and 'Blue Water':** Green water refers to moisture in soils and vegetation, while blue water includes surface and groundwater. Reliable supplies of green water are vital for generating rainfall, mitigating climate change, and ensuring economic stability.
- **Need for Redefining Water Governance:** The report emphasises the need to redefine water governance through a mission-driven collective approach that involves all stakeholders to address the water challenges effectively.

Five-Point Agenda for Addressing the Global Water Crisis:

- **Revolutionising Food Systems: Goal 1:** Improve water productivity by reducing water usage in agriculture by one-third while increasing crop yields. **Goal 2:** Accelerate the shift to regenerative agriculture systems, increasing the global cropland covered from 15% to 50% by 2050.
- **Conserving Natural Habitats: Goal:** Achieve a 30% restoration target for degraded forests and inland water ecosystems to promote regeneration of green water flows and improve precipitation and soil moisture retention.
- **Establishing a Circular Water Economy:** The goal is to focus on solutions promoting a circular economy for water, particularly in urban areas, to address declining and unstable water resources. The target is to recover approximately 8% of current freshwater withdrawals from wastewater annually, equivalent to the total amount distributed by municipalities worldwide.
- **Enabling Sustainable Innovation: Goal:** Promote sustainable innovations that support better management and usage of water resources globally.
- **Ensuring Clean Water Access:** The goal is to guarantee universal access to clean water, addressing the increasing risks from water scarcity and the need for long-term solutions.

Global Water Pact and Strategic Focus for Water Governance:

- **Global Water Pact:** The ultimate goal for global water governance is the establishment of a Global Water Pact to secure a just and sustainable water future for everyone.
- **Strategic Focus Areas:**
 - **Funding:** Secure funding through innovative 'Just Water Partnerships' to ensure equitable and sustainable water management.
 - **Global Water Data Infrastructure:** Enhance the global water data infrastructure to support a mission-driven approach to water management.

Asia-Pacific Climate Report

News Excerpt:

As noted by the Asian Development Bank in its recent Asia-Pacific Climate Report, India is shifting its focus from an unsustainable dependence on fossil fuel subsidies to fostering clean energy.

More detail about news:

- In a world bound to the grip of fossil fuels, India has taken steps toward a different path. With a bold net-zero target set for 2070, the nation is reimagining its approach to energy.
- Guided by a “**remove, target, and shift**” strategy, India steadily whittled down its fossil fuel support, opening doors to new investments in solar power, electric vehicles, and a more robust energy grid.

India's Transition Towards Clean Energy: Key Steps

- **Gradual Removal of Petrol and Diesel Subsidies:** From 2010 to 2014, petrol and diesel subsidies were gradually phased out, marking a significant policy shift.
- **Incremental Tax Increases on Fossil Fuels:** Between 2014 and 2017, measured tax hikes on petrol and diesel were implemented. This bold move provided fiscal space to fund renewable energy projects.
- **Redirecting Funds to Clean Energy Initiatives:** The savings from reducing fossil fuel subsidies were channelled into clean energy initiatives at an unprecedented scale, supporting India's renewable energy ambitions.
- **Subsidies for Renewable Energy Projects:** Increased support has been directed toward solar parks, distributed energy solutions, and state-owned enterprises to expand renewable energy infrastructure.
- **Setting a Global Example:** Through these steps, India is paving a path toward a resilient energy future and setting an example for countries aiming to shift toward sustainable power sources.

Key Highlights of the Asia-Pacific Climate Report by the Asian Development Bank (ADB):

- **Purpose and Objective:** The Asia-Pacific Climate Report is a new knowledge initiative by the **Asian Development Bank (ADB)** to assist the Asia and Pacific regions in addressing climate change challenges through targeted policy reforms.
- **Comprehensive Climate Overview:** The inaugural report provides a detailed overview of the region's changing climate landscape, covering critical aspects of the climate crisis, such as increased frequency and intensity of heat waves.
- **Focus on Economic and Social Costs:** The report highlights the rising economic and social costs due to climate impacts, underscoring the pressing need for climate-resilient measures.

- **Urgent Call for Adaptation Measures:** It emphasises the urgent need for adaptation strategies to better equip the region for the challenges of climate change.
- **Resource Mobilisation for Vulnerable Populations:** The report calls for mobilising resources to support vulnerable populations within the region, ensuring they are adequately prepared to withstand climate-related adversities.
- **Guidance for Effective Climate Action:** This report serves as a critical resource for understanding key issues and provides guidance to drive effective climate action in the Asia and Pacific regions.

Key Findings of the Report on India's Fossil Fuel Subsidy Reform and Clean Energy Taxation

- **India's "Remove, Target, and Shift" Approach:** India's approach has reduced fiscal subsidies in the oil and gas sector by 85%, showcasing a model of subsidy reduction. This strategy included targeted removal of certain subsidies, redirection of funds, and strategic tax adjustments, supporting India's transition toward sustainable energy.
- **India's Fossil Fuel Subsidy Reform:**
 - Since 2010, India's “remove, target, and shift” strategy has involved:
 - Gradual adjustment of retail fuel prices.
 - Tax and subsidy restructuring for select petroleum products.
 - Fiscal subsidies in the oil and gas sector dropped from \$25 billion in 2013 to \$3.5 billion by 2023.
- **Key reform steps included:** Phasing out petrol and diesel subsidies with incremental tax increases. 2014-2017 excise duty hikes on petrol and diesel during low global oil prices, redirecting revenues toward renewable energy and LPG access.
- **Social and Environmental Benefits:** Revenue generated through these reforms funded:
 - Renewable energy projects.
 - Electric vehicle initiatives.
 - Electricity infrastructure for a cleaner energy landscape.
- **Role of Taxation in Supporting Clean Energy:** Between 2010 and 2017, a cess on coal production and imports funded clean energy initiatives: 30% of cess collections went to a national clean energy fund supporting renewable projects and research. The Green Energy Corridor scheme and the National Solar Mission to reduce solar energy costs and fund off-grid solutions.
- **Impact of GST on Clean Energy Funding:** After GST's introduction in 2017, the coal cess was incorporated into the GST compensation cess to offset state revenue losses.

Major Government Schemes and Programmes:

- India is advancing toward a sustainable energy future with initiatives like the National Green Hydrogen Mission, PM-KUSUM scheme, and PM Surya Ghar: Muft Bijli Yojana.

Conclusion: Through key initiatives such as the National Green Hydrogen Mission, PM-KUSUM, and various production-linked incentive schemes, India is not only striving to meet its ambitious net-zero target by 2070 but also fostering a resilient and inclusive energy landscape. Significant reductions in fossil fuel subsidies and innovative taxation measures supporting clean energy projects exemplify the nation's proactive strategy.

7th Assembly of the International Solar Alliance

News Excerpt:

The 7th Session of the International Solar Alliance (ISA), which was held in **New Delhi** from November 3 to 6, 2024, focused on accelerating solar energy deployment across its Member Countries, particularly in regions with limited energy access.

Key highlight:

- The 3rd edition of the World Solar Report series was released at the 7th Assembly** of the International Solar Alliance, focusing on global solar growth, investment trends, technological advancements, and Africa's green hydrogen potential. The newly launched four reports, namely **World Solar Market Report, World Investment Report, World Technology Report, and Green Hydrogen Readiness Assessment for African Countries**, each highlight a crucial area in the global shift towards sustainable energy.
- The World Solar report series was released by President of the ISA Assembly** and India's Minister for New and Renewable Energy, Pralhad Joshi.
 - First introduced in 2022, this report series provides a concise and comprehensive overview of global progress in solar technology, key challenges, and investment trends in the sector.
 - The latest edition emphasises the vital role of solar energy in advancing sustainable energy solutions worldwide, offering stakeholders valuable insights into the industry's rapid evolution.
- The World Solar Market Report reveals exceptional solar growth, with global capacity soaring from 1.22 GW in 2000 to 1,418.97 GW in 2023.** Manufacturing is set to exceed demand, making solar more affordable. Solar jobs have surged to 7.1 million, and global capacity may reach 7,203 GW by 2030.
- The latest World Investment Report highlights a global shift toward sustainable energy, with energy investments rising from \$2.4 trillion in 2018 to \$3.1 trillion by 2024.** Solar leads renewable energy investments, accounting for 59% of the total, driven by

lower costs, with APAC emerging as the top investing region.

- The World Technology Report showcases advancements in solar technology, emphasising breakthroughs in efficiency, sustainability, and affordability.** Highlights include record-setting 24.9% efficiency in solar PV modules, an 88% reduction in silicon usage since 2004, and a 90% drop in utility-scale solar PV costs, fostering resilient, cost-effective energy solutions.
- Readiness Assessment of Green Hydrogen African Countries highlights green hydrogen's potential to decarbonise industries heavily reliant on fossil fuels, such as steel and fertiliser production.** Produced via renewable-powered electrolysis, green hydrogen offers a viable alternative to coal, oil, and gas, supporting Africa's transition to cleaner energy.

Localised Weather forecasting

News Excerpt:

In a world of climate change-induced weather uncertainties, localised forecasting will help safeguard agricultural livelihoods and enhance rural preparedness against natural disasters.

Key Points of Gram Panchayat-Level Weather Forecasting Initiative

- Joint Initiative:** A collaborative effort between the **Panchayati Raj Ministry, IMD, and the Ministry of Earth Sciences.**
- Empowering Rural Communities:** Aims to empower rural communities and enhance disaster preparedness.
- Enhanced Agricultural Practices:** Assists farmers in planning agricultural activities like sowing, irrigation, and harvesting.
- Climate Resilience:** Helps rural communities become more resilient to climate change impacts.
- Localised Weather Forecasts:** Provide hourly and 5-day forecasts at the gram panchayat level.
- Data Availability:** Forecasts are accessible through **e-GramSwaraj, Gram Manchitra, and the Meri Panchayat app.**
- Improved Forecasting Accuracy:** Addresses the limitations of traditional forecasting methods, particularly for localised events.
- Data-Driven Decision Making:** Enables data-driven decision-making for farmers and local authorities.
- Addressing Climate Change Impacts:** Helps mitigate the effects of climate change on agriculture and rural livelihoods.

'Protected' areas are seeing faster biodiversity decline

News Excerpt:

Biodiversity is declining more quickly inside key protected areas than outside them, according to a new study.

More detail about news:

The findings, which raise questions about the ongoing conservation practices, suggest that merely designating more areas as protected “will not automatically result in better outcomes for biodiversity”. The analysis was carried out by the Natural History Museum (NHM), based in London.

Key Findings and Insights from the Biodiversity Study:

- **Biodiversity Intactness Index (BII):** The study assessed the Biodiversity Intactness Index (BII), which estimates how much natural biodiversity remains in a region on average.
- **Global BII decline:** The index fell by 1.88 percentage points globally from 2000 to 2020.
- **Critical Biodiversity Areas (CBAs):** The study examined Critical Biodiversity Areas (CBAs), including ecosystems like wetlands that are crucial for biodiversity.
- **Protection coverage:** Only 22% of CBAs are protected.
- **Biodiversity decline within CBAs:** Between 2000 and 2020, the average decline for unprotected CBAs was 1.9 percentage points, while the average decline for protected CBAs was 2.1 percentage points.
- **Reasons for Biodiversity Decline:**
 - **Incomplete ecosystem protection:** Many protected areas focus on specific species rather than the whole ecosystem, leading to gaps in “biodiversity intactness.”
 - **Pre-existing degradation:** Some areas were already experiencing environmental degradation before being declared protected.
 - **Region-specific degradation factors:** Localised analysis is necessary to identify the exact reasons for biodiversity loss in specific landscapes.
- **Additional Threats to Protected Areas:**
 - **Industrial concessions:** Oil, gas, and mining concessions are a significant threat; for example, over 65% of Conkouati-Douli National Park in the Republic of the Congo is occupied by oil and gas concessions.
 - **Climate crisis impacts:** Increased droughts and wildfires due to climate change have damaged protected areas, such as Australia, where national parks were severely affected by the 2019 wildfires.
- **Recommendations for Stronger Conservation:**
 - **Focus on the 30×30 commitment:** Countries must maintain efforts to conserve 30% of lands and oceans by 2030, as pledged in the Biodiversity COP15 agreement.
 - **Improve conservation quality:** Nations are urged to expand protection to more areas and prioritise genuine ecosystem conservation that supports long-term biodiversity and ecosystem services.

India cloud chamber as part of Mission Mausam

News Excerpt:

Mission Mausam, launched by the government last month, aims to improve weather forecasting in the country, 'manage' certain weather events on demand, and enhance or suppress rainfall, hail, fog, and, later, lightning strikes.

Cloud Chamber and India's Convective Cloud Chamber Initiative:

- **About Cloud Chamber:** A cloud chamber is a closed cylindrical or tubular drum in which water vapour, aerosols, and other particles are injected. Under controlled humidity and temperature, a cloud can develop inside the chamber, allowing scientists to study the formation and behaviour of cloud droplets or ice particles.
- **India's Cloud Chamber Development under Mission Mausam:** India is developing an advanced convective cloud chamber to study monsoon clouds. Unlike basic cloud chambers found globally, India's chamber will have convection properties, enabling in-depth studies relevant to Indian weather systems.
- **Purpose of Building a Convective Cloud Chamber in India:** The cloud chamber aims to study cloud physics — understanding cloud behaviour during various weather conditions, the formation of rain droplets and ice particles, and interactions between different cloud layers. It will provide insights into how cyclones or low-pressure systems affect cloud formation, allowing for strategic planning in weather modification.
- **Planned Uses for the Cloud Chamber:** Scientists will use the chamber to simulate various environmental parameters like temperature, humidity, and convection to replicate conditions that influence Indian monsoon clouds. Over the next 18-24 months, scientists will develop advanced instrumentation to monitor minute atmospheric conditions and perform seed particle injections to study different scenarios.
- **India's Experience with Cloud Seeding:** India conducted the **Cloud Aerosol Interaction and Precipitation Enhancement Experiment (CAIPEEX)** in multiple phases, including trials over Maharashtra's Solapur district (2016-2018). Results indicated that rainfall could be increased by up to 46% in certain areas, though cloud seeding is not a guaranteed solution for rainfall challenges.

Marine heat waves

News Excerpt:

Just as heat waves refer to a higher-than-average temperature prevailing on land, Marine Heat Waves (MHWs) are defined by the unusual warming of ocean waters.

Measurement of Marine Heatwaves (MHWs):

- **Surface Temperature Observation:** MHWs are typically measured using temperature observations at the ocean surface.
- **Challenges in Deep-Ocean Measurement:** As depth increases:
 - Sunlight penetration decreases, limiting visibility.
 - High sea pressure makes exploration challenging for humans and instruments.
 - These factors hinder the comprehensive monitoring of deeper ocean layers.
- **The "Twilight Zone":** The twilight zone of oceans lies between 200 and 1,000 metres depth. Although this zone still receives minimal light, research in this region remains limited.
- **Recent Study:** The study titled 'Common occurrences of subsurface heatwaves and cold spells in ocean eddies' was published in Nature. Researchers from China and Australia analysed MHWs and Marine Cold Spells in the twilight zone, advancing the understanding of subsurface heat dynamics.

Findings About Heatwaves in Oceans:

- **Under-Reporting of Deep-Ocean MHWs:** Marine Heatwaves (MHWs) in the deep ocean may be significantly under-reported, according to researchers.
- **Key Researcher:** Ming Feng, Senior Principal Research Scientist at Australia's CSIRO, co-authored the study.
- **Mechanism of Temperature Changes:** Unlike surface MHWs influenced by atmospheric factors, eddy currents are the primary drivers of deep-ocean temperature changes.
- **Eddy Currents:** Large swirling loops of ocean current, sometimes spanning hundreds of kilometres. Can extend over 1,000 metres deep and transport warm or cold water across vast distances.
- **Methods of Measurement:**
 - **Long-term moorings:** Buoys suspended at depth were deployed globally to monitor temperature changes over time.
 - **Argo Floats:** Robotic divers capable of descending up to 2,000 metres and resurfacing. Used to sample temperature and salinity in deep ocean layers.

Relevance of the Findings:

- **Impact of Global Warming on Deep Waters:** The findings highlight that global warming affects not only surface ocean temperatures but also the deep ocean, which is influenced by eddy currents.
- **Role of Eddies in Temperature Changes:**
 - **Eddy currents magnify:** The warming rates of marine heatwaves (MHWs). The cooling rates of marine cold spells. Warmer oceans are contributing to stronger eddy currents, amplifying temperature fluctuations.
- **Threat to the Twilight Zone Ecosystem:**

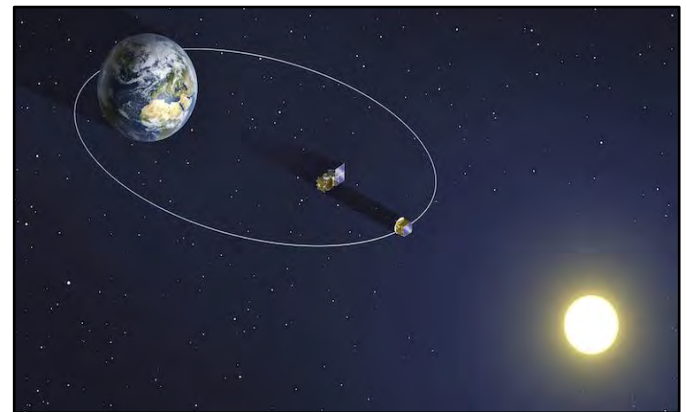
- **Twilight Zone (200–1,000 metres depth):** Home to many fish species and plankton, which form the base of the oceanic food chain. Extreme temperature changes in this zone could disrupt marine ecosystems and threaten biodiversity.
- **Additional Concerns:** Marine heatwaves can lead to Low oxygen levels in deep waters and reduced nutrient availability, impacting marine life.

SCIENCE & TECHNOLOGY
SPACE

India to Launch European Space Agency's Proba-3 Mission

News Excerpt

India is set to launch the European Space Agency's (ESA) **Proba-3 mission** on December 4, 2024, from Sriharikota using ISRO's **Polar Satellite Launch Vehicle (PSLV-XL)**.



Key Details of the Proba-3 Mission

- The mission consists of **two satellites**:

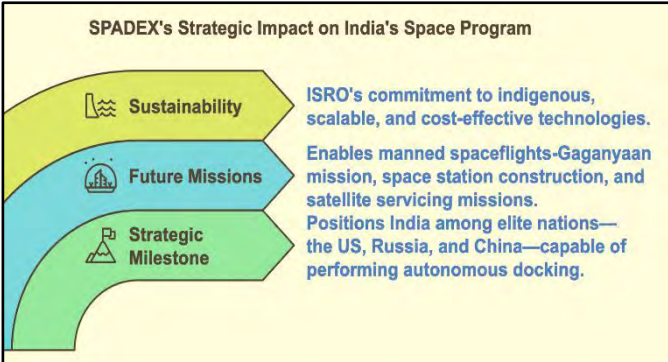
<p>Oculter Satellite: Blocks direct sunlight.</p>	<p>Coronagraph Satellite: Observes the corona from the shadow of the oculter.</p>
--	--

- The **primary goal** is to **observe the Sun's corona**, the **outermost layer** of the Sun's atmosphere, which is typically visible only during solar eclipses.
- The mission uses an **innovative satellite formation** flight to continuously block out the Sun's direct light, providing a clear view of the corona.
- These satellites will fly in **millimetre-level precision formation**, with one satellite casting a shadow on the other to achieve **continuous observation**.
- The satellites will **orbit Earth** in a trajectory **ranging from 600 km to 60,000 km** altitude.
- At the peak altitude, the satellites will **fly in formation for about six hours** during each orbit. This position minimises gravitational influence and reduces propellant consumption, allowing precise control.

Space Docking Experiment (SPADEX)

News Excerpt

Recently, a Hyderabad-based company handed over two 400 kg class satellites to ISRO. These will be part of the space agency's Space Docking Experiment later this year.



About Space Docking

- Space docking refers to the **precise connection** of **two spacecraft**, whether manned or unmanned, allowing them to operate as a **single unit**.
- It is crucial for tasks such as **refuelling, repairs, and crew exchange** and facilitates the **assembly** of advanced orbital structures like the **International Space Station (ISS)**.
- The **Soviet Union** achieved the **first successful docking** on October 30, 1967, when **Kosmos 186 and Kosmos 188** completed a fully automated docking.
 - This historic feat laid the groundwork for further advancements in space exploration, including **constructing space stations** and a long-term human presence in space.

Types of Space Docking

Docking: The spacecraft autonomously manoeuvres and attaches to the station without external assistance.

Berthing: An astronaut uses the station's robotic arm to capture the spacecraft. Once captured, Mission Control on Earth directs the robotic arm to manoeuvre and attach the spacecraft to the docking port.

About Space Docking Experiment (SPADEX)

- SPADEX is one of **ISRO's pioneering steps** toward developing autonomous docking technology, a capability critical for advanced space missions.
- The mission involves two spacecraft, **'Chaser'** and **'Target'**, which will **autonomously dock** in orbit. This marks India's entry into a technology domain mastered by only a few nations.
- Objectives and Capabilities**

- Demonstrate Autonomous Rendezvous and Docking (AR&D):** The spacecraft will autonomously navigate, approach, and securely dock while coordinating.
- Test Docking Stability:** After docking, SPADEX will evaluate the stability and control of the combined spacecraft, which is essential for long-term missions.
- Formation Flying:** Showcase precise orbital control to maintain relative positions, a vital capability for in-space assembly and satellite servicing.
- Remote Operations and Robotic Arm:** Experiment using one spacecraft's Attitude Control System to manage the docked configuration and explore robotic arm technologies for in-space manipulation and servicing.

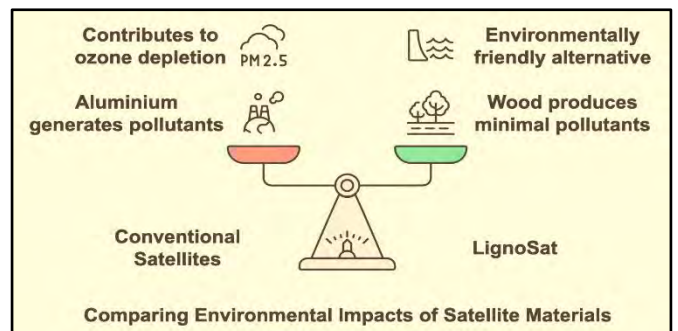
Lignosat, the first wooden satellite launched into space

News Excerpt

The world's first **wood-panelled satellite** was launched into space to **test** the reliability of **timber** as a renewable building material for future space travel.

About Lignosat

- A **Japanese spacecraft, LignoSat**, measures **4 inches** (10 centimetres) on each side and weighs **900 grams**. Kyoto University and homebuilder Sumitomo Forestry developed it.
- The satellite is named after the Latin word for wood, with panels built from a type of **magnolia tree**, using a traditional Japanese crafts technique without screws or glue to hold it together.

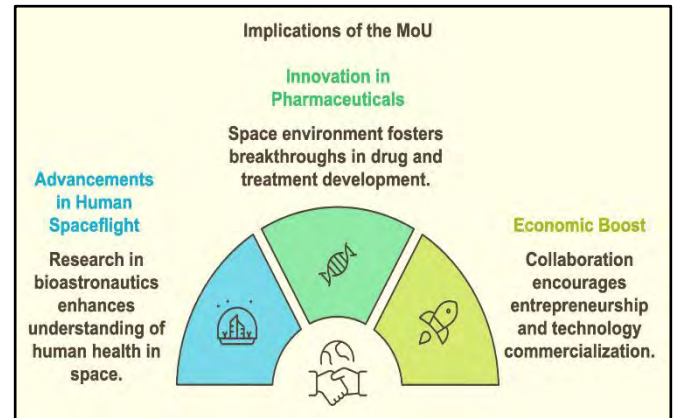


- It arrived at the **International Space Station (ISS)** on November 5 aboard a **SpaceX Dragon cargo capsule**. After a month, it will be released into orbit above the Earth, remaining in orbit for six months.

- The satellite will test the durability of wood in the extreme environment of space where temperatures fluctuate from **-100 to 100 degrees Celsius** every 45 minutes, even as objects traverse through sunlight and darkness.
- The satellite will also gauge **timber's ability** to reduce the impact of space **radiation on semiconductors**.

Durability of wood

- **Wood in Aerospace History:** Kyoto University noted that early 1900s aeroplanes were made of wood, indicating its historical use in high-stress environments.
 - **Cork in Spacecraft:** Cork, a form of wood, has been used in spacecraft to protect them during re-entry into Earth's atmosphere.
- **Potential for Future Use:** Kyoto University researchers envision using wood to replace metals in future space exploration projects. The long-term goal is to plant trees and construct timber habitats on the Moon and Mars within the next 50 years.



About Bharatiya Antriksh Station

- The Indian Orbital Space Station, also known as the "Bharatiya Antariksha Station," is a **modular space station** India plans to construct and **operate under** the Indian Space Research Organisation (**ISRO**).
- The space station would **weigh 20 tonnes** and maintain an orbit of approximately **400 kilometres above the Earth**, where astronauts could stay for **15-20 days**.
- Originally planned to be completed by 2030, it was postponed to 2035 due to delays caused by **technical issues** related to the **Gaganyaan crewed spaceflight mission** and the **COVID-19 pandemic** in India.
- The **first module** is expected to be launched in **2028** on an **LVM3 launch vehicle**, and the remaining modules will be launched on the **Next Generation Launch Vehicle by 2035**.

