



drishti

Current Affairs (CONSOLIDATION)

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Drishti, 641, First Floor, Dr. Mukherjee Nagar, Delhi-110009
Inquiry (English): 8010440440, Inquiry (Hindi): 8750187501
Email: help@groupdrishti.in

Contents

Polity and Governance	1
● India Maldives Relations.....	1
● Shimla Development Plan 2041.....	3
● Reforming Organ Transplantation.....	5
● Pradhan Mantri Anusuchit Jaati Abhuyday Yojana.....	7
● Selection of Tableaux on the Republic Day	8
● Website Blocking by the Government.....	10
● Bilkis Bano Case and Remission.....	11
● Concerns over Hit-and-Run Law	13
● Concerns Over Existing Examination System.....	14
● Supreme Court Legal Services Committee	16
● Outlook of OTT in 2024	17
● PRITHvi Vigyan Scheme	19
● Kochi-Lakshadweep Islands Submarine Optical Fiber Connection Project.....	20
● Section 132 of the Income Tax Act,1961	21
● Ministry of Social Justice and Empowerment Year End Review 2023	22
● Bharatmala Phase-1: Deadline Extended	23
● Sanitation Challenges in Indian District Courts.....	24
● Technological Innovations Implemented Under MGNREGA Scheme.....	26
● Viksit Bharat Sankalp Yatra Adds Beneficiaries to PM-Kisan	27
● Scheme of Special Assistance to States for Capital Investment	28
● SHRESHTA	29
● Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana.....	30
Economic Scenario	32
● World Bank's Global Economic Prospects Report	32
● Lentil Production India	33
● World Employment and Social Outlook: Trends 2024.....	34
● Navigating GST Challenges	35
● World Economic Situation and Prospects Report for 2024	36
● Concerns over Insolvency and Bankruptcy Code, 2016.....	38
● Decline of Saffron Production in Kashmir.....	40
● Debt Sustainability and Exchange Rate Management.....	42
● Supreme Court Verdict on Adani-Hindenburg Case	44
● India's Toy Industry	45
● Interest Rate Adjustments in Small Savings Schemes	46

● Extended PLI Scheme for Automobile and Auto Components	47
● RBI Guidelines on Inoperative Accounts and Unclaimed Deposits.....	48
● India’s Steel Sector	49
● Inflation in India: Demand vs. Supply	50
● Banks’ Gross NPAs Drop to 3.2%	52
International Relations	54
● India and Saudi Arabia Sign Bilateral Haj Agreement 2024	54
● Annual Exchange of Nuclear Installation Lists: India and Pakistan.....	54
● Issue of Indians Jailed Abroad	56
● Global Geopolitical Intricacies and Opportunities for India	57
● India-Italy Migration and Mobility Agreement.....	59
● Red Sea and Panama Canal	60
Social Issues	63
● Vaccine Drive to Fight Cervical Cancer	64
● Global Risks Report 2024: WEF	64
● Rise of Child Marriages in West Bengal.....	66
● Immoral Traffic (Prevention) Act, 1956	67
● Caste Based Discrimination in Indian Prisons.....	69
● Sickle Cell Disease.....	71
● Prioritizing the Poor, Youth, Women, and Farmers.....	71
● Huntington’s Disease.....	73
Science & Technology.....	75
● Heat-Tolerant Covid-19 Vaccine by IISc.....	75
● ISRO Tests Polymer Electrolyte Membrane Fuel Cell	76
● Counter-Drone Technology and UAV Development.....	77
● Antimicrobial Resistance	78
● Peregrine Mission One	80
● GSAT-20 (GSAT-N2) Aboard SpaceX’s Falcon-9	80
● India to Join SKAO as a Full Member	81
● Space Missions in 2024.....	82
● Efficacy of Liquid Nano Urea.....	84
● Lithium-Deal with Argentina	84
● Pegasus Spyware	87
● X-ray Polarimeter Satellite: ISRO	88
Environment and Ecology	90
● Project Tiger	90
● Natural Pathogenic Fungi to Save Eucalyptus Forests.....	92
● Darjeeling Zoo’s Conservation Breeding Programme for Snow Leopards.....	93
● Varied Progress in Clean Air Target	95

● Northeast African Cheetah	96
● Sustainable Agriculture	96
● Wetland City Accreditation	98
● Buxa Tiger Reserve	99
● Biodiversity Credits.....	101
● Captive-bred Wolves into the Wild in Gujarat.....	102
● Pelagic Birds.....	102
● Balancing Climate Goals and Biodiversity Protection.....	103
Security	105
● Peace Pact with ULFA	105
Art and Culture.....	106
● GI Tags for Over 17 Products.....	106
Geography	108
● 150 Years of India Meteorological Department	108
● Rock Glaciers	109
Ethics	111
● Decoding Psychoanalysis.....	111
Miscellaneous	113
● Atal Setu Nhava Sheva Sea Link.....	113
● President of India Presents Sports and Adventure Awards 2023.....	114
● US Religious Freedom Designations	115
● Proposed Hypotheses on the Parting of the Red Sea.....	116
● India as a MICE Destination	117
● Expansion of Litchi Cultivation Across India	117
● PMLA Notice to Offshore Crypto Firms	118
Rapid Fire Current Affairs	120
● India Celebrates 76th Army Day and 8th Armed Forces Veterans' Day	120
● Indian Air Force AN-32 (K-2743).....	120
● Argentina's Inflation Surges Past 200%	121
● Spacetime: Geometry of Universe.....	122
● Gangireddu Melam.....	122
● Indian Army Eyes Upgraded 'Pup Tents' for Icy Heights Along LAC	124
● Indian of the Year Award 2023.....	124
● ICD 11 TM Module 2 Launch: Global Integration of Ayush Medicine	124
● National Youth Day 2024.....	125
● Startups for Railways.....	125
● Sisal Leaves: A Green Revolution in Menstrual Hygiene	125

● Impact of Wind Turbines on Forest Bats	126
● Privileges Committee to Seek Responses from Suspended Rajya Sabha MPs.....	126
● World Hindi Day	126
● Nanoplastic Contamination in Bottled Water	127
● High Court Nod: Yakshagana Mela Reinstates All-Night Shows	127
● Awards for Excellence in Public Administration 2023	127
● India-Myanmar Free Movement Regime Likely to End	128
● Floods in Telangana Reveal Paleolithic Tools	128
● Warmest Year on Record 2023.....	129
● Pravasi Bharatiya Divas.....	129
● World Typing Day	129
● National Birds Day	130
● BIS: 77 Years of Shaping Standards	130
● Martian Plasma Waves	130
● Moradabad’s Brassware Industry.....	130
● Panspermia	131
● Term of Trade	131
● Roche’s Breakthrough Antibiotic.....	131
● MeitY Launches ERNET India’s Web Portal.....	131
● Qatari Court Decision on Indian Naval Personnel	132
● Reverse Flipping	132
● Rashtriya Khel Protsahan Puruskar 2023.....	132
● Aditya-L1 into L1 orbit	132
● Warlis’ Lesson: Peaceful Leopard Coexistence in Maharashtra	133
● Cyber Kidnapping	133
● World Braille Day.....	134
● Reviving Ancient Water Bodies in Coastal Karnataka Towns	134
● Savitribai Phule Birth Anniversary	134
● Rani Velu Nachiyar Birth Anniversary.....	135
● IREDA’s 2024 Roadmap	135
● Family Pension Guidelines for Government Servants/Pensioners	135
● Snow Leopard.....	135
● Prime Minister’s National Relief Fund.....	137
● K-SMART App.....	137
● India-UAE Joint Exercise ‘Desert Cyclone 2024’	137
● No Tsunami Threat to India	137
● Samvid Gurukulam Girls Sainik School	138
● Ayodhya’s Transformational Projects.....	138
● Constitution of the Sixteenth Finance Commission.....	138
● Trial Essential to Define ‘Religious Character of Place of Worship’: Allahabad HC	138

Polity and Governance

Highlights

- India Maldives Relations
- Shimla Development Plan 2041
- Reforming Organ Transplantation
- Pradhan Mantri Anusuchit Jaati Abhuyday Yojana
- Selection of Tableaux on the Republic Day
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INTELLECTUAL PROPERTY RIGHTS (IPRs)

IP refers to intangible assets owned/legally protected by an individual/company from outside use or implementation without consent.



NEED FOR IPR

- Encourages Innovation
- Economic growth
- Safeguard rights of creators
- Enhances ease of doing business



RELATED CONVENTIONS/TREATIES (INDIA SIGNATORY TO ALL)

- WIPO Administered (first recognised IPR under):
 - Paris Convention for the Protection of Industrial Property 1883 (Patents, Industrial Designs)
 - Berne Convention for the Protection of Literary and Artistic Works 1886 (Copyrights)
- WTO - TRIPS Agreement:
 - Ensures adequate standard of protection
 - Argues for incentives for technology transfer to developing countries
- Budapest Treaty 1977:
 - International recognition of the deposit of micro-organisms for the purposes of patent procedure
- Marrakesh VIP Treaty 2016:
 - Facilitate access to published works by visually impaired persons and persons with print disabilities
- IPR also outlined in Article 27 (Universal Declaration of Human Rights)



INDIA AND IPR - INITIATIVES

- National IPR Policy 2016:
 - Motto: "Creative India; Innovative India"
 - Compliant with TRIPS Agreement
 - Brings all IPRs to single platform
- Nodal Dept - Department of Industrial Policy & Promotion (Ministry of Commerce)
- National (IP) Awareness Mission (NIPAM)
- Kalam Program for Intellectual Property Literacy and Awareness Campaign (KAPILA)

World Intellectual Property Day: 26th April

Intellectual Property	Protection	Law in India	Duration
Copyright	Expression of Ideas	Copyright Act 1957	Variable
Patent	Inventions- New Processes, Machines, etc.	Indian Patent Act 1970	20 years Generally
Trademarks	Sign to distinguish business goods or services	Trade Marks Act 1999	Can last Indefinitely
Trade Secrets	Confidential Business Information	Protected without Registration	Unlimited time
Geographical Indication (GI)	Sign used on specific geographical origin and possess qualities due to site of origin	Geographical Indications of Goods (R & P) Act, 1999	10 years (Renewable)
Industrial Design	Ornamental or aesthetic aspect of an article	Design Act, 2000	10 years



BHARATIYA SAKSHYA ACT, 2023

The Bharatiya Sakshya Act, 2023 has 170 sections, altering 24, adding two, and repealing six of 167 sections of the Indian Evidence Act 1872.

Retained Provisions

- Parties involved in a legal proceeding can only present admissible evidence
- Court accepts proven facts if evidence supports reasonable action in the given circumstances
- Police confessions generally inadmissible unless recorded by a Magistrate

Key Issues

- Electronic Records:**
 - Concerns regarding tampering of electronic records during the search, seizure and investigation process
 - Usually, Electronic records must be authenticated by a certificate to be admissible as documents
 - The Act classifies electronic evidence as documents (which may not need certification), creating a contradiction
- Exclusion of Suggestion of SC and Law Commission**
 - Concerns about duress and torture as Act kept a rule allowing information from someone in police custody to be used if it's directly related to a discovered fact
 - Exclusion of the presumption of police responsibility for injuries to someone in custody

Key Changes

- Electronic records hold equivalent legal status to traditional paper documents
- Electronic records encompassing data stored in memory and communication devices
- Allows oral evidence to be given electronically
- Electronic records are categorised as secondary evidence
- A joint trial means trying more than one person for the same crime
- A trial of multiple persons, where an accused has not responded to an arrest warrant, will be treated as a joint trial



India Maldives Relations

Why in News?

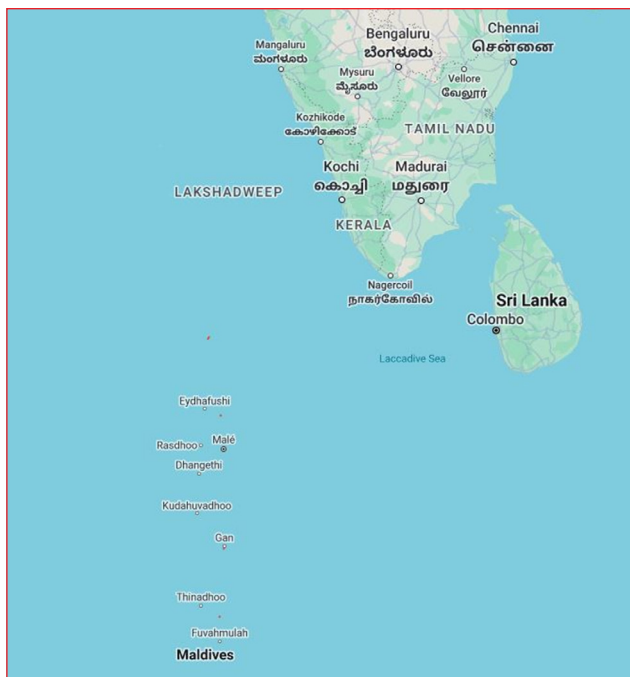
The **Maldives** has recently found itself in the **midst of diplomatic turmoil**, raising questions about its relations with India through **undiplomatic remarks, military positioning, and the scrapping of crucial agreements.**

Note:

- Maldives has also signed **new deals with China**, further complicating the geopolitical landscape.

What are the Major Points Related to India and Maldives Relations?

- **Historical Ties:** The diplomatic and political relationship between India and the Maldives dates back to **1965 when the British relinquished control of the islands**.
 - Since the democratic transition in 2008, India has invested years in building deep relationships with various stakeholders in the Maldives, including political, military, business, and civil society figures.



- **Maldives' Significance for India:**
 - **Strategic Location:** Located south of India, the Maldives holds immense strategic importance in the **Indian Ocean**, acting as a gateway to the Arabian Sea and beyond.
 - This allows India to **monitor maritime traffic and enhance regional security**.
 - **Cultural Link:** India and Maldives share a deep cultural and historical connection dating back centuries.
 - Until the first half of the 12th century, Buddhism was the principal religion in the Maldivian islands.

- There is an inscription of **Vajrayana Buddhism**, that had existed in the Maldives in ancient times.

- **Regional Stability:** A stable and prosperous Maldives aligns with India's **"Neighbourhood First" policy**, promoting peace and security in the Indian Ocean region.

INDIANS TRAVELLING TO THE MALDIVES

	Tourist	Share*
2023	2,06,026	11.18%
2022	2,41,382	14.41%
2021	2,91,787	22.07%
2020	62,960	11.33%
2019	1,66,030	9.75%
2018	90,474	6.10%

Source: Ministry of Tourism, Republic of Maldives
* share of total arrivals

- **India's Significance for Maldives:**
 - **Essential Supplies:** India is a crucial supplier of everyday essentials, including **rice, spices, fruits, vegetables, and medicines**.
 - India also aids in building Maldivian infrastructure by providing materials like **cement and rock boulders**.
 - **Education:** India serves as the primary education provider for Maldivian students who pursue **higher education in Indian institutions**, including scholarships for deserving students.

Note:

- **Disaster Assistance:** India has been a consistent source of aid during crises, such as **tsunamis and drinking water shortages**.
 - The provision of essential items and support during the Covid-19 pandemic showcases India's role as a reliable partner.
- **Security Provider:** India has a history of providing security assistance, intervening during a **coup attempt in 1988** through **Operation Cactus** and conducting joint naval exercises for the protection of the Maldives.
 - Joint Exercises include- **"Ekuverin", "Dosti" and "Ekatha"**.
- **India's Dominance in Maldives Tourism:** Indian tourists have become the leading source market for the Maldives since the Covid-19 pandemic. In 2023, **they accounted for a significant 11.2% of total tourist arrivals**, amounting to 18.42 lakh visitors.

Note: Eight Degree Channel separates Indian Minicoy (part of Lakshadweep Islands) from that of Maldives.

What are the Major Challenges Related to India Maldives Relations?

- **India-Out Campaign:** In recent years, Maldivian politics has witnessed a campaign centered on an **"India Out" platform**, branding Indian presence as a threat to Maldivian sovereignty.
 - Key campaign points include the demand for the withdrawal of Indian military personnel.
 - Current Maldives' President has set a deadline of 15th March, 2024, for the withdrawal of Indian troops.
- **Tourism Strain:** The tourism scenario in the Maldives has gained significant focus due to a diplomatic dispute arising from **disparaging comments directed at the Indian Prime Minister** after his promotional visit to the Lakshadweep islands.
 - Consequently, a **boycott Maldives** trend has been floating social media as a response to the controversy.
- **China's Rising Influence in Maldives:** Chinese is becoming increasingly visible in the Maldives. The Maldives' proximity to key shipping lanes and India makes it **strategically important for China**, potentially fueling its interest in deeper engagement.

- It has caused unease in India and could lead to a regional geopolitical contest.

What are the Key Takeaways From Recent China-Maldives Deals?

➤ Elevation of Bilateral Ties:

- **China and Maldives** announced the **elevation of their countries' ties to a Comprehensive Strategic Cooperative Partnership**, signifying the deepening of their relationship.

➤ Key Agreements:

- **Belt and Road Initiative:** The nations will jointly **accelerate the formulation of the Cooperation Plan on the Belt and Road Initiative**, fostering connectivity and infrastructure development.
 - **Tourism Cooperation:** Both countries pledged to **strengthen collaboration in the tourism sector**, recognizing its significance to the Maldives' economy.
 - **Disaster Risk Reduction:** The agreements encompass cooperation in disaster risk reduction, emphasizing joint efforts to address and mitigate the impact of natural disasters.
 - **Blue Economy:** They expressed their commitment to advancing cooperation in the **blue economy**, focusing on sustainable use of ocean resources.
 - **Digital Economy:** Efforts to strengthen investments in the digital economy were underscored.
- ##### ➤ Economic Assistance:
- China has extended support to the Maldives by providing grant assistance, although the specific amount remains undisclosed.
 - The agreements also highlight the importance of China-Maldives trade, with bilateral trade in 2022 totaling USD 451.29 million.

Shimla

Development Plan 2041

Why in News?

Recently, the Supreme Court has approved the **Shimla Development Plan 2041** that is aimed at **regulating construction activities** in Himachal Pradesh's capital city, terming it **Sustainable**.

Note:

What is the Shimla Development Plan 2041?

➤ About:

- The draft Development Plan for the Shimla Planning Area 2041 was published in February 2022.
- The development plan has been prepared by the **Town and Country Planning Department of Himachal Pradesh under the [AMRUT \(Atal Mission for Rejuvenation and Urban Transformation\)](#)** sub-scheme of the Government of India.
 - The plan is **GIS (Geographic Information System)-based**. It covers Shimla [Municipal Corporation](#) and its adjoining areas under the provisions of the **Himachal Pradesh Town and Country Planning Act, 1977**.
- The plan states that “town planning does not come under the purview of NGT”.

➤ Background of Legal Battles:

- The initial approval for the plan was granted by the previous state government in February 2022.
- However, the [National Green Tribunal \(NGT\)](#) intervened and issued stay orders in May 2022, terming the **plan illegal and in conflict with earlier orders** passed in 2017.
 - The NGT’s 2017 verdict had **prohibited construction on buildings above two floors** and the attic floor in the Shimla planning area.
 - The NGT found the scheme violated **the ban by allowing more floors** and new constructions in restricted areas. The NGT warned of **damage to law, environment and public safety** if the state continued.
- The state government appealed to the Supreme Court, and in May 2023, the Supreme Court directed the **government to address objections to the draft development plan** and issue a final plan within six weeks.

What is the Supreme Court’s Ruling?

- In January, 2024, the SC gave its approval to the Shimla Development Plan 2041, setting aside **the previous orders of the NGT**, stating that it was beyond the jurisdiction of the tribunal to direct the state government on **how to formulate the development plan**.

- The court mentioned that the **NGT cannot dictate the state government’s formulation** of the plan but can scrutinize the plan on its merits.
- The court acknowledged **that the 2041 development plan appears to be balanced** and sustainable, but it emphasized that **parties are still open to challenging specific aspects** of the plan on their merits.

What is the National Green Tribunal (NGT)?

- It is a specialized body set up under the **National Green Tribunal Act (2010)** for **effective and expeditious disposal** of cases relating to environmental protection and conservation of forests and other natural resources.
- With the **establishment of the NGT**, India became the **third country in the world** to set up a specialized environmental tribunal, only **after Australia and New Zealand**, and the first developing country to do so.
- The **NGT Act provided a specialized role** to the tribunal to act on issues where a dispute arose under seven specified laws (**mentioned in Schedule I of the Act**): The Water Act 1974, The Water Cess Act 1977, The Forest Conservation Act 1980, Air Act 1981, **Environment Protection Act 1986**, Public Liability Insurance Act 1991 and the **Biological Diversity Act 2002**.
- NGT is mandated to make disposal of applications or appeals finally within 6 months of filing the same.
- The NGT has five places of sittings, New Delhi is the Principal place of sitting and Bhopal, Pune, Kolkata and Chennai are the other four.
- The **Tribunal is headed by the Chairperson** who sits in the **Principal Bench** and has at least ten but not more than twenty judicial members and at least ten but not more than twenty expert members.
- Decisions of the Tribunal are binding. The **Tribunal has powers to review its own decisions**. If this fails, the decision can be challenged before the Supreme Court within ninety days.