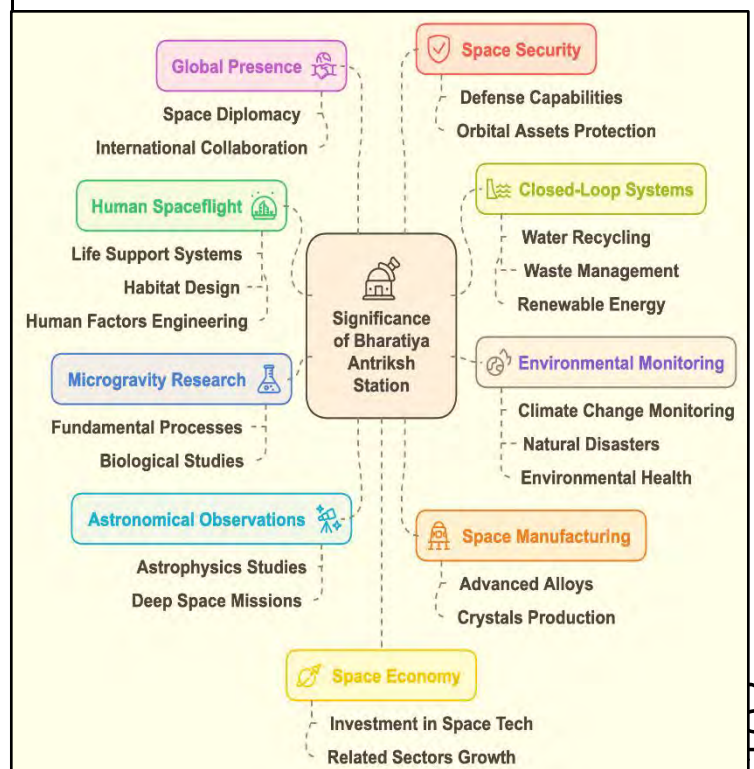
India will have its own Space Station by 2035

News Excerpt

A Memorandum of Understanding (**MoU**) was signed between the Indian Space Research Organisation (**ISRO**) and the Department of Biotechnology (**DBT**).

Key Highlights of the signed MoU

- **Integration of Space and Biotechnology:** The signing of an MoU between ISRO and the Department of Biotechnology represents a pioneering effort to merge space exploration with biotechnology. This synergy is expected to drive innovations in
 - Space biology and bioastronautics.
 - Development of new pharmaceuticals and regenerative medicine.
 - Sustainable solutions for waste management in space.
- **Bharatiya Antriksh Station:** India will have its own Space Station by 2035, known as the "Bharatiya Antriksh Station." The proposed space station will serve as a platform for
 - Long-term human missions.
 - Collaborative international research projects.
 - Commercial activities such as space tourism and in-orbit manufacturing.
- **BioE3 (Biotechnology for Economy, Environment, and Employment) Policy:** This new policy aims to leverage biotechnology for economic growth, environmental sustainability, and employment generation. It targets a \$300 billion bioeconomy by 2030.



GENERAL SCIENCE

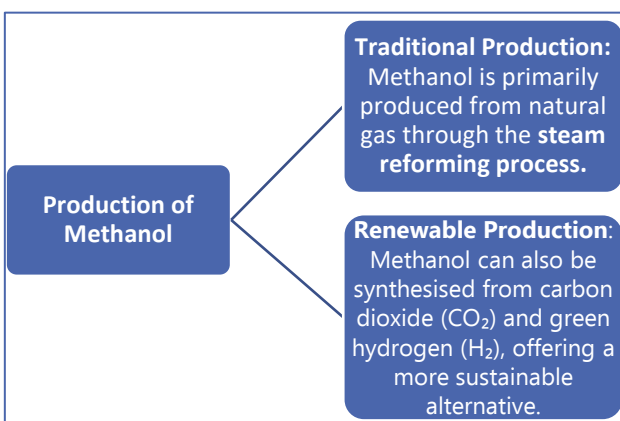
NTPC launches world's first CO₂-to-Methanol Plant

News Excerpt

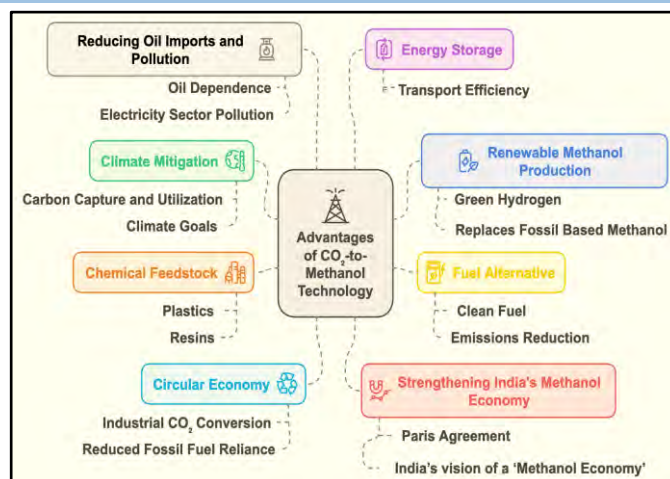
National Thermal Power Corporation (NTPC), India's largest power producer, inaugurated the world's first **CO₂-to-methanol conversion plant** at its Vindhyachal facility, coinciding with its 50th Raising Day celebration.

About Methanol

- Methanol (CH₃OH), also known as **methyl alcohol** or **wood alcohol**, is the simplest form of alcohol.
- It is a **colourless, volatile, and flammable liquid** with a distinctive odour.
- Methanol is vital in various **industrial applications** and is increasingly considered a key component in **sustainable energy** and chemical production.
- It is **highly toxic** if ingested or inhaled in large quantities, potentially causing blindness or death.

CO₂-to-Methanol Conversion

- The conversion of carbon dioxide (CO₂) to methanol is an innovative technology that offers a **dual benefit**:
 - Reducing atmospheric CO₂ levels.
 - Producing a valuable chemical feedstock.
- **Process of CO₂-to-Methanol Conversion**
 - **CO₂ Capture:** CO₂ is captured from industrial emissions, power plants, or even directly from the atmosphere through Direct Air Capture (DAC) technology.
 - **Hydrogen Production:** Hydrogen (H₂) is essential for the chemical reaction and is typically produced via electrolysis of water, ideally powered by renewable energy to ensure sustainability.
 - **Catalytic Conversion:** The captured CO₂ reacts with H₂ over a catalyst, such as copper, zinc oxide, or zirconium oxide, under high temperature and pressure to produce methanol (CH₃OH).



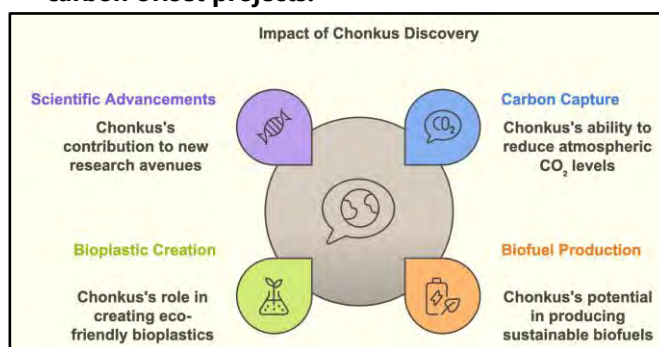
Chonkus, the mutant Cyanobacteria

News Excerpt

Scientists have identified a **new strain of cyanobacteria** named Chonkus, which holds immense **potential** for biologically-based **carbon sequestration** and the **bioproduction** of valuable commodities.

About Chonkus

- Chonkus was discovered in the **shallow, sunlit waters** off **Italy's Vulcano Island coast**.
- The area is characterised by **volcanic gas-rich groundwater** seeping into the sea, which provides a **unique combination** of nutrients and conditions conducive to Chonkus' growth.
- Chonkus has demonstrated the ability to **absorb** significantly **more carbon dioxide** than typical ocean cyanobacteria.
- Its superior carbon sequestration capabilities make it a promising candidate for **climate change mitigation** and **carbon offset projects**.



About Cyanobacteria

- Also known as **blue-green algae** or **blue-green bacteria**, cyanobacteria are **photosynthetic** microscopic organisms.
- They thrive in various environments, including **terrestrial and aquatic habitats**, such as freshwater, brackish, and marine ecosystems.
- Cyanobacteria derive their characteristic colour from the **pigment phycocyanin**, which helps them capture light for photosynthesis.

Ecological Significance

- **Oxygenation:** They played a crucial role in the early oxygenation of Earth's atmosphere and oceans, making life possible.
- **Aquatic Food Chain:** As primary producers, they form the base of many marine food webs.
- **Nitrogen Fixation:** Cyanobacteria can convert atmospheric nitrogen into forms that are usable by plants, thereby enriching soil and water with essential nutrients.

Fifth Global Standards Symposium (GSS-24)

News Excerpt

For the first time in the **Asia-Pacific** region, the Fifth Global Standards Symposium (GSS-24) was held in **New Delhi**.

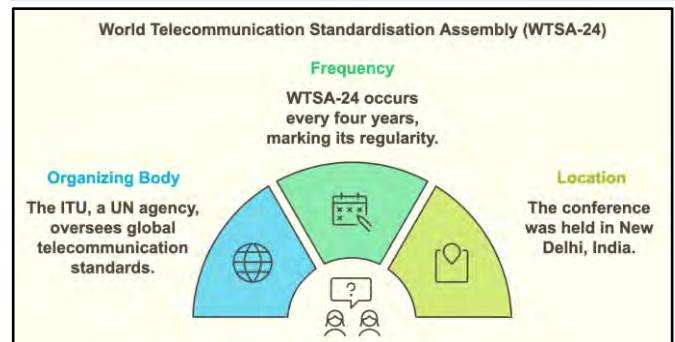
Key Highlights of the Event

- The Fifth Global Standards Symposium (GSS-24) was organised by the **International Telecommunication Union (ITU)** and hosted by the **Department of Telecommunications**, Government of India.
- It brought together a record-breaking 1,500 **policymakers, innovators, and experts** from across the globe. The **Chief Executive Officer** of the Centre for Development of Telematics (**C-DoT**) chaired the symposium.
- The symposium's **theme** was "Charting the Next Digital Wave: Emerging Technologies, Innovation, and International Standards."
- GSS-24 served as a premier **forum** for **high-level discussions** and coordination on pressing **technological and standardisation** challenges. A special high-level segment enabled industry leaders and ministers to collaborate, focusing on the future of innovation and **digital public infrastructure**.
- The **outcome document** of the symposium lays the foundation for discussion at the World Telecommunication Standardization Assembly (WTSA-24).

Key outcomes:

- **Driving Digital Transformation:** The Outcome Document underscores international standards as the cornerstone for digital transformation globally.
- **Uniting Global Leaders:** GSS-24 brought together industry giants and policymakers to discuss the impact of standards on cutting-edge technologies.
- **Innovation Through Standards:** The AI Standards Summit showcased how consensus-based standards can spark innovation across various sectors, enhancing technological advancements.
- **Bridging the Gap:** The symposium stressed the need to bridge the standards gap between developed and developing nations, ensuring equitable access to technology for all.

- **Harnessing AI and the Metaverse:** GSS-24 highlighted the transformative potential of AI and the metaverse in public services and urban planning, urging the ITU to strengthen initiatives like the Global Initiative on Virtual Worlds.
- **Accelerating SDGs:** The event underscored the vital role of international standards in achieving the UN Sustainable Development Goals, paving the way for sustainable digital transformation.
- **High-Level Dialogues:** An unprecedented high-level segment fostered collaboration among industry leaders and ministers, focusing on the future of innovation and digital public infrastructure.
- **Establishing AI Governance:** GSS-24 called for robust international standards for AI governance, encouraging initiatives like AI for Good and the AI for Skills Coalition.
- **Empowering Open Source:** The symposium recognized the critical role of open-source software in driving innovation, advocating for collaboration with developers to create a more inclusive tech ecosystem.
- **Celebrating Smart Cities:** GSS-24 acknowledged cities excelling in smart and sustainable initiatives, reinforcing the commitment to the United for Smart Sustainable Cities (U4SSC) initiative, led by the ITU, UNECE, and UN-Habitat.



BIOTECH

First Foundation Day of Biotechnology Research and Innovation Council (BRIC)

News Excerpt

The first **foundation day** of the **Biotechnology Research and Innovation Council (BRIC)** was celebrated from November 9th to 10th, 2024.

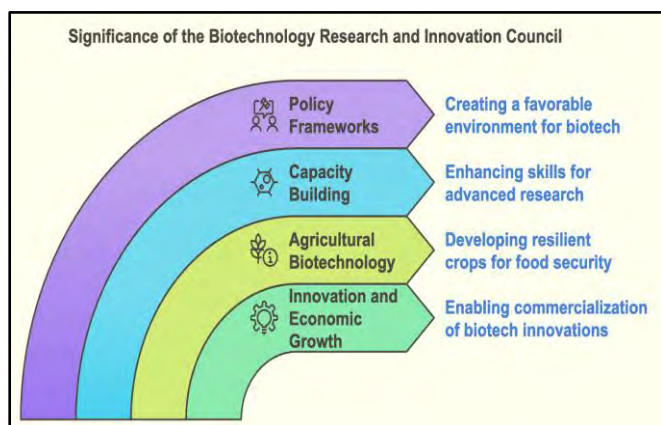
About the Biotechnology Research and Innovation Council (BRIC):

- It is an **autonomous body** under the **Department of Biotechnology (DBT)**, Ministry of Science and Technology.
- It has been formed by **subsuming 14 Autonomous Institutions (AIs)** under it.

- It **aims** to foster innovation, entrepreneurship, and research within the biotechnology sector in India.
 - BRIC provides **grants, fellowships**, and other **funding opportunities** to researchers and institutions. This promotes advancements in **agriculture, healthcare, environment**, and **industrial biotechnology**.
- BRIC's objectives and functions align closely with several key national policies, most notably the **BioE3 (Biotechnology for Economy, Environment and Employment) Policy**.
 - It aims to catalyse the growth of India's bioeconomy, which is projected to reach **₹24,000 billion by 2030 and contribute 5-6% to the GDP**. This aligns with the BioE3 policy's goal of **making India a US\$150 billion bioeconomy by 2025**.

Key Technologies Supported by BRIC

- **Gene Therapy:** BRIC has supported India's first gene therapy clinical trial for Hemophilia A, involving a novel hematopoietic stem cell-based lentiviral vector-based gene therapy technology.
- **Fruit and Vegetable Preservation Technology:** BRIC-NIPGR, through the startup Fruvitec, developed technologies to enhance the shelf life of fruits and vegetables while maintaining their nutritional status.
- **Novel Blood Bag Technology:** Researchers at BRIC-inStem developed taurine and acridine-containing electrospun nanofibrous sheets (Tau-AcrNFS) to reduce damage to stored blood cells.
- **SpeedFlower Protocol:** Developed at the International Rice Research Institute (IRRI) facility in Varanasi, this protocol combines specific light parameters with optimised growth conditions to expedite rice breeding and contribute to global food security.
- **Ceramic Membrane Integrated Anaerobic Bioreactor (CMIAR):** This technology was developed to treat textile industry effluent effectively.



ICMR announces 'First in the World Challenge'

News Excerpt

The Indian Council of Medical Research (ICMR) has announced a new **initiative**, 'First in the World Challenge,' to **encourage scientists** to generate **innovative ideas** for tackling **health issues**.

About First in the World Challenge

- It **aims** to foster **novel, out-of-the-box, futuristic ideas, new knowledge generation**, and the discovery/development of breakthrough **health technologies** (vaccines, drugs/therapeutics, diagnostics, interventions, etc.) that have never been thought of, tested, or tried in the world to date.
- This **high-risk, high-reward program** will fund projects at various stages, from proof-of-concept to prototype and final product development.
- The proposal must have **bold** research ideas with significant **wide-ranging impact** and, if successful, should have potential '**first of its kind**' biomedical and technological innovations for better health outcomes in the global context.
 - This scheme will **not fund** proposals for 'incremental' knowledge or 'process innovation'.
- **Individuals or teams** of researchers (from a single institute or multiple institutes) can submit proposals.
- Every team application must designate a **Principal Investigator** responsible for technical, administrative, and financial deliverables.
- A **selection committee** will be formed by experts of high repute, innovators, policymakers, and scientists with outstanding records of conducting research and innovation in the biomedical domain.

About ICMR

- When founded in **1911**, ICMR was initially called the **Indian Research Fund Association (IRFA)**. After independence, India was restructured and renamed the Indian Council of Medical Research in **1949**.
- It is the **apex body** for guiding, coordinating, and promoting medical research. It is one of the world's oldest and largest medical research organisations.
- It is **overseen** by a **Governing Body** led by the Union Health Minister. An Advisory Board of scientific experts helps guide its work alongside several committees that review and monitor various research projects.
- ICMR's research aligns with **national health priorities**, such as managing infectious diseases, improving maternal and child health, controlling nutritional disorders, and researching non-communicable diseases like cancer, diabetes, and mental health.

- It is **funded** by the Government of India, specifically through the **Department of Health Research** in the Ministry of Health and Family Welfare.
- In **2007**, it established the **Clinical Trials Registry of India** to track clinical trials nationwide.
- ICMR operates **26 national institutes** that research a range of health topics, such as:
 - Infectious diseases: tuberculosis, leprosy, and AIDS
 - Vector-borne diseases: malaria and kala-azar
 - Nutrition, toxicology, and oncology: studies on food, drugs, cancer, etc.
- It has **six regional research centres** focused on health issues in different parts of the country.

HEALTH

Why the Maker of Semaglutide Wants Copies Banned

News Excerpt

Novo Nordisk, the **Danish pharmaceutical giant**, has **urged the US Food and Drug Administration (FDA)** to **ban** the compounding of its popular weight-loss drug Wegovy and diabetes medication Ozempic, both of which contain semaglutide.

About Semaglutide

- Semaglutide is a medication used for specific health conditions, including
 - **Weight Loss:** Approved for use in certain patients.
 - **Blood Sugar Control:** Helps lower blood sugar levels in patients with type 2 diabetes. Semaglutide is not indicated for people with type 1 diabetes.
 - **Cardiovascular Risk Reduction:** Reduces the risk of major events such as heart attacks or strokes in eligible patients.
- Semaglutide is a **GLP-1 (glucagon-like peptide-1) receptor** agonist that helps manage weight and blood sugar by
 - **Increasing Insulin Release:** Improves blood sugar control.
 - **Reducing Glucagon Levels:** Lowers blood sugar by decreasing the liver's glucose output.
 - **Delaying Gastric Emptying:** Slows food movement from the stomach to the intestines, promoting fullness.
 - **Suppressing Appetite:** Helps reduce food intake, contributing to weight loss.
- **No Generic Versions:** Semaglutide is **only** available under branded names (Wegovy, Ozempic, Rybelsus), all manufactured by Novo Nordisk and approved by the FDA for different conditions.

GENERICS V COMPOUNDED DRUGS

Both are alternatives to brand-name medications, but they differ significantly in manufacturing and regulation.

MANUFACTURING

GENERICS are mass-produced by manufacturers once the patent on a brand-name drug expires. They contain the same active ingredients, and match branded versions in dosage, safety, quality, and intended use. Novo Nordisk's patent on semaglutide will expire in 2026.

COMPOUNDED DRUGS are prepared by licensed pharmacists and tailored to meet a patient's specific needs. Customisation can include adjusting the dosage or combining multiple drugs.

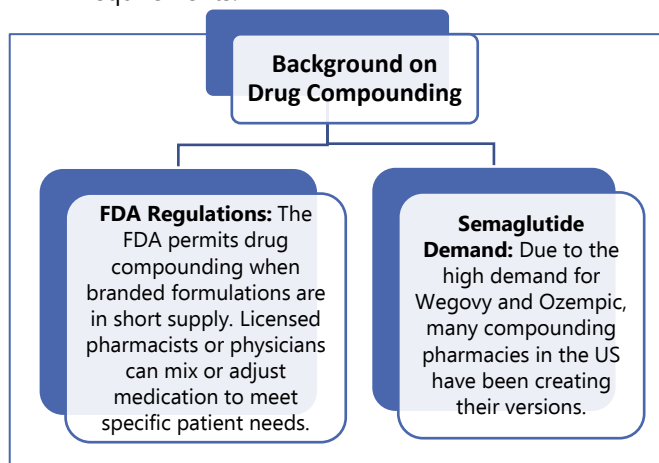
REGULATION

GENERICS must meet strict regulatory standards set by bodies like the FDA. For instance, they must prove bioequivalence, i.e., deliver the same amount of active ingredients into the bloodstream at the same rate as the branded original.

COMPOUNDED DRUGS are not subject to the same rigorous approval process, even though the ingredients used in compounding must be FDA-approved. Oversight typically falls to state pharmacy boards.

Concerns Over Compounded Semaglutide

- Novo Nordisk asked the FDA to **include** semaglutide on the **Demonstrable Difficulties for Compounding (DDC)** List, which limits drug compounding when commercial versions are available.
 - The FDA evaluates drugs for the DDC list based on stability, bioavailability, and complex manufacturing requirements.



Key Concerns Highlighted

- **Complex Formulation:** Semaglutide's structure, produced via recombinant DNA technology, is difficult to replicate. Compounded versions may lack the FDA-approved drug's purity, stability, and effectiveness.
- **Delivery Mechanism:** FDA-approved semaglutide uses precise delivery systems (e.g., single-use pen injectors) for accurate dosing. Compounded versions often use multi-dose vials or prefilled syringes, increasing the risk of dosing errors.
- **Bioavailability Issues:** Compounded semaglutide may have lower absorption rates, leading to ineffective treatment, which can result in severe complications for diabetes and obesity patients.
- **Contamination and Stability Risks:** Compounding requires specialised facilities to ensure sterility. Improper handling or storage can lead to contamination and compromised drug stability, particularly for temperature-sensitive semaglutide.

INTERNAL SECURITY

MHA issues alert against illegal payment gateways

News Excerpt:

Indian Cybercrime Coordination Center (I4C), MHA has issued an alert against illegal payment gateways created using mule bank accounts by Transnational Organized Cybercriminals facilitating money laundering as a service.

About News:

- Nationwide Raids Uncover Illegal Payment Gateways:** Recent raids by Gujarat Police (FIR 0113/2024) and Andhra Pradesh Police (FIR 310/2024) have revealed illegal digital payment gateways created by transnational criminals. These gateways are used for money laundering services connected to various types of cybercrimes.
- Government Actions for Cyber Security:** Led by Prime Minister Shri Narendra Modi and Union Home Minister Shri Amit Shah, the Ministry of Home Affairs (MHA) is collaborating with all Law Enforcement Agencies (LEAs) to promote a Cyber Secure Bharat. The Indian Cybercrime Coordination Center (I4C) and State Police Agencies are analyzing cyber threats and taking measures to combat cybercrime.
- Methods of Creating Mule Accounts:** Criminals scout for current and savings accounts via social media platforms like Telegram and Facebook. The mule accounts often belong to shell companies or individuals and are controlled remotely from overseas.
- Process of Setting Up Illegal Payment Gateways:** Using mule accounts, an illegal payment gateway is created for criminal syndicates to accept deposits for activities like:
 - Fake investment scams.
 - Offshore betting and gambling.
 - Fraudulent stock trading platforms.
 - Once funds are received, they are immediately transferred (layered) to other accounts, often misusing the Bulk Payout facility provided by banks.
- Identified Illegal Payment Gateways:** Payment gateways like PeacePay, RTX Pay, PoccoPay, RPPay have been identified as providers of Money Laundering as a Service, operated by foreign nationals.
- Public Advisory and Warnings:** Citizens are advised not to sell or rent their bank accounts, company registration certificates, or Udhyaam Aadhaar Registration certificates. Depositing illicit funds in such accounts can lead to legal consequences, including arrest. Banks are advised to implement checks to identify accounts potentially used for illegal payment gateways.
- Reporting Cybercrime:** Citizens should report any cybercrime to the helpline 1930 or via www.cybercrime.gov.in. Follow "CyberDost" on social media for cyber security tips and updates.

C-295 aircraft

News Excerpt:

The Prime Minister, Shri Narendra Modi and the Prime Minister of Spain, Mr Pedro Sanchez jointly inaugurated the TATA Aircraft Complex for manufacturing C-295 aircraft at TATA advanced systems limited (TASL) Campus in Vadodara, Gujarat.

About C-295

- Overview of the C-295 Aircraft:** The C-295 aircraft is a versatile, multi-role tactical airlifter ideal for various operations such as logistics transfers, rescue, and other missions.
- Naming Explanation:** "C" stands for CASA. "2" signifies the number of engines. "95" refers to the payload capacity of 9.5 tonnes.
- Engine and Design Improvements:** Equipped with Pratt and Whitney Canada PW127G turboprop engines (2645 hp each). Features a new propeller and redesigned wing for improved performance.
- Payload and Transport Capabilities:** Can carry up to 9 tonnes of payload or 71 troops. Capable of a maximum cruising speed of 260 knots (481 km/h).
- Air-to-Air Refueling Capability:** Supports air-to-air refueling for both fixed-wing aircraft and helicopters.
- Range and Endurance:** Range of 5,000 km with up to 11 hours of endurance. Designed for long endurance, staying aloft for up to 13 hours.
- Short Takeoff and Landing (STOL):** Can perform short takeoff and landing on unprepared or unpaved runways, including sandy, grassy, and soft airstrips.
- Landing Gear and Cabin Design:** Fitted with retractable landing gear. Features an unobstructed, 12.69-meter-long pressurized cabin for diverse operational needs.
- Altitude and Flight Versatility:** Capable of flying at high altitudes up to 30,000 feet. Also retains excellent low-level flight characteristics, making it suitable for a wide range of altitudes and terrains.
- Fuel Efficiency:** The Pratt & Whitney engines offer excellent fuel efficiency, allowing for extended missions with low fuel consumption.