What is AMRUT?

- **Launch:** June 2015
- **Concerned Ministry:** Ministry of Housing and Urban Affairs
- **Purpose:**
 - To ensure that **every household has access to a tap with the assured supply** of water and a sewerage connection.

Note:

- The Priority zone of the Mission is water supply followed by sewerage.
- To increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks).
- To reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).
- **Components:**
 - Capacity building, reform implementation, water supply, sewerage and septage management, storm water drainage, urban transport and development of green spaces and parks.
 - The reforms aim at improving delivery of citizen services, bringing down the cost of delivery, improving financial health, augmenting resources and enhancing transparency. It also includes replacement of street lights with LED lights.
- **State Annual Action Plan (SAAP):**
 - AMRUT has made states equal partners in planning and implementation of projects by approval of SAAP once a year by MoHUA and states have to give project sanctions and approval at their end, **therefore actualisation of [cooperative federalism](#)**.
- **Supervision:**
 - An Apex Committee (AC), chaired by the Secretary, MoHUA and comprising representatives of related Ministries and organisations supervises the Mission.

Reforming Organ Transplantation

Why in News?

- Recently, the Delhi [High Court](#) has recommended an **optimal timeframe of 6-8 weeks for completing organ transplant processes involving living donors**.
- High Court directed the government to establish specific timelines for all stages of organ donation applications in accordance with [The Transplantation of Human Organs and Tissues \(THOT \) Act, 1994](#), and [Transplantation of Human Organs and Tissues Rules, 2014 \(THOT Rules\)](#).

What Does the THOT Act, 1994 Say?

- **About:**
 - The law governs the transplantation of human organs and tissues in India, **including the donation of organs after death**.
 - It lays down regulations governing healthcare providers and hospitals, and stipulates penalties for violations.
- **Organ Donors and Recipients:**
 - A transplant can be **either from a pool of organs of deceased persons donated by their relatives or from a living person** who is known to the recipient.
 - In most cases, **the Act allows living donations from close relatives** such as parents, siblings, children, spouses, grandparents, and grandchildren.
- **Donations From Distant Relatives and Foreigners:**
 - **Altruistic donations from distant relatives**, in-laws, or long-time friends are allowed **after additional scrutiny** to ensure there is no financial exchange.
 - Living donations from close relatives **involving Indians or foreigners** must be accompanied by documents establishing their identities, family trees, and pictures that prove the donor-recipient relationship.
 - Donors and recipients are also interviewed.
- **Donations from Unrelated Persons:**
 - Donations from unrelated persons **require documents and photographic evidence** to prove their long-term association or friendship with the recipient.
 - These are **examined by an external committee** to prevent illegal dealings.
- **Fines and Punishments:**
 - Offering to pay for organs or supplying them for payment; initiating, negotiating, or advertising such arrangements; looking for persons to supply organs; and abetting in preparing false documents can **attract a jail term up to 10 years and a fine up to Rs 1 crore**.
- **Formation of NOTTO:**
 - **National Organ and Tissue Transplant Organization (NOTTO)** is a National level

Note:

organization set up under Directorate General of Health Services, Ministry of Health and Family.

- This has been mandated as per the **Transplantation of Human Organs (Amendment) Act 2011**.
- National Network division of NOTTO would function as apex centre for All India activities of coordination and **networking for procurement and distribution of Organs and Tissues** and registry of Organs and Tissues Donation and Transplantation in the country.

What Do the THOT Rules, 2014 Say?

- **Authorisation Committee:**
 - Rule 7 of the 2014 Rules provides for the **constitution of the Authorisation Committee** and the nature of enquiry and evaluation conducted by it.
 - Rule 7(3) says the **Committee must ensure there is no commercial transaction involved** in cases where the donor and recipient are not near relatives.
 - Rule 7(5) says that if a recipient is in a critical condition and needs transplantation within a week, the hospital can be approached for an expedited evaluation.
- **Living Donor Transplantations:**
 - For living donor transplantations, **Rule 10 describes the application process**, which requires joint applications by the donor and recipient.
 - **Rule 21 requires the Committee to personally interview** applicants and determine their eligibility to donate.

What is the Authorisation Committee?

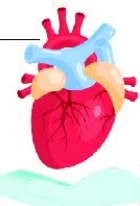
- **About:**
 - The Authorisation Committee **oversees and approves organ transplant procedures** involving donors and recipients who are not near relatives.
 - This approval is crucial, **especially in cases where organs are donated for reasons of affection, attachment, or other special circumstances**, to ensure ethical compliance and prevent illegal practices.
- **Composition:**
 - **Section 9(4)** of the Act, 1994 says the “composition of the Authorisation Committee shall be such as

may be prescribed by the Central Government from time to time”.

- **State government and Union Territories** “shall constitute one or more Authorisation Committee consisting of such members as may be nominated by the State Government and the Union Territories.”
- **Powers:**
 - Under Section 9(5), the Committee is **expected to conduct a thorough inquiry** while reviewing applications for transplant approval.
 - A crucial aspect of the inquiry is to **verify the authenticity of the donor and recipient**, and ensure that the donation is not driven by commercial motives.
- **Role of Parliament:**
 - Section 24 of the Act allows the Centre to make rules, **subject to parliamentary approval**, for carrying out the various purposes of the Act.
 - These can relate to the **manner and conditions under which a donor may authorise** the removal of their organs before death.
 - Also **how a brain-stem death is to be certified**, or the steps to be taken to preserve human organs removed from anyone, etc.

OVER 58,000 TRANSPLANTS IN LAST 5 YEARS

Year	Total transplants	Living donor transplants	Deceased donor transplants
2018	10,340	78.19%	21.81%
2019	12,666	83.72%	16.28%
2020	7,443	86.75%	13.25%
2021	12,259	86.78%	13.22%
2022	16,041	83.15%	16.85%



Highest number of living donor transplants*

Delhi	3,422
Tamil Nadu	1,690
Kerala	1,423
Maharashtra	1,222
West Bengal	1,069

Highest number of deceased donor transplants*

Tamil Nadu	555
Telangana	524
Karnataka	478
Gujarat	398
Maharashtra	303

Source: NOTTO

*In 2022

What did the High Court Decide?

- **Constitution of Authorisation Committees**
 - The Act mandates state governments/Union Territories to form one or more authorisation committees, consisting of nominated members.
 - High Court **underscores the necessity of it** to maintain the integrity and effectiveness of organ transplantation protocols.

Note:

➤ **Timelines for Living Donor Transplantation Application:**

- The high court stipulates that the timeline for processing living donor transplantation applications **should not exceed a maximum of 10 days** from the date of application.
- **Within a maximum of 14 days**, the court **mandates** the verification of documents concerning the domicile status of the recipient and donor.
- Any opportunity given to the donor or recipient to complete required documentation **must be communicated within the prescribed timeline** under the Rules.

➤ **Scheduled Interviews and Family Meetings**

- **After four to six weeks of receiving the application**, interviews should be scheduled within two weeks.
- The committee should conduct the interview, facilitate a family meeting, and convey the decision within this timeframe.
 - The court emphasizes that the entire process, **from submission to decision, should ideally not exceed six to eight weeks.**

➤ **Recommendations to Government:**

- The high court calls for the judgment to be presented to the Secretary, Ministry of Health and Family Welfare, ensuring the prescription of timelines for all steps in the consideration of organ donation applications, **after consulting relevant stakeholders.**

Pradhan Mantri Anusuchit Jaati Abhuyday Yojana

Why in News?

Recently, the **Ministry of Social Justice and Empowerment** highlighted the [Pradhan Mantri Anusuchit Jaati Abhuyday Yojana \(PM-AJAY\)](#) is a comprehensive scheme amalgamating three **Centrally Sponsored Schemes**, including [Pradhan Mantri Adarsh Gram Yojana \(PMAGY\)](#), [Special Central Assistance to Scheduled Castes Sub Plan \(SCA to SCSP\)](#), and [Babu Jagjivan Ram Chhatrawas Yojana \(BJRCY\)](#).

- This initiative, launched in the **fiscal year 2021-22**, aims to **uplift Scheduled Caste (SC) communities** by generating employment opportunities through [skill development](#), income-generating schemes, and various initiatives.

What are the Key Highlights of the PM-AJAY?

➤ **Objectives:**

- Reduce poverty in the SC communities by the **generation of additional employment opportunities** through skill development, income-generating schemes and other initiatives.
- To **increase literacy and encourage enrolment of SCs** in schools and higher educational institutions by providing adequate residential facilities in quality institutions, in the aspirational districts/SC majority blocks and elsewhere in India.

➤ **Components of PM-AJAY:**

- **Development of SC-Dominated Villages into an "AdarshGram"**: This component was formerly known as **Pradhan Mantri AdarshGram Yojana (PMAGY)** and the objective of this component is to ensure integrated development of SC-majority villages.
 - Provide **adequate infrastructure** for socio-economic development needs.
 - Target improvement in identified socio-economic indicators (Monitorable indicators).
 - ◆ The **monitorable indicators** are distributed across 10 domains. These domains encompass crucial aspects such as [Drinking water and Sanitation](#), Education, Health and Nutrition, Social Security, Rural Roads and Housing, Electricity and Clean fuel, Agricultural Practices, Financial Inclusion, [Digitization](#), and Livelihood and Skill Development.
- **Eliminate disparity** between SC and non-SC population.
- Ensure completion of education up to at least the secondary level for all SC children.
- Address factors leading to [maternal and infant mortality](#).
- Eliminate the incidence of [malnutrition](#), especially among children and women.

Note:

- **Achievements:**
 - ◆ Under the Adarsh Gram Component, a total of **1834 villages have been Declared as Adarsh Gram** during the current FY2023-24.
- 'Grants-in-aid' for District/State-level Projects:
 - This component was formerly known as **Special Central Assistance to Scheduled Caste Sub Plan**.
 - The scheme aims at the socio-economic development of SCs through grants for the following types of projects:
 - **Comprehensive Livelihood Projects:** Such projects which create an **entire eco-system for producing sustainable income**, or social advancement to the SCs only shall be taken up. The projects should preferably be a combination of two or more of the following:
 - ◆ **Skill Development:** Skilling courses as per norms of the **Ministry of Skill Development and Entrepreneurship**. Related facilities and infrastructure for conducting Skill Development Activities conducted by the Government. Skill Development Institutions can also be funded.
 - ◆ **Grants for Creation/Acquisition of Assets for Beneficiaries/Households:** No standalone individual asset distribution is allowed under the scheme. **If the project involves acquiring or creating assets crucial for livelihoods**, beneficiaries can receive financial assistance for loans, up to Rs. 50,000 or 50% of the asset cost, whichever is less, per beneficiary/household.
 - ◆ **Infrastructure development:** Development of infrastructure related to the project and also **Hostels and residential schools**.
 - **Special Provisions:**
 - ◆ Upto 15% of the total Grants exclusively on viable income-generating economic development schemes/programmes for SC Women.
 - ◆ Upto 30% of the total Grants utilized for infrastructure development
 - ◆ Atleast 10% of the total funds for skill development
 - ◆ **Promote SC Women Cooperatives** engaged in the production and marketing of consumer goods and services.
- **Achievements:**
 - ◆ During the FY 2023-24, the perspective plan for 17 states has been approved under the Grant-in-aid component.
- **Construction of Hostels in Higher Educational Institutions:**
 - It enables and encourages SC students to attain quality education and **reduce dropout rate**, Implemented through the State Governments, UT Administrations and central and State Universities/Institutions
 - The cost norms for construction/expansion of hostels will be as under:
 - ◆ **North Eastern Region:** Rs.3.50 lakh per inmate.
 - ◆ **Northern Himalayan Regions:** Rs.3.25 lakh per inmate.
 - ◆ **Gangetic Plains & Lower Himalayan Region:** Rs3.00 lakh per inmate.
 - 100% Central assistance for hostels for boys 'hostels as well— earlier it was cost sharing with the State.
 - **Achievements:** During the FY 2023-24, a total of 15 new hostels have been sanctioned.

Selection of Tableaux on the Republic Day

Why in News?

Recently, the Ministry of Defence has proposed a rollover plan for the States and Union Territories (UTs) to showcase their tableaux in the [Republic Day Parade](#).

- It comes after a few states' governments have criticized the central government for not allowing it to be a part of the 2024 Republic Day Parade Tableaux.

Which States/Union Territories have been Selected for the Republic Day Parade?

- **16 States and UTs have been** selected for the 2024 Republic Day Parade, Andhra Pradesh, Arunachal

Note:

Pradesh, Chhattisgarh, Gujarat, Haryana, Jharkhand, Ladakh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Rajasthan, Tamil Nadu, Telangana and Uttar Pradesh.

- The MoD has included a provision for **States and Union Territories that are not selected** for the Republic Day parade to **showcase their tableaux at the [Bharat Parv](#)**.
 - The Government of India organizes the **six-day mega event “Bharat Parv”** from **January 26-31**, as part of the Republic Day celebrations. This alternative event takes place at the historic [Red Fort](#).
- The Government has finalized a **rotational plan to ensure that every State and Union Territory gets an opportunity** to present their tableaux at the Republic Day parade within a **three-year cycle (2024-2026)**.
 - The rotational system, agreed upon by 28 States, intends to provide fair **opportunities to all regions**, mitigating accusations of political bias and **fostering a more inclusive celebration**.

What is the Selection Process of Tableaux?

- **Ministry Responsible for Conducting Parade:**
 - The Ministry of Defence (MoD) is responsible for **conducting the parade and coordinating arrangements** with States and other agencies.
 - Preparations for the ceremony, which has become synonymous with national pride and patriotism, **begin months in advance**. This process includes the **selection and shortlisting** of tableaux.
 - The Ministry of Culture **collaborates with the MoD** in the selection process, given the **cultural and artistic nature of the tableaux**, supporting in the evaluation and promotion of cultural displays.
- **Selection and Shortlisting:**
 - There is a standard procedure for selecting parade participants. Every year, months ahead of the event, the MoD invites **States, UTs and departments to submit sketches or designs** for tableaux on a broad theme.
 - For instance, the **theme of 2024 is ‘Viksit Bharat’** (Developed India) and **‘Bharat-Loktantra ki Matraka’** (India-Mother of Democracy).

- The sketch or design must be **simple, colourful, easy to comprehend and avoid statistical data** and unnecessary details.
- Additionally, the Ministry shares basic guidelines that must be included in the proposal like the use of eco-friendly material and technology.
- Writing or use of logos on the tableaux is **not allowed except for the name of State/UT presenting**, which can be in Hindi in the front, English at the back and in the regional language on the sides of the tableau.

➤ **Committee of Experts:**

- The MoD constitutes a **committee of experts** from the fields of **arts, culture, painting, sculpture, music, architecture, and choreography**, among others, to screen proposals.
 - The expert committee, consisting of renowned artists recommended by [IGNCA \(Indira Gandhi National Centre for the Arts\)](#) and [ICCR \(Indian Council for Cultural Relations\)](#), selected the tableaux of 16 States and UTs for the year 2024 parade after **four rounds of meetings**.
- **In the first phase**, the panel carries out a basic evaluation and suggests modifications in the sketch or design.
- Once the designs are approved post any modifications, participants present a **three-dimensional model of the proposed tableau** to the panel.
- These are **examined by experts for final selection**. Only shortlisted candidates are informed about the next round.

What is Republic Day?

- India became Independent **on 15th August, 1947** which is celebrated as Independence Day.
- Republic Day is celebrated as the **day when India acquired a written Constitution** and became an independent republic.
 - The term ‘**Republic**’ indicates that **India has an elected head called the President**.
- The Constitution of India was adopted by the Constituent Assembly on 26th November 1949 and came into effect on 26th January 1950.
 - **26th November is observed as [Constitution Day](#)**.

Note:

- 26th January was **chosen to be observed as the Republic Day** because it was on this day in 1930 when the Indian National Congress (INC) declared **Purna Swaraj or Indian independence from the British regime**.
 - During INC's Lahore session of December 1929, Purna Swaraj resolution was passed. The **session was presided over by Jawaharlal Nehru**.

Website Blocking by the Government

Why in News?

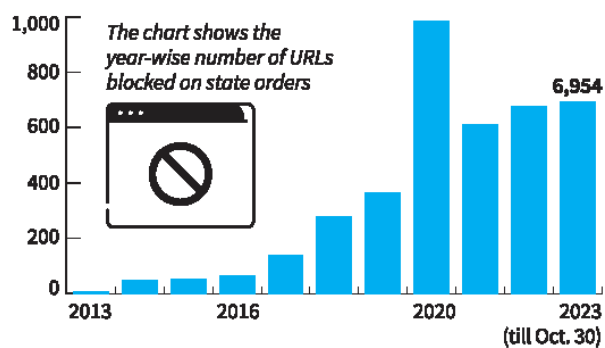
Website blocking orders have grown over a **100-fold from 2013 to October 2023**, shows a reply to a [Right to Information \(RTI\)](#) application.

What are the Trends of the Website Blocking Orders in India?

- The Union government issued 62 website blocking orders in 2013, and in 2023, 6,954 till October.
- These orders are issued under **Section 69A of the Information Technology (IT) Act, 2000**.
- The increase in website blocking orders has **occurred alongside a significant rise in internet use**, especially since the substantial reduction in mobile data prices in 2016.
- Most of the web pages blocked are likely to be individual posts, videos or profiles.
- Location of web/application servers are traced on immediate basis as and when required or in case they are not complying with the laws of the land or they are required to be blocked as per court orders.

Banning websites

The number of URLs blocked under Section 69A has drastically increased in the past decade, according to a recent RTI response



What is the Legal Framework within the Government to Block Websites or Online Contents?

- **Information Technology Act, 2000:**
 - In India, **the IT Act, 2000**, as amended from time to time, governs **all activities related to the use of computer resources**.
 - It covers all **'intermediaries' who play a role in the use of computer resources** and electronic records.
 - The [Information Technology \(Intermediary Guidelines and Digital Media Ethics Code\) Rules 2021](#) issued by the Ministry of Electronics and Information Technology, under IT Act 2000 regulates the content and conduct of intermediaries and digital media platforms, and have resulted in the blocking of several websites and channels that allegedly violate the rules.
- **Section 69 of the IT Act:**
 - It confers on the **Central and State governments the power to issue directions "to intercept, monitor or decrypt any information generated, transmitted, received or stored in any computer resource"**.
 - The grounds on which these powers may be exercised are:
 - In the **interest of the sovereignty or integrity of India**, defence of India, the security of the state.
 - **Friendly relations** with foreign states.
 - Public order, or for preventing incitement to the commission of any cognizable offence relating to these.
 - **For investigating** any offence.

Why the Government Blocks Websites and what are the Challenges in Blocking them?

- Government website blocking is **primarily driven by concerns related to national security**, public order, and legal regulations.
- It aims to counter threats such as [Terrorism](#), [Hate Speech](#), or illegal content.
- However, this practice encounters various challenges. Users can easily circumvent blocks using tools like **VPNs**, making enforcement difficult.

Note:

- VPN stands for “**Virtual Private Network**” and describes the opportunity to establish a protected network connection when using public networks.
- Website blocking has **become much harder due to evolutions in the encryption technologies** used by Web browsers and firms, increasingly blurring the level of visibility that Internet providers have on their users’ activity.

What are the Implications of Blocking Websites by the Government?

- **Impact on Freedom of Expression:**
 - Website blocking, especially when not transparently justified, can raise concerns about **Freedom of Expression**. It is crucial to strike a balance between protecting national interests and **safeguarding citizens’ rights** to express their opinions.
- **Impact on Information Access:**
 - Blocking websites may **hinder access to valuable information** and diverse perspectives. This can limit the **public’s ability to stay informed** about various issues and make well-rounded decisions.
 - If the government blocks websites **without due diligence**, it may unintentionally impede the **dissemination of knowledge** and hinder the public’s right to access information.
- **Economic Consequences:**
 - Blocking websites can have economic repercussions, especially if it disrupts the **operations of legitimate businesses** hosted on those platforms.
 - Businesses and entrepreneurs may face challenges if their websites are blocked, impacting not **only their revenue but also potentially stifling innovation** and economic growth.
- **Public Perception and Trust:**
 - The government’s decisions to block websites can shape public perception and trust in its ability to uphold democratic values.
 - If the public perceives website blocking as arbitrary or unjustified, it can lead to a loss of trust in government institutions, potentially impacting overall civic engagement.

Bilkis Bano Case and Remission

Why in News?

Recently, the **Supreme Court** has nullified the **Gujarat government’s decision** to grant **Remission** to 11 convicts involved in the gangrape of **Bilkis Bano** and the murder of seven of her family members during the **2002 Riots** in the state.

What is the Background of Bilkis Bano Case?

- During 2002 Gujarat riots, Bilkis Bano, a pregnant woman at the time, was **subjected to a brutal gangrape**, while seven members of her family, including her three-year-old daughter, were killed by a mob during the riots.
- Following extensive legal proceedings, the **Central Bureau of Investigation (CBI)** investigated the case.
- In 2004, SC **moved the trial from Gujarat to Mumbai after Bilkis faced death threats**; directed the central government to appoint a special public prosecutor.
- In 2008, a Mumbai court convicted 11 individuals for their involvement in the gangrape and murder, marking a significant step towards justice for Bilkis Bano.
- However, **in August 2022, the Gujarat government granted remission to these 11 convicts**, leading to their release. This decision sparked controversy and legal challenges due to concerns regarding the authority and jurisdiction responsible for granting such remissions.

What is the SC’s Ruling Nullifying Gujarat Government’s Remission Grant?

- **Lack of Authority and Concealed Facts:**
 - The Court emphasized that the **Gujarat government lacked the authority** or jurisdiction to issue the remission orders.
 - Under **Section 432 of the CrPC**, state governments do have the power to suspend or remit a sentence. But the court noted that Section 7(b) of the law clearly states that the **appropriate government is the one in whose jurisdiction the offender is sentenced**.
 - It pointed out that the **decision to grant remission should be within the domain of the state** where the convicts were sentenced, not where the crime occurred or where they were imprisoned.

Note:

➤ **Criticism of the Remission Process:**

- The Court highlighted **serious flaws in the remission process**, mentioning that the orders lacked proper consideration and were obtained through the concealment of facts, constituting fraud upon the court.

➤ **Overreach and Unlawful Exercise of Power:**

- The Court **criticized the Gujarat government's overreach**, asserting that it unlawfully exercised power that rightfully belonged to the Maharashtra government in issuing remission orders.

➤ **Directives and Rejection of Liberty Plea:**

- Rejecting the convicts' plea to **protect their liberty**, the Court directed them to surrender to jail authorities within two weeks.

What is Remission?

➤ **About:**

- Remission is the **complete ending of a sentence at a reduced point**. Remission is distinct from both furlough and parole in that it is a reduction in sentence as opposed to a break from prison life.
- In remission, **the nature of the sentence remains untouched, while the duration is reduced** i.e., the rest of the sentence need not be undergone.
- The effect of the remission is that the prisoner is given a certain date on which he shall be released and in the eyes of the law he would be a free man.
- However, in case of breach of any of the conditions of remission, it will be cancelled, and the offender has to serve the entire term for which he was originally sentenced.

➤ **Constitutional Provisions:**

- Both the President and the Governor have been vested with sovereign power of **pardon by the Constitution**.
- **Under Article 72**, the President can grant pardons, reprieves, respites or remissions of punishment or suspend, remit or commute the sentence of any person.
 - This can be done for any person convicted of any offence in all cases where:
 - ◆ The punishment or sentence is by a court-martial, in all cases where the punishment or
 - ◆ The sentence is for an offence under any law relating to the Union government's

executive power, and in all cases of death sentences.

- **Under Article 161**, a Governor can grant pardons, reprieves, respites or remissions of punishment, or suspend, remit or commute the sentence.

- This can be done for anyone convicted under any law on a matter which comes under the State's executive power.

- The scope of the pardoning power of the President under Article 72 is wider than the pardoning power of the Governor under Article 161.

➤ **Statutory Power of Remission:**

- The **Code of Criminal Procedure (CrPC)** provides for remission of prison sentences, which means the whole or a part of the sentence may be cancelled.

- Under Section 432, the 'appropriate government' may suspend or remit a sentence, in whole or in part, with or without conditions.

- Under Section 433, any sentence may be commuted to a lesser one by the appropriate government.

- This power is available to State governments so that they may order the release of prisoners before they complete their prison terms.

➤ **Landmark Cases of Remission:**

- *Laxman Naskar v. State of West Bengal (2000)*:

- In this case, SC stipulated the factors that govern the grant of remission namely:
 - ◆ Whether the offence is an individual act of crime without affecting the society at large?
 - ◆ Whether there is any chance of future recurrence of committing crime?
 - ◆ Whether the convict has lost his potentiality in committing crime?
 - ◆ Whether there is any fruitful purpose of confining this convict any more?
 - ◆ Socio-economic condition of the convict's family.

- *Epuru Sudhakar v. State of AP (2006)*:

- SC held that **judicial review** of the order of remission is available on the following grounds:
 - ◆ non-application of mind;
 - ◆ order is mala fide;

Note:

- ◆ order has been passed on extraneous or wholly irrelevant considerations;
- ◆ relevant materials kept out of consideration;
- ◆ order suffers from arbitrariness.

NOTE:

- **Pardon:** It removes both the sentence and the conviction and completely absolves the convict from all sentences, punishments, and disqualifications.
- **Commutation:** It denotes the substitution of one form of punishment with a lighter form of punishment. For example, a death sentence may be commuted to rigorous imprisonment.
- **Respite:** It denotes awarding a lesser sentence in place of one originally awarded due to some special fact, such as the physical disability of a convict or the pregnancy of a woman offender.
- **Reprieve:** It implies a stay of the execution of a sentence (especially that of death) for a temporary period. Its purpose is to enable the convict to have time to seek pardon or commutation from the President.

Concerns over Hit-and-Run Law

Why in News?

The recent protests by transporters and commercial drivers in states like Maharashtra, Chhattisgarh, West Bengal, and Punjab shed light on the contentious **Section 106 (2) of the Bharatiya Nyaya Sanhita, 2023 (BNS)**.

- This section, which stipulates **severe penalties for hit-and-run incidents**, has become a focal point of discontent among the driving community.
- The countrywide truckers' strike has been called off after the government assured that it **would consult stakeholders before implementing** a contentious law against hit-and-run.

What is the Hit-and-run Law?

- **Provisions:**
 - The hit-and-run provision is part of the **Bharatiya Nyaya Sanhita (BNS)**, which is set to replace the colonial-era **Indian Penal Code, 1860**.
 - Section 106 (2) of the BNS, 2023 **stipulates a penalty of up to 10 years in jail and a fine for**

fleeing an accident spot and failing to report the incident to a police officer or a magistrate.

- However, if the driver reports the incident immediately after the accident, they will be charged under Section 106(1) instead of Section 106(2). **Section 106(1) provides for a punishment of up to five years** for causing death by any rash or negligent act not amounting to culpable homicide.

➤ Need:

- The new law comes in the backdrop of concerning figures related to road accidents in India.
 - In **2022, India recorded over 1.68 lakh road crash fatalities**, averaging 462 deaths daily.
 - India experienced a **12% increase in road accidents** and a 9.4% rise in fatalities, while global road crash deaths decreased by 5%.
 - ◆ On average, there are 19 deaths per hour due to road accidents in India, almost one death every three and a half minutes.
 - More than half of road fatalities occurred on national and State highways, which make up less than 5% of the total road network.
 - **India, with only 1% of the world's vehicles**, contributes to about **10% of crash-related deaths** and suffers an annual economic loss of **5-7% of its GDP** due to road crashes.

➤ Principle Underlying the Law:

- The **National Crime Records Bureau** recorded **47,806 hit-and-run incidents** which resulted in the deaths of 50,815 people in 2022.
 - Offenders have a **legal duty to report road accidents to the police** or magistrate, and there are **provisions to criminalize the omission of this duty**.
- The principle underlying **Section 106 (2) of hit-and-run law** is to **deter rash and negligent driving and to punish** those who flee the scene without reporting or helping the victims.
- The law reflects the legislative intent to **enforce moral responsibility** on the offender towards the victim.
 - Drawing parallels with existing laws, such as **Section 134 of the Motor Vehicles Act, 1988**, highlights the government's commitment to ensuring a prompt and responsible response from drivers in the aftermath of accidents.

Note:

- ◆ Section 134 of the Motor Vehicles Act, 1988, **requires the driver of the vehicle to take all reasonable steps** to secure medical attention for the injured person unless it is **not practicable on account of mob fury or any other reason beyond his control**.

What are the Concerns of the Protesters?

➤ Section 106 (2) of the BNS, 2023:

- Transporters and commercial drivers are demanding the **withdrawal or amendment of Section 106 (2) of the BNS, 2023**.
- Protesters argue that the prescribed penalties, including a 10-year imprisonment and Rs. 7 lakh fine, are excessively severe.
- The widely circulated view that Section 106 (2) of the BNS stipulates imprisonment of up to 10 years and a **fine of Rs. 7 lakh for fleeing an accident spot and failing to report the incident to a police officer/magistrate is grossly incorrect**.
 - While this Section discusses a maximum punishment of 10 years and a fine, there is **no actual mention in the BNS about the fine being Rs 7 lakh**.

NOTE:

➤ Section 161 of the [Motor Vehicles \(Amendment\) Act, 2019](#), provides **compensation for victims of hit-and-run accidents**.

- The compensation for death is Rs 2 lakh and for grievous hurt, it is Rs 50,000. Unlike Section 106 (2) of BNS, the compensation in this case is not recoverable from the drivers.

➤ Challenging Conditions:

- They argue that the **penalty is excessive** and fails to consider the challenging work conditions of drivers, such as **long driving hours and difficult roads**.
- Transporters also argue that accidents may be caused by **factors beyond the driver's control**, such as **poor visibility due to fog**, and **fear of mob violence against drivers** if they stop to assist at accident sites.
 - The fear of violence further complicates the decision-making process for drivers in the aftermath of accidents.

➤ Perceived Unfair Blame:

- Drivers argue that they are **often unfairly blamed for accidents**, irrespective of the actual circumstances.
- The legislation's punitive approach may exacerbate this perception of unfairness and contribute to a negative impact on the transport industry.

➤ Possible Misuse by Authorities:

- They are concerned that the law may be **abused by law enforcement agencies** and that the harsh penalties could hurt the transport industry as a whole.

➤ Unfair Treatment and Limited Categorization:

- The current legislation raises concerns about the **fairness of penalties** imposed on truck drivers and individual vehicle drivers,
 - For instance, an exception has been made under **106 (1) of the BNS for doctors** in the event of rash or negligent acts, where the **punishment will be up to two years with a fine**.
- This limited categorisation is problematic and is against the **principles of equality**, as the liability of a wide variety of people working in other sectors also needs to be moderated.

➤ Lack of Differentiation:

- Section 106(2) lacks differentiation between **rash and negligent driving**, which are two distinct types of offences with different degrees of liability.
 - They also contend that the **section does not consider the contributory factors in negligent acts**, such as the behaviour of commuters, road conditions, lighting on the road, and other similar factors, which may affect the driver's responsibility.
- Applying one clause to all situations may **unfairly prejudice drivers** in different circumstances.

Concerns Over Existing Examination System

Why in News?

In the ever-evolving landscape of education, the **examination system** plays a pivotal role in shaping

Note:

learning outcomes and determining the credibility of academic certifications.

- However, **recurrent scandals, inconsistent standards,** and a pervasive focus on rote memorization have raised concerns about the **effectiveness of the existing examination system in India.**

What are the Concerns Regarding the Existing Examination System in India?

- **Credibility and Educational Standards:**
 - Scandals during examination seasons **impact the credibility of examination boards.**
 - Lack of credibility affects educational standards as teaching aligns with examination patterns, often promoting rote learning.
- **Short-Term Memorization:**
 - Midterms, semester exams, and unit tests provide a lighter schedule but encourage **short-term memorization.**
 - Students often study for marks, forgetting the learned content soon after exams.
 - Education should focus on **long-term learning,** internalizing knowledge rather than short-term memorization.
 - The system needs to be practical, testing students' abilities effectively.
- **Assessment Quality:**
 - The validity and comparability of the summative examination across **institutions are meaningless today.** There are complaints that examination boards **test only memory, leading to students being coached to memorize** answers rather than develop higher-order thinking.
 - Additionally, question papers often have grave flaws such as language errors, irrelevant questions, and errors in conceptualization.
 - The examination system is **prone to cheating and malpractices,** such as **copying, leaking, impersonation,** etc.
 - This undermines the credibility and quality of the assessment and the education system.
- **Decentralised System:**
 - India has numerous higher education examination systems with **diversified modes of assessment,** including 1,100 universities, 50,000 affiliated colleges, and 700 autonomous colleges.

- The total student enrolment exceeds 40.15 million, showcasing the vastness of the higher education sector.
- Additionally, there are 60 school boards for secondary and higher secondary education, certifying over 15 million students annually.
- Secrecy and standardization are considered hallmarks of good examination boards, but **secrecy without proper checks leads to scandals.**
- **Uniformity in examinations,** while seeking consistency, can **hinder experimentation in assessment and curriculum.**
 - This poses a notable risk to the credibility of education. Balancing **standardization with room for innovation** is essential for a dynamic and effective education system.

➤ **Impact on Employability:**

- Employers rely on their **assessments rather than institutional certifications** for evaluating candidates.
 - The emphasis on higher order learning is crucial for employability, yet institutional examinations often fall short.
 - This in turn has created a **coaching market** for competitive examinations and skilling.

What Steps Can Be Taken to Address the Challenges in the Examination System?

➤ **Ensuring Learning Outcomes:**

- Specify **minimum standards of learning outcomes** to provide a clear benchmark.
- Encourage academics across disciplines to contribute to curriculum design, pedagogy, and assessment systems.

➤ **Subject and Skill-Specific Assessments:**

- Incorporate subject-specific and skill-specific assessment processes to ensure a comprehensive evaluation.
 - Expect university degrees and school board **certificates to truly reflect the learning achievements of students.**
 - Advocate for comprehensive and challenging assessments that distinguish students based on their academic attainments.
- Emphasize continuous assessment throughout the course, with teacher involvement and student participation.

Note:

- Make summative assessment and evaluation transparent by implementing checks and balances.
- **Leverage Technology for Credibility:**
 - Utilize technology in assessments to enhance credibility, standardizing question papers and evaluations.
 - Explore **market-available software solutions** for both centralized and distributed assessment systems.
- **External Audit of Assessment Systems:**
 - Conduct regular external audits of assessment systems in universities and school boards.
 - Establish benchmark principles and standards for **audit reports, ensuring reliability and consistency.**
 - Grade examination boards based on transparency, reliability, and consistency, reflecting these aspects in audit reports.
- **Transparency Measures for Students:**
 - Implement measures for transparency, allowing students to access the evaluation process and address grievances.

Initiatives Related to Education

- [Right To Education Act of 2009.](#)
- [New Education Policy 2020.](#)
- [Sarva Shiksha Abhiyan \(SSA\).](#)
- [Rashtriya Madhyamik Shiksha Abhiyan.](#)
- [Rashtriya Uchhatar Shiksha Abhiyan \(RUSA\).](#)
- [National Testing Agency \(NTA\)](#)
- [National Curriculum Framework.](#)

Supreme Court Legal Services Committee

Why in News?

Recently, the Supreme Court judge Justice BR Gavai has been nominated as the Chairman of the **Supreme Court Legal Services Committee (SCLSC).**

What is the Supreme Court Legal Services Committee?

- **Background:**
 - The idea of a legal aid programme **was earlier floated in the 1950s**, it was in 1980 that a

committee at the national level was established under the chairmanship of then **SC judge Justice PN Bhagwati.**

What is the Legal Services Authority Act, 1987?

- **About:**
 - In 1987, the Legal Services Authorities Act was enacted to **give a statutory base to legal aid programmes.** It aims to provide free and competent legal services to eligible groups, including women, **children, SC (Scheduled Castes)/ ST (Scheduled Tribes) and EWS (Economically Weaker Section) categories,** industrial workers, disabled persons, and others.
- **NALSA:**
 - Under the Act, NALSA was constituted in **1995 to monitor and evaluate the implementation of legal aid programmes** and to lay down policies for making legal services available.
 - A nationwide network has been envisaged under the Act for providing legal aid and assistance.
 - It also disburses funds and **grants to State Legal Services Authorities** and NGOs for implementing legal aid schemes and programmes.
- **State Legal Services Authorities:**
 - Subsequently, in every state, **State Legal Services Authorities (SLSA)** were established to implement NALSA's policies and directions, give free legal services to people, and conduct Lok Adalats.
 - An SLSA is **headed by the Chief Justice of the respective High Court** and includes the senior HC judge as its Executive Chairman. While the HC Chief Justice is the **patron-in-chief of the SLSA**, the CJI is the patron-in-chief of NALSA.
- **District Legal Services Authorities:**
 - Similarly, District Legal Services Authorities (DLSAs) and Taluk Legal Services Committees were **established in districts and most taluks.** Situated in the District Courts Complex in every district, each DLSA is chaired by the District Judge of the respective district.
 - The Taluka or Sub-Divisional Legal Services Committees are headed by a senior civil judge. Collectively, **these bodies organise legal awareness camps,** provide free legal services, and supply and obtain certified order copies and **other legal documents,** among other functions.

Note:

- The Committee for Implementing **Legal Aid Schemes** started monitoring legal aid activities throughout India.
- **About:**
 - The SCLSC was constituted under **Section 3A of the Legal Services Authorities Act, 1987**, to provide “free and competent legal services to the weaker sections of society”, in cases **falling under the top court’s jurisdiction**.
 - Section 3A of the Act states that the **National Legal Services Authority (NALSA)** shall constitute the committee.
 - It consists of a **sitting SC judge**, who is the chairman, along with other members possessing the experience and qualifications prescribed by the Centre. Both the chairman and other members will be nominated by the **CJI (Chief Justice of India)**.
 - Further, the CJI can appoint the Secretary to the Committee.
- **Members:**
 - The SCLSC consists of a **chairperson and nine members nominated by the CJI**. The Committee, in turn, can appoint officers and other employees as prescribed by the Centre, in consultation with the CJI.
 - Besides this, Rule 10 of the NALSA Rules, 1995, entails the numbers, experience, and qualifications of the SCLSC members.
 - Under Section 27 of the 1987 Act, the Centre is empowered to make rules in consultation with the CJI, by notification, to carry out the provisions of the Act.

What are the Constitutional Provisions that Mandate the Provision of Legal Services in India?

- The need for providing legal services has been underlined in many provisions of the Indian Constitution. **Article 39A** states, the **State shall secure that the operation of the legal system promotes justice, on a basis of equal opportunity**, and shall, in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.

- Moreover, **Articles 14 (right to equality) and 22(1)** (rights to be informed of grounds for arrest) also make it obligatory for the State to ensure equality before the law and a legal system that promotes justice based on equal opportunity.

Outlook of OTT in 2024

Why in News?

The OTT market in India is currently battling the dilemma **between growth and profitability** in a price-sensitive market. In 2023, the **Over-The-Top (OTT) Market** in India experienced significant disruptions and challenges that shaped its trajectory.

What is Over-The-Top?

- **About:**
 - OTT stands for “**Over-The-Top**,” a term used to **describe content delivery** over the internet directly to viewers, bypassing traditional broadcast, cable, or satellite TV platforms.
 - The OTT market **refers to the industry that provides streaming media services**, delivering movies, TV shows, music, and other content to users via the internet.
 - **Examples:** Netflix, Disney+, Hulu, Amazon Prime Video, Peacock, CuriosityStream, Pluto TV, and so many more.
- **Benefits of OTT :**
 - **Flexibility and Convenience:**
 - Users can access content anytime, anywhere, across multiple devices, providing unparalleled convenience.
 - **Diverse Content:**
 - OTT platforms offer a wide array of content, including movies, TV shows, documentaries, and original productions, catering to varied tastes and interests.
 - **Personalization:**
 - These platforms use algorithms to recommend content based on viewing habits, enhancing user experience and content discovery.
 - **Cost-Effectiveness:**
 - Compared to traditional cable or satellite TV subscriptions, OTT services often offer more affordable pricing options, including free content with ad support or subscription tiers.

Note:

- **Global Accessibility:**
 - OTT platforms transcend geographical barriers, allowing users worldwide to access content regardless of their location.
- **Limitations of OTT :**
 - **Internet Dependence:**
 - Reliable high-speed internet is crucial for seamless streaming. In areas with poor connectivity, accessing content can be frustrating.
 - **Content Fragmentation:**
 - Exclusive content rights on different platforms result in fragmentation. To access specific shows or movies, users may need multiple subscriptions.
 - **Data Privacy Concerns:**
 - OTT platforms collect user data for personalization, raising privacy concerns if mishandled or if data is shared with third parties without consent.
 - **Content Quality and Quantity:**
 - While there's a vast selection of content, quality can vary. Additionally, the sheer volume of content can make discovering quality material overwhelming for users.

What was the State of OTT in 2023 and Outlook for 2024?

- In 2023, the **OTT landscape saw disruptive moves** with platforms offering premium content for free, impacting subscription revenue.
- Monetization challenges persisted, none reaching **break-even due to high content costs**.
- Freemium models emerged, curbing password sharing and integrating ads. Regulatory concerns lingered **but censorship wasn't favored**, fostering selective data sharing.
- Looking to 2024, expect cost-efficient content strategies with a decline in experimental content. Mergers among major players like Zee/Sony and potential collaborations like RIL/Disney may **restructure market dynamics**, influencing bargaining power and content costs.
- Pricing strategies will continue evolving, likely intensifying limitations on sharing and embedding ads.