India, U.S. conclude \$3.5bn deal for 31 MQ-9B armed UAVs

News Excerpt:

Recently, India and the U.S. concluded a \$3.5 bn deal for the procurement of 31 MQ-9B armed High Altitude Long Endurance (HALE) Remotely Piloted Aircraft Systems (RPAS) manufactured by General Atomics through an inter-governmental agreement, via the Foreign Military Sales programme of the U.S.



About news:

- **Contract Details for MQ-9B UAV Procurement:** India signed a Tri-Service contract with the U.S. government for the procurement of **31 MQ-9B Sky/Sea Guardian HALE systems**. Another contract was signed with General Atomics Global India Pvt Ltd for performance-based logistics, including Depot Level Maintenance, Repair & Overhaul (MRO) in India.
- **Distribution of UAVs Among Services:**
 - 15 Sea Guardians for the Indian Navy.
 - 16 Sky Guardians (eight each for the Indian Army and Air Force).
- **Augmentation of ISR Capabilities:** The MQ-9B UAVs will significantly boost India's Intelligence, Surveillance, and Reconnaissance (ISR) capabilities. For the Indian Navy, the Sea Guardians will enhance monitoring over the Indian Ocean Region (IOR) and reduce strain on P-8I maritime patrol aircraft.
- **Technical Features of the MQ-9B:** Designed to operate for up to 40 hours in all weather conditions via satellite communication. Can integrate into civil airspace safely.
- **Sea Guardian configuration includes:**
 - 360-degree surface-search maritime radar.
 - Automatic Identification System (AIS).
 - Sonobuoy monitoring and dispenser systems for anti-surface and anti-submarine warfare missions.
- **Pending High-Profile Deal:** Another major deal with the U.S. involves the local license manufacture of General Electric (GE) F414 jet engines by Hindustan Aeronautics Limited (HAL) for the LCA Mk1A.

MAHASAGAR

News Excerpt:

Recently, the third edition of the high-level virtual interaction MAHASAGAR was conducted by the Indian Navy. **(MAHASAGAR: Maritime Heads for Active Security And Growth for All in the Region.)**

MAHASAGAR Initiative: Key Highlights

- **Participating Countries:** Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and Tanzania.
- **Theme of Interaction:**
 - "Training Cooperation to Mitigate Common Maritime Security Challenges in IOR"
 - Emphasizes the importance of training collaboration to address shared maritime security challenges in the Indian Ocean Region (IOR).
- **Meaning of MAHASAGAR:**
 - "Mahasagar" means vast ocean in Hindi. It is the Indian Navy's flagship outreach for high-level virtual interaction among Maritime Heads.
- **Initiative Details:**
 - Launched by the Indian Navy in 2023.
 - Held bi-annually and widely accepted among participating nations.
- **Focus of the Current Edition:**
 - Discussions emphasized the importance of quality training and opportunities for collaborative training among IOR nations.
 - Aims to develop necessary capacities and skilled manpower to address common maritime security challenges in the region.

Exercise Austrahind

News Excerpt:

The 3rd edition of joint military Exercise AUSTRAHIND commenced at Foreign Training Node, Pune in Maharashtra.

Key Highlights of Exercise AUSTRAHIND 2024

- **Participating Contingents:**
 - **India:** 140 personnel, mainly from a battalion of the DOGRA Regiment. 14 personnel from the Indian Air Force.
 - **Australia:** 120 personnel from the 13th Light Horse Regiment of the 10th Brigade, 2nd Division.
- **Aim of the Exercise:**
 - To promote military cooperation and enhance interoperability between India and Australia.
 - Focus on joint sub-conventional operations in a semi-urban environment and semi-desert terrain under Chapter VII of the UN mandate.
- **Key Drills and Training Aspects:**
 - Response to terrorist action and capturing defined territory.
 - Establishing a Joint Operations Centre.
- **Conducting joint counter-terrorism operations like:**
 - Raids, Search and Destroy missions.
 - Securing a helipad.
 - Use of drones and counter-drone measures.
 - Special Heli-Borne Operations.

First Ever Space Exercise 'Antariksha Abhyas – 2024'

News Excerpt:

'Antariksha Abhyas – 2024', a three day Exercise to war-game the growing threats from and to Space Based Assets and Services, was conducted by the Defence Space Agency of Headquarters Integrated Defence Staff.

Key Details of Exercise Antariksha Abhyas

- **Exercise Overview:** First-of-its-kind space exercise aimed at securing India's national strategic objectives in space and integrating space capabilities into military operations.
- **Opening Address by Chief of Defence Staff:** General Anil Chauhan emphasized the importance of space as a critical component of India's defense and security. Highlighted the congested, contested, competitive, and commercial nature of space.
- **Objectives of the Exercise:**
 - Provide a better understanding of space-based assets and services for military and strategic purposes.
 - Assess operational dependency on space-based services across military branches.
 - Identify vulnerabilities in space capabilities and develop strategies for operating under denial or disruption of space-based services.
- **Participants: Key participants include:**
 - Defence Space Agency and allied units.
- **Significance:**
 - Enhances India's preparedness in space as a strategic frontier.
 - Fosters cross-agency collaboration and strengthens national defense capabilities in the space domain.
 - Supports state-of-the-art technology development and advanced systems for space security.

Adaptive Defence

News Excerpt:

The Defence Minister termed 'Adaptive Defence' as a strategic approach where a nation's military and defence mechanisms continuously evolve to counter emerging threats effectively.

About Adaptive Defence and Defence Initiatives:

- **Concept of 'Adaptive Defence':**
 - Announced by Defence Minister Rajnath Singh on November 12, 2024, as a necessity rather than just a strategic choice.
 - Aims to anticipate future threats and prepare proactively, rather than merely responding to events.
 - Emphasizes situational awareness, flexibility, resilience, agility, and integration with advanced technologies as core principles.
- **Features of Adaptive Defence:**

- Focuses on adapting, innovating, and thriving in unpredictable scenarios.
- Strategic flexibility and tactical adaptability are essential for both national and transnational defense strategies.
- Utilizes futuristic technologies to enhance defence operations and maintain a proactive approach.
- **Importance of Transnational Solutions:**
 - Recognizes that as threats are transnational, defense solutions should also be international and collaborative.
 - Emphasizes jointness beyond the military domain of individual countries, stressing global interconnectedness in defense.
- **Changing Nature of Warfare:**
 - Emerging technologies such as drones and swarm technologies are revolutionizing military tactics and doctrines.
 - India aims to become a global hub for drones by boosting research, certification mechanisms, and encouraging Indian Intellectual Property (IP) creation.
 - This effort is part of the Make in India and Aatmanirbhar Bharat (Self-Reliant India) programs.
- **Success of 'Make in India' in Defence Exports:**
 - India is exporting defense products to over 100 nations.
 - Top three export destinations in 2023-24 were the U.S.A., France, and Armenia.
 - The target is to achieve ₹50,000 crore in defense exports by 2029.
- **Collaborative Approach for Modern Defence:**
 - The Minister highlighted the importance of collaboration due to the complex cybersecurity, AI, quantum, and nanotechnology challenges.
 - Urged for sharing of knowledge, information, and strategies internationally to counter emerging security threats effectively.

India-Indonesia concluded 9th edition of Garuda Shakti exercise

News Excerpt:

The 9th edition of the India-Indonesia Joint Special Forces Exercise Garuda Shakti concluded Mokopassus in Cijantung, Indonesia.

About Exercise:

- **Exercise Overview:** Garuda Shakti began on November 1, 2024, focusing on enhancing bilateral military cooperation and strengthening ties between India and Indonesia. An Indian Army Parachute Regiment (Special Forces) unit of 25 personnel participated, along with 40 Indonesian personnel from Kopassus Special Forces.

• Training Activities:

- The exercise included intensive tactical drills such as underwater training, close-range shooting, and operations in urban and jungle terrain.
- These activities allowed both armies to share best practices and improve interoperability in complex combat and counter-terrorism scenarios.

DRDO carries maiden test of land attack long range cruise missile

News Excerpt:

Defence Research and Development Organisation (DRDO) conducted the maiden flight-test of a **Long Range Land Attack Cruise Missile (LRLACM)**.

Key Points:

- **Range:** The missile has a range of 1,000 km.
- **Launch Site:** The test was conducted at the Integrated Test Range (ITR), Chandipur, off the coast of Odisha, using a mobile articulated launcher.
- This missile is a new variant of the **Nirbhay LRLACM**, with improved features.
- **Navigation and Maneuvering:** The missile demonstrated waypoint navigation and the ability to perform various maneuvers at different altitudes and speeds. Equipped with advanced avionics and software for enhanced performance and reliability.
- **Development and Manufacturing:** The missile was developed by Aeronautical Development Establishment (ADE) in Bengaluru, with contributions from other DRDO laboratories and Indian industries.
- **Strategic Importance:**
 - The LRLACM is part of the Defence Acquisition Council-approved project and is a Mission Mode Project aimed at enhancing India's missile capabilities.
 - Once inducted, the missile will provide the Indian armed forces with long-range standoff capabilities similar to the U.S. Tomahawk cruise missile, enabling strikes on land-based targets.

Terror attack on Z-Morh project

News Excerpt:

Recently, suspected militants targeted the workers of infrastructure company APCO

Infratech, which is constructing the Z-Morh tunnel on the Srinagar-Sonamarg highway in Jammu and Kashmir.

Z-Morh Tunnel: Key Points

• About Z-Morh Tunnel:

- A 6.4-kilometer tunnel connecting Sonamarg health resort with Kangan town in central Kashmir's Ganderbal district.
- Located near Gagangir village, the tunnel provides all-weather connectivity to Sonamarg, a tourist destination on the Srinagar-Leh highway.
- The name derives from the Z-shaped road stretch at the location of the tunnel.

• Need for the Tunnel:

- The road stretch is at an altitude of over 8,500 feet, prone to snow avalanches during winter.
- The road to Sonamarg typically remains closed for most of the winter season.
- The project was originally conceived in 2012 by the Border Roads Organisation (BRO) to address this issue.
- The project was later handed over to the National Highways & Infrastructure Development Corporation Limited (NHIDCL), with APCO Infratech executing the work.

• Strategic Importance:

- Provides all-weather connectivity to Sonamarg and beyond to Ladakh.
- Essential for military access to border areas in Ladakh, ensuring quick deployment in sensitive regions.

ALL-WEATHER ROAD
TWO TUNNELS WILL TURN THE SRINAGAR-LEH HIGHWAY INTO AN ALL-WEATHER ROAD IN FUTURE

Z-MORH TUNNEL | **COST** ₹2,716.9 cr
Construction will start this year

Deadline 2016-2017 (Construction start)
Deadline 2022-23 (Feasibility survey)

Status: Feasibility survey being conducted

What the tunnels will do

- Provide all-weather road to Ladakh. Currently, road is closed because of snow for 6-7 months in a year
- Reduce the time taken to travel between Srinagar and Leh
- Provide army means to send quick reinforcements in relation to China, Kargil & Slachen glacier regions

Map labels: Srinagar, J&K, Leh, Slachen, China-occupied Kashmir, NH-1D, Kargil, Himachal Pradesh.

- Complements the ongoing construction of the Zojila Tunnel (12,000 feet altitude), which will connect Sonamarg to Drass in Ladakh.
- The Z-Morh Tunnel is crucial as the Zojila Tunnel is expected to be completed by December 2026.
- **Benefits of the Tunnel:**
 - Year-round access to the Sonamarg health resort, boosting tourism.
 - Enhances regional connectivity on the Srinagar-Leh highway.
 - Strengthens India's strategic infrastructure in the sensitive Himalayan region.

GEOGRAPHY

Sun signs: On extreme heat and Tamil Nadu's policy decision

News Excerpt:

Tamil Nadu's model is a proactive approach other states could adopt to address extreme heat conditions effectively.

Key point:

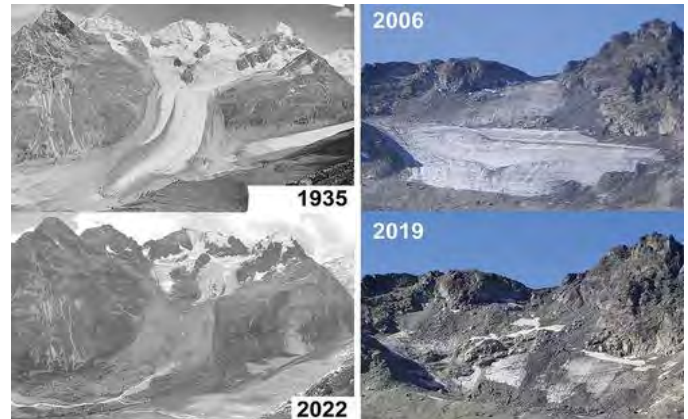
- **Importance of Clairvoyant Policy Decisions:** Proactive policies that anticipate future challenges are beneficial and long-lasting. Tamil Nadu's decision to declare heat as a State-specific disaster is an example of such foresight.
- **Significance of Tamil Nadu's Move:** Declaring extreme heat as a disaster enables affected people to receive State assistance. This decision is crucial in a country facing environmental issues, unplanned urbanization, poverty, and limited access to health care and shelter.
- **2023 Recorded as Hottest Year:** The World Meteorological Organization declared 2023 the hottest year. Studies predict extreme heat waves will most severely impact densely populated agricultural regions in South Asia, including the Ganges and Indus basins.
- **Human Health Impact of Heat:** Human bodies must remain at an optimal temperature of 37° C. Constant exposure to temperatures above this can cause severe health issues, affecting organs and even leading to fatalities in vulnerable groups.
- **Tamil Nadu's Recognition of Extreme Heat Impact:** Tamil Nadu acknowledges that temperatures above 40° C, recorded consistently in the summer of 2024, impact elderly individuals, children, and those with comorbidities or outdoor jobs. Its long coastline intensifies vulnerability due to high humidity, causing the dangerous 'wet-bulb temperature' effect.
- **Global Warming on Wet-Bulb Temperature:** The World Economic Forum has highlighted the risk of reaching a wet-bulb temperature of 35° C globally, a threshold where safe body temperature regulation becomes impossible.

- **Tamil Nadu's Preparedness Measures:** The State Disaster Response Fund will now include heatwave-related support. Relief measures include:
 - Ex gratia payments for heat-related deaths.
 - Medical care, drinking water, ORS supply, and adjusted working hours to protect vulnerable populations.

Glacial lakes rise as glaciers retreat

News Excerpt:

From 17 hectares in 1977, the South Lhonak lake has grown to 167 hectares by 2023.

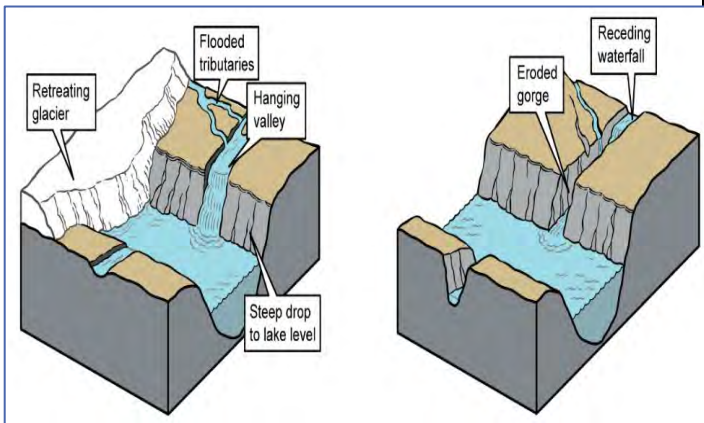


Key Points about Glaciers and Glacial Lakes:

- **Glaciers as Enormous Bodies of Ice:** Glaciers are large bodies of dense ice found on mountains.
- **Movement and Erosion:** Glaciers move under the influence of gravity and their own weight, eroding the land beneath them. The grinding action of the glacier pulverizes rock, turning it into moraine, which includes materials ranging from large boulders to fine "rock flour."
- **Moraine Deposits:** Moraine is deposited on the sides and at the terminus (end) of the glacier.
- **Formation of Glacial Lakes:** When glaciers retreat due to melting, the gap left behind often fills with water, creating a glacial lake. The moraine at the terminus of the glacier can form a natural dam, trapping the water.
- **Hydrological Buffer Role:** Glacial lakes act as hydrological buffers, regulating the flow of water from melting glaciers.
- **Potential Risks to Downstream Communities:** Natural dams formed by moraine can sometimes create hardships for downstream communities, especially if the lake overflows or the dam breaks.

Glacial Lakes and Their Blue Color:

- **Blue Color of Glacial Lakes:** Glacial lakes' striking blue colour is caused by the scattering of light by ultra-fine particles of rock flour suspended in the water. The effect can be compared to the appearance of swimming pools with painted bottoms. Many Himalayan glacial lakes exhibit stunning turquoise hues.



- **Gurudongmar Lake (Northern Sikkim):** Located at an altitude of 5,430 meters above sea level (msl), Gurudongmar is one of the highest lakes in the world. The lake is dammed by moraine, and its outlet stream feeds into water tributaries that contribute to the formation of the Teesta River.
- **Pangong Tso:** A 134-km chain of lakes, Pangong Tso is situated in the disputed buffer zone between Ladakh and China. It is a significant and picturesque lake in the region.
- **Samiti Lake (Sikkim):** Located at around 4,300 meters above sea level, Samiti Lake lies en route to the Kanchenjunga peak. It is a popular, often-photographed glacial lake in Sikkim.

Points on Glacial Lake Outburst Floods:

- **Impact of Global Warming on Glacial Lakes:** Global warming leads to the retreat of glaciers, which causes water to accumulate in glacial lakes. This accumulation increases the risk of the moraine barriers (natural dams) holding these lakes from breaching. The breaching of moraine barriers can lead to catastrophic outburst floods.
- **South Lhonak Lake (Sikkim):** South Lhonak Lake, a moraine-dammed lake in Sikkim, has grown rapidly due to rising temperatures. The lake first appeared in satellite images in 1962, and by 1977, it covered only 17 hectares. By 2023, the lake had expanded to 167 hectares. Due to its rapid growth, the lake, fed by three glaciers, became a potential hazard.
- **Efforts to Prevent Breaching:** In 2017, three eight-inch-diameter pipes were installed to pump water out of the lake. However, these pumps were inadequate for managing the growing volume of water.
- **2017 Glacial Lake Outburst:** In 2023, heavy rains caused the moraine dam to breach, leading to a glacial lake outburst. The outburst raised water levels in the Teesta River by six meters, leading to the collapse of the Teesta III dam and widespread destruction.
- **Future Outburst Predictions:** Research by IIT-Roorkee and others predicts that a future breach of South Lhonak Lake could result in a discharge of over 12,000 cubic

meters of water per second. Such an outburst would pose a serious threat to human settlements downstream.

- **Importance of Monitoring:** Monitoring glacial lakes and their outburst potential is crucial for disaster mitigation. Understanding these natural phenomena is key to protecting communities and minimizing the impact of such disasters.

Dead Sea

News Excerpt:

In an interdisciplinary research project coordinated by the Helmholtz Centre for Environmental Research (UFZ), researchers have discovered meter-high chimneys on the floor of the Dead Sea.



Key highlight of the study:

- **Discovery of Vents:** Vents discovered near the Dead Sea are crucial as early warning indicators for sinkholes, which are also known as subsidence craters and are hazardous to the local population.
- **Dynamic System of the Dead Sea:** The Dead Sea is a dynamic system with its water level dropping by approximately one meter annually for over 50 years. This is due to the loss of tributary connections and high water evaporation caused by drought and heat.
- **Current Sea Level:** The surface of the Dead Sea has declined significantly, reaching about 438 meters below sea level.
- **Consequences of Declining Water Levels:** The decreasing lake level impacts groundwater levels in the surrounding regions. Groundwater availability is becoming scarce, creating challenges for neighbouring countries, including Israel, Jordan, and the West Bank, to access this vital resource.
- **Regional Impacts:** The declining water levels exacerbate environmental and resource challenges, directly affecting the ecosystem and human populations relying on the Dead Sea and groundwater resources.

Willingdon Island

News Excerpt:

The rejuvenation of Willingdon Island, once a bustling hub for port-related activities, has taken centre stage in

discussions at trade union forums, with calls for concrete measures to restart its commercial operations.

About Island:

- **Location and Significance:** Willingdon Island is situated in Kochi, Kerala, and is one of the most scenic locations



in the region.

- **Man-Made Structure:** It is an artificial island created by dredging and named after Lord Willingdon, the British Viceroy of India.
- **Size and Importance:** It is one of the largest man-made islands in India.
- **Key Establishments:** The island hosts the Kochi Naval Base of the Indian Navy, the Central Institute of Fisheries Technology, and the Port of Kochi, a major hub for trade and maritime activities.
- **Connectivity:** Willingdon Island is linked to the mainland via the Venduruthy Bridge, ensuring accessibility for transportation and logistics.

DISASTER MANAGEMENT

G20 Disaster Risk Reduction Ministerial Declaration

News Excerpt:

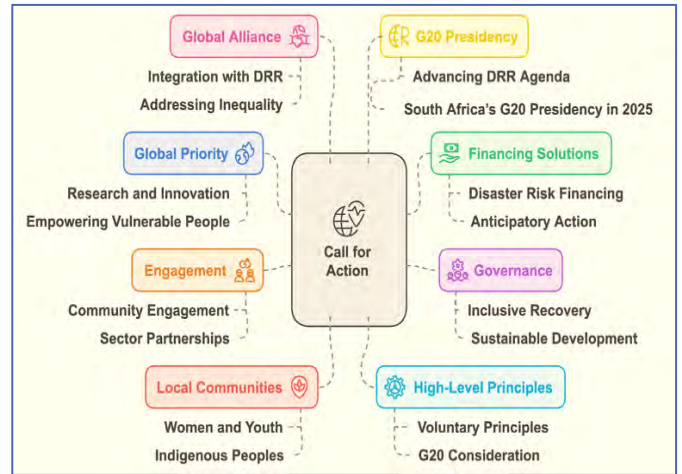
G20 Ministers met to discuss the importance of Disaster Risk Reduction (DRR) in **Belém, Pará, Brazil**, on 1st November 2024, alongside ministers from invited countries and partner international organisations to respond to the growing challenges of disasters and enable a future where risks are reduced for all.

Key Points from the G20 Disaster Risk Reduction (DRR) Commitment:

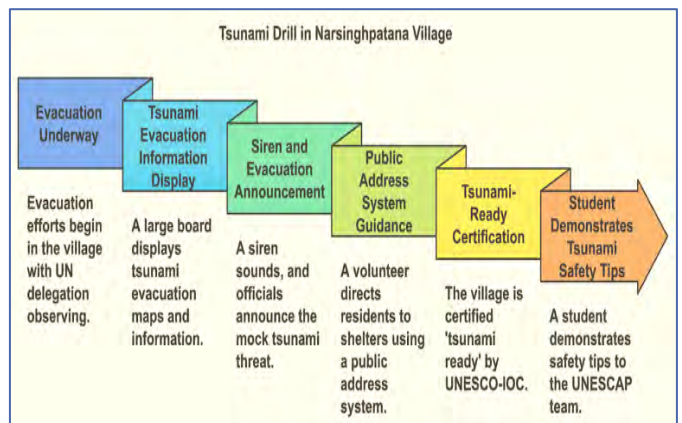
- **Sendai Framework and Synergies:** Reaffirm the 2015-2030 Sendai Framework for Disaster Risk Reduction (SFDRR) and its connections to sustainable development and climate change adaptation. Emphasise synergies with the 2030 Agenda, UNFCCC, and the Paris Agreement.
- **Combatting Inequality in DRR:** Support the Brazilian G20 Presidency's focus on inequality in DRR, advocating

for inclusive, multi-stakeholder approaches to address disaster risks.

- **Inclusive Approaches:** Prioritize gender-responsive, disability-inclusive, whole-of-society approaches, empowering local communities, women, youth, and Indigenous Peoples in disaster risk management.



- **Early Warning Systems:** Commit to accessible, inclusive Multi-hazard Early Warning Systems (MHEWS) to protect lives and livelihoods and support the UN Secretary-General's "Early Warnings for All" initiative.
- **Emerging Threats and Risks:** Acknowledge that emerging threats, including those exacerbated by climate change, require enhanced investment in resilient, inclusive, and sustainable infrastructure.
- **Mobilising Financial Resources:** Emphasize the need for mobilised financial resources, including private sector investment, to support disaster risk reduction and community needs.
- **Inclusive Recovery and Reconstruction:** Promote accessible, equitable recovery, rehabilitation, and reconstruction, integrating DRR measures and learning from past events.
- **Nature-based Solutions:** Encourage using nature-based solutions and ecosystem approaches in land-use planning and climate adaptation efforts.
- **International Cooperation:** Strengthen international and regional cooperation in DRR and foster



partnerships to enhance governance, mutual learning, and early warning systems.

- **Role of Multilateral Development Banks:** Recognize the significant role of Multilateral Development Banks in supporting financial and technical aspects of DRR.

Ocean Institute Orchestrated Mega Drill

News Excerpt:

The mock drill, incidentally, held on **World Tsunami Awareness Day**, lasted four hours and saw participation from 25 coastal villages in Andhra Pradesh (6), Andaman and Nicobar (4), Gujarat (2), Goa (2), Kerala (4), Odisha (1), Puducherry (2), Tamil Nadu (2) and West Bengal (2).

More about news:

- **Simulation Exercise at INCOIS:** On November 5, the Synergistic Ocean Observation Operations Services (SYNOPS) at INCOIS conducted a simulation exercise for tsunami preparedness. The scenario simulated an earthquake of magnitude 9.3 near northern Sumatra, Indonesia, sufficient to trigger large tsunami waves in the Indian Ocean.
- **Purpose of the Exercise:** The exercise aimed to help stakeholders test tsunami warning systems and procedures. The simulation enhances public awareness and preparedness by identifying gaps in warning systems and procedures for improved future readiness.
- **Historical Context–2004 Indian Ocean Tsunami:** The simulation comes ahead of the 20th anniversary of the Indian Ocean tsunami on December 26, 2024. The 2004 tsunami was caused by a massive 9.3 magnitude earthquake near Sumatra, generating tsunami resulted in over 230,000 deaths and affected 14 countries, including India.