- Regulatory compliance may tighten, emphasizing sensitivity toward religious or minority sentiments. Increased transparency in viewership trends will aid advertisers and creators.

What are the Laws regulating OTT Platforms?

- **In 2022**, the Ministry of Electronics and Information Technology (MeitY) had **notified the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021** to regulate OTT platforms.
- The rules establish a **soft-touch self-regulatory architecture** with a Code of Ethics and three-tier grievance redressal mechanism for OTT platforms.
 - Every publisher should appoint a Grievance Officer based in India for receiving and redressing grievances in 15 days.
 - Also, every publisher needs to become a member of a self-regulating body. Such a body will have to register with the Ministry of Information and Broadcasting and address grievances that have not been resolved by the publisher within 15 days.
 - The Ministry of Information Broadcasting and the Inter-Departmental Committee constituted by the Ministry constitute the third-tier Oversight Mechanism.
- They provide for self-classification of the content **without any involvement of Central Board of Film Certification**.

What Can be Done for Better Regulation of OTT?

- **Self-Regulation Frameworks:**
 - There is a need to encourage **OTT platforms to establish transparent** content guidelines and rating systems akin to traditional media.
 - Industry-led self-regulation **can address concerns without stifling creativity**.
- **Collaborative Oversight Bodies:**
 - It is imperative to form **independent bodies comprising industry experts**, stakeholders, and government representatives. These bodies can monitor content, review complaints, and set industry standards.
- **Clear Content Classification and Ratings:**
 - There is a need to implement **standardized content classification systems** to help users make informed viewing choices based on age-appropriateness and content themes.

Note:

- **Transparency in Data Sharing:**
 - Encourage OTT platforms to share viewership trends selectively with oversight bodies, aiding in content evaluation and ensuring compliance with guidelines.
- **Regular Audits and Compliance Checks:**
 - There is a need to conduct **periodic audits to ensure platforms** adhere to established guidelines, fostering accountability and responsible content curation.

PRITHvi Vigyan Scheme

Why in News?

The Union Cabinet recently approved the comprehensive scheme “**PRITHvi Vigyan (PRITHVI)**” by the **Ministry of Earth Sciences**.

- This initiative spans five sub-schemes, aiming to enhance Earth System Sciences and provide crucial services for societal, environmental, and economic well-being.
- The Cabinet also approved an agreement between the **Indian Space Research Organisation (ISRO)** and **Mauritius Research and Innovation Council (MRIC)** to jointly develop a “small satellite.”

NOTE: India and Mauritius have a history of cooperation since the 1980s when ISRO established a **ground station in Mauritius** for tracking and telemetry support for ISRO’s launch vehicle and satellite missions.

What is the “PRITHvi Vigyan (PRITHVI)” Scheme?

- **About:**
 - It is an overarching scheme of the Ministry of Earth Sciences (MoES) for the period from 2021 to 2026.
 - It encompasses five ongoing sub-schemes, namely:
 - **ACROSS: Atmosphere and Climate Research-Modelling Observing Systems & Services.**
 - **O-SMART: Ocean Services, Modelling Application, Resources and Technology.**
 - **PACER: Polar Science and Cryosphere Research.**
 - **SAGE: Seismology and Geosciences**
 - ◆ The scheme includes six activities, including seismological monitoring and

microzonation. SAGE aims to strengthen **earthquake monitoring and research on the Earth’s solid components.**

- **REACHOUT: Research, Education, Training and Outreach.**
- PRITHVI scheme comprehensively addresses the **five components of Earth System Sciences: atmosphere**, hydrosphere, geosphere, **cryosphere**, and biosphere.
 - This holistic approach aims to enhance understanding and deliver reliable services for the country.
- **Objectives:**
 - To augment and sustain long-term **observations of the atmosphere, ocean**, geosphere, cryosphere and solid earth to record the vital signs of the Earth System and change
 - Development of modelling systems for understanding and **predicting weather, ocean and climate hazards** and understanding the science of **climate change.**
 - Exploration of **polar and high seas regions of the Earth** towards discovery of new phenomena and resources;
 - Development of technology for exploration and sustainable harnessing of oceanic resources for societal applications.
 - Translation of knowledge and insights from Earth systems science into services for societal, environmental and economic benefit.
- **Benefits for India:**
 - PRITHVI provides **advanced warning services** for natural disasters like **cyclones, floods, heatwaves**, and **earthquakes**, facilitating prompt and **effective disaster management.**
 - Additionally, the scheme ensures **precise weather forecasts** for both land and oceans, enhancing safety and minimizing property damages in adverse weather conditions.
 - PRITHVI extends its reach to explore the three poles of the Earth; **Arctic, Antarctic, and Himalayas** facilitating valuable insights and knowledge about these regions.
 - The scheme encourages the development of technology for exploration and sustainable harnessing of oceanic resources, aligning with modern advancements in Earth Science.

Note:

Kochi-Lakshadweep Islands Submarine Optical Fiber Connection Project

Why in News?

Recently, the Prime Minister of India inaugurated the **Kochi-Lakshadweep islands submarine optical fiber connection (KLI-SOFC) project** among various developmental projects covering a wide range of sectors including technology, energy, water resources, healthcare and education.

What are the Key Facts About the KLI-SOFC Project?

➤ Background:

- Lakshadweep required digital connectivity, prompting a high-capacity submarine cable link due to **limitations in satellite communication**, marked by inadequate bandwidth to meet growing demand.



➤ KLI-SOFC Project:

- The KLI-SOFC project will lead to an **increase in internet speed**, unlocking new possibilities and opportunities.

- The project introduces **Submarine Optic Fiber Cable connectivity** for the first time in Lakshadweep since independence.
 - Fiber optics, or optical fiber, refers to the **technology that transmits information as light pulses** along a glass or plastic fiber.
- The **Department of Telecommunications (DOT)** funded by the **Universal Services Obligation Fund (USOF)**, completed the project. **Bharat Sanchar Nigam Limited (BSNL)** was the Project Executing Agency.
- The KLI project extended submarine cable connectivity from the mainland (**Kochi**) to **eleven Lakshadweep Islands** namely, Kavaratti, Agatti, Amini, Kadmat, Chetlat, Kalpeni, Minicoy, Androth, Kiltan, Bangaram and Bitra has been extended.

Other Projects in Lakshadweep Islands

➤ Low-Temperature Thermal Desalination (LTTD) Plant at Kadmat:

- Produces 1.5 lakh litres of clean drinking water every day. **Functional Household Tap Connections (FHTC)** in Agatti and Minicoy Islands.
 - All households on the Agatti and Minicoy islands now have functional household tap connections.
 - The LTTD is a process under which the **warm surface seawater is flash evaporated at low pressure** and the vapour is condensed with cold deep sea water.

➤ Solar Power Plant at Kavaratti:

- The first-ever battery-backed **solar power** project in Lakshadweep.

➤ Primary Health Care Facility in Kalpeni:

- Foundation stone laid for the renovation of the primary health care facility in Kalpeni.

➤ Model Anganwadi Centres (Nand Ghars):

- Five model **Anganwadi centres** (Nand Ghars) to be constructed in the islands of Androth, Chetlat, Kadmat, Agatti, and Minicoy.

➤ Significance:

- The project aligns with the goals of **'Digital India'** and **'National Broadband Mission'**, fostering the rollout of various **e-governance projects** in Lakshadweep Islands.

Note:

- E-Governance, Tourism, Education, Health, Commerce, and Industries will experience significant enhancements, contributing to **improved standards of living** and overall socio-economic development on the islands.
- The population of Lakshadweep Islands will benefit from high-speed wireline broadband connectivity, facilitated through Fibre to the Home (FTTH), and **5G/4G Mobile network technologies**.
- The bandwidth generated by the project will be accessible to all **Telecom Service Providers (TSPs)**, reinforcing telecom services in Lakshadweep Islands.

What are the Key Facts

About the Lakshadweep Islands?

- India's smallest Union Territory Lakshadweep is an archipelago **consisting of 36 islands** with an area of 32 sq km.
- The **capital is Kavaratti** and it is also the principal town of the UT.
 - All Islands are 220 to 440 km away from the coastal city of Kochi in Kerala, in the emerald **Arabian Sea**.
 - The name Lakshadweep in Malayalam and Sanskrit means 'a hundred thousand islands'.
- Lakshadweep has a **tropical climate and it has an average temperature of 27° C – 32° C**.
 - As the climate is equitable during monsoons, ship-based tourism is closed.
- It is directly under the **control of the Centre through an administrator**.
- The entire indigenous population has been classified as **Scheduled Tribes** because of their economic and social backwardness.
 - According to the **Scheduled Castes** and Scheduled Tribes list (modification orders), 1956, there are no Scheduled Castes in this Union Territory.
- In 2020, the Lakshadweep Islands administration established **the world's first conservation area for sea cucumbers**, the Dr. KK Mohammed Koya Sea Cucumber Conservation Reserve, spanning 239 square kilometers **in the Cheriyapani Reef**.

Section 132 of the Income Tax Act, 1961

Why in News?

The landmark judgment in [Justice K.S. Puttaswamy vs Union of India, 2017](#) declared the **fundamental right to privacy**. However, concerns have emerged regarding the extra-constitutional powers granted by **Section 132 of the Income-Tax Act, 1961** in India as they seem to violate the **fundamental rights** of the citizens.

What is Section 132 of the Income Tax Act, 1961?

- The section was **introduced in 1961, as part of Income Tax Act, 1961**, to replace the **Taxation on Income (Investigation Commission) Act, 1947**, which was struck down by the **Supreme Court** in [Suraj Mall Mohta vs A.V. Visvanatha Sastri \(1954\)](#) on the ground that it treated a certain class of assesses differently from others, thereby **violating the guarantee of equal treatment** contained in [Article 14 of the Constitution](#).
 - The original income-tax law in 1922 lacked search and seizure powers.
- Section 132 of the Income-Tax Act, 1961, empowers the **tax authorities to conduct searches and seizures** of persons and properties, **without any prior judicial warrant**, if they have a **"reason to believe"** that the person has concealed or evaded income.
 - It grants authorities the power to search buildings, places, vehicles, or aircraft based on suspicion of hiding financial assets.
 - It allows for the seizure of books of account, money, bullion, jewellery, or other valuable items discovered **during the search**. Additionally, tax officials can seize such items found in the possession of any person during a search or survey under the Act.

What are the Challenges Regarding Section 132 of the Income Tax Act, 1961?

- **Breach of the Proportionality Principle:**
 - Section 132 of the Income-Tax Act, despite not being formally challenged, suggests a potential breach of the doctrine of proportionality principle.

Note:



- The state's power to search and seize is no longer viewed as a simple tool of social security but is subject to the **doctrine of proportionality**. This means that its use must be **intended for a legitimate aim, rationally connected to its objective**, with no alternative less intrusive means available, and a balance struck between the means chosen and the right that is violated.
- The Supreme Court in the case of *Principal Director of Income Tax vs Laljibhai Kanjibhai Mandalia, 2022* revealed a reliance on the “**Wednesbury**” principle, a standard of administrative review derived from a UK court judgment, treating **search opinions as administrative, not judicial**.
 - ◆ **Wednesbury principle** states that if a decision is so unreasonable that no sensible authority could ever take it, such **decisions are liable to be quashed through judicial review**.
- Critics argue that **Post-Puttaswamy**, there should be **no place for the Wednesbury rule**, especially **when fundamental rights are at stake**, and that any executive action must conform to statutory law in the strictest sense possible.
- **Violation of the Right to Privacy:**
 - The right to privacy, a **fundamental right under Article 21 of the Indian Constitution**, includes protection from unreasonable searches and seizures, as well as confidentiality of personal information.
 - Income Tax searches, however, **intrude on individuals' privacy without consent**, often based on vague grounds, leading to potential abuse.
 - Additionally, there is a lack of adequate safeguards and oversight mechanisms to prevent misuse and protect the rights of the individuals subjected to I-T searches.
 - The absence of stringent safeguards exposes individuals to potential misuse of power by tax authorities.
- **Duration and Conditions of Searches:**
 - The Gujarat High Court's questioning of a raid where individuals were **allegedly kept in virtual**

detention for days without proper safeguards highlights concerns about the duration and conditions of such searches.

Case Related to Section 132 of the Income Tax Act, 1961

- **Pooran Mal vs Director of Inspection (1973):**
 - The constitutionality of this provision was challenged in the **case of Pooran Mal vs Director of Inspection (1973)**.
 - The Supreme Court **upheld the law**, citing its own judgment in *M.P. Sharma vs Satish Chandra (1954)* by emphasizing that the **power of search and seizure is essential for the protection of social security** and is regulated by law.
 - The court also noted that the **Constitution does not recognize a fundamental right to privacy** similar to the **American Fourth Amendment** about searches and seizures.
 - ◆ The American Fourth Amendment **protects against unreasonable searches and seizures** by the government.
 - It was concluded that statutory provisions for searches do not defeat the **constitutional protection under Article 20(3)**.
 - The judgment in M.P. Sharma was concerned with **searches under the Code of Criminal Procedure**, while searches under the **Income-Tax Act do not require a judicial licence**.
 - The Court's reading of the law has since changed, with M.P. Sharma being formally overruled. The **right to privacy is now considered intrinsic to the right to personal liberty guaranteed by Article 21 of the Constitution**.

Ministry of Social Justice and Empowerment Year End Review 2023

Why in News?

Recently, the year-end-review of the Department of Empowerment of Persons with Disabilities (DEPwD), **Ministry of Social Justice and Empowerment** for the year 2023 was released.

Note:

What are the Key Highlights of the Initiatives and Achievements?

- **Historic Gatherings and Festivals for Inclusion:**
 - The Department hosted events like a **special gathering at Rashtrapati Bhavan and India's First Festival of Inclusion (Purple Fest)** in Goa, involving thousands of Divyangjan and transgenders, setting world records, and fostering a sense of belonging.
- **India-South Africa cooperation in Disability Sector:**
 - The Union Cabinet signed a Memorandum of Understanding (MoU) between the Government of India and the Government of South Africa, focused on cooperation in the **Disability Sector**.
- **Divya Kala Mela:**
 - The **Divya Kala Mela 2023**, held in different cities throughout the year, stands as a testament to the Government's commitment to fostering holistic development and empowerment for persons with disabilities.
 - With a vision aligned with the Prime Minister's Atmanirbhar Bharat initiative, the Government aims to ensure **equal participation of divyang individuals in India's overall growth**.
- **Disabilities Awareness Days:**
 - The DEPwD embarked on a year-long celebration, commemorating various disability awareness like **World Braille Day** on January 4 to **International Day of Persons with Disabilities** on December 3, 2023d in 2023.
- **Recognition of Achievements:**
 - Government felicitated **Abilympics winners**, honoring Indian Deaf Cricket Team and Para Swimmer Shri Satendra Singh Lohia, celebrating excellence in the field of disabilities, and recognizing their contributions.
- **Initiatives and Reforms:**
 - The government launched transformative programs like integrating universal accessibility courses into architectural programs, releasing anonymous data through **UDID (Unique Disability ID) portal**, and introducing portals for skill training, employment opportunities, and online case monitoring.
- **Empowering Through Entrepreneurship:**
 - Government partnered with **institutes to support and empower 3000 Persons** with Disabilities

through enterprise initiatives, fostering collaboration between government, corporate, and institutions.

- **Technology and Accessible Resources:**
 - The government launched ISL (Indian Sign Language) dictionary terms, Video Relay Service, and online courses in Indian Sign Language, along with ensuring accessible books through SugamyaPustakalaya.
- **Sports and High-Tech Training Centers:**
 - Inaugurated India's first high-tech sports training center for Divyangjan, named after former Prime Minister **Shri Atal Bihari Vajpayee**, in Gwalior, Madhya Pradesh, emphasizing equal opportunities in sports and talent enhancement.
- **Legal Support and Financial Inclusion:**
 - Delivered impactful judgments, providing interest rate rebates to divyangjan borrowers, promoting financial inclusion through NDFDC loans, and collaborating for universal design centers for reading.
 - DEPwD announces 1% interest rate rebate to divyangjan borrowers under NDFDC Loan.
- **Assistance to Disabled Persons Camp (ADIP) Scheme:**
 - The Scheme witnesses remarkable achievements, with grants-in-aid totaling Rs.368.05 crore, benefiting 2.91 lakh beneficiaries.

Bharatmala Phase-1: Deadline Extended

Why in News?

Recently, the Government has extended the deadline for completion of the flagship highway development project **Bharatmala Pariyojana Phase-I** to **2027-28**.

- The move follows an over **100% increase** in the estimated cost of the mega project and reflects the **slowing of implementation**, and **financial constraints**.

What is Bharatmala Pariyojana?

- **About**
 - **Bharatmala Pariyojana** is an umbrella programme launched under the **Ministry of Road Transport and Highways**.

Note:

- The **first-phase of Bharatmala** was announced in **2017** and was to be completed by **2022**.
- **Salient Features:**
 - Bharatmala focuses on enhanced effectiveness of already built infrastructure, multi-modal integration, bridging infrastructure gaps for seamless movement and integrating National and Economic Corridors. There are **six key features of the programme:**
 - **Economic Corridors:** Integrating the economic corridors facilitates larger connectedness between economically important production and consumption centers.
 - **Inter-corridor and Feeder routes:** This would ensure first mile and last mile connectivity.
 - **National Corridor Efficiency Improvement:** Through this, the greater actionable goal is to undertake lane expansion and decongestion of existing National Corridors.
 - **Border and International Connectivity Roads:** Better border road infrastructure would ensure greater maneuverability, while also boosting trade with neighboring countries.
 - **Coastal and Port Connectivity Roads:** Port-led economic development is further boosted through connectivity to coastal areas, encouraging both tourism and industrial development.
 - **Green-field Expressways:** Expressways have higher traffic configuration and choke points would benefit from green-field expressways.
- **Status:**
 - Till November 2023, **15,045 km or 42%** of the project has been completed.
- **Challenges:**
 - Cost of raw material, Increased land acquisition cost, Construction of high speed corridors and increase in Goods and Services Tax rates.

Sanitation Challenges in Indian District Courts

Why in News?

A recent report published by the Centre for Research and Planning of the [Supreme Court of India](#), titled 'State

of the Judiciary,' has brought attention to disparities in **gender-specific facilities** within district court complexes across the country.

- The report sheds light on the **inadequate provision of separate toilets for women**, the lack of [sanitary napkin](#) vending machines, and the absence of toilets for transgender persons.

What are the Key Findings of the Report?

- **Inadequate Women-Friendly Facilities:**
 - Nearly **one-fifth of district court complexes** lack separate toilets for women.
 - Only 6.7% of women's toilets have **sanitary napkin vending machines**.
- **Challenges in Existing Washrooms:**
 - Existing washrooms often have broken doors and face issues of irregular water supply.
 - Shared washrooms for male and female judges raise **concerns about privacy and equality**.
 - Judges personally engage sweepers and cleaners to ensure cleanliness in court toilets.
 - For instance, In Peren district of Nagaland, no maintenance facility was engaged to clean the toilets. Staff members themselves had to ensure the upkeep of the washrooms.
- **Lack of Inclusive Facilities:**
 - Most district courts do not have toilets for [transgender persons](#).
 - Emphasized the need for "**gender-inclusive toilets**" in every court complex.
 - In Kerala, washrooms for transgender persons are shared with persons with disabilities.
 - Uttarakhand has only four washrooms for transgender persons across the state.
 - Tamil Nadu offers such facilities in only two districts — Chennai and Coimbatore.
 - Using washrooms that do not align with their gender identity may cause **discomfort and harassment to transgender persons**.

What are the Challenges Posed by Inadequate Sanitation Facilities?

- **Health and Hygiene Risks:**
 - Insufficient toilet facilities may result in unhygienic conditions, posing health risks for women,

Note:

including the increased likelihood of infections and diseases such as [cholera](#), [typhoid](#), and [dysentery](#).

- Lack of separate toilets can contribute to safety concerns for women, especially in poorly lit or secluded areas, making them **vulnerable to harassment or assault**.
- **Pregnant women and elderly individuals** may face challenges accessing shared toilet facilities, impacting their comfort and mobility.
- **Violation of United Nations Human Rights:**
 - The UN Human Rights state that the **right to sanitation entitles everyone** to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, and socially and culturally acceptable and that provides privacy and ensures dignity.
- **Violation of Fundamental Right:**
 - The Supreme Court, in *Virendra Gaur vs State Haryana (1995)*, emphasized that [Article 21](#) protects the right to life, extending it to sanitation for the enjoyment of life with dignity.

How can Sanitation

Facilities be Improved in Courts?