Series of alerts:

- **Mock Drill Initiation:** At 9:30 a.m., a dashboard in the SYNOPS office flashes the alert: "Mock Drill is about to commence." At 9:38 a.m., the first bulletin is issued, indicating an 8.8-magnitude earthquake in northern Indonesia, potentially triggering a tsunami.

GOVERNMENT SCHEMES

Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY) completes 10 years

News Excerpt:

The Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY) is a landmark initiative that was launched on October 28, 2014.

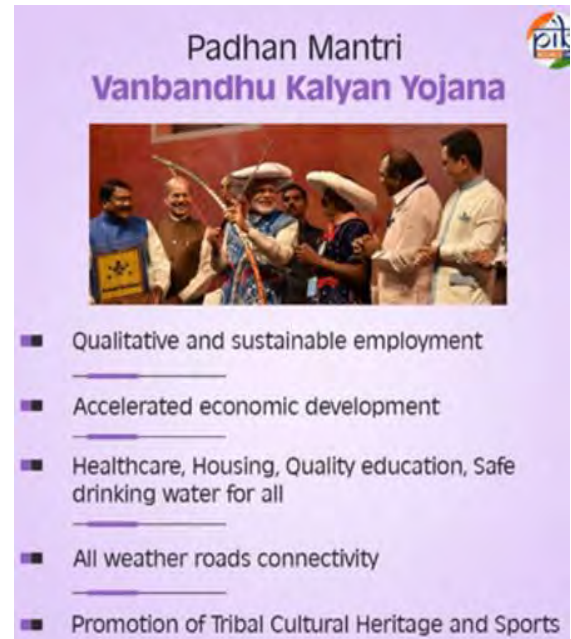
More detail about news:

- This ambitious scheme has been conceived as a comprehensive strategy to address the unique

challenges faced by tribal communities in India, which constitute about 8.9% of the country's population.

- With over 700 scheduled tribes spread across diverse regions— from the Himalayas to the Andaman and Nicobar Islands—India's tribal populations often remain marginalised in terms of socio-economic development.

Pradhan Mantri Vanbandhu Kalyan Yojana (PMVKY): Key Points:



- **Objective:** PMVKY is designed to empower tribal communities in India, acknowledge their historical neglect, and promote inclusive development.
- **Vision:** The initiative aligns with Prime Minister Narendra Modi's vision of "Sabka Saath, Sabka Vikas" (Together with all, development for all) to create an equitable society.
- **Financial Outlay:** A budget of ₹26,135.46 crores has been allocated for the scheme, covering the period from 2021-22 to 2025-26.
- **Focus Areas:**
 - **Holistic Development:** The scheme emphasises the integrated development of tribal villages.
 - **Capacity Building:** It includes initiatives aimed at enhancing skills in education and livelihoods for tribal communities.
- **Sustainable Development:** PMVKY provides a structured approach to sustainable development, recognising tribal communities' knowledge and practices in living harmoniously with nature and forest conservation.
- **Preservation of Culture:** Along with socio-economic upliftment, PMVKY aims to preserve and promote the cultural heritage and identity of tribal populations.
- **Prime Minister's Statement:** PM Modi emphasised the role of tribal communities in nature conservation,

underlining the significance of their traditional practices for sustainable living.

- **Outcome Goals:** By fostering an environment for tribal communities to thrive, PMVKY seeks to uplift their socio-economic conditions and promote inclusive growth across India.

The PMVKY encompasses six steps aimed at different facets of tribal welfare. These include:

1. Pradhan Mantri Adi Adarsh Gram Yojana

- **Revamped Initiative:** PMAAGY revamps the existing Special Central Assistance to Tribal Sub-Plan, focusing on the integrated development of villages with significant tribal populations.
- **Target Villages:** The scheme targets 36,428 villages with substantial tribal populations to improve overall living standards.
- **Core Sectors:** PMAAGY addresses essential sectors like road connectivity, telecom connectivity, education, health services, and sanitation to raise the living standards of tribal communities.
- **Infrastructure Improvements: Specific areas of focus include:**
 - Road connectivity for better transportation
 - Mobile and internet access for digital inclusion
 - Educational facilities such as schools and Anganwadi centres
 - Health services, including health sub-centres.
 - Basic amenities such as drinking water, drainage, and solid waste management
- **Financial Support:** Under the scheme, each village will receive ₹20.38 lakh. The total planned expenditure is ₹7,276 crore by 2025-26.
- **Objective:** PMAAGY aims to bridge gaps in infrastructure and services in tribal villages, fostering sustainable development and enhancing living standards for tribal communities.

2. Development of Particularly Vulnerable Tribal Groups (PVTGs)

- **Purpose:** Aimed at the socio-economic upliftment of the most marginalised tribal communities, known as Particularly Vulnerable Tribal Groups (PVTGs), while preserving their cultural heritage.
- **Financial Support:** Provides financial assistance to state governments for customised developmental activities focusing on housing, health, and education for PVTG families.
- **Pradhan Mantri PVTG Development Mission:** Announced during the 2023-24 Budget Speech, this mission further enhances living conditions for PVTG families by ensuring access to basic facilities. Funding allocation of ₹15,000 crore over three years to cover essential amenities.

- **Essential Amenities Provided:** Focus on providing secure housing, clean drinking water, sanitation, education, health services, nutrition, and improved connectivity to PVTG communities.

- **Utilisation of Local Centers:** Local hubs like Haat Bazars, Common Service Centers (CSCs), and Gram Panchayats will be used to provide doorstep access to services and facilitate scheme implementation.

- **3. Support to Tribal Research Institutes (TRI):** This component facilitates research and documentation efforts related to tribal communities. Based on their proposals, financial assistance is allocated to state governments and UTs to strengthen the knowledge base concerning tribal cultures and challenges.

4. Pre-Matric Scholarships

- **Objective:** Centrally sponsored schemes aimed at supporting tribal students in grades IX and X to advance their education.
- **Eligibility:** Available to students in grades IX and X from families with an annual parental income up to ₹2.50 lakhs.
- **Funding Pattern:**
 - The Government of India contributes 75% of the scholarship funds for most states, while the state government provides 25%. For North Eastern and hilly states, the Government of India contributes 90%, with the state government contributing 10%.
 - In Union Territories (UTs) without a Legislative Assembly, like Andaman & Nicobar, the Government of India provides 100% of the funding.
- **Goal:** To remove financial barriers for tribal students, enabling them to continue their education without constraints.

- **5. Post-Matric Scholarships:** The Post-Matric Scholarship follows similar terms and conditions as the Pre-Matric scheme but caters to Scheduled Tribe students studying beyond class 10. This scholarship aims to further support their educational journey by alleviating financial burdens and encouraging continued academic advancement.

6. Administrative Assistance for Project Management

- **Units:** The PMVKY also allocates funds to establish project management units within state governments, ensuring that schemes related to the welfare of Scheduled Tribes are effectively monitored and implemented.

Other Steps by Government of India for Tribal Welfare:

- **Eklavya Model Residential Schools:** In addition to the above components, the Eklavya Model Residential Schools (EMRS) scheme has been established to provide quality education to Scheduled Tribe students from classes VI to XII. Under the new scheme, the government decided to establish one EMRS in every block with a population of more than 50% ST and at least 20,000 tribal

persons (as per census 2011). Accordingly, the target is to set up 728 EMRSs across the country by the year 2026.

- **Pradhan Mantri Janjatiya Vikas Mission (PMJVM):** Approved for implementation from 2021-22 to 2025-26, the PMJVM has been restructured by merging and extending two existing schemes: the “**Mechanism for Marketing of Minor Forest Produce through Minimum Support Price**” and the “**Institutional Support for Development and Marketing of Tribal Products.**”
 - The Pradhan Mantri Janjatiya Vikas Mission (PMJVM) is designed to enhance tribal entrepreneurship and create livelihood opportunities by promoting the efficient and equitable use of natural resources, including agricultural products, Non-Timber Forest Products (NTFPs), and non-farm enterprises. The Tribal Cooperative Marketing Development Federation of India (**TRIFED**) serves as the central implementing agency for this initiative.
- **Development Action Plan for Scheduled Tribes (DAPST):** The Development Action Plan for Scheduled Tribes (DAPST) serves as a dedicated funding source for tribal development. This multi-faceted strategy encompasses support for critical areas such as education, health, sanitation, water supply, and livelihood opportunities.
 - In addition to the Ministry of Tribal Affairs (MoTA), 41 ministries and departments contribute a percentage of their total scheme budgets each year towards tribal development initiatives under the DAPST.

Conclusion:

To enhance tribal development, prioritise robust implementation, education, healthcare, and infrastructure improvements. Empower communities through decision-making involvement and cultural preservation. Address climate change by promoting sustainable practices and disaster preparedness, fostering a resilient and inclusive future for tribal populations.

PM Young Achievers' Scholarship Award Scheme for Vibrant India (PM YASASVI)

News Excerpt:

The Ministry of Social Justice and Empowerment has implemented the PM Young Achievers Scholarship Award Scheme for Vibrant India (PM-YASASVI).

More detail about news:

- This comprehensive umbrella scheme aims to improve the lives of students from Other **Backward Classes (OBC)**, **Economically Backward Classes (EBC)**, and **Denotified Tribes (DNT)** by providing them with access to quality education during their formative years.
- **The PM YASASVI scheme consolidates and enhances several earlier initiatives, including the Dr Ambedkar**

Post-Matric Scholarship Scheme for EBCs and the Dr Ambedkar Pre-Matric and Post-Matric Scholarship Scheme for DNTs, which were subsumed under this program starting from 2021-22.



The poster features logos for G20, Ministry of Social Justice & Empowerment, Government of India, and 75th Anniversary. The main title is "PM Young Achievers Scholarship Award Scheme for Vibrant India for OBCs & Others" with "PM-YASASVI" in a large blue box. Below the title, it states: "PM-YASASVI is an umbrella scheme designed for OBC, EBC and DNT students by combining the existing scholarship schemes and hostel scheme." and "The initiative aims to provide economically weaker families' children financial support so they can receive a high-quality education."

- **By integrating these schemes, PM YASASVI aims to ensure a more streamlined** and impactful approach to supporting the educational needs of socially and economically disadvantaged students.

Objective:

- **The scheme's overarching goal is to promote educational empowerment among these vulnerable groups**, helping them overcome financial barriers and complete their education. This initiative fosters individual academic growth and contributes to the broader vision of creating a more inclusive and equitable society.
- Under this scheme, students can avail of a **pre-matriculation or post-secondary Scholarship from Class 9 to 10** and a post-matriculation scholarship for their higher studies.
- Students who excel in their studies also get an **opportunity for scholarships to study in top-class schools and colleges** under the Scheme of 'Top Class School Education' and 'Top Class College Education'.
- **Hostel facilities are** also provided to OBC students under the 'Scheme of Construction of Hostels for OBC boys and girls.'
- **PM –YASASVI for OBC, EBC, and DNT students has been formulated having the following five sub-schemes:**
 - Pre-Matric and Post-Metric Scholarship for OBC, EBC and DNT Students
 - Top Class School and College Education for OBC, EBC and DNT Students
 - Construction of Hostel for OBC Boys and Girls

Scope:

- **The Pre-Matric Scholarship** is designed for students in classes IX and X attending government schools. It offers an annual academic allowance of Rs. 4,000 to families with an income below Rs. 2.5 lakh.
- **For the 2023-24 academic year, Rs. 32.44 crore** has been allocated to states and Union Territories for its

implementation. The Post-Matric Scholarship supports students pursuing post-secondary education, providing academic allowances ranging from Rs. 5,000 to Rs. 20,000 based on the category of the course.

- Additionally, the **Top Class School and College Education schemes are designed** to support meritorious students from OBC, EBC, and DNT categories. These programs cover tuition fees, hostel expenses, and other academic costs, with school students (Class 9-12) eligible for funding up to Rs. 1.25 lakh annually.
- **College students at top institutions receive full financial support, including tuition, living expenses, and educational materials.** To further enhance access to education, Rs. 12.75 crore has been allocated in 2023-24 under the '**Construction of Hostels for OBC Boys and Girls**' scheme. This scheme aims to provide accommodation for socially and educationally backward students near government schools and institutions, ensuring they have better access to quality education.
- **Additionally, the government has invested in other educational support initiatives. ₹14.30 cr. has been released for the construction of hostels, accommodating 1146 students in 2023-24. Key Points:**

Selection Process: The YASASVI Entrance Test (YET) 2023, conducted by the National Testing Agency (NTA) under the direction of the Ministry of Social Justice and Empowerment (MSJ&E), Government of India, is the basis for candidate selection.

- **Eligibility: Open to OBC, EBC, and DNT** students with a total annual family income of up to ₹2.50 lakhs. Additional eligibility criteria may apply, depending on the specific scholarship scheme.
- **Where to Apply:** Eligible students can apply online at the **National Scholarship Portal: scholarships.gov.in**.

Conclusion: By offering a comprehensive array of scholarships and support programs, PM-YASASVI is addressing the financial constraints that often hinder marginalised communities' access to education. The integration of various earlier schemes into one streamlined initiative ensures that students are supported from their school years through higher education, creating pathways for personal and professional growth.

Anusandhan National Research Foundation (ANRF) Launches PMECRG and MAHA-EV initiative.

News Excerpt:

The newly operationalised Anusandhan National Research Foundation (ANRF) today announced the launch of its first two initiatives: the Prime Minister Early Career Research Grant (PMECRG) and the **Mission for Advancement in**

High-Impact Areas -Electric Vehicle (MAHA- EV) Mission.

About ANRF: ANRF's Role:

- Bridge the gap between academic research and industrial application.
- Promote innovation and excellence in research.
- Support India's national priorities.
- **PMECRG:**
 - Supports early career researchers.
 - Encourages innovation and scientific excellence.
- **MAHA-EV Mission:**
 - Focuses on EV components like battery cells, power electronics, machines, and drives.
 - Promotes industry-aligned research and development.
- **ANRF's First Governing Board Meeting:**
 - Discussed strategic interventions for India's R&D landscape.
 - Emphasised the global positioning of India in key sectors.
 - Highlighted the importance of aligning R&D with national priorities.
 - Stressed the need for capacity building and innovation ecosystem development.

ANRF launches 1st Mission for Advancement in High-Impact Areas (MAHA)- EV Mission

Objectives

- Enhance domestic R&D capabilities on Electric Vehicle (EV) components to achieve strategic advantages in EVs for self-reliance and global competitiveness
- Position India as a hub for development of EV components

Technology Verticals for establishment of e-Nodes

- Tropical EV Batteries & Battery Cells
- Power Electronics, Machines, and Drives (PEMD)
- Electric Vehicle Charging Infrastructure

General Conditions

- Applicants (Lead PI and PIs) must hold a regular academic/research position in a recognized academic institution/national laboratory/any other recognized R&D institution in India with a proven track record in the relevant domain
- Participation of relevant industry/PSU/start-ups is mandatory

Key Points of the Prime Minister Early Career Research Grant (PMECRG):

- **Flexible Budget and Progressive Initiatives:** The grant offers a flexible budget and incorporates progressive initiatives to make research easier and more accessible.
- **Fostering High-Quality Innovative Research:** PMECRG aims to foster high-quality, innovative research that pushes the boundaries of knowledge and drives technological progress.
- **Positioning India as a Global Leader:** The grant supports the vision of positioning India as a global leader in Science and Technology (S&T).

- **Commitment to Nurturing Young Researchers:** PMECRG reflects ANRF's dedication to nurturing young researchers and fostering a culture of research and innovation across India.
- **Empowering Early Career Researchers:** The grant invests in early career researchers, helping seed, grow, and support the development of India's research ecosystem.
- **Creating a Vibrant Research Ecosystem:** The initiative aims to create a vibrant research environment that supports excellence and fosters groundbreaking discoveries in S&T.

Key Points of Mission Electric Vehicle (EV) under Mission for Advancement in High-Impact Areas (MAHA) Scheme:

- **Focus on Key EV Technologies:** The MAHA-EV mission aims to develop critical electric vehicle (EV) technologies to reduce import dependency and promote domestic innovation.
- **Part of the MAHA Program:** The mission is part of the Advancement in High-Impact Areas (MAHA) program, which fosters multi-institutional, multi-disciplinary collaborations to address critical scientific challenges.
- **Alignment with Atmanirbhar Bharat:** The mission supports the government's Atmanirbhar Bharat vision by accelerating technological advancements in key sectors to enhance India's global standing.
- **Focus on Three Critical Technology Verticals: The mission concentrates on:**
 - Tropical EV Batteries and Battery Cells.
 - Power Electronics, Machines, and Drives (PEMD).
 - Electric Vehicle Charging Infrastructure.
- **Enhancing Domestic Capabilities:** The mission will boost domestic capabilities in designing and developing essential EV components, strengthening India's competitiveness in the global EV sector.
- **Promoting a Greener and Sustainable Future:** The mission aims to contribute to a more sustainable and environmentally friendly future by accelerating the transition to electric mobility.
- **Commitment to Cutting-Edge R&D:** The mission underscores ANRF's commitment to fostering innovative research and development that is aligned with national priorities and emerging technologies.
- **Building a Vibrant R&D Ecosystem:** The mission aims to create a dynamic R&D ecosystem that promotes innovation and collaboration across academic, research, and industrial sectors.
- **Supporting India's Sustainable Future:** The MAHA-EV mission will contribute significantly to India's goal of achieving a Viksit Bharat (Developed India) by 2047.
- **Guidance from the Hon'ble Prime Minister:** Under the guidance of the Prime Minister, the foundation will implement programs to strengthen India's research

ecosystem and accelerate scientific and technological progress, with the first two initiatives as key steps towards transformation.

The loan limit under PMMY increased to Rs.20 lakh from the current Rs.10 lakh.

News Excerpt:

As announced by the finance minister on July 23, 2024, in the Union Budget 2024-25, the limit of Mudra loans under the Pradhan Mantri Mudra Yojana (PMMY) has been enhanced from the current Rs. 10 lakh to Rs. 20 lakh.

About news:

- This increase aspires to further the overall objective of the Mudra Scheme, which is Funding the Unfunded.
- This enhancement is specifically beneficial to upcoming entrepreneurs and facilitates their growth and expansion.
- The move is in alignment with the government's commitment to fostering a robust entrepreneurial ecosystem.
- As per the notification issued in this regard, the new category of Tarun Plus is for Loans above Rs. 10 lakh and up to Rs. 20 lakh and would be available to entrepreneurs who have availed of and successfully repaid previous loans under the Tarun category.
- Under the Credit Guarantee Fund for Micro Units (CGFMU), PMMY loans up to Rs. 20 lakh will be guaranteed.

Mobile app for birth-death registration

News Excerpt:

Union Home Minister launched a mobile app for seamless birth and death registration, developed under PM Modi's Digital India vision.

About news:

- The **Civil Registration System (CRS)** mobile app, prepared by the Registrar General and Census Commissioner of India.
- It is expected to significantly reduce the time required for the registration of birth and death.
- This application will make registration of births and deaths seamless and hassle-free by allowing citizens to register at any time, from any place, and in their state's official language.

National Electricity Plan (Transmission)

News Excerpt:

The Ministry of Power (MoP) has launched the National Electricity Plan for transmission. It was prepared by the Central Electricity Authority with the aim to transmit 500 GW of renewable energy by 2030 and over 600 GW by 2032.

Key Aspects of the Transmission and Energy Storage Plan:

- **Energy Storage Goals:** The Plan aims for 47 GW of battery energy storage systems and 31 GW of pumped storage plants.
- **Transmission Expansion:** 191,000 circuit km of transmission lines to be added from 2022-23 to 2031-32. 1,270 GVA of transformation capacity to be added at 220 kV and above.
- **HVDC and Inter-Regional Capacity:**
 - 33 GW of HVDC bi-pole links to be added.
 - Inter-regional transmission capacity to increase:
 - From 119 GW (current) to 143 GW by 2027.
 - 168 GW by 2032.
- **Cross-Border Connections:** Focus on cross-border connections with neighbouring countries:
 - Nepal, Bhutan, Myanmar, Bangladesh, and Sri Lanka.
 - Exploring potential links with Saudi Arabia and the UAE.
- **Investment Opportunity:** Estimated investment of over ₹9.15 trillion in the transmission sector by 2032.
- **New Technology Options:**
 - Introduction of hybrid substations, monopole structures, and insulated cross arms.
 - Adoption of dynamic line rating and high-performance conductors.
 - Upgradation of maximum operating voltage to 1200 kV AC.
- **Skill Development:** The plan includes skill development initiatives in the transmission sector.

PM Narendra Modi rolls out health cover for 70-plus senior citizens

News Excerpt:

The Prime Minister recently launched the **expanded Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)** scheme.

Expansion of Ayushman Bharat-PMJAY for Senior Citizens:

- **Eligibility:** Applicable to all senior citizens aged 70 and above across India, regardless of socio-economic status.
- **Benefit Coverage:** Coverage of ₹5 lakh per year for treatment in empanelled hospitals across India.
- **Beneficiary Scope:** Expected to benefit 60 million senior citizens.
- **Additional Coverage:** Senior citizens from AB-PMJAY families will receive an additional ₹5 lakh top-up on top of the ₹5 lakh already provided to the family. Senior citizens whose families are not covered under AB-PMJAY will receive a cover of ₹5 lakh per year on a family basis.

- **Financial Outlay:** The outlay for expansion is ₹3,437 crore, covering six months of the current financial year and the next full year.
- **Scheme Compatibility:** Beneficiaries with private health insurance or ESIC coverage can still avail of PMJAY benefits. Those already covered under CGHS or ECHS will need to choose either their existing scheme or PMJAY.
- **New Ayushman Card:** Under this expansion, eligible senior citizens will receive a separate Ayushman Vaya Vandana Card.
- **Current Ayushman Bharat Stats:** According to NHA dashboard data, over 356 million Ayushman cards have been issued to beneficiaries across India.
- **Total Outlay for Health Projects:** The senior citizens' coverage expansion is part of ₹12,850 crore in health projects launched by PM Modi.

Government extends "Samarth"

News Excerpt:

Government extends **"Samarth" (Scheme for Capacity Building in Textiles Sector) till March 2026.**

Samarth Scheme Overview:

- **Objective:** Demand-driven, placement-oriented skilling program by the Ministry of Textiles. Aims to support the textile industry in job creation across the organised sector, excluding spinning and weaving.
- **Extension and Budget:** Extended for two years (FY 2024-25 and 2025-26). Allocated ₹495 Crore to train 3 lakh individuals in textile-related skills.
- **Scope and Coverage:** This program covers the entire textile value chain except Spinning and Weaving. It focuses on entry-level skilling and upskilling/reskilling for productivity enhancement.
- **Target Sectors:** This includes segments like Apparel and garments, as well as traditional textile sectors such as handloom, handicrafts, silk, and jute.
- **Implementation Partners (IPs): The scheme is implemented through IPs, including:**
 - Textile Industry/Industry Associations.
 - Central/State Government Agencies.
 - Sectoral Organisations under the Ministry of Textiles, such as DC/Handloom, DC/Handicrafts, Central Wool Development Board, and Central Silk Board.
- **Achievements:**
 - Trained 3.27 lakh candidates to date.
 - 79.5% placement rate: 2.6 lakh candidates employed.
 - Strong emphasis on women's employment, with 2.89 lakh women (88.3%) trained.
- **Curriculum Focus:** Training program and curriculum tailored to align with technological advancements and market needs.

PM-Vidyalaxmi scheme for higher education

News Excerpt:

The Union Cabinet has approved the PM-Vidyalaxmi scheme for financial assistance to students applying for higher education. The scheme will get Rs 3,600 crore for 2024-25 to 2030-31.

About PM-Vidyalaxmi Scheme:

- **Credit Guarantee and Interest Subvention:** The central government provides a 75% credit guarantee for loans up to Rs 7.5 lakh. During the moratorium period, a 3% interest subvention is provided on loans up to Rs 10 lakh for students with a family income of up to Rs 8 lakh who are ineligible for other government scholarships or interest subvention schemes. The loans will cover full tuition fees and other related expenses.
- **Eligible Institutions:** Applies to Qualified Higher Education Institutions (QHEIs) identified by the National Institutional Ranking Framework (NIRF).
- **Eligible institutions include:**
 - All government and private higher education institutions ranked in the top 100 in overall, category-specific, and domain-specific NIRF rankings.
 - State government institutions ranked between 101-200.
 - All central government-run institutions.
- **Student Eligibility and Prioritisation:** Aims to support 2.2 million students. Prioritises students enrolled in government institutions pursuing professional or technical courses.
- **Reimbursement Process:** Banks and financial institutions will be reimbursed via E-vouchers and Central Bank Digital Currency (CBDC) wallets.
- **PM-USP CSIS Integration:** Under PM-USP CSIS, students with a family income up to Rs 4.5 lakh pursuing technical or professional courses at approved institutions receive full interest subvention on loans up to Rs 10 lakh during the moratorium period.
- **Comprehensive Education Support:** PM Vidyalaxmi and PM-USP aim to provide comprehensive financial support for students pursuing higher education at quality HEIs and technical or professional courses at approved institutions.

Benefits of PM-Vidyalaxmi scheme:

- **Collateral-free loans:** Students can obtain loans that fully cover tuition and associated expenses without the need for collateral or guarantors.
- **Credit guarantee:** The government provides a 75 per cent credit guarantee for loans up to Rs 7.5 lakh, making it easier for banks to lend to a larger number of students.
- **Interest subsidy:** Students from families with an annual income of up to Rs 8 lakh are eligible for a 3 per cent

interest subsidy on loans up to Rs 10 lakh during the moratorium period, with priority given to those pursuing technical or professional courses in government institutions.

OROP Scheme completes 10 years

News Excerpt:

The government decided to implement OROP by issuing an order on November 7, 2015, making its benefits effective from July 1, 2014. It would make you all happy that over the decade, lakhs of pensioners and pensioner families have benefitted from this landmark initiative.

One Rank One Pension (OROP) Scheme Overview:

- **Introduction and Purpose:** Launched by the Indian government to address disparities in pension benefits for military veterans. Aimed to provide equal pensions for veterans with the same rank and length of service, regardless of the year of retirement.
- **Historical Significance:** Addressed a long-standing demand by military veterans for fair pensionary recognition. It marked a momentous commitment to honouring the sacrifices and service of those who served the nation.
- **Key Benefits of OROP:** OROP bridges the pension gap between current and past retirees, ensuring parity in pensionary benefits across generations. It also provides financial security and respect for ex-servicemen and their families.
- **Impact on Armed Forces Community:** It has proven to be a game-changer for lakhs of ex-servicemen and their families. It reinforces the nation's dedication to the welfare of its military personnel, fostering a stronger bond between the government and its armed forces.
- **10-Year Reflection (2024):** As OROP completes 10 years in 2024, it continues to reflect the government's commitment to equity and fairness in supporting veterans. Has significantly improved the post-retirement lives of military personnel, honoring their contributions to national security.

Key Features of the OROP Scheme:

- **Re-fixation of Pensions:** Starting July 1, 2014, the pensions of all past pensioners are re-fixed based on the pensions of personnel who retired in 2013. This created a new benchmark for pensions, with all retirees getting equal benefits for their service.
- **Periodic Revision:** The pension is to be re-fixed every five years, ensuring that it continues to reflect changes in the pay and pension structure.
- **Arrears Payments:** Pension arrears were to be paid in equal half-yearly instalments, although the arrears for family pensioners and gallantry awardees were paid in a single instalment.

- **Safeguarding Above-Average Pension:** Personnel drawing pensions higher than the average have their pensions protected, ensuring that they do not lose out on the benefits of OROP.
- **Inclusive of All Ex-Servicemen:** The order covered all personnel who retired up to June 30, 2014, and provided a robust framework for revising pensions for all ranks, including family pensioners.

Impact of One Rank One Pension (OROP) Scheme on Veterans and Their Families:

- **Beneficiary Reach:** OROP has benefitted over 25 lakh veterans and their families, providing essential financial security to the ex-servicemen community.
- **Recognition of Service:** For many veterans, OROP brought long-awaited recognition of their sacrifices, bridging the gap between their contributions and the rewards they received.
- **Social and Emotional Impact:** The scheme holds significant social and emotional value, strengthening the bond between the Indian government and its military veterans.
- **Commitment to Veterans:** OROP signals the nation's commitment to those who serve and protect its sovereignty, highlighting the respect and dignity accorded to ex-servicemen.

Scheme for Strengthening the Medical Device Industry

News Excerpt:

To boost the medical devices industry greatly, the Union Minister of Health & Family Welfare launched the Scheme for Strengthening the Medical Device Industry.

About scheme:

- The scheme is a comprehensive scheme that targets critical areas of the medical device industry. It covers the manufacturing of key components and accessories, skill development, support for clinical studies, development of common infrastructure, and industry promotion.
- The medical device industry is an essential pillar of healthcare delivery. From diagnostic machines to surgical instruments and from stents to prosthetics, medical devices are critical for preventing, diagnosing, and treating diseases.
 - India's medical device market is valued at approximately \$14 billion and is expected to grow to \$30 billion by 2030.
- **The new scheme has a total outlay of 500 Crores. It consists of five sub-schemes, which are as follows –**
- **Common Facilities for Medical Devices Clusters:** Through the sub-scheme for common facilities for medical device clusters, the Central Government will

provide financial assistance to medical device clusters to create common infrastructure facilities such as R&D labs, Design and Testing Centres, Animal Labs etc., for the manufacturers located in the cluster.

- **Marginal Investment Scheme for Reducing Import Dependence:** The second sub-scheme providing marginal investment support is designed to deepen the MedTech supply chain in the country by focusing on manufacturing key components, raw materials, and accessories within the country. This sub-scheme aims to reduce dependence on imported components.
- **Capacity Building and Skill Development for Medical Devices:** The third sub-scheme focuses on capacity



Department of Pharmaceuticals
Ministry of Chemicals & Fertilizers
Government of India

Atma Nirbhar MedTech

Scheme for Strengthening of Medical Device

Industry (Rs.500 Crore) - Comprehensive scheme with wide-ranging support

Capacity building and Skill Development:
Funding for Central Institutes for Masters' Courses in Medical Devices and Skill Development programmes to provide skilled workforce to the industry - 100 crore.

Common facilities for Clusters:
Aid to industry clusters for common facilities - 110 crore

Value Chain Development:
marginal investment support to manufacture components, raw materials and accessories - 180 crore.

Clinical Studies Support:
Funding for animal studies and clinical investigation of medical devices - 100 crore.

Medical Device Promotion:
Support for industry promotion and awareness generation - 10 crore.

building and skill development for the medical device sector. Its goal is to develop a skilled technical workforce capable of designing and developing MedTech products. The central government will offer financial support for running various Master's and short-term courses.

- **Medical Device Clinical Studies Support Scheme:** The fourth sub-scheme is a pioneering initiative designed to assist established companies and start-ups in conducting clinical studies. The scheme enables medical device developers and manufacturers to apply for financial support for animal studies and, if successful, human trials to validate MedTech products.

- **Medical Device Promotion Scheme:** The last sub-scheme aims to support industry associations and export councils by providing financial assistance to organise conferences and other events that promote medical device-related activities. It will also support the conduct of surveys and studies.

'EV as a Service' Programme

News Excerpt:

The Union Minister of Power launched the 'EV as a Service' programme of Convergence Energy Services Limited (CESL), a subsidiary of Energy Efficiency Services Limited (EESL), at Major Dhyan Chand National Stadium.

CESL's 'EV as a Service' Programme: Key Highlights:

- **Purpose and Scope:** Aim to advance the adoption of electric vehicles (EVs) within Central and State Government ministries/departments, CPSEs, and institutions.
- **Deployment Target:** The programme plans to deploy 5,000 electric cars over the next two years to meet the growing demand for EVs in government sectors.
- **Flexible Procurement Model:** Offers a variety of E-Car makes/models for government offices, allowing them to choose EVs based on operational needs.
- **Environmental Goals:** Aligns with India's net zero emissions goal for 2070, supporting the government's environmental sustainability vision.
- **Impact on Carbon Emissions and Energy Security:** It facilitates carbon emission reduction, fossil fuel dependency reduction, and strengthening of energy security in India.
- **Current Deployment and Expansion:** CESL has already deployed nearly 2,000 E-Cars across India and is set to facilitate approx. 17,000 E-Buses.
- **Alignment with PM E-DRIVE Scheme:** Supports the PM E-DRIVE Scheme, aimed at accelerating India's transition to electric mobility.
- **CESL's Vision for Sustainable Mobility:** CESL is committed to an energy-efficient, low-carbon economy and is building an EV infrastructure as a benchmark for sustainable mobility.
- **Collaborative Ecosystem:** The programme fosters collaboration among manufacturers, fleet operators, policymakers, and users for a growth-oriented EV ecosystem.
- **Launch Event Highlights:** Featured an EV Exhibition and rally with over 100 electric vehicles across various segments (e-bicycles, electric two-wheelers, e-tractors, e-cargo pickups, etc.), showcasing CESL's commitment to green transportation solutions.

The Digital Farm Mission

News Excerpt:

Recently, the Digital Farm Mission (DFM) was approved by the Union Cabinet Committee.

Digital Farm Mission and Agri Stack: Key Components and Probable Impacts

- **Core Registries:**
 - **Farmers' Registry:** A comprehensive database of farmers.
 - **Geo-Referenced Village Maps:** Spatial data for precise location-based mapping.
 - **Crop Sown Registry:** Information on crop types and areas under cultivation.
 - **Krishi Decision Support System:** This system aggregates data on crops, soil, weather, and water to generate geospatial maps, aiding in data analysis and decision-making.
- **Networked Development:** The mission aims to foster collaborative development across central and state governments, technology start-ups, and market agencies to enhance information governance, infrastructure, and data sharing.
- **Probable Impacts of the Digital Farm Mission (DFM)**
 - **Enhanced MSP-Based Procurement:** Agri Stack's registries and geo-maps will enable GIS-based MSP target planning and optimal procurement centres, improving service delivery for farmers and procurement agencies.
 - **Improved PM Kisan Scheme:** The farmers' registry and GPS coordinates of landholdings will reduce inclusion-exclusion errors and increase accurate coverage for PM Kisan, which provides annual income support of ₹6,000 to farmers.
- **Soil Health Card Program:** To ensure efficient data processing, a digital form for soil health card data entry will be standardised and supported by platforms like Krishi Tantra, Jio, and others.
- **Streamlined Kisan Credit Card:** Application and sanctioning of Kisan Credit Cards will become contactless and hassle-free, improving ease of access for farmers.
- **Real-Time Crop Insurance (PMFBY):** The crop insurance program will feature real-time registration, premium payment, insurance underwriting, and claim settlement, reducing issues like moral hazard and adverse selection.
- **State Participation and Funding:** With the central government covering 68% of the budget through FY 2025–26, 22 states/UTs with signed MoUs are expected to accelerate the creation and maintenance of Agri Stack registries.
- **Role of Agri-Tech Start-Ups:** Agri-tech start-ups are leveraging digitalisation across areas like precision agriculture, mechanisation, and traceability systems, supporting the mission's technological goals.
- **Expected Outcomes:**

- **Improved Digital Service Delivery:** Enhances access to efficient and reliable services for smallholder farmers.
- **Increased Digital Capacity:** Builds farmers' capacity to achieve technical and allocative efficiency.
- **Societal Goals:** Reduces policy-related transaction costs, fosters equity, and promotes environmental sustainability.

MISCELLANEOUS

Joint naval drills IMEX 2024

News Excerpt:

Naval drills hosted by Iran with the participation of Russia and Oman and observed by nine other countries began in the Indian Ocean on October 19, 2024.

Key Points on the "IMEX 2024" Naval Exercises

- **Objective:** The exercises, named IMEX 2024, aim to enhance collective security in the region, promote multilateral cooperation, and demonstrate the capability to ensure peace, friendship, and maritime security.
- **Operational Focus:**
- **Participants will practice tactics for:**
 - Securing international maritime trade.
 - Protecting maritime routes.
 - Humanitarian operations and relief efforts.
 - Information exchange on rescue and relief operations.
- **Context: The drills occur amid rising regional tensions due to:**
 - Israel's ongoing conflict with Hamas in Gaza.
 - Attacks on ships in the Red Sea by Yemen's Iran-backed Houthi rebels.
 - Increased military collaboration between Iran, Russia, and China as a response to tensions with the United States.
- **Recent Related Activities:** In March, Iran, China, and Russia conducted their fifth joint naval drills in the Gulf of Oman.
- **Observer Nations:** Observing countries in the IMEX 2024 exercises include Saudi Arabia, Qatar, India, Pakistan, Bangladesh, and Thailand.

INS Tushil

News Excerpt:

India is gearing up for a major addition to its naval fleet as INS Tushil, a state-of-the-art stealth frigate, is set to be commissioned this December.

INS Tushil Overview

- **Description:** INS Tushil is a Talwar-class stealth frigate equipped with advanced stealth technologies designed to reduce radar and sonar signatures, making detection by adversaries challenging.

- **Armament:** It is armed with surface-to-air missiles, surface-to-surface missiles, and other weapon systems, integrating Indian and Russian technologies for comprehensive offensive and defensive capabilities.

India-Russia Defence Cooperation

Historical Partnership:

India's defence relationship with Russia spans several decades, with INS Tushil exemplifying this cooperation.

- **2016 Agreement:** Under a 2016 agreement, two frigates (INS Tushil and INS Tamal) are being built in Russia, while two more will be constructed in India at the Goa Shipyard with Russian technical assistance.
- **Yantar Shipyard:** Russia's Yantar Shipyard, which has previously constructed three Talwar-class frigates for India, is building INS Tushil.

India's Naval Future

- **Modernisation Efforts:** The commissioning of INS Tushil is a critical step in India's naval modernisation. It will bolster India's maritime security and enhance its power projection in the Indian Ocean.
- **Frigate Fleet Expansion:** The Indian Navy currently operates ten frigates and aims to significantly increase its fleet to meet strategic objectives.
- **Upcoming Frigate:** INS Tamal is the next frigate in line, expected to be delivered in 2025, continuing India's progress in expanding its naval capabilities.



Bob Khathing Museum of Valour

News Excerpt:

Recently, the Defence Minister inaugurated the Major Ralengnao 'Bob' Khathing Museum of Valour at Tawang in Arunachal Pradesh.

About Bob Khathing:

- Ranenglao 'Bob' Khathing was born on February 28, 1912, in Manipur's Ukhrul district.
- He studied at Sir Johnstone High School in Imphal and did his matriculation from Shillong before joining Cotton College in Guwahati.
- He joined Ukhrul High School as its Headmaster.
- He also founded a school at Harasingha in Assam's Darrang district.
- In 1939, after the Second World War broke out, Khathing joined the Indian Army and got an Emergency Commission as an officer.

PHILOSOPHY OF THE MONTH

The Quest for Freedom: Is the Will Truly Free?

In philosophical inquiry, one of the gravest questions pertains to the **nature of free will**. What does it mean for the **'will' to be truly free**? Free will is often defined as the **ability to make choices without constraint** from external forces; however, this perspective may not capture the **complexity of human existence**. Are we not constantly influenced by a myriad of physical, psychological, and social factors?

Key Questions Raised:

1. What is the relationship between free will and causality?

Free will suggests autonomy in making choices, yet causality—the law-governed nature of the universe—implies that every action stems from a cause. How can one reconcile the existence of free will with the principle of cause and effect? If every decision is ultimately the result of **prior causes, does free will exist at all**?

Answer: The coexistence of free will and causality can be viewed through the lens of degrees of freedom. The **human mind operates** within the constraints of naturally occurring laws while still possessing the capacity to act and make choices. This kinesis between existence and consciousness indicates that, **despite being influenced by external forces, individuals can still exercise agency** in their decision-making processes.

2. Is free will an illusion?

Numerous thinkers, from scientists to theologians, argue against the notion of free will, attributing human behavior to biological architecture or divine providence. If free will were merely an illusion, how do we justify personal responsibility and moral accountability?

Answer: The existence of free will, even if limited, lends itself to personal responsibility and accountability. Those who argue against it inadvertently engage in **the notion of choice themselves**, as they express their views. The pursuit of understanding and enlightenment underscores the inherent complexity of human agency—acknowledging that **we are, to some degree, the architects of our fates**.

3. What of those who lack the faculties for rational thought?

The implications of free will become convoluted when **considering individuals with limitations**. Are they devoid of freedom, or do advances in knowledge and resources enable them to exercise their potential?

Answer: Historical shifts in societal understanding have often favored the marginalized, demonstrating that every

individual possesses an **inherent capacity for growth and potential**. The story of **Stephen Hawking**, who thrived despite his physical limitations, illustrates that modern advancements have allowed diverse expressions of freedom and intellectual contribution, reinforcing that freedom is not solely a condition of mind but can be a societal structure enabling various forms of expression.

4. Can true freedom exist within societal constraints?

Jean Jacques Rousseau famously stated, "**Man is born free but everywhere is in chains**." Does civilization inherently bind freedom, or can it, paradoxically, expand it?

Answer: The evolution of societies suggests that **true freedom emerges through cooperative frameworks**, yet societal norms and structures can impose limitations. A healthier view posits that individuals achieve freedom by **becoming cognizant of their interconnectedness** within societal structures—freedom involves participating intelligently within these frameworks to foster a communal growth that respects individual autonomy.

5. Does the concept of free will imply moral responsibility?

If humans are capable of **free choice**, then must they not also be **accountable for their actions**? How does free will influence our moral framework?

Answer: The nexus between free will and morality is pivotal to understanding human responsibility. The ability to choose **inherently carries moral implications**; therefore, individuals must strive to act based on **rational reflection** rather than succumbing to instinct or external obligation. The assertion that moral agency is contingent upon **free, rational choice underscores the delicate balance** between individual freedom and ethical conduct.

In summary, the intricate relationship between **free will, societal structures, and the nature of existence** raises profound philosophical questions. The recognition that **while absolute freedom may be an illusion**, the journey toward understanding our degrees of freedom grants **us greater autonomy and responsibility** in shaping our lives. As we **navigate the complexities of choice, we must remember that our will is both** an individual and collective endeavour, inherently intertwining our aspirations with the fabric of society. As we ponder these questions, we engage in a necessary philosophical exploration that can empower us to act with intention, responsibility, and freedom.



THEMATIC ESSAY

1. Good decisions come from experience. Experience comes from making bad decisions
2. Everything you want is on the other side of fear.

CONTEMPORARY ETHICS CASE STUDY

As winter approached in North India, the district administration of Ballia released the contract for renovation, repair and creation of the "Rain-Basera (Night shelter home)". A powerful local contractor is building a Rain-Basera in a district that is a close associate of the sitting MLA. The Public Works Department (PWD) is responsible for issuing the tender, checking the quality of the building and giving approval to it. During the construction of the building, testing by the quality control lab of the Civil Engineering Department (CED) in the National Engineering College (NEC), Ballia showed its strength to be slightly below the minimum value required for granting approval for its further construction and completion.

You are the HOD of the CED of NEC Ballia, and you have to give the final go-ahead. The local contractor paid hefty bribes to some officials in the PWD to get the contract. These officials are pressuring the Director of NEC and CED of NEC, Ballia, to sign

the report and approve the building. The local MLA is also pressuring the CED of NEC, Ballia, for approval, as elections in the state are approaching and the building has to be inaugurated. However, you, being the Head of the Department of CED of NEC, Ballia, are aware that if you grant approval and any mishappening related to the building occurs in the future, you may come under scrutiny and might become the scapegoat. In this context, answer the following questions:

- A. What are the issues involved in this scenario?
- B. Evaluate the options available to the HOD of the Civil Engineering Department of NEC, Ballia, in the given situation.
- C. What course of action should be adopted by the HOD? Justify with logical arguments.



SCAN THIS QR FOR
MODEL CONTENT

(Answer in 250 words) 20

SPECIES IN NEWS

Rare Bird Sightings in Kashmir's Hokersar Wetland

News Excerpt: In a first for Kashmir's ornithology, two rare bird species—a **Falcated Duck and a Collared Pratincole**—were spotted in the **Hokersar wetland**, a **Ramsar site near Srinagar**.

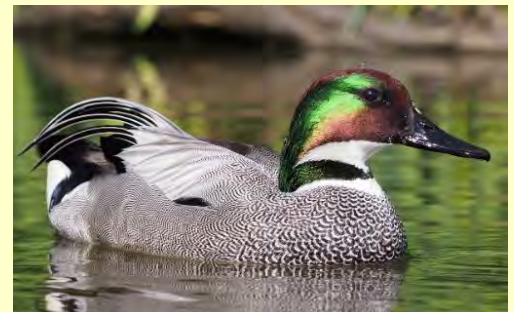
Falcated Duck - IUCN Status: Near Threatened

Collared Pratincole (Glareola pratincole) - It is not listed as threatened on the IUCN Red List.

About Bird:

The Falcated Duck (*Mareca falcata*):

- Migrates from **Siberia, Mongolia, and northern China to winter in Asia, including northern India.**
- Known for its striking **bottle-green head**, the male duck also features a maned neck and long black-grey tertials.
- This species is rarely spotted in western India but is observed occasionally in Northeast India.





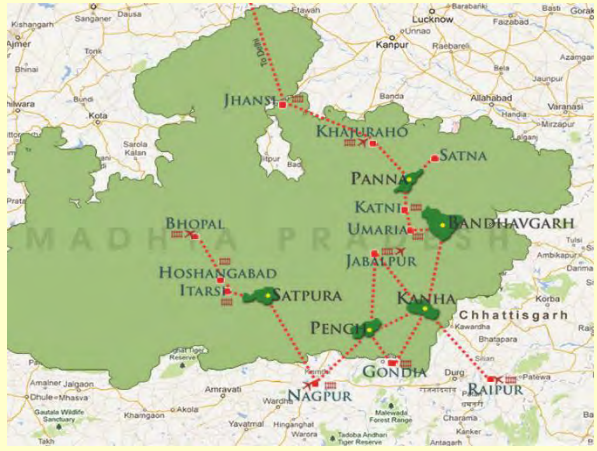
Collared Pratincole (*Glareola pratincole*)

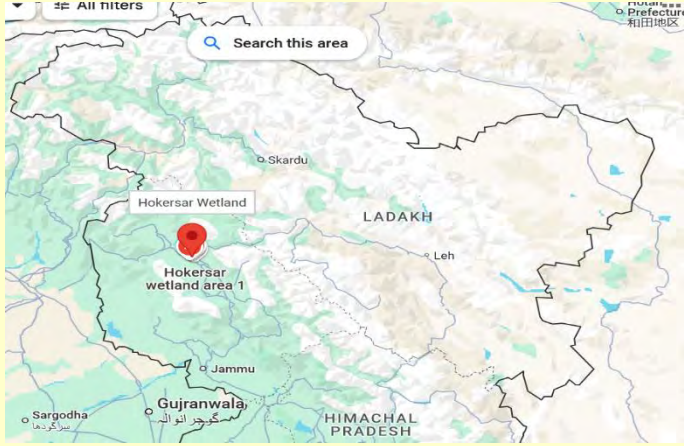
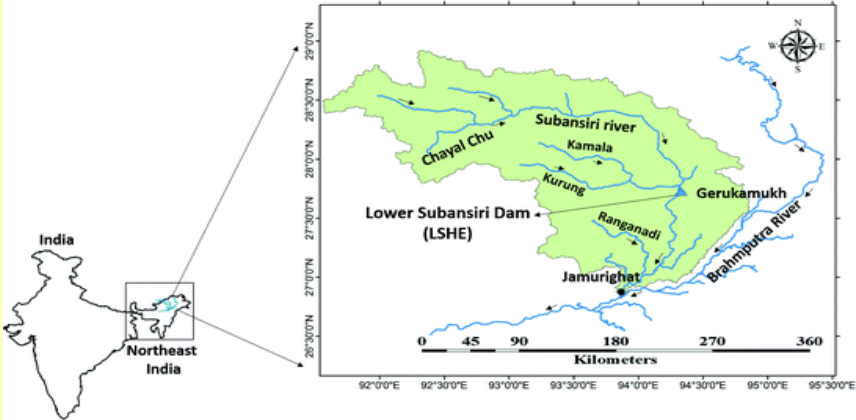
- The Collared Pratincole (*Glareola pratincola*) is a medium-sized wader measuring about 24-26 cm in length notable for its **grey-brown upper body, lighter underparts, and a striking black 'collar'**,
- The pratincole faces declines due to **habitat loss, primarily driven by agricultural expansion and wetland drainage.**
- This **species migrates to the Indian subcontinent in winter, often found in open habitats like grasslands and wetlands.**



<p>Farmers in Idukki battling spotted locust infestation</p> <p>News Excerpt: Plantations of over 70 farmers severely affected by the spotted locust infestation at Konnathady and Vathikudy panchayats.</p>	<p>About:</p> <ul style="list-style-type: none"> Farmers in Idukki district are experiencing significant crop losses due to spotted locust (Aularches miliaris) infestation. Grasshoppers are attacking multiple crops and trees, including: Bananas, Coconut trees, Cardamom, Pepper, Vegetables, areca nut, Glyricidia, and teak trees. The pest is identified as spotted locust (Aularches miliaris), belonging to the Pyrgomorphidae family (Order: Orthoptera). Large swarms, including mating adults, have been denuding various crops and wild plants. Use insecticides like Lambda-cyhalothrin as a last resort. 	
<p>Rare Eurasian Otter discovered in Pune</p> <p>News Excerpt: A rescue operation conducted by the Pune Forest Department and RESQ Charitable Trust has revealed a rare Eurasian Otter in Indapur, Pune District, a species previously unrecorded in this area.</p> <p>IUCN - Near Threatened WPA - II Schedule.</p>	<p>About:</p> <ul style="list-style-type: none"> The eurasian otter (Lutra lutra) is one of the three otter species found in India, alongside the Smooth-coated Otter (Lutrogale perspicillata) and the small-clawed otter (Aonyx cinereus). While primarily found in Europe and parts of Asia, its presence in India is rare, mainly confined to the Himalayan foothills, parts of Northeast India, and scattered sightings in the Western Ghats. Eurasian Otters prefer clean, freshwater habitats, such as as rivers, lakes, and marshes with abundant fish, their primary diet. They are solitary, primarily nocturnal creatures that are highly sensitive to water pollution and habitat disturbance. Unlike the more common smooth-coated otter, eurasian otters are elusive and rarely seen in the wild, even in regions where they are known to inhabit. As apex predators in river ecosystems, otters help regulate fish populations and maintain ecological balance. 	
<p>Dual-blooming species of Dicliptera</p> <p>News Excerpt: Recently, scientists discover a new fire-resilient, dual-blooming species of Dicliptera in the Northern Western Ghats of India.</p>	<p>About:</p> <ul style="list-style-type: none"> Dicliptera polymorpha is a distinctive species, notable for its fire-resilient, pyrophytic habit and its unusual dual-blooming pattern. In addition to its typical post-monsoon flowering, the species exhibits a second, vigorous burst of flowering triggered by the grassland fires commonly set by locals in the region. This species is taxonomically unique, with inflorescence units (cymules) that develop into spicate inflorescences. It is the only known Indian species with this spicate inflorescence structure, with its closest allies being found in Africa. The species was named Dicliptera polymorpha to reflect its diverse morphological traits. 	
<p>Comb jellies</p> <p>News Excerpt: Scientists have discovered a new species of marine invertebrate that breaks the traditional cycle of birth, ageing, and death to which most animals are bound.</p>	<p>About:</p> <ul style="list-style-type: none"> Comb jellies, also known as ctenophore Mnemiopsis leidyi, can defy age and revert to younger versions of themselves, according to a recent study published in Proceedings of the National Academy of Sciences. As per research, comb jellies could also be one of the first animals to have existed as their origin can be traced back to an estimated 700 million years ago. However, they are not the only members of the "time-travelers" club. The latest discovery pertaining to comb jellies could help better understand the ageing process in humans as well as the developmental biology of other animals. 	