- **Allocate Dedicated Resources:**
 - Budget sufficient funds for sanitation upkeep and allocate staff responsible for cleaning and maintenance. Consider appointing hygiene champions within the court to raise awareness and monitor standards.
 - As suggested by the former CJI, a dedicated institution, the **National Judicial Infrastructure Authority of India (NJIAI)**, could be established to serve as a central body for mobilizing funds for sanitation improvement projects in courts.
- **Upgrade Existing Facilities:**
 - Renovate bathrooms to **ensure cleanliness, functionality, and accessibility** for people with disabilities. Install proper ventilation, lighting, and hygiene supplies like soap, paper towels, and sanitary bins.
- **Develop Sanitation Guidelines:**
 - Set **national standards for sanitation facilities in courts**, ensuring consistency and quality across different states and court levels. This could

include guidelines for minimum amenities, accessibility requirements, and hygiene protocols.

➤ Encourage User Feedback:

- Create mechanisms for **court users to provide feedback on sanitation facilities**, identify issues, and propose improvements. This could involve suggestion boxes, surveys, or public meetings.
 - Ensure swift and timely action on suggestions and complaints.

What is the Status of Toilet Facilities in India?

- Sanitation is a **State subject**, and hence the task of providing toilets, initiating behaviour change activities, providing **Solid and Liquid Waste Management arrangements** and sustaining the various activities vests with the states.
- According to the [National Family Health Survey \(NFHS\)](#), **69.3% of households have access to improved toilet facilities** or those that are not shared.
 - **8.4%** of households have access to shared toilet facilities and **2.9%** have access to **unimproved facilities**.
- The report by NFHS showed that **80.7% of urban households and 63.6% of rural households** have access to improved toilet facilities, while the percentage stands at 63.6 for rural households.
 - A total of **19.4% of Indian households did not use any toilet facility in 2019-2021**.
 - In urban regions, [open defecation](#) is practiced in **6.1%** of all households while that number shoots up to **25.9% for households in rural areas**.

Initiatives Related to Sanitation

- [Swachh Bharat Mission](#)
- [World Health Organization \(WHO\) Water, sanitation and hygiene \(WASH\) - India](#)
- [Atal Mission for Rejuvenation and Urban Transformation \(AMRUT\)](#)
- **Swachhata Abhiyaan App:**
 - The Ministry of Social Justice and Empowerment has launched it to capture the data of insanitary latrines still existing and **manual scavengers associated with their cleaning**.
- Among states and union territories, access to a **toilet facility is lowest in Bihar** (available only in 61.2% of

Note:

households). Bihar is followed by Jharkhand (69.6%) and Odisha (71.3%).

- Lakshadweep reports **100% household access to toilet facilities**.

Technological Innovations Implemented Under MGNREGA Scheme

Why in News?

The Ministry of Rural Development has responded to concerns about the use of technology, particularly [Aadhaar](#), in denying **welfare benefits to vulnerable Indians** and delaying wage payments under the [Mahatma Gandhi National Rural Employment Guarantee Act \(MGNREGA\) scheme](#).

- In response to these concerns, the ministry has highlighted several technological innovations under the MGNREGA, aiming to **enhance transparency and efficiency** in its implementation.

What is the MGNREGA Scheme?

➤ About:

- Launched in **2005** by the Ministry of Rural Development, MGNREGA stands as one of the **world's largest work guarantee programs**.
- This initiative provides a legal guarantee, ensuring a **hundred days of employment each financial year** for adult members of any rural household.
 - Participants engage in unskilled manual work related to public projects, earning the statutory minimum wage.

➤ Current Status of MGNREGA:

- There are **14.32 crore registered Job Cards**, with 68.22% active Job Cards, and a total of 25.25 crore workers, of which 56.83% are active workers.

➤ Technological Innovations Implemented:

○ Aadhaar Integration:

- Continuous **Aadhaar seeding**(linking an Aadhaar number to a primary bank account number) for de-duplication and authentication of genuine beneficiaries.
- Aadhaar seeding of 14.08 crore (**98.31%**) active workers have already been completed. Against these seeded Aadhaar, a total 13.76 crore

Aadhaar have been authenticated and **87.52% active workers are now eligible for [Aadhaar Payment Bridge System \(APBS\)](#)**.

- ◆ APBS is a payment system that uses **Aadhaar numbers to electronically send government subsidies and benefits** to the Aadhaar-linked bank accounts of beneficiaries.
- ◆ [Gram Panchayats](#) facing technical or Aadhaar-related problems may seek exemptions from APBS on a case-by-case basis until the resolution of the issues.
- [National Payments Corporation of India \(NPCI\)](#) data indicates a success rate of 99.55% or above when Aadhaar is enabled for DBT.
- Payment for beneficiaries who **turn up for wage employment** to be made through APBS.
- The recent concerns stating that **34.8% of total registered workers and 12.7% of active workers are still ineligible for ABPS** have no relevance.
 - ◆ Because **APBS is applicable only in case a registered beneficiary turns up** for wage employment.
- **National Electronic Fund Management System (NEFMS):**
 - NEFMS is Introduced in FY 2016-17 for direct wage payments to beneficiaries.
 - ◆ Over 99% of wage payments are directly credited to beneficiaries' bank/post office accounts.
- **Real-time Monitoring through NMMS:**
 - [National Mobile Monitoring System \(NMMS\)](#) app captures real-time attendance of beneficiaries at worksites.
 - ◆ Beneficiaries and citizens can verify worker attendance, enhancing transparency.
- **Geotagging of Assets:**
 - Utilizes **remote sensing technology** for geotagging assets created under the scheme.
 - ◆ Remote sensing is the process of detecting and monitoring the physical characteristics of an area by measuring its **reflected and emitted radiation** at a distance (typically from satellite or aircraft).

Note:

- Ensures public scrutiny and accountability by providing location-specific information.
- **Job Card Updation:**
 - Regular exercise conducted by states/UTs for job card updation/deletion.
 - ◆ A Job card can be deleted in case it is a fake job card (incorrect job card)/ duplicate job card/ household not willing to work/ family shifted from Gram Panchayat permanently/ single person in job card and that person is expired.
 - ◆ Since **April 2022 about 2.85 crore Job cards have been deleted.**
- **Drone Monitoring:**
 - Pilot testing of drone usage is conducted for monitoring and implementation, enhancing real-time monitoring and data collection for improved decision-making.

Viksit Bharat Sankalp Yatra Adds Beneficiaries to PM-Kisan

Why in News?

Recently, the number of [Pradhan Mantri Kisan Samman Nidhi \(PM-Kisan\) scheme](#) beneficiaries has declined by more than **20%**, decreasing from a peak of **10.47 crore** in **April-July 2022** to **8.12 crore**.

- The government's proactive measures, particularly the "[saturation drive](#)" initiated under the **Viksit Bharat Sankalp Yatra**, have added 34 lakh farmers back to the list of beneficiaries.

What is Viksit Bharat Sankalp Yatra?

- **About:**
 - It is a nationwide campaign to **raise awareness** through **outreach activities** to achieve **saturation of schemes of Govt. of India** across the country covering all [Gram Panchayats](#), [Nagar Panchayats](#) and [Urban Local Bodies](#).
 - The campaign is being taken up by adopting a whole of government approach with active involvement of various **Ministries/Departments of Government of India, State Governments, Central Govt. Organizations and Institutions.**

What is PM Kisan Samman Nidhi Yojana (PM-Kisan)?

- **About:**
 - It was launched to supplement financial needs of land holding farmers.
 - It has become operational from **December, 2018.**
- **Financial Benefits:**
 - Financial benefit of **Rs 6000/- per year in three equal installments, every four month** is transferred into the bank accounts of farmers' families across the country through [Direct Benefit Transfer \(DBT\) mode.](#)
- **Scope of the Scheme:**
 - The scheme was initially meant for **Small and Marginal Farmers (SMFs)** having landholding upto **2 hectares** but scope of the scheme was extended to cover all landholding farmers.
- **Funding and Implementation:**
 - It is a [Central Sector Scheme](#) with 100% funding from the Government of India.
 - It is being implemented by the **Ministry of Agriculture and Farmers Welfare.**
- **Objectives:**
 - To supplement the **financial needs** of the **Small and Marginal Farmers** in procuring various inputs to ensure **proper crop health** and **appropriate yields**, commensurate with the anticipated farm income at the end of each crop cycle.
 - To protect them from falling in the clutches of **moneylenders** for meeting such expenses and ensure their continuance in the **farming activities.**
- **PM-KISAN Mobile App:**
 - It was developed and designed by the **National Informatics Centre** in collaboration with the **Ministry of Electronics and Information Technology.**
- **Physical Verification Module:**
 - A mandatory physical verification of **5%** beneficiary every year is being done as per the provisions laid down in the scheme.
- **Objectives:**
 - Reach out to the **vulnerable** who are eligible under various schemes but have not availed benefit so far.

Note:

- Dissemination of information and generating awareness about schemes.
- Interaction with beneficiaries of government schemes through their **personal stories/ experience sharing**.
- Enrolment of potential beneficiaries through details ascertained during the Viksit Bharat Sankalp Yatra.

What are the Challenges of PM-Kisan?

- **Mandatory Provisions and Aadhaar Linkage:**
 - The **mandatory land seeding provisions** and the requirement to **link Aadhaar with active bank accounts** have introduced complexity, leading to challenges for farmers in complying with these prerequisites.
 - Farmers, especially those in remote areas, may face technical challenges in fulfilling the **Aadhaar linkage and land seeding requirements**, hindering their access to **PM-Kisan** benefits.
- **Awareness and Outreach:**
 - Many eligible farmers may still be unaware of the **PM-Kisan scheme** or may not have sufficient information about the application process.
 - Despite efforts, **outreach initiatives** may struggle to reach all segments of the farming community, particularly in remote or marginalized areas.
- **Technology Accessibility:**
 - Disparities in technology access, including smartphones and internet connectivity, may hinder farmers' ability to engage with the online processes required for **PM-Kisan** enrollment and compliance.

Scheme of Special Assistance to States for Capital Investment

Why in News?

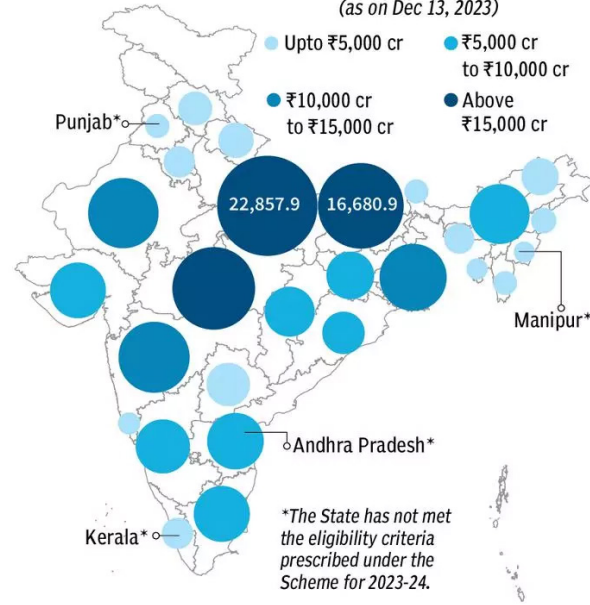
Out of the Rs 1,67,518.6-crore special assistance (loan) allocated by the Centre under the [Scheme for Special Assistance to States for capital expenditure/ investment](#), Uttar Pradesh (UP) has been the highest recipient over the last four years.

- The substantial financial **support underscores the government's commitment to bolstering development initiatives in UP**.

Centre's capex loans

Funds released under the Scheme for Special Assistance to States for Capital Expenditure/ Investment (in ₹ cr)

From 2020-21 to 2023-24
(as on Dec 13, 2023)



What are the Trends in Capital expenditure as per the Ministry of Finance?

- **UP and Bihar** are the top two States which have fulfilled the criteria related to Capital Expenditure and **received maximum allocation** under the Scheme in the last four years.
- Uttarakhand, Haryana, Kerala and Punjab are among the States which have received about 1-2% of the total released amount under the Scheme.
- Andhra Pradesh, Kerala, Manipur and **Punjab have not received any allocation in 2023-24** and as per the Ministry of Finance, these States have not met the eligibility criteria prescribed under the Scheme.

What is the Special Assistance to States for Capital Investment Scheme?

- **About:**
 - The Scheme for Special Assistance to States for Capital Expenditure was launched in FY 2020-21 in the wake of **Covid-19 Pandemic**.
 - The scheme has been expanded and continued as 'Scheme for Special Assistance to States for Capital Investment 2023-24' with allocation of Rs 1.3-lakh crore.

Note:

➤ Parts:

- The scheme has eight parts, **Part-I being the largest with allocation of Rs. 1 lakh crore**. This amount has been allocated amongst states in proportion to their share of central taxes and duties as per the award of the [15th Finance Commission](#).
- Other parts of the scheme are either linked to reforms or are for sector-specific projects.
 - **Part-II provides incentives to states** for scrapping of old vehicles and setting up of automated vehicle testing facilities;
 - Part-III and IV provide incentives to states for reforms in [urban planning](#) and urban finance;
 - Part-V provides funds for increasing the housing stock for police personnel and their families within the police stations in urban areas.
 - Part-VI of the scheme supports the vision of national integration, [Make in India and One District One Product](#) by promoting cultural diversity and local products through Unity Mall projects.
 - Under Part-VII, Rs. 5,000 crore is provided as financial assistance to states for establishing libraries with digital infrastructure at the [Panchayat](#) and Ward level, primarily benefiting children and adolescents.

➤ Objectives of the Scheme:

- The scheme is expected to have a higher multiplier effect on the economy by stimulating demand and creating jobs.
- The scheme also aims to enhance the pace of projects in key sectors such as [Jal Jeevan Mission](#) and [Pradhan Mantri Gram Sadak Yojana](#) by providing funds for meeting the state share.
- The scheme also seeks to encourage states to undertake reforms in urban planning and urban finance to improve the quality of life and governance in cities.

What is Capital Expenditure in India?

➤ Capital Expenditure (Capex):

- It refers to the **funds allocated by the government for the acquisition**, construction, or improvement of physical assets such as infrastructure, buildings, machinery, and equipment.

- It is considered to be productive and growth enhancing as it adds to the productive capacity of the economy and generates income and employment in the future.

- The Indian government **allocates capital expenditure through its annual budget**, which is presented by the finance minister.

- The capital investment outlay has experienced a consecutive three-year increase, reaching Rs 10 lakh crore, which accounts for 3.3% of the GDP, marking a significant growth of 33% (Union Budget 2023-24).

➤ Effective Capital Expenditure:

- The capital expenditure presented in the budget does not include the spending by the government on creating capital assets through grants-in-aid to states and other agencies.

- These grants are classified as revenue expenditure in the budget, but they also contribute to the creation of fixed assets such as roads, bridges, schools, hospitals, etc.

- Therefore, to capture the true extent of public investment by the central government, a concept of 'effective capital expenditure' has been introduced.

- [Effective capital expenditure](#) is defined as the sum of capital expenditure and grants for creation of capital assets.

- It is budgeted at Rs 13.7 lakh crore or 4.5% of GDP (Union Budget 2023-24).

SHRESHTA

Why in News?

The Ministry of Social Justice & Empowerment recently highlighted the [Scheme for Residential Education for Students in High Schools in Targeted Areas \(SHRESHTA\)](#).

What are the Key Highlights of the SHRESHTA?

➤ About:

- SHRESHTA aims to fill the educational service gap in [Scheduled Castes \(SCs\)](#) dominant areas by providing high-quality education, socio-economic upliftment, and overall development for SC students.

Note:



- Admission will be provided in Class 9 and Class 11 of CBSE/State affiliated private schools.
- **Eligibility:**
 - The students, belonging to **SCs**, studying in class **8th and 10th** in the current academic year are eligible for availing the benefits of the scheme.
 - Students from the SC community who come from a **marginalized income group** with an **annual income** of up to **Rs 2.5 lakh** are eligible.
- **Operating Procedure:**
 - The scheme is being implemented in two Modes:
 - **Mode 1: SHRESHTA Schools:**
 - ◆ Selection Process:
 - ◆ Meritorious SC students are selected annually through the **National Entrance Test for SHRESHTA (NETS)** conducted by the **National Testing Agency (NTA)**.
 - ◆ Selected students are admitted to the best **CBSE/State Board-affiliated private residential schools** in classes 9th and 11th.
 - **Financial Support:**
 - ◆ The Department covers the total fee for students, including school and hostel fees, amounting to Rs. 1,00,000 to Rs. 1,35,000 from class 9th to 12th.
 - ◆ Admissible fee for each class under the Scheme.
 - **Bridge Course:**
 - ◆ A bridge course is provided outside regular school hours to enhance students' capability to adapt easily to the school environment.
 - ◆ The Department bears 10% of the annual fee for the bridge course.
 - **Monitoring:**
 - ◆ The Ministry monitors the progress of students regularly.
 - **Mode 2: NGO/VO Operated Schools/Hostels:**
 - ◆ Schools/Hostels run by VOs/NGOs with classes up to 12th grade receive grants for school fees and residential charges for SC students.
 - ◆ Grants range from Rs. 27,000 to Rs. 55,000 per student based on the type of school.

- **Monitoring:**
 - The Ministry monitors the progress of students regularly.
 - Institutions are required to disclose performance on their websites and the **e-Anudaan/online portal**, ensuring transparency.
 - Installation of cameras in institutions, providing live feeds for monitoring purposes.
 - All the institutions are liable for a field visit by an inspection team constituted for this purpose.
- **Impact:**
 - 2023-24 (as of December 2023): 7,543 beneficiaries.
 - Admissions in 2023-24: A total of 2,564 students were admitted to 142 Private Residential Schools, and Rs. 30.55 Crore has been reimbursed for school fees.

Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana

Why in News?

Recently, Ministry of Health & Family Welfare has released some statistics regarding [Ayushman Bharat Pradhan Mantri — Jan Arogya Yojana \(AB PM-JAY\)](#).

What are the Key Highlights of the AB PM-JAY Statistics?

- **Ayushman Cards:**
 - Women account for approximately 49% of the total Ayushman cards created and **approximately 48% of total authorised hospital admissions**.
 - As of December 2023, approximately 28.45 Crore Ayushman Cards have been created since the **inception of the scheme**, out of which, approximately **9.38 crore Ayushman Cards have been created during the year 2023**.
- **Health Coverage:**
 - 55 crore individuals corresponding to 12 crore families **are covered under the scheme** and many states and union territories implementing AB PM-JAY have further expanded the beneficiary base, at their own cost.

Note:

➤ **Hospital Admissions:**

- A total of 6.11 crore hospital admissions amounting to Rs 78,188 crores were authorised of which 1.7 crore hospitals admissions worth over Rs 25,000 crores were authorised during the year 2023 (Jan-Dec 2023).

What is Ayushman Bharat-PMJAY?

➤ **About:**

- PM-JAY is the world's largest health insurance scheme fully financed by the government.
- **Launched in 2018**, it offers a sum insured of **Rs.5 lakh per family** for secondary care and tertiary care.
 - Health Benefit **Packages covers surgery, medical** and day care treatments, cost of medicines and diagnostics.

➤ **Beneficiaries:**

- It is an entitlement-based scheme that targets the beneficiaries as identified by latest [Socio-Economic Caste Census \(SECC\)](#) data.

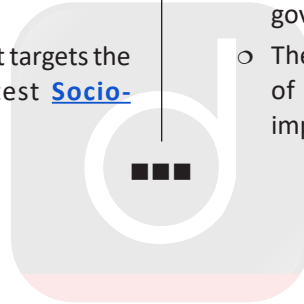
- The National Health Authority (NHA) has provided flexibility to States/UTs to use [non-Socio-Economic Caste Census \(SECC\)](#) beneficiary family databases with similar socio-economic profiles for tagging against the leftover (unauthenticated) SECC families.

➤ **Funding:**

- The funding for the scheme is shared – **60:40 for all states and UTs** with their own legislature, 90:10 in Northeast states and Jammu and Kashmir, Himachal and Uttarakhand and 100% Central funding for UTs without legislature.

➤ **Nodal Agency:**

- The [National Health Authority \(NHA\)](#) has been constituted as an autonomous entity under the Society Registration Act, 1860 for effective implementation of PM-JAY in alliance with state governments.
- The State Health Agency (SHA) is the apex body of the State Government responsible for the implementation of AB PM-JAY in the State.



Note:

Economic Scenario

Highlights

- World Bank's Global Economic Prospects Report
- Lentil Production India
- World Employment and Social Outlook: Trends 2024
- Navigating GST Challenges
- World Economic Situation and Prospects Report for 2024
- Concerns over Insolvency and Bankruptcy Code, 2016
- Decline of Saffron Production in Kashmir
- Debt Sustainability and Exchange Rate Management
- Supreme Court Verdict on Adani-Hindenburg Case
- India's Toy Industry
- Interest Rate Adjustments in Small Savings Schemes
- Extended PLI Scheme for Automobile and Auto Components
- RBI Guidelines on Inoperative Accounts and Unclaimed Deposits
- India's Steel Sector
- Inflation in India: Demand vs. Supply
- Banks' Gross NPAs Drop to 3.2%

World Bank's Global Economic Prospects Report

Why in News?

Recently, the [World Bank \(WB\)](#) has released its **Global Economic Prospects Report**, which shows that the global economy may witness a poor performance by the end of 2024, the slowest half-decade of **GDP (Gross Domestic Product)** growth in 30 years.