PLACES IN NEWS - INDIA

<p>Ramgarh Vishdhari Reserve</p> <p>News Excerpt: Recently, the carcass of a nearly nine-year-old tigress was found in Ramgarh Vishdhari Tiger Reserve.</p>	<p>About:</p> <ul style="list-style-type: none"> Ramgarh Vishdhari Tiger Reserve lies in the southeastern part of Rajasthan in Bindi district with representation of both Vindhyan and Aravalli elements. It is in continuation with the buffer area of Ranthambore tiger reserve in the North-eastern side and Mukundara Hills tiger reserve in the southern side. Mez, a tributary of Chambal river, passes through the tiger reserve. The terrain is mostly rugged and hilly. The area is confined to biogeographic classification 4A which is the 'Semi-arid' Zone of India. The habitat is dominated by Dhok (Anogeissus pendula) trees. 
<p>Tiger population triples in Assam's Manas National Park: Study</p> <p>News Excerpt: According to a new study, the tiger population in western Assam's Manas National Park, a major wildlife preserve stretching into Bhutan, tripled from 2011 to 2019.</p>	<p>About:</p> <ul style="list-style-type: none"> According to the study, the tiger population (adults/100 km²) density in Manas increased from 1.06 in 2011–12 to 3.64 in 2018–19 and has a high potential to grow to 8 or more. It added that the increasing trend could see the number of tigers in the park double by 2023 if conservation measures are in place and effective. In 2021, a total of 44 adult tigers were photographed in Manas, one of Assam's two tiger reserves designated as UNESCO World Heritage Sites. Manas National Park in Assam is a UNESCO World Heritage Site, a Project Tiger Reserve, an Elephant Reserve as well as a Biosphere Reserve. A unique distinction, Manas National Park is home to a varied species of Fauna of the likes of the Indian One Horned Rhinoceros, Asiatic Elephants, Indian Tigers, Clouded Leopards, Hoolock Gibbons, Barking Deer, etc. 
<p>Bandhavgarh elephant deaths</p> <p>News Excerpt: According to the toxicology report of the 10 elephants that died at Bandhavgarh Tiger Reserve, they had consumed a "large quantity" of kodo millet plants that were infected with a fungus.</p>	<p>About:</p> <ul style="list-style-type: none"> Bandhavgarh Tiger Reserve (BTR) of Madhya Pradesh is one the most coveted destination for wildlife tourism. The Reserve is mainly recognized for the presence of majestic Royal Bengal Tiger, which is the National Animal of India and practically one of the most fascinating animal in the world. BTR with some of its dense forests, bamboo vegetations and vast grasslands along with some perennial streams, offers an excellent habitat for the solitary predator. Bandhavgarh Tiger reserve has great historical significance also which is evidenced by the presence of the Famous Bandhavgarh fort, various Caves, Rock paintings and carvings inside the Protected Area. 

	<ul style="list-style-type: none"> The park consists of three distinct areas i.e. 'Bandhavgarh National Park', 'Panpatha Wildlife Sanctuary' which make up the "Core Area" and the adjoining notified "Buffer Area" spread across the districts of Umariya, Shahdol and Katni.
<p>Hokersar wetland</p> <p>News Excerpt: According to IMD, Kashmir has witnessed 81% rainfall deficit since October.</p>	<p>About:</p> <ul style="list-style-type: none"> The Hokersar is a wetland conservation area in Zainakote, in Srinagar district of Jammu and Kashmir, India. The Hokersar wetland is a Ramsar site. It is spread across nearly 13.75 square kilometres (sq km), down from 18.13 sq km recorded in 1969. According to the Ramsar Site Information Service, the wetland is the only site with the remaining reedbeds of Kashmir. It serves as a pathway to 68 waterfowl species such as little cormorant, common shelduck, large egret, great crested grebe, and other birds migrating from Siberia, China, Central Asia and Europe. The wetland is a crucial source of food, offering spawning grounds and nurseries for fish along with breeding habitat. 
<p>Subansiri River</p> <p>News Excerpt: Power generation is set to commence at the highly controversial Subansiri Lower Hydroelectric Project, a run-of-river big dam constructed on the Subansiri River, located on the Assam-Arunachal Pradesh border near Gogamukh in Dhemaji district, from next year</p>	<p>About:</p> <ul style="list-style-type: none"> A central Government body, the Brahmaputra Board submitted a DPR for this dam on the Subansiri River, flowing from Arunachal Pradesh to Assam, in 1983. NHPC, the construction agency, received central government departmental clearances in October 2004. Construction began in January 2005 but was halted due to protests from the downstream residents and other organisations of Assam. Subansiri River: <ul style="list-style-type: none"> Subansiri, (Gold River) is the largest tributary of the Upper Brahmaputra river. It originates from the Tibetan Himalayas. The Subansiri is approximately 518 kilometres. It enters India near the town of Taksing and flows east and southeast through Miri Hills, then south to the Assam Valley at Dulangmukh in Dhemaji district, where it joins the Brahmaputra River at Jamurighat in Lakhimpur district. 

MAP CONNECT WORLD

ZAMBIA
Zambia and India strengthen bilateral ties during the 6th Session of Joint Permanent Commission. India will give 100 solar power irrigation pumps to Zambia. Early commencement of the India-Zambia Technology Transfer Programme.

INDIA ALGERIA COOPERATION
India and Algeria signed the Memorandum of Understanding (MoU) on bilateral defence cooperation.

DOMINICA
Dominica has announced to confer its highest national honour (The Dominica Award of Honour) to Prime Minister Narendra Modi.

CUBA
Cuba's electrical grid collapsed with a hurricane making landfall to compound the island's misery and threaten further havoc on its decrepit infrastructure.

INDONESIA'S MOUNT LEWOTOBI
Mount Lewotobi Laki-Laki spews volcanic materials from its crater during an eruption in East Flores, Indonesia.

MALAWI
The President of India meets the President of Malawi and Leads delegation level-talks.

SOLOMON ISLANDS
The scientists found the world's largest coral near the Pacific's Solomon Islands.

HALMAHERA SEA IN INDONESIA
The German Research Centre for Geosciences (GFZ) reported that a 5.7 magnitude earthquake struck the Halmahera Sea in Indonesia.

GEORGIA
Georgian Dream wins disputed election with 54% vote, sparking protests and calls for investigation from US and EU.

AZERBAIJAN
The 29th Conference of the Parties to the UN Framework Convention on Climate Change (COP29), to take place in Baku, Azerbaijan, from 11 to 22 November 2024.

MAP NOT TO SCALE

SNAPSHOT - KURUKSHETRA (NOVEMBER)

Social Security and Welfare

Introduction

Social protection encompasses a range of policies to reduce **poverty, vulnerability, and social exclusion**. It is crucial in fostering **economic growth**, promoting **human development**, and ensuring **social cohesion**. In India, various sector-specific initiatives address the diverse needs of its population, emphasising the importance of social security and welfare.

Definition of Social Protection

- **International Labour Organization (ILO):** According to the ILO, social protection includes policies and programs to reduce poverty, vulnerability, and social exclusion. These programs cover **nine primary areas**: Child and family benefits, Maternity protection, Unemployment support, Employment injury benefits, Sickness benefits, Health protection, Old-age benefits, Invalidity and disability benefits, and Survivors' benefits.
- **World Bank:** The World Bank emphasises the economic benefits of social protection. For every dollar transferred to poor families, an estimated **\$2.49 is generated** in the local economy. Social security promotes **human rights** and helps meet fundamental needs, creating constructive social engagement.

Global Agenda and Social Protection

- **Sustainable Development Goals (SDGs):** The **2030 Agenda** for Sustainable Development, specifically **Goal 1**, aims to **eradicate poverty**. This includes implementing national social protection systems and measures to cover the poor and vulnerable populations by 2030.
- **Universal Declaration of Human Rights: Article 22** of the Universal Declaration of Human Rights enshrines social security as a right, affirming every individual's entitlement to social and economic security for dignity and development.

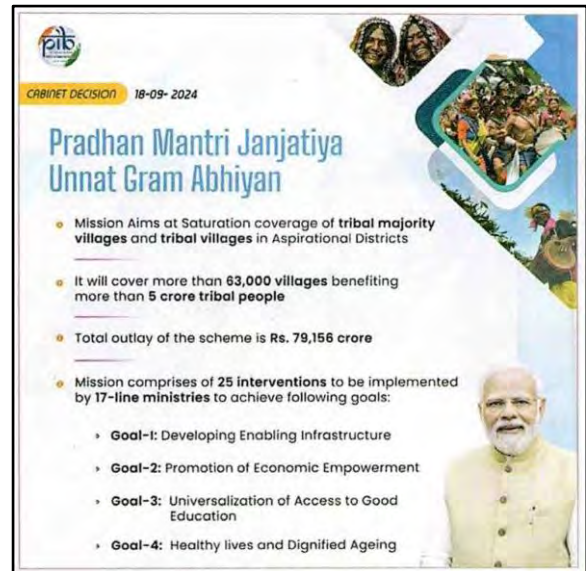
Need for Universal Social Protection

- According to the **United Nations 56th Commission for Social Development**, **71% of the world's population** lacks adequate social protection, with over 750 million people living in extreme poverty.
- The **World Social Protection Report 2024-26** highlights that **only 52.4% of the global population** is covered by social protection, with significant gaps in child and gender-specific protection.
- According to the **ILO 2024-26 Report**, low- and middle-income countries need an additional **\$1.4 trillion annually** to secure basic social protection, requiring significant efforts to close these gaps.

Significance of Social Security

- Social security can help prevent and **reduce poverty** and **promote social inclusion** and **dignity** of vulnerable populations.
- It contributes to **economic growth** by increasing incomes, consumption, savings, and investment at the household level and domestic demand at the macro level.
- It promotes **human development**. Cash transfers in social security schemes facilitate access to nutrition and education, thus resulting in **better health outcomes**, higher school enrolment rates, reduced school drop-out rates, and a decline in child labour.

- Social security schemes protect individuals and families against losses due to shocks, such as **pandemics, natural disasters, or economic downturns**.
- These schemes build **political stability** and social peace, reducing inequalities, social tensions and violent conflict; social protection ensures greater social cohesion and participation.
- Social security is a **human right** that everyone, as a member of society, should enjoy, including children, mothers, persons with disabilities, workers, older persons, migrants, indigenous peoples and minorities.



Social Security in India: Key Sectors

- **Right to Education:** The **Right to Education (RTE) Act, 2009** guarantees free and compulsory education for children aged 6-14. Initiatives like the **Sarva Shiksha Abhiyan (SSA)** and **Samagra Shiksha** provide quality education from preschool to class XII. States such as Karnataka and Maharashtra extend free education for girls up to post-graduation.
- **Right to Food:** **National Food Security Act (NFSA), 2013**, ensures food security for 75% of the rural and 50% of the urban population, covering 81.35 crore beneficiaries. Programs like the **Mid-Day Meal Scheme** (now **PM Poshan Scheme**) improve school enrollment and nutrition. **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)** extends additional food support for five more years from 2024.
- **Health Insurance for the Poor:** **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)** provides up to **Rs 5 lakh per family annually**, aiming to cover over 12 crore families. In 2024, it expanded to include senior citizens **aged 70 and above**, benefiting an additional six crore people.
- **Right to Work:** The **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** ensures **100 days** of wage employment annually for rural households. This has significantly contributed to rural income security, with person-days reaching 309.2 crore in 2023-24.
- **Senior Citizens' Welfare:** With a rising elderly population, programs like the **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)** and **Atal Vayo Abhyuday Yojana (AVYAY)** provide financial and healthcare support. The **Senior Citizens' Saving Scheme** and **Reverse Mortgage** offer financial security options for retirees.

Who is an Unorganized Worker?

According to
THE UNORGANIZED WORKERS' SOCIAL SECURITY ACT, 2008
an unorganized worker is

UNORGANIZED WORKER means a home-based worker, self-employed worker or a wage worker in the unorganized sector and includes a worker in the ORGANISED sector who is not covered by any of the Acts mentioned in Schedule II

श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
विश्व बैंक (Government of India)

- **Social Protection for the Unorganized Sector:** With nearly 565 million workers, including 29.85 crore unorganised workers registered on the eShram portal, programs like **Pradhan Mantri Shram Yogi Maan-Dhan (PM-SYM)** and **Employees' Provident Fund (EPFO)** provide pension, insurance, and social benefits.

Need for Farmers' Social Security

- India's vision of becoming a **developed nation by 2047** requires an accelerated economic **growth rate of 8% annually**. However, agriculture, which contributes **18% to the GDP**, is challenged by population growth, climate change, resource degradation, and socio-economic stressors.
- With **55% of the population** dependent on agriculture, farmers need robust social security frameworks to address small landholdings, limited technological access, erratic monsoons and market fluctuations, rising input costs, and debt cycles.

Farmers' Welfare Initiatives

- **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** provides **Rs 6,000 annually** in income support to land-holding farmers. The scheme uses advanced digital infrastructure to ensure transparency through **Direct Benefit Transfer (DBT)** and digital tools like the **PM Kisan Mobile App** and the **Kisan e-Mitra AI Chatbot**. Since its inception, Rs 2.81 lakh crores have been disbursed to over 11 crore farmers.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)**, launched in 2016, provides cost-effective crop insurance against natural calamities, covering 5,549.40 lakh farmer applications and Rs 150,589.10 crore claims. **Interest Subvention Scheme (ISS)** also provides concessional loans to farmers for crop and allied activities with a **3% subvention** on timely repayment.
- **Pradhan Mantri Kisan Maan-Dhan Yojana (PM-KMY)** provides a **monthly pension of Rs 3,000** to small and marginal farmers aged 60 and above, with LIC managing the funds. Over 23 lakh farmers have enrolled, ensuring financial security in old age.
- **Central Sector Scheme for Farmer Producer Organizations (FPOs)**, initiated in 2020 with an outlay of Rs 6,865 crore, empowers farmers by forming collectives. The scheme provides financial assistance and a credit guarantee while integrating FPOs with the **e-NAM platform** for transparent price discovery.

- **National Agriculture Market (e-NAM)** connects 1,389 mandis across India, facilitating online trading for 1.76 crore farmers and 2.5 lakh traders.

CSC TO ENROLL FARMERS FOR KISAN CREDIT CARD SO THAT THEY CAN AVAIL THESE BENEFITS

New Benefits Under Kisan Credit Card

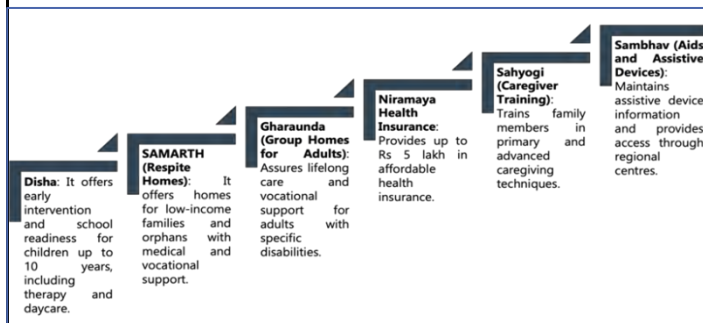
- Rs 2 lakh crore credit to 2.5 crore farmers
- Beneficiaries include PM Kisan beneficiaries, Fishermen and Animal Husbandry Farmers
- Upto 3 lakhs loan to be given to KCC holder on demand

Need for Divyangjans' Social Security

- According to the **World Health Organization (WHO)**, around **400 million differently-abled people** reside in developing countries and have limited social and economic opportunities.
- India recognises **21 categories of disability**, with the highest prevalence of visual impairment followed by mobility impairment. The **2011 census** recorded that over **2.1% of the population** had some form of disability, with the highest concentration (15.76%) in Uttar Pradesh, followed by Bihar, West Bengal, Tamil Nadu, and Maharashtra.
- While literacy among differently-abled individuals has improved, significant **gaps in access to services** remain, particularly in rural areas. Also, social discrimination against differently-abled individuals persists.

Empowerment Schemes for Differently Aabled Individuals

- **Section 33** of the **Persons with Disabilities Act 1995** mandates a **3% reservation in government jobs** across disability categories to improve their quality of life.
- **Unique Disability ID (UDID):** This card facilitates access to benefits such as scholarships, concessionary travel, and reduced-rate educational loans.
- The **Assistance to Disabled Persons for Purchase/Fitting of Assistive Devices (ADIP)** Scheme provides access to sophisticated, scientifically designed assistive devices implemented by agencies like ALIMCO. The scheme was extended under the 15th Finance Commission until March 2026.
- **Schemes Under the National Trust**



Need for Elderly's Social Security

- India's elderly population has been increasing due to higher life expectancy and improved healthcare:
 - 2011: 103.8 million elderly (60+ years)
 - 2021: Estimated 138 million
 - 2031: Projected 194 million
 - 2041: Projected 240 million, nearly 1.75 times the level in 2021
- This demographic shift brings social security, healthcare, and economic policy challenges, especially with the rise of nuclear family systems, urban migration, and weakened traditional caregiver networks.

Social Security Programs for Senior Citizens

- National Policy on Older Persons 1999:** India's first policy focused on the elderly. It addressed financial and food security, healthcare, shelter, and legal protections, aligning with the **UN's declaration of 1999** as the International Year of Older Persons.
- National Action Plan for Senior Citizens (NAPSC) 2021:** It aims to promote a dignified, healthy, and self-reliant life for the elderly while strengthening social and intergenerational bonds.
- Atal Pension Yojana (APY):** Launched in 2015, APY encourages retirement savings for unorganised sector workers aged 18-40, with guaranteed pensions between Rs 1,000 to Rs 5,000. As of 2024, over **66.2 million subscribers** have enrolled, with women comprising 46% of enrollments.
- Pradhan Mantri Vaya Vandana Yojana (PMVVY):** Started in 2017, this LIC-managed scheme provides fixed pension options with assured returns for seniors over 60. Extended until March 2025, PMVVY has served over **4.49 lakh policies** with a total investment of **Rs 6,646 crore**.
- Employees' Pension Scheme (EPS):** Since 1995, EPFO has managed the EPS, which offers retirement, disability, and family pensions. In **2023-24**, more than 30 lakh claims were settled.
- Rashtriya Vayoshri Yojana (RVY):** This scheme provides BPL senior citizens with free aids such as walking sticks, hearing aids, and wheelchairs, aiming to enhance their mobility and independence.
- Senior Able Citizens for Re-employment in Dignity (SACRED):** Launched in 2021, SACRED connects senior citizens with private enterprises, providing re-employment based on their skills and experience.
- Promoting Silver Economy Initiative:** This initiative supports innovative startups creating products and services for the elderly. Selected startups receive equity support through the **Senior Care Ageing Growth Engine (SAGE) portal**.

Global Perspectives

- Countries like **Uruguay** and high-income **European countries** demonstrate comprehensive social protection. Uruguay spends over **80% of public funds** on social programs.



SNAPSHOT - YOJANA (NOVEMBER)

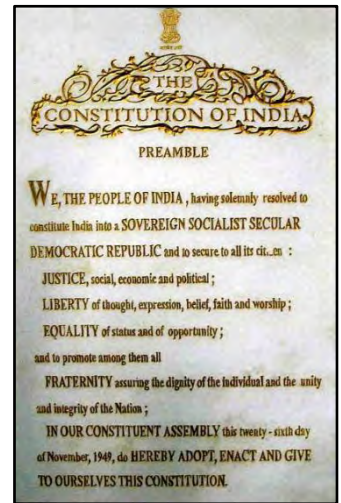
OUR CONSTITUTION AND LEGAL REFORMS

Introduction

The Indian Constitution, drafted amid the complexities of **colonial rule** and the **freedom struggle**, was designed to reflect India's diverse social, cultural, and linguistic tapestry. It established a foundation for **democratic governance** rooted in justice, liberty, equality, and fraternity. Over time, it has **evolved** through **amendments** and **judicial interpretations**, addressing modern challenges such as social justice, digital security, and emerging technologies while empowering marginalised communities and reinforcing India's commitment to human rights and constitutional morality.

Drafting and Adoption of the Constitution

- Objective Resolution:** Adopted on **13th December 1946**, this Resolution laid out the core principles of the Constitution, including justice, liberty, equality, and fraternity.
- Drafting Committee:** Formed in **1947**, the Committee engaged in extensive debates to address issues such as government structure, minority rights, and individual freedoms.
- Adoption:** It was adopted on **26 November 1949**, setting the foundation for a democratic India. This historic moment is commemorated annually as Constitution Day. The Constitution's coming into effect on **26 January 1950** marked India's transition to a republic.



Key Features of the Constitution

- Fundamental Rights:** Ensuring freedom and protection from discrimination, these rights safeguard all citizens.
- Directive Principles:** These outline the goals of the state, emphasising social and economic equity.
- Amendments as a Living Document:** India's Constitution has undergone **over 100 amendments** in response to changing socio-political dynamics. This adaptability underscores its resilience and relevance, setting it apart from constitutions like the United States, which have been amended only **27 times**.

Judiciary's Role in Interpreting Constitutional Values

- India's judiciary has continuously expanded constitutional interpretations, ensuring the protection of marginalised communities, gender equality, and environmental preservation.

Basic Structure Doctrine: In the landmark **Kesavananda Bharati v. State of Kerala** case (1973), the Supreme Court established the Basic Structure doctrine, limiting Parliament's power to amend core principles of the Constitution.

Minerva Mills v. Union of India (1980): Reinforced the Basic Structure doctrine, ensuring a balance between Fundamental Rights and Directive Principles.

- **Expanding Rights:** The Indian judiciary has expanded the scope of rights through landmark cases, reinforcing the Constitution's adaptability.
 - **Maneka Gandhi v. Union of India (1978):** Broadened Article 21, defining the right to life as encompassing the right to live with dignity.
 - **Vishaka v. State of Rajasthan (1997):** Established guidelines for preventing workplace sexual harassment, highlighting civil society's role in promoting women's rights.
 - **Shayara Bano v. Union of India (2017):** Declared instant triple talaq unconstitutional, affirming gender justice.
 - **Justice K.S. Puttaswamy v. Union of India (2017):** The court recognised the right to privacy as a fundamental right under Article 21, underscoring the importance of personal data protection in a digital age.
 - **Navej Singh Johar v. Union of India (2018):** Decriminalized consensual homosexual acts by reading down Section 377 of the Indian Penal Code, promoting equality and non-discrimination.
 - **Joseph Shine v. Union of India (2018):** Struck down the law on adultery, declaring it discriminatory against women and violating their rights to equality and dignity.

Role of Indian Constitution in Promoting Social Justice

- **Transformative Constitutionalism:** Kalpana Kannabiran and Upendra Baxi describe transformative constitutionalism as a framework that demands active state intervention to achieve social justice. It departs from liberal constitutionalism's passive stance on social issues, requiring the government to dismantle social inequities actively.
 - **Austin's View:** Granville Austin observes that transformative constitutionalism **necessitates state regulation** in pursuing social justice, in contrast to Gandhi's vision, which emphasised individual moral transformation over state intervention.
 - **Gandhian Perspective:** Gandhians like SN Agarwal argued for **minimal government intervention**, believing that social justice should emerge organically from individual transformation. This vision conflicted with the Constitution's proactive role in enforcing social equality.
- **Constitutional Morality: Khosla (2020)** argues that the Indian Constitution instructs democratic citizenship by encouraging adherence to constitutional morality. This perspective aligns with Ambedkar's vision of constitutional morality, which requires citizens to uphold constitutional values beyond mere legal compliance.
 - **Moving Beyond Colonial Foundations:** While borrowing certain provisions from the **Government of India Act 1935**, the Indian Constitution marked a departure by embedding democratic principles, unlike its colonial predecessors.
 - **Debates and Deliberations:** The Constituent Assembly's discussions reflected the belief that ideas hold historical significance, shaping a constitutional framework that rejected imperial philosophies and promoted individual freedoms.

Unique Nature of Indian Constitutionalism

- **American vs. Indian Constitutionalism:** Mehta argues that while American constitutionalism (18th century) aimed to limit government, Indian constitutionalism (20th century) celebrates an expanded role for state intervention to dismantle deeply rooted social hierarchies.

- **Rajeev Bhargava** emphasises that the Indian Constitution aimed to dismantle established social hierarchies and create a society based on **liberty, equality, and justice**. This transformative vision allows historically oppressed communities to participate in a new democratic framework.
 - **Social Hierarchies:** The Constitution challenges India's entrenched caste, gender, and religious inequities, offering marginalised communities access to rights and representation.
 - **Empowerment:** The Constitution has sought to rebalance Indian society by empowering communities that had traditionally been denied power.