What are the Key Highlights of the Report?

- **Slowest Half-Decade of GDP Growth in 30 Years:**
 - The global economy is projected to **experience the slowest half-decade of GDP growth** in three decades, with a growth rate of 2.4% in 2024.
- **Improved Outlook Compared to Previous Year:**
 - The **risk of a global Recession** has receded, attributed to the strength of the US economy, resulting in a better global economic position than the previous year.
 - But mounting geopolitical tensions **could create fresh near-term hazards** for the world economy.
- **Deteriorating Medium-Term Outlook for Developing Economies:**
 - While the global economy is in a better place than a year ago, the medium-term outlook has worsened for many developing economies. Factors include slowing growth, sluggish [Global Trade](#), and tight financial conditions.

Challenges in Global Trade and Borrowing Costs:

- Global trade growth in 2024 is expected to be **only half the average in the decade preceding the Pandemic**.
- Borrowing costs for developing economies, especially those with low credit ratings, are expected to remain high.

Global Growth:

- Global growth is projected to slow for the **third consecutive year**, dropping from 2.6% in 2023 to 2.4% in 2024.
- Developing economies are **projected to grow just 3.9%**, more than one percentage point below the average of the previous decade.
- Low-income countries are projected to **grow by 5.5%**, lower than initially expected.

Weak Near-Term Growth and High Debt Levels:

- There will be weak near-term growth, **particularly in developing countries**, leading to high levels of [Debt](#) and limited access to food. That would obstruct progress on many global priorities.

Recommendations:

- There is a **need for urgent action to accelerate investment** and strengthen fiscal policy frameworks to avoid a wasted opportunity in the current decade.
- The report advocates for a **'formidable' increase in investment by developing countries**, approximately USD 2.4 trillion per year, to address

Note:

climate change and achieve other key global development goals by 2030.

- The developing economies need to implement comprehensive policy packages, including improvements to fiscal and monetary frameworks, expansion of cross-border trade and financial flows, betterment of the investment climate, and strengthening of institutional quality.

What is World Bank?

➤ About:

- It was **created in 1944, as the International Bank for Reconstruction and Development (IBRD)** along with the IMF. The IBRD later became the World Bank.
- The World Bank Group is a unique global partnership of five institutions working for sustainable solutions that reduce poverty and build shared prosperity in developing countries.
- The World Bank is one of the **United Nations' specialized agencies**.

➤ Members:

- It has 189 member countries.
- India is also a member country.

➤ Major Reports:

- [Human Capital Index](#).
- [World Development Report](#).

➤ Its Five Development Institutions:

- International Bank for Reconstruction and Development (IBRD)
- International Development Association (IDA)
- International Finance Corporation (IFC).
- Multilateral Guarantee Agency (MIGA)
- International Centre for the Settlement of Investment Disputes (ICSID)
 - India is not a member of ICSID.

Lentil Production India

Why in News?

As per the Ministry of Consumer Affairs, India is **set to become the world's largest producer** of lentils (masoor) during the 2023-24 crop year on account of higher acreage.

- The country's lentil production is estimated to touch an all-time high of **1.6 million tonnes in the 2023-24** rabi season on higher acreage.
- According to official data, in the 2022-23 crop year, the country's lentil production stood at 1.56 million tonnes.

What are Lentils?

➤ About:

- Lentil is a bushy **annual herbaceous plant** of the **legume family**.
- These are edible legumes, known for their lens-shaped, flat disced seed.
- Lentil plants are typically short, and bear **self-pollinated flowers**.
- Lentil grains are excellent sources of energy, carbohydrates, protein, fat, fibers, phosphorus, iron, zinc, carotene, vitamins, and antioxidants.

➤ Climatic Condition:

- Lentil is primarily grown as a rainfed crop.
- It requires **cold temperature during its vegetative growth** and warm temperature at the time of maturity.
- Lentil is grown during **rabi season**.

➤ Soil Types:

- Lentils can grow on various soil types, from sand to clay loam, growing best in deep sandy loam soils with moderate fertility.
- A soil pH around 7 would be the best. Lentils **do not tolerate flooding or water-logged conditions**.

➤ Lentil Growing Region:

- It is mainly cultivated in **Uttar Pradesh, Madhya Pradesh, Bihar, West Bengal, Chhattisgarh and Jharkhand**.
 - The Bundelkhand region of Uttar Pradesh and Madhya Pradesh is considered as lentil bowl which contributes nearly 25% to the total lentil production in the country.
- According to the **Food and Agriculture Organization (FAO)**, the world top lentil growers in 2022 were **Canada, India, Australia, Turkey, and Russia**.
 - Despite being the **second largest producer of lentil, India has so far been relying on imports** to meet its domestic requirements, buying mainly from Australia, Canada, Russia, Singapore, and Turkey.

Note:

What is the Status of Pulse Production in India?

- India is the **largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses** in the world.
- Pulses account for around 20% of the area under foodgrains and contribute around 7-10% of the total foodgrains production in the country.
- **Gram is the most dominant pulse** having a share of around 40 % in the total production followed by Tur/Arhar at 15 to 20 % and Urad/Black Matpe and Moong at around 8-10 % each.
- Though pulses are grown in both Kharif and Rabi seasons, **Rabi pulses contribute more than 60% of the total production.**
- Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh and Karnataka are the top five pulses-producing states.

What are Government Initiatives to Boost Pulses Production in India?

- **Policy Support:** The policy prescription for ensuring reasonable prices to the farmers largely centres around procuring the pulses by providing **Minimum Support Prices (MSP)** to the farmers through **National Agricultural Cooperative Marketing Federation of India (NAFED)** and more recently through **Small Farmers Agri Consortium (SFAC)**.
- **National Food Security Mission (NFSM)-Pulses.**
- **ICAR's Role in Research and Variety Development**
- **Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) Scheme**

World Employment and Social Outlook: Trends 2024

Why in News?

Recently, the **International Labour Organisation's (ILO)** has released the **World Employment and Social Outlook: Trends 2024** report, which highlighted that Global **Unemployment** rate is set to increase in 2024 and growing inequalities and stagnant productivity are causes for concern.

What are the Key Highlights of the Report?

- **Resilience Amid Deteriorating Economic Conditions:**

- Despite deteriorating economic conditions, global labor markets have shown surprising resilience, with **improvements in both the unemployment rate and the jobs gap rate** (the number of persons without employment who are interested in finding a job).

➤ **Global Unemployment Trends:**

- The global unemployment rate stood at 5.1% in 2023, a modest improvement from 2022.
- However, the **report projects a worsening Labor Market outlook**, with an additional two million workers expected to be looking for jobs in 2024, raising the global unemployment rate to 5.2%.

➤ **Uneven Recovery:**

- The recovery from the pandemic is uneven, **with new vulnerabilities and multiple crises** eroding prospects for greater social justice.
- Differences **persist between higher and lower income countries**, both in terms of unemployment rates and jobs gap rates.
- While the jobs gap rate in 2023 was 8.2% in high-income countries, it stood at 20.5% in the low-income group.
- Similarly, while the 2023 unemployment rate persisted at 4.5% in high-income countries, it was 5.7% in low-income countries.

➤ **Income Inequality Widening:**

- Income inequality has widened, and **Disposable Incomes have declined in the majority of G20 countries.**
 - **Disposable income** is net income. It's the amount left over after taxes.
- The erosion of **real disposable income is seen as a negative factor** for aggregate demand and a more sustained economic recovery.

➤ **Working Poverty Persists:**

- Despite quickly declining after 2020, the number of workers living in extreme poverty (earning less than **USD 2.15 per person per day in purchasing power parity terms**) grew by about 1 million in 2023.
- The number of workers living in moderate poverty (earning less than USD3.65 per day per person in PPP terms) increased by 8.4 million in 2023.
- Working poverty is **likely to persist as a challenge.**

Note:

- **Informal Work Rates Remain High:**
 - Rates of **Informal Work** are expected to remain static, accounting for around 58% of the global workforce in 2024.
- **Labor Market Imbalances:**
 - The return to pre-pandemic labor market participation rates has varied between different groups.
 - Women's participation has **bounced back quickly**, but a gender gap still persists, especially in emerging and developing nations.
 - Youth unemployment rates and the **NEET (Not in Employment, Education, or Training)** category remain high, posing challenges for long-term employment prospects.
- **Productivity Growth Slowed:**
 - After a brief post-pandemic boost, labor productivity has returned to the low levels seen in the previous decade.
 - Productivity growth has continued to slow despite technological advances and increased investment, with **barriers including skills shortages and the dominance of large digital monopolies**.
- **Outlook Uncertain and Structural Concerns:**
 - The imbalances observed are **not simply part of pandemic recovery** but may be structural. Workforce challenges pose a **threat to both individual livelihoods and businesses**.
 - Falling living standards, weak productivity, persistent inflation, and greater inequality **undermine efforts to achieve Social Justice** and sustainable recovery. The report emphasizes the need to address these challenges effectively and quickly.
- **Positive Real Wages:**
 - Real wages in **India and Turkey** are "positive" compared to other **G20 countries**, but the **available data refer to 2022 relative to 2021**. This implies that, despite global challenges, **wage increases in India have managed to outpace inflation**, contributing to an improvement in real wages.
 - The other G20 countries saw real wages fall; the declines were **particularly pronounced in Brazil (6.9%)**, Italy (5%) and Indonesia (3.5%).

What is the International Labour Organisation?

- **About:**
 - It was created in 1919, as part of the Treaty of Versailles that ended World War I, to reflect the belief that universal and lasting peace can be accomplished only if it is based on social justice.
 - It became a specialized agency of the **United Nations in 1946**.
 - It is a tripartite organization, the only one of its kind bringing together representatives of governments, employers and workers in its executive bodies.
- **Members:**
 - India is a founding member of the ILO with a total 187 member States.
 - In 2020 **India assumed the Chairmanship** of the Governing Body of ILO.
- **Headquarter:** Geneva in Switzerland.
- **Awards:** In 1969, ILO received the **Nobel Peace Prize** for improving fraternity and peace among nations, pursuing decent work and justice for workers, and providing technical assistance to other developing nations.

Navigating GST Challenges

Why in News?

The recent **Goods and Services Tax (GST)** revenue data paints a concerning picture: **consumption growth is not uniform across Indian states**, revealing a potential dissonance in **national economic recovery**.

What are the Major Takeaways From the Recent GST Related Data?

- **Overall GST Collections:** It grew by **11.7% in the first nine months of 2023-24** compared to the 2022-23.
 - State GST collections grew at a **higher rate (15.2%) compared to Central GST**, suggesting differential consumption patterns across states.
- **Sharp Disparities Among States:** Some states like **Madhya Pradesh, Maharashtra, and Karnataka** showed robust growth in state **GST revenues (17% to 18.8%)**, while others like Gujarat, West Bengal, and Andhra Pradesh lagged behind with single-digit growth or even contraction.

Note:

- **Lowest Private Consumption Expansion:** [National Statistical Office \(NSO\)](#) estimates project private final consumption expenditure (PFCE) growth for the year at **only 4.4%**, the slowest since 2002-03 (excluding pandemic times).
 - The **PFCE** is defined as the expenditure incurred by the **resident households and non-profit institutions serving households (NPISH)** on final consumption of goods and services, whether made within or outside the economic territory.

What is Goods and Services Tax?

- **About:** GST is a value-added tax system that is levied on the supply of goods and services in India.
 - It is a comprehensive indirect tax that was introduced in India on **1st July 2017**, through the [101st Constitution Amendment Act, 2016](#), with the slogan of '**One Nation One Tax**'.
- **Tax Slabs:** The primary GST slabs for regular taxpayers are currently **0% (nil-rated), 5%, 12%, 18%, and 28%**.
 - There are a few GST rates that are less commonly used, such as **3% and 0.25%**.
- **Benefits of GST:**
 - **Simplified Tax Regime:** GST replaced a multitude of indirect taxes, making compliance easier and reducing paperwork for businesses.
 - **Increased Transparency:** The **online GST portal** simplifies tax administration and promotes transparency in the system.
 - **Reduced Tax Burden:** Lower prices due to the elimination of cascading taxes benefit consumers.
 - **Boosted Economic Growth:** By removing tax barriers and improving efficiency, **GST is expected to contribute to higher economic growth** and job creation.
- **GST Council:** The GST Council is a **constitutional body responsible for making recommendations** on issues related to the implementation of the GST in India.
 - As per **Article 279A (1)** of the amended Constitution, the **GST Council was constituted by the President**.

What are the Current Major Challenges Related to GST in India?

- **Complexity and Compliance Burden:** GST in India has a complex structure with **multiple tax slabs**, leading to increased compliance requirements.

- This complexity poses a **challenge for businesses**, especially smaller enterprises, in understanding and adhering to the diverse regulations.
- **Technology and Infrastructure Readiness:** The successful implementation of GST relies heavily on robust technological infrastructure. Issues such as **lack of technological readiness among businesses, and disparities in technology adoption** can hinder the seamless functioning of the GST network.
- **Input Tax Credit (ITC) Verification:** The government authorities have recently identified and busted more than 29,000 bogus firms involved in evading GST dues.
- **Multiple Registrations Across States:** Businesses operating in multiple states must **register separately in each state for GST compliance**.
 - This multiplicity of registrations adds administrative burden and increases compliance costs for businesses with a **pan-India presence**, contributing to logistical challenges.

World Economic Situation and Prospects Report for 2024

Why in News?

A recent [United Nations](#) report titled [World Economic Situation and Prospects report for 2024](#) forecasts a **decline in global inflation in 2024**, but warns of a **simultaneous rise in food inflation**, particularly in developing nations.

- The implications of this phenomenon, coupled with **climate-related challenges** and geopolitical tensions, pose threats to food security, poverty alleviation, and economic growth.

What are the Key Highlights of the World Economic Situation and Prospects Report for 2024?

- **Global GDP Growth:**
 - The report forecasts a **deceleration in global gross domestic product (GDP) growth**, from an estimated **2.7% in 2023 to 2.4% in 2024**.
 - Developing economies, in particular, are struggling to recover from **pandemic-induced losses**, with many facing high debt and investment shortfalls.

Note:

- It is anticipated that **many low-income and vulnerable nations** will experience **only moderate growth** in the upcoming years.
 - The reasons are persistently **high-interest rates, escalating geopolitical conflicts, slow international trade** and an increase in **climate-related calamities**.
- **India's Perspective:**
 - South Asia grew by an estimated 5.3% in 2023 and is projected to increase by 5.2% in 2024, driven by a robust expansion in **India, which remains the fastest-growing large economy in the world**.
 - India is projected to grow by **6.2% in 2024**, supported by domestic demand and **growth in manufacturing and services**.
- **Inflation:**
 - Global inflation, a key concern over the past two years, shows **signs of easing**.
 - Global **headline inflation** fell from 8.1% in 2022 to an estimated 5.7% in 2023 and is projected to decline to 3.9% in 2024.
 - ◆ Headline inflation measures the **total inflation within an economy**, which includes commodities like food and energy prices.
 - The decline in inflation was attributed to ongoing **moderation in international commodity prices** and a decrease in demand due to monetary tightening by the UN.
 - However, **food price inflation remains critical**, exacerbating food insecurity and poverty, particularly in developing countries.
 - An estimated **238 million people experienced acute food insecurity in 2023**, an increase of 21.6 million from 2022.
 - ◆ Weak local currencies, climate-related shocks and limited pass-through from international prices to local prices will be the causes of this ongoing increase in food inflation.
 - The resurgence of **El Nino** can disrupt climate patterns, leading to both excessive and insufficient precipitation affecting food production.
- **Climate Change:**
 - 2023 experienced extreme weather conditions, leading to devastating wildfires, floods, and droughts worldwide.
 - These **events have direct economic impacts**, such as damage to infrastructure, agriculture, and livelihoods.
 - Studies project significant economic losses due to **climate change**.
 - Estimates suggest a potential **10% reduction in global GDP by 2100**, considering events like the Greenland ice shelf collapse.
 - Without mitigation, models indicate a **potential 23% decrease in average global incomes by 2100**.
 - IPCC estimates predict a range of 10 to 23% global GDP losses by 2100 due to temperature impacts alone.
- **Investment:**
 - Global investment growth is **expected to remain low** due to economic uncertainties, high debt burdens, and rising interest rates.
 - Developed nations prioritize **sustainable sectors** like green energy and digital infrastructure.
 - Developing countries grapple with **capital flight and reduced foreign direct investment**.
 - Geopolitical tensions impact regional investment flows, contributing to low global investment growth amid economic uncertainties and rising interest rates.
 - Investment in the energy sector, especially in clean energy, is growing but not at a pace sufficient to meet the **net-zero-emissions goal by 2050**.
 - Report estimates USD 150 trillion needed by 2050 for energy transition and infrastructure, requiring USD 5.3 trillion annually for the global energy sector alone.
 - Despite this, **climate finance falls short of requirements**, emphasizing the crucial need for massive scaling up.
 - The report calls for effective operationalization of the **Loss and Damage Fund** and increased financing commitments to aid vulnerable countries facing climate disasters.

Note:



➤ Labour Market:

- The global labour market displays divergent trends between developed and developing countries post-pandemic.

● Developed Countries:

- ◆ Experienced a robust recovery with **low unemployment rates**, notably 3.7% in the US and 6.0% in the EU in 2023, coupled with rising nominal wages and narrowing wage inequality.
- ◆ However, real income losses and labour shortages pose challenges.

● Developing Countries:

- ◆ Mixed progress with varied unemployment trends (e.g., China, Brazil, Türkiye, Russia report declines).
- ◆ Persistent issues are **informal employment, gender gaps, and high youth unemployment**.
- ◆ Globally, the decline in female labor force participation to 47.2% in 2023 (compared to 48.1% in 2013).

- **Artificial Intelligence(AI) Impact on Global Employment:**

- Since **ChatGPT's** introduction in 2022, AI adoption has rapidly advanced.
 - ◆ One-third of global firms now use generative AI, with **40% planning to expand AI investment**.
 - ◆ **AI could reduce demand for low-skilled jobs**, disproportionately impacting women and lower-income countries. Also, there's a significant gender gap in AI professions.

➤ Trade:

- Global trade growth weakened to 0.6% in 2023, **anticipated to recover to 2.4% in 2024**.
- The report points to a **shift in consumer spending from goods to services**, rising geopolitical tensions, supply chain disruptions, and the lingering effects of the pandemic as factors impeding global trade.

➤ International Finance and Debt:

- Rising **external debt and increased interest rates** hinder developing countries' access to international capital markets.

- Decline in **official development assistance** and **foreign direct investment** compounds financial constraints for low-income nations.
- **Debt sustainability** becomes a critical concern, necessitating debt restructuring and relief efforts to manage escalating financial burdens effectively.

➤ Multilateralism and Sustainable Development:

- The 2024 WESP report emphasizes the need for **strengthened global cooperation**, particularly in areas like climate action, sustainable development financing, and addressing the debt sustainability challenges of low- and middle-income countries.
- The report underscores the critical role of multilateralism in navigating the complex global economic landscape and achieving the **UN-mandated Sustainable Development Goals (SDG)**.

Concerns over Insolvency and Bankruptcy Code, 2016

Why in News?

The **Insolvency and Bankruptcy Code (IBC)** came into effect in 2016 to achieve several objectives, including maximizing the value of debtor's assets, promoting entrepreneurship, ensuring timely resolution of cases, and balancing the interests of stakeholders.

- However, recent developments have raised concerns about the **effectiveness of the code and the resolution process**.

What are the Key Issues with the IBC?

➤ Low Repayment Percentage:

- The resolution plan approval process typically involves only about 15% payment by the purchaser, and **repayment can take years without any further interest collected** by the banks according to the **financial stability report (FSR)** released by **Reserve Bank of India (RBI)** in 2023.
 - This has raised questions about the effectiveness of the repayment process.

➤ Settlement and Recovery:

- Recent settlements and resolutions, such as the **Reliance Communications Infrastructure Ltd. (RCIL) case**, have raised concerns due to the low settlement amounts and extended resolution periods.

Note:

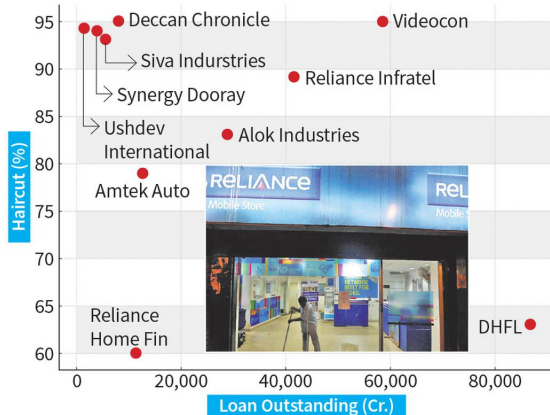
- For example, the settlement for RCIL amounted to a **mere 0.92% of the debt**, and it took four years to complete the resolution plan, far **beyond the stipulated maximum of 330 days**.
 - The Financial Creditors (FCs) should ideally get principal and interest.
- Time-consuming processes for identifying and acknowledging defaults contribute to reduced recovery rates. It hampers the **timely initiation of resolution proceedings**, contributing to reduced recovery rates.

➤ Haircuts and Recovery Rates:

- The concept of “haircuts,” which involves **writing off loans and accrued interest**, has gained prominence.
- Promoters are taking advantage by taking the company to cleaners and getting a **substantial haircut from bankers/National Company Law Tribunal (NCLT)**.
- After resolutions, **borrowers and Insolvency Professionals (IPs) remain wealthy**, while lenders suffer and banks are absolved from liability, as only **companies are declared insolvent, not the owners**, leading to depositors being the losers.
- This has resulted in **low recovery rates for financial creditors**, with some cases realizing as little as 5% of the loan outstanding.

Code Red

In RCom, against debtors' claims of ₹49,668 cr., the NCLT admitted only ₹47,251 cr. The settlement was just ₹455.92 cr.



➤ Realizable Value:

- The **FSR** released by the **RBI** in 2023 highlights the **low realizable value to creditors**, with banks

or financial creditors recovering an average of just 10-15% in NCLT-settled cases of large corporates. However, the RBI says the creditors realize **168.5% of the liquidation value and 86.3% of the fair value**.

- As per the FSR, out of 597 liquidations, against the claim of Rs 1,32,888 crore, the **amount realised was 3% of the claims admitted**.

- While banks collect up-to-date interest on loans to farmers, students, MSMEs and on housing, including penalty interest for delays, corporates are treated differently.

- The amount realized from liquidations has also been minimal, raising concerns about the recovery process.

➤ Regulatory Concerns:

○ Regulatory Reports:

- The **FSR** has highlighted several concerns regarding the **Corporate Insolvency Process (CIRP)**.
 - ◆ The report indicates that the **admitted claims are less than the dues**, and banks or financial creditors are recovering only a fraction of the liquidation value and fair value.

○ Parliamentary Standing Committee Report:

- The **32nd report of the Parliamentary Standing Committee on Finance** has raised concerns about **low recovery rates**, with **haircuts as much as 95%** and the **delay in the resolution process with more than 71% of cases pending** for more than 180 days clearly points towards a deviation from the original objective of the code intended by the Parliament, and issues with **Resolution Professionals (RPs) and Insolvency Professionals (IPs)**.

- ◆ It also recommends the need for a **professional code of conduct for the Committee of Creditors (COCs)** and fixing a ceiling on haircuts.

➤ Limited Judicial Bench Strength:

- The IBC resolution process is impeded by a **shortage of judges**, resulting in a **deceleration of case processing**. This, in turn, contributes to prolonged resolution times.

Note:

What are the Key Highlights of the Insolvency and Bankruptcy Code, 2016?

➤ About:

- The Insolvency and Bankruptcy Code (IBC), 2016 provides a framework for resolving the bankruptcy and insolvency of companies, individuals, and partnerships in a time bound manner.
 - Insolvency is a state where the **liabilities of an individual or an organization exceeds its asset** and that entity is **unable to raise enough cash to meet its obligations** or debts as they become due for payment.
 - Bankruptcy is when a person or company is **legally declared incapable of paying** their due and payable bills.
- The [Insolvency and Bankruptcy Code \(Amendment\) Act, 2021](#) amends the Insolvency and Bankruptcy Code, 2016.
 - This amendment aims to provide an efficient alternative insolvency resolution framework for corporate persons classified as [micro, small and medium enterprises \(MSMEs\)](#) under the code.
 - It aims for **ensuring quicker, cost-effective and value maximizing outcomes** for all the stakeholders.

➤ Objectives:

- Maximizing the value of debtor's assets.
- Promoting entrepreneurship.
- Ensuring timely and effective resolution of cases.
- Balancing the interests of all stakeholders.
- Facilitating a competitive market and economy.
- Providing a framework for cross-border insolvency cases.

➤ IBC Proceedings:

- Insolvency and Bankruptcy Board of India (IBBI):
 - [IBBI](#) serves as the regulatory authority overseeing insolvency proceedings in India.
 - ◆ The IBBI's **Chairperson and three whole-time members** are appointed by the government and are experts in the fields of finance, law, and insolvency.
 - ◆ It also has ex-officio members.

○ Adjudication of Proceedings:

- **National Companies Law Tribunal (NCLT)** adjudicates proceedings for companies.
- **Debt Recovery Tribunal (DRT)** handles proceedings for individuals.
 - ◆ Courts play a pivotal role in approving the initiation of the resolution process, appointing professionals, and endorsing the final decisions of creditors.

○ Procedure for Insolvency Resolution under the Code:

- Initiated by **either the debtor or creditor upon default**.
- Insolvency professionals manage the process, providing financial information to creditors and overseeing debtor asset management.
- A **180-day period prohibits legal action** against the debtor during the resolution process.

○ Committee of Creditors (CoC):

- Formed by insolvency professionals, the CoC comprises financial creditors.
 - ◆ The CoC determines the **fate of outstanding debts**, deciding on debt revival, repayment schedule changes, or asset liquidation.
- Failure to decide within 180 days leads to the debtor's assets going into liquidation.

○ Liquidation Process:

- Proceeds from the sale of the debtor's assets are distributed in the following order of order:
 - ◆ First insolvency resolution costs, including the remuneration to the insolvency professional, second secured creditors, whose loans are backed by collateral and third dues to workers, other employees, forth unsecured creditors.

Decline of Saffron Production in Kashmir

Why in News

The [Saffron fields of Kashmir](#), known for producing the **world's costliest spice**, are facing a severe crisis due to the **encroachment of cement factories**.

Note:

- Despite ranking as the **second-largest saffron producer globally**, with an average annual production of 11-12 tonnes, after **Iran**, the region's saffron industry is weakening, presenting economic challenges for local farmers.

What Factors Contribute to the Decline in Saffron Production?

- **Proximity to Cement Factories:**
 - Cement factories in close proximity to saffron fields emit **large volumes of dust**, damaging both **quality and quantity** of saffron yield.
 - Saffron fields in Pulwama, have witnessed a **60% decline in cultivation in the last 20 years due to cement pollution**.
- **Impact of Cement Dust:**
 - Delicate **saffron flowers are adversely affected by cement dust** containing harmful gasses like **nitrogen oxides, sulphur dioxide, and carbon monoxide**.
 - Large volumes of cement dust also results in **decreased chlorophyll**, clogged **stomata** (tiny pores in plant tissue that allow for gas exchange) in leaves, interrupted light absorption and gas diffusion, inducing **early leaf fall and resulting in stunted growth**.
 - Cement dust negatively impacts **crocin** (responsible for the color of saffron) content, affecting color, medicinal properties, and cosmetic benefits of Kashmiri saffron.
- **Environmental Factors:**
 - **Climate change**, unexpected rainfall, and land diversion for housing and industries contribute to reduced saffron production.
 - Usage of machines for ploughing also affects saffron cultivation, which is highly dependent on a favorable climate.
- **Lack of Government Intervention:**
 - Farmers have **resisted the establishment of cement factories** near saffron fields since 2005, citing environmental concerns.
 - Despite protests and appeals, authorities have permitted cement industries to operate in close proximity to saffron cultivation.
- **Market Challenges:**
 - Saffron farmers face financial difficulties as the **spice's market becomes less lucrative**.

- Farmers express concern over declining prices, quantity, and quality, leading to a bleak future for the industry.

What are the Key Facts About the Kashmiri Saffron?

- **Saffron Production and Price:**
 - Saffron production has long been restricted to a limited geographical area in the Union territory of Jammu & Kashmir.
 - **Pampore region**, in India, commonly known as **Saffron bowl of Kashmir**, is the main contributor to saffron production.
 - The saffron spice, extracted from the **stigma (male reproductive part)** of the saffron flower (*Crocus sativus L*), is known as **kong** in Kashmiri, **zaffran** in Urdu, and **kesar** in Hindi.
 - Kashmiri kesar is highly valued, selling at Rs 3 lakhs per kilogram.
 - A gram of kesar is obtained from approximately 160-180 flowers, requiring extensive labor.



- **Season:**
 - In India, saffron Corms (seeds) are cultivated during the **months of June and July** and at some places in **August and September**.
 - It starts flowering in October.
- **Cultivation Conditions:**
 - **Altitude:** Saffron grows well at an **altitude of 2000 meters above sea level**. It needs a photoperiod (**sunlight**) of **12 hours**.
 - **Soil:** It grows in many different soil types but thrives best in **calcareous** (soil that has calcium carbonate in abundance), **humus-rich and well-drained soil** with a pH between 6 and 8.

Note:

- **Climate:** For saffron cultivation, we need an explicit **climatological summer and winter** with temperatures ranging from no **more than 35 or 40°C** in summer to **about –15 or –20°C** in winter.
- **Rainfall:** It also requires adequate rainfall that is **1000-1500 mm per annum**.
- **Crocin Content and Color:**
 - **Kashmiri kesar contains 8% of crocin**, while the rest of the varieties contain 5-6% of the element.
- **Benefits of Kashmiri Saffron:**
 - It is known for **medicinal properties** such as lowering blood pressure, treating anemia, migraines, and aiding insomnia.
 - Possesses **cosmetic benefits**, enhancing skin quality, reducing pigmentation, and minimizing spots.
 - Integral part of **traditional dishes** and it is widely used in beverages, confectionery, dairy products, and food coloring.

Initiatives in India to Promote Saffron Production

- **National Saffron Mission:**
 - The NSM was launched in 2010-11 to support the cultivation of saffron in Jammu and Kashmir. The mission was part of the **Rashtriya Krishi Vikas Yojana (RKVY)** and aimed to improve the socio-economic status of the people living in Kashmir.
- **North East Centre For Technology Application and Reach (NECTAR):**
 - It is an autonomous body under the **Department of Science & Technology**, Government of India supported a pilot project to explore the feasibility of **growing saffron in the North East region of India**, with the same quality and higher quantity.
- **Recognition:**
 - In 2020, the central government granted a **Geographical Indication (GI) certification** to saffron grown in the Kashmir Valley.
 - Saffron Heritage of Kashmir is one of the **Globally Important Agricultural Heritage systems (GIAHS)**.
 - GIAHS are agroecosystems where communities maintain a close relationship with their territories. These resilient sites, marked by **agrobiodiversity, traditional knowledge, and sustainable management**, involve farmers, herders, fisherfolk, and forest people, contributing to livelihoods and food security.

- The **Food and Agriculture Organization** of the **United Nations** has recognized over 60 such sites worldwide through its GIAHS Programme.

Debt Sustainability and Exchange Rate Management

Why in News?

The **International Monetary Fund (IMF)** recently released its annual Article IV consultation report on India, addressing **critical issues concerning the nation's debt sustainability** and **exchange rate** management.

What are IMF's Projections Related to India's Economic Outlook?

- **Debt Sustainability:** The IMF flagged concerns about **India's long-term debt sustainability**.
 - It projected that India's general government debt, encompassing both the Centre and States, could potentially **escalate to 100% of GDP by fiscal year 2028**, particularly under adverse circumstances.
- **Debt Management Challenges:** The report highlighted the **necessity for more prudent debt management practices**, emphasizing the crucial need for **financing to achieve climate change mitigation goals** and enhance resilience against natural disasters.
 - The **Indian Finance Ministry contested the IMF's debt projections**, dismissing them as a worst-case scenario rather than an imminent reality.
- **Exchange Rate Dynamics:** The IMF reclassified India's de facto exchange rate regime to **"stabilized arrangement" from "floating"** for December 2022 to October 2023
 - This reclassification reflects observations about **controlled fluctuations in the rupee's value** due to interventions by the RBI.
- **Stagnant Credit Ratings:** Despite being lauded as the fastest-growing major economy, **India's sovereign investment ratings** have remained stagnant for a considerable period.
 - Agencies like Fitch Ratings and S&P Global Ratings have maintained **India's credit rating at 'BBB- with stable outlook' since 2006**, citing concerns about weak fiscal performance, burdensome debt, and low per capita income.

Note:

What is the Global Debt Landscape?

- **Rising Global Debt:** Globally, public debt has surged dramatically, surpassing **USD 92 trillion in 2022**, a more than fourfold increase since 2000, outpacing the growth of global GDP.
 - According to the UN, in 2022, 3.3 billion people live in countries that spend more on interest payments than on education or health.
 - Developing countries accounted for almost 30% of the total, of which roughly 70% is attributable to **China, India and Brazil**, largely driven by diverse factors like the **pandemic, cost-of-living crisis, and climate change**.
 - **Debt Asymmetry Between Developed and Developing Nations:** Developing countries, including those in **Africa**, contend with substantially higher borrowing costs compared to developed nations.
 - This disparity in borrowing rates compromises debt sustainability for developing nations, leading to **increased interest spending relative to public revenues**.

What is India's Current Debt Scenario?

- **Government Current Debt Levels:** The central government's debt stood at **₹155.6 trillion, approximately 57.1% of GDP by March 2023**. Meanwhile, State governments carried a debt of about **28% of GDP**.
 - As stated by the Finance Ministry, India's public debt-to-GDP ratio is **81% in 2022-23**. This, is way higher than the levels specified by the FRBM target.
 - The 2018 amendment to the FRBM Act specified debt-GDP targets for the Centre, States and their combined accounts at **40%, 20% and 60%, respectively**.
- **Interlinked Factors Related to India's Rising Debt Levels:**
 - **High Fiscal Deficit:** The government consistently spends more than it earns, leading to the deficit being financed through borrowing. This deficit can arise due to:
 - **High Expenditure Commitments:** Social welfare programs, **subsidies**, and defense spending significantly contribute to government outlays.

- **Slow Revenue Growth:** Tax reforms haven't sufficiently boosted revenue collection, creating a **revenue-expenditure gap**.
- **Global Geopolitical Events:** Events like the **Russia-Ukraine war** and rising commodity prices can lead to economic disruptions and higher import costs, forcing the government to borrow to maintain stability.
- **Informal Economy and Tax Leakage:** India's large informal economy poses challenges for efficient tax collection.
 - **Tax evasion** and **lack of formalization in sectors like agriculture** and small businesses limit revenue generation, potentially forcing the government to rely on debt financing.
- **Guarantees and Contingencies:** Government guarantees for loans taken by **public sector entities or contingent liabilities**, like potential losses from **public-private partnerships**, substantially add to the debt indirectly.
- **Exchange Rate Fluctuations:** Fluctuations in exchange rates **impact the cost of servicing foreign currency-denominated debt**, potentially increasing the overall debt burden.

➤ Legislation for Debt Management in India:

- **Fiscal Responsibility and Budget Management Act, 2003 (FRBM Act):** FRBM Act is an Indian law enacted to bring financial discipline to the government's fiscal operations and to reduce the **country's fiscal deficit**.
 - **FRBMA** aimed for specific debt-GDP targets for the Centre and States.
 - ◆ However, disruptions induced by the **pandemic** contributed significantly to elevated debt-GDP ratios, surpassing the specified thresholds.
 - Also, despite several years since its enactment, the Government of India has struggled to meet the FRBM Act targets.

What Measures can India Take for Sustainable Debt Management?

- **Short Term: Fiscal Consolidation:**
 - **Targeted Reforms:** **Streamlining subsidies, reforming public sector enterprises, and reducing administrative inefficiencies** and **strict adherence to FRBM Act targets** can free up resources for debt repayment and productive investments.

Note:

- **Improved Tax Efficiency:** Strengthening tax administration and **tackling tax evasion** can significantly boost revenue without excessive borrowing.
- **Long Term Growth-Oriented Strategies:**
 - **Skill Development and Education:** Investing in **human capital** through education and **skill development** programs enhances productivity and competitiveness, leading to higher economic growth and improved tax collection.
 - **Export Promotion:** Diversifying export markets, **incentivizing high-value exports**, and addressing competitiveness challenges can boost foreign exchange earnings, potentially reducing the need for external debt.

What Differentiates Floating Exchange Rate Dynamics from Stabilized Arrangement?

- **Floating Exchange Rate:**
 - **Market-Driven:** Currency value is **determined solely by supply and demand in the foreign exchange market**, with minimal government intervention.
 - **High Volatility:** The exchange rate can fluctuate significantly in response to economic news, events, or market sentiment.
 - **Promotes Flexibility:** Businesses and individuals can **adjust to changing economic conditions** through market-determined exchange rates.
- **Stabilized Arrangement:**
 - **More Managed than Purely Floating:** The government or central bank may intervene in the foreign exchange market **occasionally to smooth out excessive volatility** or maintain a target range for the currency.
 - **Moderate Volatility:** Aiming for greater stability than a pure float, but still accepting some degree of fluctuation.
 - **Offers Predictability:** Businesses and individuals can plan with a more stable exchange rate environment.
- **IMF's Classification of Stabilised Arrangement:**
 - The **IMF** classifies an exchange rate regime as a stabilized arrangement when it determines that the **exchange rate has not moved beyond a 2% band in 6 months** and that this stability has **resulted from market interventions rather than market conditions**.

Supreme Court Verdict on Adani-Hindenburg Case

Why in News?

The [Supreme Court of India](#) recently concluded its judgment on a series of petitions pertaining to allegations made by the US-based firm, [Hindenburg Research](#), against the **Adani group**.

- The apex court **refused to transfer the investigation** from the [Securities and Exchange Board of India \(SEBI\)](#) to other bodies, affirming its confidence in SEBI's handling of the case.
- Also, SC instructed SEBI to utilize its investigative authority to **determine if the Hindenburg report's short-selling actions violated laws**, resulting in investor harm.

What is the Supreme Court's Position Regarding the Adani-Hindenburg Dispute and SEBI's Inquiry?

- **Background:**
 - **Hindenburg's Allegations:** In **January 2023**, Hindenburg Research accused the Adani group of **stock manipulation, accounting fraud, and using improper tax havens** and shell companies to manage funds, significantly impacting the stock market.
- **Petitions and Arguments:**
 - **Petitions Filed:** Various petitions were filed seeking a **court-monitored investigation**, citing implications for national security and the economy.
 - They also alleged that SEBI, the **market regulator**, was not competent or independent enough to conduct a fair and impartial probe.
 - **Counter Arguments:** The Adani group refuted the allegations, attributing them to false information and vested interests.
 - **SEBI** defended its competence and independence in handling the investigation.
- **Recent Judgment:**
 - The Supreme Court ruled **in favor of the Adani group and SEBI**, rejecting the transfer of the probe to other investigative bodies.

Note:

- The court held that the **power to transfer investigation must be exercised in exceptional circumstances** and not in the absence of cogent justifications.
- The Court **deemed the Hindenburg report unreliable** and aimed at influencing the market through selective and distorted information.
- While **upholding SEBI's integrity**, the Court directed an expedited completion of SEBI's investigation within three months.

NOTE: The Supreme Court formed the **Justice Sapre Committee** in March 2023 to probe **potential regulatory failures** after investors suffered significant losses due to market volatility following **Hindenburg Research's allegations against the Adani Group** for share price manipulation and accounting fraud.

What is Short Selling?

➤ About:

- **Short selling** is the practice wherein an investor borrows a stock or security, sells it in the open market, foreseeing a potential future price decline, aiming to repurchase the same asset at a lower price point later on.
- SEBI defines short selling as **selling a stock that the seller does not own at the time of trade.**



➤ Regulation of Short-selling in India:

- SEBI has recently stated that **investors across all categories will be allowed for short-selling**, but **naked short-selling will not be permitted.**
- Consequently, all investors are required to **fulfill their duty of delivering securities** during the settlement period
- **Naked short selling** occurs when an investor sells stocks or securities without first arranging to borrow them or ensuring they can be borrowed.

- Institutional investors must disclose upfront whether a **transaction is a short sale**, while **retail investors can make a similar disclosure by the trading day's end.**
- Also, short selling is permitted for securities traded in the **F&O (Futures & Options) segment**, subject to SEBI's periodic review of eligible stocks.
- **Futures and Options (F&O)** are derivative instruments. Futures involve an **obligation to buy/sell assets at an agreed price** on a set date, carrying unlimited risk.
- ◆ **Options grant the right (but not obligation)** to buy/sell assets by a certain date, **with a premium paid upfront** limiting potential losses.

Futures	Options
A buyer has to purchase the stocks at the time of delivery irrespective of its price (even if it's going low)	A buyer can forgo the decision of buying stocks if there is a drop or may not buy at all
Requires higher margin payment than options	Has lower margin payment as compared to futures
There is unlimited profit and risks are also high	There is limited loss potential and unlimited profit due to its flexibility to purchase stocks or not at the said date
Requires no upfront cost apart from commissions	There is a premium required to pay
The underlying position in futures is much more than options	Underlying position is lower than futures

India's Toy Industry

Why in News?

Recently, the Indian Institute of Management (IIM) Lucknow at the behest of [Department for Promotion of Industry and Internal Trade \(DPIIT\)](#) under the Ministry of Commerce & Industry, has conducted a Case Study on **"Success Story of Made in India Toys"**, highlighting a significant rise in Toy Exports in in FY 2022-23 in comparison to FY 2014-15.