Instrumental Provisions for Social Justice in the Indian Constitution

- **"We the People":** The opening phrase of the Preamble underscores the idea of equal rights for all citizens, free from the limitations of caste, religion, or ethnicity.
- **Universal Adult Franchise:** "One person, one vote, one value" was revolutionary in India's hierarchical society. It provided equal political representation regardless of social background.
- **Abolition of Untouchability:** Article 17 ended the discriminatory practice of untouchability, breaking from centuries of caste-based oppression.
- **Right to Equality:** Recognized as substantive equality, the Constitution protects marginalised groups with special measures to promote their welfare, advancing a robust concept of social equity. **Article 15(2)** prohibits discrimination in accessing public spaces based on religion, race, caste, sex, or birthplace.
- **Article 23** prohibits practices such as human trafficking and bonded labour, which historically marginalised communities have suffered under.
- **Directive Principles of State Policy:** These principles guide the state in fostering social and economic welfare, empowering the Indian masses to achieve freedom from social and economic constraints.

Redefining Law in a Cyber Age: India's Legislative Shift Against Modern Crime

- India's rapid digital transformation has made it a target for cybercriminals. According to reports, the country ranks among the top nations for cyberattacks, with sectors like **banking, healthcare, and government** being the most vulnerable.
- Recognising this need, the Government of India has introduced three landmark criminal laws: the **Bharatiya Nyaya Sanhita (BNS)**, the **Bharatiya Nagrik Suraksha Sanhita (BNSS)**, and the **Bharatiya Sakshya Adhinyam (BSA)**. These laws aim to bolster India's legal response to cybercrime, ensuring the country is equipped to safeguard its digital realm.



New Legal Framework: BNS, BNSS, and BSA

- **Bharatiya Nyaya Sanhita (BNS):** It acknowledges the complexities of cybercrime, particularly the need for jurisdictional flexibility.
 - **Beyond Physical Boundaries:** The BNS enables law enforcement to act across multiple jurisdictions within India, ensuring that cybercriminals cannot evade prosecution due to jurisdictional loopholes.
 - **Streamlined Investigative Powers:** BNS empowers authorities to investigate cybercrimes with a cohesive approach across states, enabling faster response times and coordinated action against cybercriminals.
- **Bharatiya Nagrik Suraksha Sanhita (BNSS):** It focuses on protecting Indian citizens from the growing sophistication of cybercrime by equipping law enforcement with the necessary tools and protocols.
 - **Forensic Audits:** Section 176(3) of the BNSS mandates forensic audits in cybercrime cases with severe consequences (e.g., financial fraud, data theft) where punishments exceed seven years. This provision helps track complex digital footprints, ensuring that crimes are not unpunished due to lack of evidence.
 - **Digital Investigation Framework:** The BNSS provides a structured approach for digital investigations, including analysis of transaction records, server logs, and IP addresses, even across international borders.
- **Bharatiya Sakshya Adhiniyam (BSA):** It addresses the challenges of digital evidence, which can be easily deleted, altered, or concealed.
 - **Protocols for Digital Evidence:** The BSA introduces strict guidelines for collecting, storing, and presenting digital evidence in court to maintain its integrity.
 - **Role of Digital Forensics:** Digital forensics experts are crucial in investigating cases like identity theft or hacking and collecting evidence from sources like IP logs, digital signatures, and social media activity.



Intersection of Artificial Intelligence (AI) and Legal Evolution

- As India moves forward with regulatory initiatives like the **Digital Personal Data Protection (DPDP) Act 2023** and the **Bharatiya Nyaya Sanhita (BNS) 2023**, it joins a global conversation about balancing the powerful capabilities of AI with the safeguarding of individual rights.

- This transformation is particularly significant in **profiling and criminal investigations**, where AI's ability to analyse large datasets can enhance services and present risks.

Concept of Profiling in AI

- Profiling is a core aspect of many AI systems, where data is **collected** and **analysed** to predict user behaviours. This approach is used widely across various industries:
 - **E-commerce:** Personalized product suggestions based on browsing history and purchase behaviour.
 - **Streaming Platforms:** Content recommendations shaped by viewing patterns.
- AI's predictive power is not new, as evidenced in **e-commerce** and **digital marketing**. By analysing user behaviour, AI can push targeted advertisements and influence purchasing decisions.
- However, in **law enforcement**, the stakes are significantly higher. While a misplaced ad might cause mild annoyance, a wrongful prediction in criminal investigations can infringe on an individual's **freedom and privacy**.

Challenges and Ethical Concerns in AI-driven Policing

- **Privacy Violations:** The BNS 2023 grants law enforcement broad powers to access digital devices, potentially leading to unlawful surveillance.
- **Algorithmic Bias:** AI systems can exhibit biases, leading to discriminatory outcomes that disproportionately affect marginalised groups. **For instance**, AI models trained on biased data could wrongfully target individuals based on race, gender, or socio-economic status.
- **Need for Judicial Oversight:** Ensuring algorithmic transparency and human oversight is essential to prevent wrongful targeting and uphold public trust in AI.

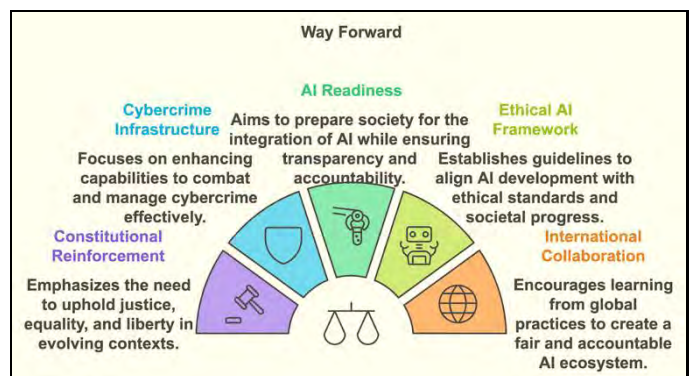
Case Study: AI in Child Exploitation Prevention in the UK

↓

The **National Crime Agency (NCA)** in the UK has been using AI since 2019 to combat child exploitation by analysing online behaviour to identify at-risk children and potential perpetrators. This proactive approach showcases how AI can be used ethically in policing to prevent crimes before they happen.

↓

India can use this example to implement AI-driven crime prevention in areas like **cyberbullying, terrorism prevention, and cybersecurity** while establishing ethical guidelines prioritising transparency and oversight.



SNAPSHOT - DOWN TO EARTH (NOVEMBER)

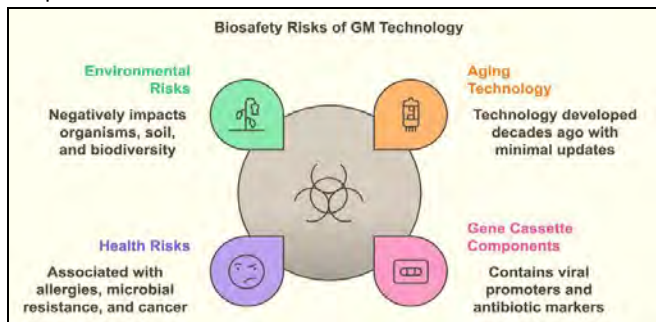
GM policy must be farmer-centric

Introduction

On July 23, 2023, the **Supreme Court of India** directed the Union government to develop a **comprehensive national policy on genetically modified (GM) crops**. With the Union government now formulating a policy, the experts emphasise the need for a democratic, consultative process.

Background: The Debate on GM Crops in India

- GM crops in India have been **controversial** since their introduction, unlike other biotechnology applications such as **vaccines or protein-based drugs**.
- Supporters argue that GM crops are essential for addressing India's food security concerns. In contrast, critics point to potential risks, including **agricultural distress, environmental degradation, biodiversity threats, and human and animal health issues**.
- Agriculture and health are **state subjects**, and several Indian states have opposed GM crops on a **case-by-case basis** or through blanket policies against environmental release. **Consultations** with agricultural universities, state agriculture commissions, or biodiversity boards have informed these policies.



Past Recommendations from Committees

<p>Task Force on Agricultural Biotechnology (2004): Recommended that national agricultural biotechnology policy should focus on farmers' economic well-being, food security, consumer health, environmental protection, and trade security.</p>	<p>Parliamentary Standing Committee on Agriculture (2012): Recommended overarching biosafety legislation to ensure biodiversity, health, and environmental protection, with clear guidelines on biotechnology's role in agriculture.</p>	<p>Standing Committee on Science and Technology, Environment, and Forests (2017): Advised against introducing GM crops without scientific assessment of long-term environmental and health impacts.</p>
--	---	--

Recommendations for the National GM Policy

- **Socioeconomic Considerations and Farmers' Welfare:** The policy must evaluate GM crops based on suitability across India's diverse agro-economic conditions.
 - The **Supreme Court's Technical Expert Committee** previously highlighted the importance of considering socioeconomic impacts, especially under international agreements like the Cartagena Protocol on Biosafety.
- **Accountability and Regulatory Reform:** The Indian regulatory process has often focused on technical comparisons between transgenic and non-transgenic crops without considering performance across varying agro-climatic conditions. The

new policy should hold regulatory bodies accountable for prioritising farmers' interests over corporate gains.

- The **example of Bt cotton**, which has led to increased farmer suicides due to high input costs, underscores the need for a farmer-centred approach.
- **Addressing Health and Environmental Risks:** The policy should ensure comprehensive scientific assessments of potential health and environmental impacts before the introduction of GM crops, with specific attention to long-term effects.
- **Role of Public Sector Research:** Public sector institutions, which have historically focused on developing low-input, high-yielding, and sustainable crop varieties, should play a central role. This will allow the policy to leverage indigenous knowledge and the genetic diversity of India's crops.

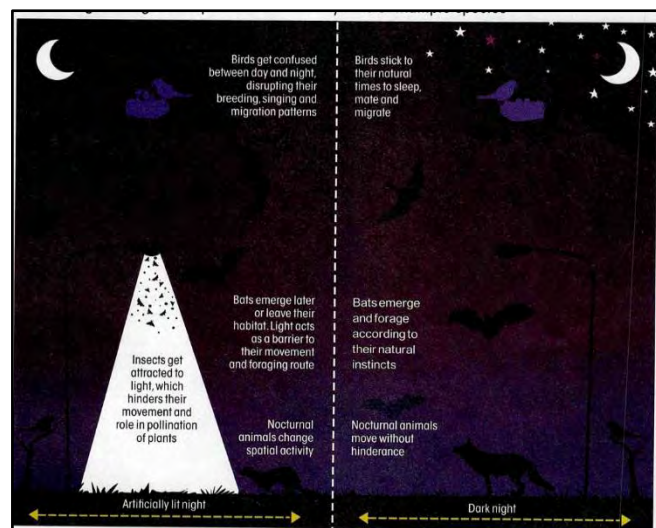
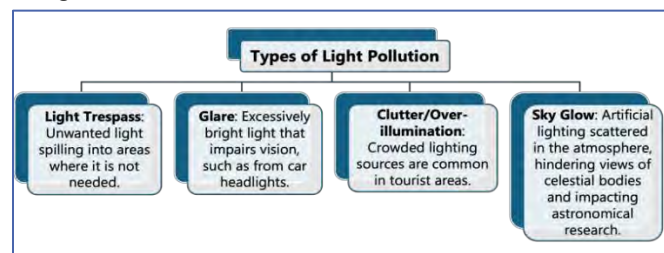
BLINDING GLOW

Introduction

Mumbai-based social activist petitioned the **Bombay High Court** to remove decorative **lights from tree trunks and branches** in various parts of Mumbai. Petitioner argued that these lights, intended to be temporary, had been in place for several months, contributing to light pollution and ecological harm.

Global Statistics on Light Pollution

- In 2016, scientists created a **world atlas of artificial night sky brightness** using satellite data, highlighting widespread light pollution in **North America, Europe, and Asia**. Singapore, Kuwait, Qatar, and other highly developed countries have some of the most light-polluted skies, while regions like the **Sahara and Amazon** remain mostly dark.
- A study by **Christopher C. M. Kyba** revealed that sky brightness has increased by **nearly 10% annually**, significantly reducing visible stars. This trend could mean the night sky might become four times brighter within a single generation.



Impact of Light Pollution on Wildlife

- **Effects on Migratory Birds and Wetland Species:** Instances of birds, like flamingos in Navi Mumbai, colliding with bright signage have shown how artificial lighting disorients migratory birds. Environmentalists have raised concerns about light pollution near wetlands, which affects bird species' feeding and nesting patterns, like the painted snipe and the cotton pygmy goose.
- **Nocturnal Animals**
 - **Birds:** Nocturnal birds like the black-crowned night heron struggle with artificial lights, which disrupt their hunting abilities.
 - **Bats:** Studies show North American bat species avoid areas with LED lights, affecting their threatened populations.
 - **Sea Turtles:** Bright lights near nesting sites disorient baby sea turtles, leading them away from the sea and impacting survival rates.

Disruption to Ecosystems and Ecology

- **Effects on Trees and Plants:** Research shows that continuous exposure to artificial light causes stress in trees, affecting their physiological processes. Trees exposed to street lights show earlier leaf growth, disrupting natural seasonal cycles and growth patterns.
- **Pollination Disruption:** Artificial lighting interrupts the symbiotic relationships between plants and pollinators. For example, excessive lighting jeopardises the nocturnal pollination of the saguaro cactus and the yucca plant, which rely on night pollinators.

Human Health Concerns

- **Circadian Rhythm Disruption:** Light pollution interferes with human circadian rhythms, which are essential for regulating sleep and health. Nighttime light exposure suppresses the hormone melatonin, which is responsible for immune function and cell repair. This can lead to potential health issues such as stress, anxiety, and cognitive decline.
- **Increased Health Risks:** Numerous studies link light pollution to increased risks of:
 - **Breast Cancer:** Due to disruption in melatonin and estrogen levels.
 - **Neurodegenerative Disorders:** Including Alzheimer's disease.
 - **Type-2 Diabetes:** Linked to circadian misalignment, affecting blood glucose regulation.
 - **Cardiovascular and Metabolic Diseases:** Common among night-shift workers exposed to prolonged artificial light.

Way Forward - Mitigating Light Pollution

- Natural cycles of light and darkness are vital to life on Earth. **Proper regulation** of artificial lighting can support human health and ecosystem balance. Simple actions, like **shielding lights, adjusting LED lights** to reduce blue-spectrum light, and **setting lighting standards**, can allow urban and developing areas to reduce light pollution while balancing modernisation needs.
- **Global and Local Efforts**
 - **Germany's Adaptive Street Lighting:** In Herzogenaurach, street lights are equipped with motion detectors and adaptive systems, allowing the light level for each LED lamp to be adjusted according to requirements and a

schedule. Such an adaptive lighting solution can help reduce both energy consumption and light pollution.

- **Slovenia and Croatia—Light Pollution Law:** Both countries restrict light emissions and enforce limits in public areas to prevent unnecessary lighting.
- **India's Dark Sky Parks Initiative:** India has established its **first dark sky park** in **Pench Tiger Reserve**. Villages in the Pench Tiger Reserve have implemented shielded street lighting. These lights are covered, reducing the cone of brightness and restricting the artificial light from being emitted upwards, thereby cutting light pollution by 60-70%.

TROUBLED WOODS

Introduction

Despite being sparsely populated and forested, the **eastern slopes of the Western Ghats** have become vulnerable to **landslides** due to **increased rainfall intensity and temperature rise**. Six forested regions in Karnataka and Kerala are now identified as "**climate change hotspots**," with temperature increases of over 1.5°C and rainfall shifts by more than 20%, as per the Forest Survey of India (FSI).

Shifting Rainfall Patterns and Their Ecological Consequences

- **Rising Landslide Frequency Due to Extreme Rainfall Events:** In the past decade, rainfall events over 300 mm per day have increased in Wayanad, leading to soil saturation and landslides. The region's landslide occurrence threshold has been identified at 145-150 mm of rainfall in 24 hours.
- **Dry Phases and Increased Forest Fire Incidents:** Despite heavier rainfall, Kerala has experienced drier monsoon phases in the past two years, contributing to drought-like conditions inside forests and increased forest fires. The shift in rainfall patterns has also led to increased weed growth, like Eupatorium, further aggravating fire risks and ecological instability.

Impact on Agricultural and Forest Produce

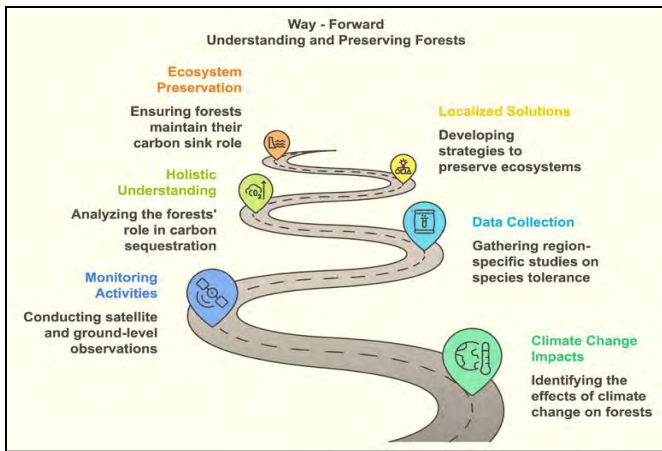
- **Reduced Food Production and Collection in Forests:** Erratic rainfall has affected the yield of key forest products. The pre-monsoon rainfall deficit has also reduced the availability of monkey jack fruit and impacted honey production, both crucial for local communities' income.
- **Delayed Crop Cycles:** Farmers have delayed planting tubers in Kerala due to inadequate early rainfall. This shift in planting cycles, observed over the past decade, coincides with the period during which landslides became more frequent in the region.

Invasive Species and Biodiversity Shifts

- **Proliferation of Invasive Weeds:** The spread of invasive species like *Senna spectabilis* in Wayanad Wildlife Sanctuary has reduced food availability for herbivores, thereby escalating human-animal conflicts.
- **Altered Wildlife Behavior and Migration Patterns:** Villagers report frequent crop damage by **elephants** searching for food due to **diminished forest forage** quality. Additionally, **migratory bird patterns** have shifted; species like the Indian pitta and Eurasian golden oriole are seen less frequently, while the peacock population in Kerala has surged, disturbing the local ecological balance.

Dwindling Role of Forests as Carbon Sinks

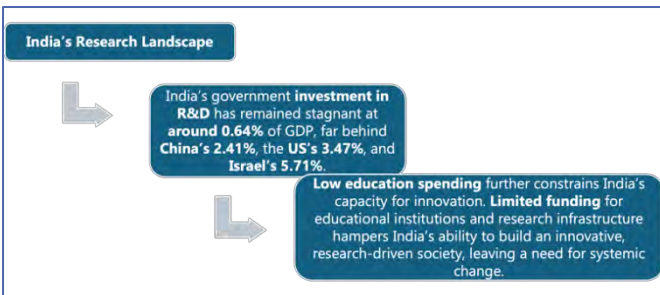
- **Impact on Photosynthesis and Carbon Absorption:** Forests serve as vital carbon sinks, storing approximately 3,121 GtC in vegetation and an additional 4,003 GtC in soil organic matter in India. Higher temperatures decrease photosynthesis rates while respiration rates increase, thus reducing forests' net carbon uptake.
- **Species-Specific Thermal Tolerance and Resilience:** Studies reveal that certain ecosystems, like Kerala's mangrove forests, exhibit high resilience to rising temperatures, potentially due to their thermal tolerance. However, many tropical trees face risks if average global temperatures rise by 4°C, as their photosynthesis capability may fail, as observed with tropical forest trees in Brazil, Puerto Rico, and Australia at temperatures above 46.7°C.



Can ANRF pull off the impossible for India?

Introduction

India's **public research sector** has faced criticism for **stagnation**, with many laboratories **lacking innovation** and modern direction. Recognising this, the government has recently taken steps to reform and invigorate India's scientific research framework, raising hopes among scientists and advocates of scientific progress.



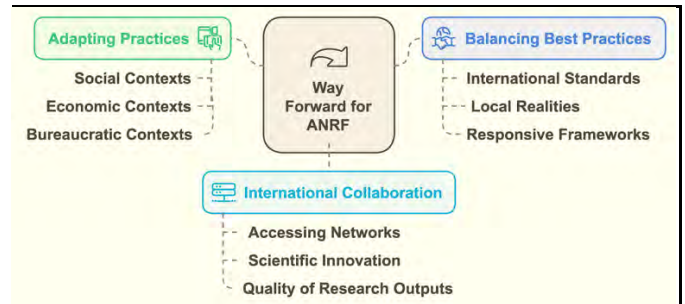
Anusandhan National Research Foundation (ANRF)

- In August 2023, the government established the Anusandhan National Research Foundation (ANRF) through an **act of Parliament, dissolving** the previous **Science and Engineering Research Board (SERB)**.
- Modeled after the **National Science Foundation (NSF) in the United States**, ANRF aims to create a strategic research direction in India by fostering collaboration between industry, academia, and government bodies.
- One of ANRF's promising features is its **interdisciplinary approach**, which includes humanities, social sciences, and liberal arts alongside traditional science and technology.

- This broader approach offers the potential to **address** the complex challenges facing Indian society, including **environmental concerns, social issues, and agricultural needs**.

Concerns regarding ANRF

- **Majority funding from Private Sources:** Out of the **₹850,000 crore budget** for 2023-2028, a substantial **₹736,000 crore is to be raised from private industry** and philanthropists. This reliance on private funding reflects a model similar to the NSF, where American industry traditionally invests in research.
 - However, in India, the **industry's contribution to R&D remains low at 36.4%** compared to 77% in China and 75% in the US, making this model uncertain.
- **Absence of Indian Industry in ANRF's Governing Board:** Despite the emphasis on private funding, Indian **industry representatives are notably absent** from ANRF's governing board. The board comprises government officials, with few representatives from state universities or research institutions.
 - An exception is the presence of Romesh Wadhvani, a former US CEO of Indian origin, alongside two distinguished Indian-origin academics, Manjul Bhargava from Princeton University and Subra Suresh, a former NSF director.
- **Differences Between ANRF and NSF Models:** Although ANRF draws inspiration from the NSF, India's **bureaucratic systems and cultural factors** may pose challenges. Unlike NSF's more flexible operational framework, ANRF must navigate India's complex bureaucracy, where hierarchical structures and **procedural delays** often impede efficient research progress.



SNAPSHOT - EPW (NOVEMBER)

1. Economic Road Map for the North-eastern Region

The north-eastern region of India has low per capita income despite a favourable land-man ratio, rich resource endowment, and a high potential for growth and development. The challenges are connectivity, location in a troubled neighbourhood, and fractionalisation and polarisation of its population. An economic road map for the North East should include union government support in close partnership with the states to build physical infrastructure and upgrade connectivity, avoiding fiscal giveaways that fail to trigger self-sustained agglomeration economies, improving law and order, and governance, focusing on high-value, low-volume, local resource-based industries, promoting tourism, and harnessing the region's hydropower potential.

The North East of India, comprising eight states, occupies a significant land area of 2.6 lakh square kilometers, making it larger than many European countries such as the UK and more than twice as large as Greece and Hungary. Despite this large area, the region had a relatively small population of 4.6 crore in 2011, leading to a low population density of 173 per square kilometer compared to the national average of 382. The region is endowed with abundant natural resources, including fertile soil, rivers, waterbodies, and natural beauty, suggesting substantial growth potential.

Reasons behind the North-eastern Puzzle:

First: The partition of India during independence disrupted the natural economic connections of the North East, severing its established rail and road links through what became East Pakistan. Although a new rail link from Fakiragram to Siliguri was created, it couldn't fully compensate for the loss of trade routes with East Pakistan. This disruption initially impacted Assam's economy, with its per capita income dropping below the national average after the 1965 war with Pakistan.

Second: The North East's connectivity issues are compounded by its landlocked position, surrounded by five countries and relying on the narrow Siliguri corridor for access to the rest of India. While some rail connections exist, like those to Assam, Itanagar, and Agartala, and the Brahmaputra River has been designated as a national waterway, navigability improvements are ongoing, highlighting the region's ongoing connectivity challenges.

Third is the problem of a troubled neighbourhood. Of our neighbours in the North East, Tibet, Myanmar, and Bangladesh are troubled by civil strife and political instability, which are not conducive to rapid economic development. If all neighbours in the North East had peace and political stability, perhaps, the history of the North East would have been quite different.

The **fourth** important clue to the North East's developmental puzzle lies in "**fractionalisation**" and "**polarisation.**" Fractionalisation is the probability of meeting two people at random and finding that they differ in their ethnicity, language, caste, tribe/non-tribe characteristics, and religion.

Polarisation, which is more disturbing than fractionalisation, is the intensity of intra-group identification and inter-group alienation. The North East has a major concentration of tribal population. Historically, tribes were seen as lying outside or at the fringes of the larger Indian society, and in various stages of "acculturation" or interaction with the broader society. With limited interaction, alienation is natural.

While fractionalisation and polarisation indeed had their roots dating back to the pre-British period, the British Raj did little to bring them down. They followed a classic model of extractive imperialism in most of the North East. Bordering the Himalayas with a variety of tribal people, to them, it was only a region that produced tea, jute,

petroleum, and a few other primary commodities and acted as a buffer between British India and Tibet, Myanmar (erstwhile Burma), Nepal, and Bhutan. Parts of it were best "ruled" with a light touch through institutions such as the North East Frontier Agency (NEFA). It was a classic case of divide and rule. The historic intimate ties of the region with the rest of India were either not fully appreciated or deliberately ignored.

Way Forward

Nation-Building in India

- India is in the process of nation-building, requiring patience and a shared sense of unity among its diverse people.
- Factors like education and modernization are vital for India's nation-building; other nations have succeeded with diverse populations.

Economic Road Map for the Northeast:

- Physical infrastructure, such as roads and railways, is crucial for the economic development of the North East.
- The Indian government has initiated various schemes to promote infrastructure in the region.

Fiscal Incentives and Industrial Development:

- Fiscal incentives aimed at promoting industrial development have been in place for decades but have shown limited long-term effectiveness.
- Recent data shows a temporary increase in firms and employment in the North East but a lack of sustainable economic growth followed the phasing out of these incentives.
- The need to address law-and-order issues and connectivity remains critical for improving the impact of fiscal incentives.

Connectivity as a Catalyst for Development:

- Enhanced connectivity is essential for economic competitiveness and reducing transportation costs in the North East.
- Significant infrastructure development includes roads and rail links, with ongoing projects to improve air connectivity.

Focusing on Local Production:

- The North East should prioritize high-value, low-volume production using local inputs due to trade challenges.
- Shifting agricultural focus towards horticulture and processing can enhance value addition and market competitiveness.
- Leveraging local products like spices and rubber can strengthen the region's economic position.

Tourism Potential:

- The North East has the potential to significantly contribute to tourism through its natural beauty and cultural heritage.
- Improving facilities and connectivity is crucial for attracting more tourists.

Fiscal Challenges and Governance:

- North Eastern states face high fiscal deficits and rely heavily on central grants, limiting their spending ability.
- Corruption remains a major barrier to effective governance and resource utilization, affecting development.

Harnessing Hydropower:

- The North East has significant hydropower potential but faces challenges such as project delays and cost overruns.
- Learning from Bhutan's success in hydropower development can provide valuable insights for maximizing this renewable energy resource.
- Improved management and planning are needed to realize the region's full hydropower potential.

2. Financing Green Economies

A Realisable Target?

In 2022, the Intergovernmental Panel on Climate Change called for urgent action to limit global warming to 1.5°C above pre-industrial levels, requiring a 43% reduction in greenhouse gas emissions by 2030. India, committed to this target, faces a significant financing challenge, needing 5%–6% of annual gross domestic product by 2070 for climate goals. As public debt is unsustainably high globally, the headroom for borrowing by the governments has shrunk. Private capital can only meet green financing needs marginally. Infrastructure Investment Trusts are a promising solution, offering public–private finance circularity.

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations (UN) body that assesses the science related to climate change, and its objective is to provide governments with scientific information that they can use to develop climate policies.

The IPCC (2023) stated that to meet the target an annual global reduction of 9% is necessary until 2030. But presently, a yearly decrease of just 2%. In 2019, global emissions of carbon dioxide (CO₂) (equivalent) were around 56 billion tonnes of CO₂ (IPCC 2023). These should have been reduced to reach the level of around 32 billion tonnes by 2030.

Instead of decreasing, however, global emissions in 2022 were at least a billion tonnes higher than in 2019. Considering the current trend, a reduction of 9% of emissions annually till 2030 would be necessary to meet the target, whereas a decrease of just 2% every year is being achieved.

Key Points:

Need for Financing: Emerging market and developing economies (EMDEs) require significant investment to build climate-resilient infrastructure to meet 2030 NDC targets.

Historical Promises: Advanced economies pledged \$100 billion annually to EMDEs in 2009 for climate change efforts, but little progress has been made.

Paris Agreement Commitments: COP21 in 2015 reinforced that advanced economies must provide financial assistance to EMDEs to meet climate commitments, with minimal actual support provided.

Recent Developments: At COP26, advanced economies committed to increase adaptation funding from \$20 billion to \$40 billion by 2025, but EMDEs require over \$200 billion annually for adaptation.

Establishment of Loss and Damage Fund: COP27 established a fund for climate disaster relief for vulnerable countries, but COP28 reported insufficient funding of \$700 million against a need exceeding \$400 billion annually.

Lack of Consensus: Ongoing discussions at COP28 highlighted disagreements on governance, structure, funding sources, and beneficiaries of the Loss and Damage Fund, while fossil fuel use reduction remains contentious.

Expectation vs. Reality: There is an expectation that advanced economies will significantly reduce emissions and contribute funds; however, this has not materialized, with limited financial flows directed towards climate action.

International Organisations

Ineffectiveness of the UN: The UN has struggled to compel advanced economies to fulfill financial commitments for climate action. The G20 has emerged as the leading platform for international economic cooperation, addressing significant global economic issues since its inception in 1999.

Focus on Green Finance: With its upgraded status to heads of state in 2009, the G20 is well-positioned to enhance green finance efforts to tackle climate challenges.

Engagement with Climate Issues: Recent G20 presidencies have incorporated climate change into their agendas, emphasizing the importance of green finance.

German Presidency Initiative: The 2017 G20 German presidency introduced a pro-climate narrative with the OECD report promoting sustainable growth alongside climate policy.

Saudi Arabia's Contributions: During its 2020 presidency, Saudi Arabia focused on policies for a net-zero transition and enhancing adaptation-mitigation linkages.

India's G20 Presidency: In 2023, India contributed a report on Multilateral Development Bank (MDB) reforms, aiming to address global capital requirements for sustainable development.

MDB Funding Recommendations: The report calls for a \$3 trillion increase in MDB annual spending by 2030 to support climate action and sustainable development goals.

Operational Reforms: Recommendations include enhancing MDB operations, improving response capacity,

and boosting private capital mobilization through agencies like MIGA.

Private Finance for Public Infrastructure

Renewed Interest in Private Finance: There is growing focus on the potential of private finance to support public infrastructure, despite limited evidence of its effectiveness in green finance. MDB reforms advocate for increased private finance mobilization to meet sustainable development demands.

Blended Finance Initiatives: MDBs are utilizing blended finance models, co-lending with private sources, with initiatives like the ADB's green co-finance program. However, a lack of bankable projects poses a significant challenge.

Green Finance Catalysing Facility (GFCF):

The GFCF proposes a blended finance framework to enhance risk mitigation and create a pipeline of bankable green infrastructure projects, thus contributing to mainstreaming green finance.

Global Investment Requirements: The IMF estimates that \$3 to \$6 trillion annually is needed to achieve the Paris Agreement goals, while current global climate finance is about \$630 billion—primarily debt-focused with green bonds only comprising a small portion of bond markets.

Private Sector Mobilization: Between 2016 and 2021, only \$120.8 billion was mobilized from the private sector for blended finance, mainly for climate change mitigation, indicating a lack of capacity to raise significant capital.

Infrastructure Investment Trusts (InvITs):

- InvITs represent a potential solution for channeling capital market finance into green infrastructure, designed to attract investments through a structured framework that encourages participation from diverse investors.

Structure and Functionality of InvITs: InvITs pool investments in revenue-generating infrastructure assets and distribute 90% of income to investors, facilitating quick debt repayment and reinvestment by sponsors.

- Sponsors monetize assets by transferring them to InvITs, enabling them to reduce debt and reinvest in new projects while maintaining a focus on infrastructure maintenance and financial integrity.

Advantages of InvITs:

- InvITs offer portfolio diversification, fixed income opportunities, and liquidity benefits, making them attractive to long-term investors such as pension funds and sovereign wealth funds.

Creating Circularity through InvITs:

- Governments can leverage loans from MDBs and BFIs to build green infrastructure, then monetize future earnings through InvITs, facilitating sustainable financing and reducing fiscal pressures while promoting green transition efforts.

Way Forward: InvITs need an internationally recognized framework for effective global financing, addressing taxonomy, regulation, and capacity building to attract sustainable investments and enhance infrastructure funding.

3. West Asia: Regional Wars, Strategies, Tragedies

Israel's eschatological ideas of a "greater Israel" motivate it to permanent wars.

The war in West Asia has stepped up the escalation ladder, with the Israel–Palestine issue at the core. Provocations and assassinations by Israel on Iran and the low-intensity conflicts between Israel on one side and the Lebanese Hezbollah, the Houthis (Ansar Allah) of Yemen, and the Hashad al-Shabi of Iraq and Syria have escalated into a regional war. The West Asian region—Israel, Iran, Lebanon, Yemen, Syria and Iraq—is in a conflict trap. Israel wants the United States' (US) support for domination. While continuing to pay lip service to the demand for a ceasefire, US aid, weaponry and intelligence continue to sustain Israel's strategic goals. The United Nations (UN) Secretary General and major powers, including India, have appealed for restraint. Meanwhile, Israel continues its genocidal policies, bombing the Gaza Strip and the West Bank, and now sees to extend them into Lebanon.

This new phase of escalation comes after Israel killed several Iranian generals at the Iranian consulate in Syria on 1 April 2024. Iran retaliated in a controlled manner, with no casualties and closed the matter. Then, on 31 July, Israel murdered Hamas political leader Ismail Haniyeh who was a state guest of Iran, to which Iran said it would retaliate. Israel killed the main leader of Hezbollah, Syed Hassan Nasrallah and several commanders, along with hundreds of civilians, by bombing a building complex in Lebanon on 27 September. This was preceded by lethal attacks on Hezbollah personnel and hundreds of ordinary people who used pagers that had explosive devices. These provocations by Israel led to counter-escalation.

In a second strike on 1 October, Iran fired 200 missiles into Israel, damaging a military base, but without any casualties. Iran's message is they have sufficient capabilities to penetrate Israel's iron dome and air defence; have precision hypersonic weapons to hit military targets; they will avoid civilian casualties; that they do not want to escalate but are ready to retaliate proportionately if Iran is harmed.

Israel, in addition to bombing and drone strikes, started ground operations on its 150-mile northern border with Lebanon on 1 October in a bid to create a buffer zone. Hezbollah, which is both a political party and a militia, is suffering losses as it cannot match the air power and intelligence gathering of the Israeli Defense Forces (IDF). Over a million people are displaced in Lebanon and the shelters and hospitals are overburdened. Israel and the US are also bombing Yemen and parts of Syria.

Israel's end goals are to "reshape" the region as stated by Prime Minister Benjamin Netanyahu by displaying maps

of “greater Israel” at the UN General Assembly (27 September 2024), which erases Palestinian territories and expands all borders. Israel’s strategic vision envisages: dominance in West Asia; control over Palestinian lands by expelling its original inhabitants; disciplining and ghettoising Palestinians; weakening Iran as a regional power; delinking Iran, Lebanon, Yemen, and Iraq from the Palestinian cause; decimating resistance groups like Hezbollah, Houthis, and Hashad al-Shabi; creating a buffer zone between south Lebanon and north Israel; and normalising relations with other Arab monarchies. Israel believes that success in this war would make it the unchallenged regional power and the US shares this interest in this oil-rich, strategic region. Israel’s tactics of ethnic cleansing in Gaza and the West Bank are labelled “plausible genocide” by the International Court of Justice. They are using a similar strategy of bombing Lebanon in a far more intense way than they did in 1982 and 2006 to decimate Hezbollah by hurting civilians.

This “Axis of Resistance” at war with Israel and allied with Iran has the Palestine cause at its heart. Their strategy is politically oriented towards a ceasefire guaranteed by the US. Militarily, their strategy is low-intensity attrition of Israel with rocket missile attacks. This low-intensity strategy shifted after Israel’s pager attack and killing of Nasrallah, the leader and strategist of the Hezbollah, friend and ally of Iran, and symbol of resistance among Arabs and the Islamic world. His killing provoked Iran to the retribution it promised on 31 July and the 200 missiles into Israel on 30 September followed. Iran’s supreme leader Ayatollah Khamenei, in a rare public address (4 October) with a Palestinian flag in the background, signalled that Iran would support its ally Lebanon and would not back down. At the same time, Iranian President Pezeshkian is speaking to world leaders seeking a ceasefire.

It is questionable as to which of Israel’s strategic goals are achieved in this past year of multiple conflicts, other than causing a flow of Palestinian and now Lebanese blood. The hostages remain unfound; Hamas has had significant losses but is not defeated or decimated. Hezbollah has lost its leader Nasrallah, who, one Lebanese Christian leader said, has gone from a symbol to a legend. Hezbollah is losing cadre under Israeli firepower but remains a battle-hardened and equipped fighting force with the power of endurance. They will cause the IDF losses before they lay down arms and get martyred. The Houthis continue to target ships passing the straits of the Hormuz-Red Sea, even though they are under air fire. But Israel and its backers will not reconsider their strategy.

As the escalation ladder steps up, Israel promises to target Iran and President Biden is looking at various military strategies to damage Iran, but also has an eye on the impact on US elections. After all, an attack on Iran’s oil infrastructure will mean Iranian retaliation and a rise in oil prices. This causes regional tension and international uncertainty.

Russia, China, India, the global South and West Asia do not want any escalation. But who will rein in Israel and its backers? Israel is also facing economic downturns. However, the attacks on Lebanon are domestically popular for Netanyahu. Israel’s eschatological ideas of a “greater Israel” motivate it to permanent wars. Its victimhood narrative and international sympathy have faded because of racialised policies against Arabs. The International Court of Justice has declared Israel’s occupation of Palestine territories as illegal and the Palestinians now fight for a Palestine nation.

US policies in this region serve its unilateralism and hegemony but its discourse on human rights and rules-based order smacks of hypocrisy as it unconditionally supports Israeli apartheid. The Arab monarchies are nervous as their people turn restive and the region faces slow devastation.

As oil prices rise and climate crises worsen, there is a serious humanitarian crisis in all these poorest states at war. They have been under US sanctions for decades. Their people are mired in poverty and have suffered interventions, wars, and repeated displacements. But somehow, they have not lost the will to support the Palestine cause, safeguard their sovereignty, and hold on to their land. Demonise them if you will. But admire their courage, that is all they have.

4. Navigating the Post-Covid-19 Landscape Regulatory Framework and Budgetary Measures for MSMEs in India

The persisting problems of micro, small and medium enterprises in India have quadrupled since the COVID-19 pandemic, demonetisation, and goods and services tax

Table 3: Classification of MSMEs by Different Agencies

	Indicators			
	International Finance Corporation, World Bank Group (Any two criteria out of three)			
Enterprise categories	Employees	Total Assets	Annual Sales	Loan Size Proxy (<)*
Micro	< 10	<\$1,00,000	<\$1,00,000	\$10,000
Small	10–49	\$1,00,000 - <\$3 m	\$1,00,000 - <\$3 m	\$1,00,000
Medium	50–300	\$3 m - \$15 m	\$3 m - \$15 m	\$1 or \$2 m
	Staff Headcount (<)	Turnover (<=)	Or/	Balance Sheet Total (<=)
European commission				
Micro	10	€2 m		€2 m
Small	50	€10 m		€10 m
Medium	250	€50 m		€43 m

* It cannot consistently report on other three criteria.

Table 4: MSMEs in the Indian Context

Enterprise Type	Old Definition		New Definition	
	Investment in Plant and Machinery/Equipment (<)		Investment and Annual Turnover (<)	
	Manufacturing	Services	Investment	Turnover
Micro	25 lakh	10 lakh	1 crore	5 crore
Small	5 crore	2 crore	10 crore	50 crore
Medium	10 crore	5 crore	50 crore	250 crore

Source: MSME Annual Report 2020–21.

regime. It is feared that larger units are lumped into the micro sector with the new classification criteria and upper limit expansion, further weakening the government's attention towards tiny businesses.

Micro, small and medium enterprises (MSMEs) comprise a significant part of India's informal sector and are the backbone of its economy. According to the 73rd round of the National Sample Survey (NSS 2015–16), MSMEs represent 99.99% of enterprises, with medium-sized at just 0.01%, justifying the notion of “**missing middle**.” However, small and medium enterprises make up barely 0.5%, indicating their limited impact on the economy's growth. Mehrotra and Giri (2019) rightly identify that its not only the middle that is missing but small enterprises are also lacking in India's MSME sector. Despite this, the sector offers substantial job and self-employment opportunities after agriculture.

The latest Economic Survey of 2022–23 witnessed a rise in the contribution of MSME sector to overall gross value added (GVA) from 29.3% (financial year [FY] 2018) to 30.5% (FY 2020), with a pandemic-induced dip to 26.8% (FY 2021). Despite this setback, the sector remains pivotal, constituting around 45% of total exports. However, nearly 90% of entrepreneurs operate in the informal sector. In addition, according to the 73rd round of NSS, India's MSMEs show a balanced sectoral distribution: 31% in manufacturing, 36% in trade, and 33% in other services. Manufacturing thrives in rural regions, while trade and services dominate urban areas, highlighting balanced regional growth. Most enterprises are owned by males, with only 20.4% being owned by women (**Table 2**). This aligns with the World Economic Forum's Global Gender Gap Report 2022, ranking India 143rd out of 146 nations and highlighting a significant gender gap exacerbated by low rates of female entrepreneurship.

Table 2: Percentage Distribution of Enterprises by Proprietary Type (by MSME Category)

Category	Male	Female
Micro	79.6	20.4
Small	94.7	05.3
Medium	97.3	02.7
All	79.6	20.4

Source: MSME Annual Report 2020–21.

The evidence identifies challenges MSMEs face, primarily micro and small enterprises. Further, the evolving regulatory landscape has pros and cons for the growth of MSMEs, especially for women entrepreneurs. Prime Minister Narendra Modi envisions India entering the “Amrit Kaal” (golden era) over the next 25 years. Finance minister Nirmala Sitharaman echoes this vision in budget speeches, emphasising MSMEs as major growth drivers.

Legal Framework of MSMEs

Change in definition: MSME definitions vary globally and often include worker count, turnover, and assets. India revised its MSME classification in 2020, emphasizing investment and turnover criteria.

Regulatory framework of MSMEs in India:

Initial Steps (1948): India enacted the Industrial Policy Resolution (IPR) 1948 on April 6, emphasizing the role of cottage and small-scale industries (SSIs) for balanced growth and job creation.

New Industrial Policy (1991): Announced amid economic reforms, this policy aimed to boost tiny and small enterprises through delicensing, reducing bureaucratic hurdles and initiating better support mechanisms, such as SIDBI and the Technology Development Cell (TDC).

Financial Accessibility Initiatives (2000): Based on the Gupta Study Group recommendations, the government focused on improving financial access for SMEs, introducing an SME Fund and establishing lending criteria for public sector banks.

National Commission for Enterprises in the Unorganised Sector (2004-05): NCEUS was established to define unorganised enterprises, addressing policy gaps in the informal sector.

MSMED Act (2006): The Micro, Small and Medium Enterprises Development Act was enacted to streamline investment and coverage concerns, leading to the creation of the Ministry of MSME.

Challenges Faced by MSMEs:

1. Impact of COVID-19:

- COVID-19 struck during an ongoing economic slowdown, affecting private investment, consumption, and exports and was preceded by shocks like demonetization and GST transition.
- A survey showed that 72% of micro enterprises saw a significant drop in earnings during lockdowns.
- MSMEs experienced revenue declines between 20%–50%, with manufacturing units hit harder than service enterprises.

2. Loan Burdens and NPAs:

- MSE loans, particularly under the PMMY scheme, saw a rise in NPAs to 11.98% by March 2021.
- The government's budget did not address PMMY modifications needed due to COVID-19.

3. Opportunities from the Pandemic:

- COVID-19 created new opportunities, including the production of health-related products like hand sanitizers and PPE kits.

- The government introduced fiscal stimulus measures and budget provisions to support MSMEs.

4. Shift to Digital Financial Literacy:

- With India's push for digital advancement, there's a need to transition traditional financial literacy to digital.
- Urban businesses have adopted digital banking post-demonetization and during COVID-19, while rural enterprises face challenges with implementation costs and trust in digital transactions.
- There is a need for targeted digital literacy programs for vulnerable groups like the elderly, women, and startups.

Post-COVID-19 Budgets:

Budget 2022–23 and 2023–24: Support for MSMEs

Allocation for MSMEs: Budget 2022–23 allocated ₹15,628.71 crore, recognizing MSMEs as vital to the economy; the 2023–24 budget increased this to ₹22,137.95 crore.

Interlinked Portals: Proposed interlinkage of Udyam, ASEEM, e-shram, and NCS portals to enhance skilling, credit facilitation, and recruitment for MSMEs.

Emergency Credit Line Guarantee Scheme: ECLGS extended to March 2023 with ₹50,000 crore added, supporting approximately 1.3 million MSMEs amid COVID-19.

RAMP Initiative: Raising and Accelerating MSME Performance (RAMP) program with ₹6,000 crore investment to improve market access and technology for MSMEs.

Credit Guarantee Trust for MSMEs: Revamped CGTMSE will inject ₹9,000 crore into collateral-free loans for MSEs with a 1% reduction in credit cost.

Presumptive Taxation: Extended turnover limits for small businesses and specified professionals under presumptive taxation to simplify compliance and promote cashless transactions.

Vivad se Vishwas I Scheme: Provides reimbursement to MSMEs for incomplete contracts due to the pandemic, facilitating claims through the government e-marketplace (GeM).

Incentivizing Timely Payments: Proposed tax deduction for timely payments to MSMEs, addressing issues of delayed payments impacting ₹10.7 lakh crore in GVA.

Skill Development Initiatives: Launch of Unified Skill India Digital platform and PMKVY 4.0 to upskill youth, focusing on digital and industry-relevant courses.

Entity DigiLocker: Introduction of Entity DigiLocker for MSMEs to streamline document sharing and compliance, enhancing innovation in fintech.

Start-up Support: Start-up incorporation date for tax benefits extended to March 2024; Agricultural Accelerator Fund to support rural agri-start-ups.

Hits and Misses of Post-COVID-19 Budgets

The interconnection streamlines MSME registration and access to resources through the UDYAM portal, helping over 16 million enterprises. However, current fiscal measures mainly benefit registered MSMEs, neglecting micro units and unregistered businesses. Demand-side reforms are needed alongside supply-side solutions to support post-COVID recovery and drive economic growth.

Discussion

COVID-19 necessitates significant efforts for economic recovery, particularly in supporting MSMEs largely in the informal sector. Challenges include identifying needy firms and a lack of up-to-date data. The 2023–24 budget extends support while emphasizing digital channels, yet highlights the need for financial literacy, especially among rural and women entrepreneurs.

UPSC / IAS

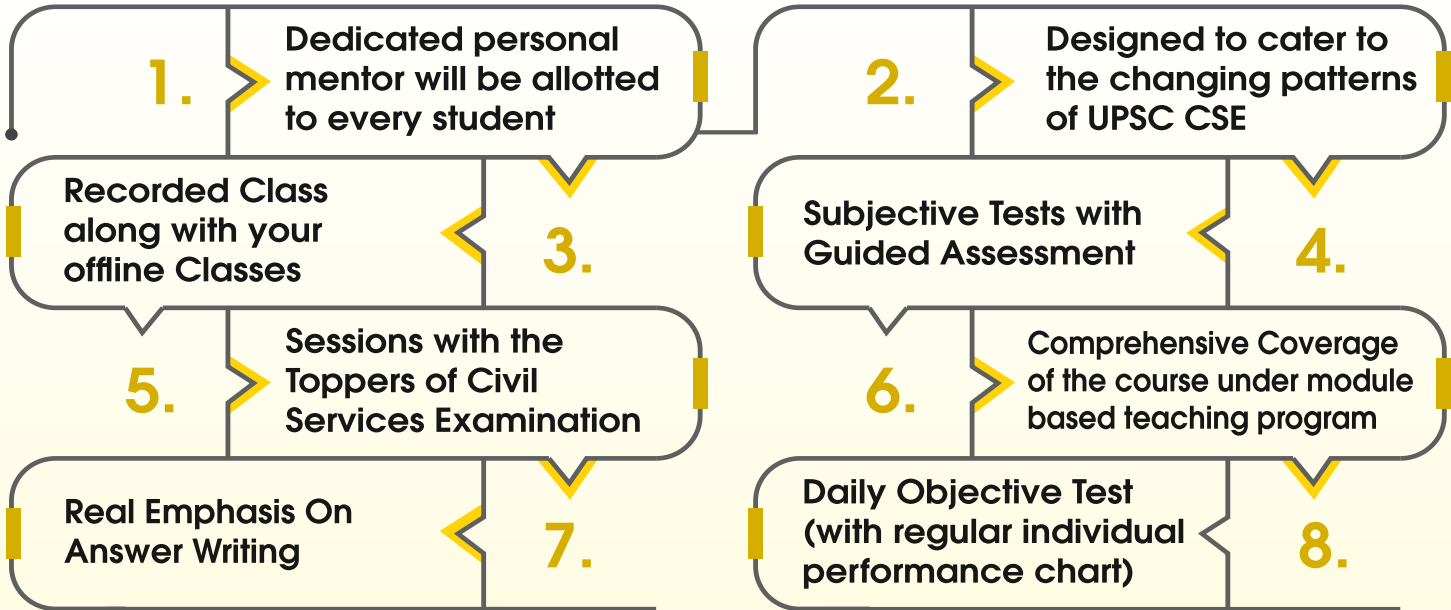
KSG

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



www.ksgindia.com

FEATURES



& Many More...

Upcoming Offline Batches

DELHI VIJAY NAGAR | **2nd DEC** | ☎ 97173 80832

BHOPAL | **8th DEC** | ☎ 75099 75361

INDORE | **9th DEC** | ☎ 9893 772941

Online

FOUNDATION COURSE

FEE ₹ 49000_{+GST}

Admission Open

ONLINE ADVANCE FOUNDATION COURSE
— 2 YEARS PROGRAM —

ESPECIALLY DESIGNED COURSE
for COLLEGE STUDENTS

Starting From... **2nd Dec.**

NAVIGATOR
Prelims Test Series

Total Tests **46**

**ADMISSION
OPEN**

AWSDP+
ANSWER WRITING SKILL
DEVELOPMENT PROGRAM

Starting From... **7th Dec.**

NORTH DELHI
97173 80832

CENTRAL DELHI
98112 93743

JAIPUR
82908 00441

BHOPAL
75099 75361

INDORE
9893 772941

BENGLAURU
76191 66663

KOLKATA
90077 09895

For Enquiry... ☎ **9990 999707 / 8826 002521**

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. ≡≡≡