What is the Status of Indian Toy Industry as per the Study?

➤ Significant Growth Trends:

- The Indian toy industry exhibited **remarkable growth between FY 2014-15 and FY 2022-23**, marked by a substantial decline in imports by 52% and **a significant rise in exports by 239%.**
- This growth indicates a shift towards self-sufficiency and global competitiveness.

Note:

- **Quality Improvement:**
 - There's been an overall enhancement in the quality of toys available in the domestic market. **This emphasizes the importance of meeting international standards** and ensuring consumer satisfaction and safety.
- **Growth Drivers:**
 - **Enhanced Manufacturing Ecosystem:** Government efforts have **facilitated the creation of a more conducive** manufacturing ecosystem. Doubling the number of manufacturing units in six years, reducing dependence on imported inputs from 33% to 12%, increasing in gross sales value by a **CAGR of 10%** and improving labor productivity are noteworthy achievements.
 - **Global Integration and Export Focus:** India's emergence as a top exporting nation in the toy industry indicates **successful integration into the global toy value chain**. Zero-duty market access in key countries like the UAE and Australia has contributed to this growth trajectory.

What are the Government Initiatives to Foster the Growth in the Toy Industry?

- **National Action Plan for Toys (NAPT):**
 - A comprehensive plan comprising 21 specific action points, coordinated by DPIIT and implemented by multiple Central Ministries/ Departments. This plan addresses various aspects like design, quality control, promotion of indigenous toy clusters, etc.
- **Increase in Basic Customs Duty (BCD):**
 - A substantial **increase in BCD on toys (from 20% to 60% in February 2020, and subsequently to 70% in March 2023)** aims to protect the domestic toy industry from cheaper imports and encourage local manufacturing.
- **Mandated Sample Testing:**
 - The **Directorate General of Foreign Trade (DGFT)**, under the Ministry of Commerce and Industry mandated sample testing for each import consignment to prevent the import of substandard toys, ensuring better quality control.
- **Quality Control Order (QCO) for Toys:**
 - Issued in 2020, this **order emphasizes quality standards for toys**, effective from January 2021,

to enhance the overall quality of toys manufactured and sold in the country.

- **Provisions for Toy Manufacturers:**
 - Special provisions by BIS (Bureau of Indian Standards) have been made, including granting licenses to small units without testing facilities for a specified period, facilitating compliance with quality standards.
- **BIS Standard Marks:**
 - Over 1200 licenses have **been granted to domestic manufacturers** and over 30 to foreign manufacturers, ensuring adherence to quality standards through BIS marks.
- **Cluster-based Approach:**
 - Supporting the domestic toy industry through schemes like **SFURTI (Scheme of Funds for the Regeneration of Traditional Industries)** by the Ministry of MSME and providing support for designing and tooling to various toy clusters by the Ministry of Textiles.
- **Promotional Initiatives:**
 - Events like **The Indian Toy Fair 2021** and **Toycathon** aim to promote indigenous toys, encourage innovation, and create a platform for showcasing and ideation in the toy industry.

Interest Rate Adjustments in Small Savings Schemes

Why in News?

Recently, the Union government decided to raise the returns on the **Sukanya Samridhi Account Scheme (SSAS)** from 8% to 8.2%, and on the **3-year Post Office Time Deposit Scheme (POTDS)** from 7% to 7.1%, for the first quarter of 2024, while keeping the interest rates unchanged for all other **small savings schemes**.

What is Sukanya Samridhi Account Scheme?

- **About:**
 - The **Sukanya Samridhi Account Scheme (SSAS)** is a small deposit scheme by the **Ministry of Finance** exclusively for a girl child and is launched as a part of the **Beti Bachao Beti Padhao Campaign**.
 - The scheme is meant to meet the **education and marriage expenses** of a girl child.

Note:

➤ Eligibility:

- Any girl child who is a resident Indian from the time of opening the account till the time of maturity/closure.
- The account may be opened by **one of the guardians in the name of a girl child**, who has **not attained the age of ten years** as of the date of opening of the account.
- A family can open a maximum of two accounts under this scheme for girl children. However, exceptions allow opening more than two accounts for twins or triplets born in the first or second order, supported by an affidavit and birth certificates.

➤ Benefits:

- The Minimum Investment is Rs 250 per annum; the Maximum Investment is Rs 1,50,000 per annum. The **Maturity Period is 21 years**.
 - At present, SSAS has several tax benefits and the **highest rate of interest among all the Small Savings Schemes**.

What is the Post Office Time Deposit Scheme?

➤ About:

- The POTDS also known as **National Savings Time Deposit scheme** is a government-backed savings option that allows individuals to deposit an amount for a fixed tenure and earn a predetermined interest rate on their investment. This scheme is offered by [India Post Payments Bank \(IPPB\)](#).

➤ Features of the POTDS:

- It offers four types of accounts with varying maturity periods: **1 year, 2 years, 3 years, and 5 years**.
- It allows deposits from Rs. 1,000 to any amount, in multiples of Rs. 100.
- It allows joint accounts, minor accounts, and nomination facility.
- It **provides income tax benefits for the 5-year account** under Section 80C of the Income Tax Act, of 1961.
 - Section 80C of the [Income Tax Act, of 1961](#), allows for deductions from gross total income for certain investments and expenses made by individuals and Hindu Undivided Families (HUFs).

- It encourages savings and investments in specific avenues, thereby reducing taxable income and providing tax benefits to taxpayers.

Extended PLI Scheme for Automobile and Auto Components

Why in News?

The **Ministry of Heavy Industries** has recently extended the tenure of the [Production Linked Incentive \(PLI\) Scheme](#) for **Automobile and Auto Components** by one year, with incentives now applicable for five consecutive financial years starting from 2023-24.

- This decision has been made after receiving the approval of the **Empowered Group of Secretaries (EGoS)**.
- Companies failing to meet the first year's sales increase threshold **will not receive incentives for that year**.
 - However, they remain eligible for future benefits by achieving a 10% year-on-year growth over the first year's threshold.

What is a Production Linked Incentive Scheme?

➤ About:

- PLI scheme is a government initiative in India that **offers financial incentives to companies** based on their **incremental sales of products** manufactured in India.
- The scheme aims to drive [domestic manufacturing](#), **spur job creation, bolster exports, facilitate technology transfer**, and diminish import reliance.

➤ Key Features:

- **Sector-specific:** The scheme is currently active in **14 key sectors:** mobile manufacturing, manufacturing of medical devices, automobiles and auto components, pharmaceuticals, drugs, specialty steel, telecom & networking products, electronic products, white goods (ACs and LEDs), food products, textile products, solar PV modules, advanced chemistry cell (ACC) battery, and drones and drone components.
- **Incentive Rate:** The incentive rate varies depending on the sector and product category, but can range from **4% to 6% of incremental sales**.

Note:

What is the Status of the Automobile Sector in India?

- India is the world's third-largest **automobile market**. The Automobile Sector resulted in **5.41% of the total FDI inflow** as per the September 2023 DPIIT Report.
- The **Electric Vehicle** market is expected to grow at a **CAGR of 49%** between 2022-2030 and the EV industry would create 5 Mn direct and indirect jobs by 2030.
- **Related Government Initiatives:**
 - **FAME Scheme**
 - **Automotive Mission Plan 2016-26 (AMP 2026)**

RBI Guidelines on Inoperative Accounts and Unclaimed Deposits

Why in News?

The **Reserve Bank of India (RBI)** has recently revised guidelines regarding inoperative accounts and unclaimed deposits, aiming to streamline the classification and activation processes.

- The revised instructions apply to all **Commercial Banks and all Cooperative Banks** and will come into effect from 1st April 2024.

What are Inoperative Accounts and Unclaimed Deposits?

- **Inoperative Account:**
 - An account with no '**customer-induced transactions**' for **over two years** is deemed inoperative.
 - A customer-induced transaction can be a **financial transaction** initiated by or done at the behest of the account holder by the bank or third party, a **non-financial transaction**, or a **KYC (know your customer) updation** done in face-to-face physical mode or through digital channels such as internet banking or mobile banking application of the bank.
 - Around **Rs 1-1.30 lakh crore** is estimated to be lying in inoperative bank accounts.
- **Unclaimed Deposits:**
 - Balances in savings/current accounts **inactive for 10 years or term deposits** unclaimed after 10

years from maturity are considered unclaimed deposits. As of March 2023, around **Rs 42,270 crore** remains unclaimed in banks.

What are the Revised RBI Guidelines?

- **Annual Review:**
 - Banks must conduct an **annual review of accounts with no customer-induced transactions** for over a year.
 - In the absence of an explicit mandate to renew term deposits, banks must review such accounts.
 - Banks need to review such accounts, where the customers have not withdrawn the proceeds after maturity or transferred these to their savings/current account to prevent **such deposits from becoming unclaimed**.
- **Communication Protocol:**
 - Banks are instructed to **notify account holders** through letters, emails, or SMS about the lack of operations in the last year.
 - **Alert messages** must explicitly state the account's impending 'inoperative' status if **no operations occur in the next year**.
 - Customers will be required to **submit fresh KYC documents** for reactivation in such cases.
- **Classification Criteria for Inoperative Accounts:**
 - Only customer-induced transactions, not bank-induced ones, are considered for classification.
 - Mandates like standing instructions or auto-renewal with no other operations are also treated as customer-induced transactions.
 - Bank-induced transactions encompass charges, fees, interest payments, penalties, and taxes.
 - The classification of an account as inoperative will be for a particular account of the customer and not with reference to the customer.
- **Exemptions from Inoperative Classification:**
 - Accounts **opened for beneficiaries of government schemes and students** (with zero balance) should be segregated in the core banking solution.
 - This ensures that the 'inoperative' label is not applied due to non-operation for more than two years.

Note:

- **Reactivation Process:**
 - Reactivation of inoperative accounts necessitates the submission of KYC documents. This process applies to all branches, including non-home branches.
 - The **Video-Customer Identification Process (V-CIP)** can also be utilized for reactivation if requested by the account holder.
 - **No charges are permitted** for the activation of inoperative accounts.
- **Penalties and Interest:**
 - Banks are **not authorized to impose penal charges for non-maintenance** of minimum balances in any account classified as an inoperative account.
 - Accounts **opened for beneficiaries of government schemes and students** (with zero balance) should be segregated in the core banking solution.
 - This ensures that the 'inoperative' label is not applied due to non-operation for more than two years.
 - Interest on savings accounts should be credited regularly irrespective of the fact that the account is in operation or not.
- **Depositor Education and Awareness Fund:**
 - The credit balance in any deposit account maintained with banks, **not operated for ten years or more**, is required to be transferred by banks to the **DEA (Depositor Education and Awareness) Fund** maintained by the RBI.

India's Steel Sector

Why in News?

Over the years, the [Steel Sector](#) has witnessed tremendous growth and India has emerged as a global force in steel production and the 2nd largest producer of steel in the world after China.

What is the State of Steel Sector in India?

- **Present Scenario:** India's steel output has been 125.32 million tonnes (MT) of crude steel and 121.29 MT of finished steel production in FY23.
- **Significance:**
 - Steel is **one of the widely used materials all over the world**. The iron and steel industry is the bottom line producer industry.

- The steel industry plays a pivotal role in crucial sectors such as construction, infrastructure, automobile, engineering, and defense.
- Steel is a key sector for the Indian economy (responsible for 2% of the country's GDP in FY 21-22).

➤ Producing States:

- India's major steel-producing states include **Odisha**, which leads among all steel producing states, **followed by Jharkhand and Chhattisgarh**. Karnataka, Maharashtra, Gujarat, and West Bengal also play crucial roles.

What are the Government Initiatives for the Growth of Steel Sector?

➤ Inclusion of Specialty Steel in [PLI Scheme](#):

- The government approved a **Rs 6322 crore outlay for a 5-year period** to promote manufacturing of specialty steel, attracting investments, and fostering technological advancements in the sector.

➤ Green Steel Making:

- The Ministry of Steel **constituted 13 Task Forces with the engagement of industry**, academia, think tanks, S&T bodies, different Ministries and other stakeholders to discuss, deliberate and recommend upon different levers of decarbonisation of the steel sector.
- The Ministry of New and Renewable Energy (MNRE) has announced a **National Green Mission for green hydrogen production and usage**. The steel sector has also been made a stakeholder in the mission.
- The steel sector has adopted the **Best Available Technologies (BAT)** available globally, in the modernization & expansions projects.

➤ Ministry's Engagement with PM Gati Shakti National Master Plan:

- The **Ministry of Steel has integrated BISAG-N's capabilities into the [PM Gati Shakti National Master Plan](#)**, uploading geolocations of more than 2000 steel units to gain insights into steel production facilities.
- This information will aid in planning railway line extension, inland waterways, highways, ports, and gas pipeline connectivity.

Note:



- **Steel Scrap Recycling Policy:**
 - The **Steel Scrap Recycling Policy (SSRP)** has been notified in 2019 which provides a framework to facilitate and promote establishment of metal scrapping centres in the country for scientific processing and recycling of ferrous scrap generated from various sources **including end of life vehicles (ELVs)**.
- **National Steel Policy 2017:**
 - The Government has formulated the **National Steel Policy 2017**, which lays down the broad roadmap for encouraging **long term growth for the Indian steel industry**, both on demand and supply sides, by 2030-31.
 - Government's push for infrastructure development through Gati-Shakti Master Plan, **'Make-in-India' initiative** for manufacturing sector and other flagship schemes of the Government would provide impetus to the demand and consumption of steel in the country. .
- **Steel and Steel products (Quality Control) Order:**
 - The Ministry of Steel has introduced Steel Quality Control Order, thereby **banning sub-standard/defective steel products both from domestic & imports** to ensure the availability of quality steel to the industry, users and public at large. As per the Order, it is ensured that only quality steel conforming to the relevant BIS standards are made available to the end users.
- **Safety in the Iron & Steel Sector:**
 - After extensive consultations with stakeholders, academia etc, a set of 25 common minimum Safety Guidelines for the **Iron & Steel Sector was formulated**.
 - These Safety Guidelines are **at par with the global standards** and are compliant with the **requirements of the ILO Code of practice on safety** in the Iron & Steel industry.
 - Inputs have also been taken from the World Steel Association's guidance document on "Safety & Health Principles and Definitions".
- **National Metallurgist Award:**
 - This award is a prestigious award given by the Ministry of Steel to recognize the outstanding contributions of metallurgists in the iron and steel sector.

Inflation in India: Demand vs. Supply

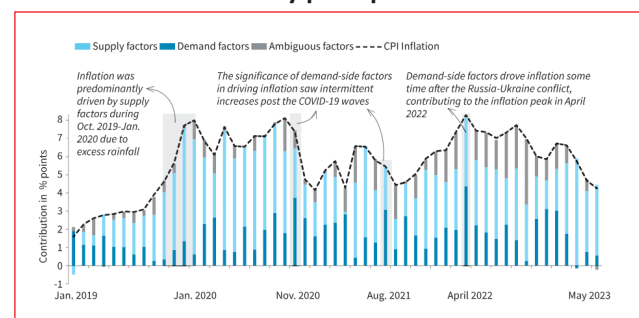
Why in News?

Recently, **Inflation** in India is a perennial concern, but recent observations by the Reserve **Bank of India (RBI)** suggest changing dynamics influenced by both supply and demand factors.

- Over the entire period from **January 2019 to May 2023**, approximately **55%** of the **Consumer Price Index (CPI) headline inflation** is attributed to supply-side factors and the contribution of demand drivers to inflation stood at 31%.

What has Caused Inflation in India in Recent Years?

- During the two waves of **Covid-19**, supply disruptions were the main cause of inflation.
 - The start of the **pandemic, lockdowns** caused a major decline in production and demand, leading to a **steep drop** in economic growth.
 - This phase also saw a decrease in **commodity prices** due to **weakened demand**.
 - As the economy began to reopen with distribution of vaccines and release of pent-up demand, demand recovered more rapidly than supply. This imbalance resulted in rising pressures on commodity prices.
- The onset of the **Russia-Ukraine conflict** in 2022 further **intensified supply chain challenges** and added to **commodity price pressures**.



What is the Methodology for Assessing Inflation Causes?

- Unforeseen shifts in **prices** and **quantities** within a month determine whether **inflation** is **demand-**

Note:

driven (prices and quantities move in the same direction) or **supply-driven** (prices and quantities move in opposite directions).

- An **increase in demand** leads to a **rise in both prices and quantities**, while a **decrease in demand** results in a **reduction in both**.
- Inflation is considered to be **supply-driven** if there is an **unexpected change in prices and quantities** that move in **opposite directions**. In this case, a

decrease in supply is linked with a **lower volume** but an increase in price, and vice versa.

- Demand and supply factors at the sub-group level were combined using the CPI weights to assess overall headline inflation.
- **Headline inflation** is a measure of the **total inflation** within an economy, including commodities such as **food and energy prices**, which tend to be much more **volatile** and prone to **inflationary spikes**.

INFLATION AND RELATED TERMS

INFLATION

- ◆ Rise in goods/services prices; corresponding decline in purchasing power
 - **Creeping Inflation:** Mild/moderate inflation where price level persistently rises over a period of time at a mild rate (single digit inflation rate)
 - **Galloping Inflation:** Occurs when mild inflation is not checked/controlled (inflation in double/triple digits - 20/100/ 200% annually)
 - **Hyperinflation:** Prices rise a million or even a trillion percent annually (witnessed by Germany in 1920s)

CORE INFLATION

- ◆ Change in costs of goods/services but **excluding those from food/energy sectors** (due to price volatility)

HEADLINE INFLATION

- ◆ **Headline Inflation** - Change in value of all goods in the basket (including food and energy)

Core = Headline – Food & fuel items

STAGFLATION

- ◆ When **Inflation, unemployment and economic stagnation** /recession occur simultaneously; most difficult type of inflation to manage
 - Witnessed by developed countries in the **1970s** (US, UK) when world oil prices rose dramatically

DEFLATION

- ◆ **Reverse of inflation** - a sustained decline in price of goods/services
 - Here, **annual inflation rate falls below 0%** resulting in an increase in the real value of money (Japan suffered for almost a decade in **1990s**)
 - **Can worsen into recession/depression**; hence, more dangerous than inflation

DISINFLATION

- ◆ When inflation rate decelerates
 - Implies that prices are rising (inflation is happening) but at a **slower rate** each passing month

Deflation is decline in prices, whereas disinflation is a decline in inflation rate



REFLATION

- ◆ Typically **follows deflation**
 - Policymakers try to **stimulate economic activity by producing inflation** (more govt spending, reduced interest rates etc.)

SKEWFLECTION

- ◆ Skewness of inflation among different sectors of the economy - **some sectors facing huge inflation while some none** and some even deflation

GREEDFLATION

- ◆ Where (corporate) **greed is fuelling inflation**; **companies increasing their prices beyond just covering costs** to maximise profits

SHRINKFLATION

- ◆ **Hidden form of inflation**; often leads to **customer frustration/dissatisfaction**
 - Practice of **reducing the size of a product while maintaining its sticker price**



Note:

- The headline inflation figure is reported through the [Consumer Price Index \(CPI\)](#), which calculates the **cost to purchase** a fixed **basket of goods** to determine how much inflation is occurring in the broad economy.

What is Inflation?

➤ About:

- **Inflation**, as defined by the [International Monetary Fund](#), is the rate of increase in prices over a given period, encompassing a broad measure of overall price increases or for specific **goods and services**.
- It reflects the **rising cost of living** and indicates how much more expensive a set of goods and/or services has become over a specified period, usually a year.
 - In India, inflation's impact is particularly significant due to **economic disparities** and a large population.

➤ Different Causes of Inflation:

- **Demand-Pull Inflation:**
 - [Demand Pull inflation](#) occurs when the **demand for goods and services** exceeds their **supply**. When the overall demand in the economy is high, consumers are willing to pay more for the available goods and services, leading to a **general rise in prices**.
 - ◆ A **booming economy** with high consumer spending can create excess demand, putting upward pressure on prices.
- **Cost-Push Inflation:**
 - [Cost-push inflation](#) is driven by an increase in the **production costs for goods and services**. This can be caused by factors such as **increased incomes, increased costs of raw materials, or disruptions in the supply chain**.
- **Built-In or Wage-Price Inflation:**
 - This type of inflation is often described as a **feedback loop** between **wages and prices**. When workers demand **higher wages**, **businesses** may raise prices to cover the **increased labor costs**. This, in turn, prompts workers to seek higher wages, and the cycle continues.

- ◆ Collective bargaining by labor unions can result in **higher wages**, leading to **increased production costs** and subsequently **higher prices for goods and services**.

Banks' Gross NPAs Drop to 3.2%

Why in News?

The [gross non-performing asset \(GNPA\)](#) ratio for **Scheduled commercial banks (SCBs)** witnessed a significant decline, falling from **3.9%** at the end of March 2023 to **3.2%** by the end of **September, 2023**, as per the recent report of [Reserve Bank of India \(RBI\)](#).

- **Contributing factors:** Write-offs, Upgrades, and Recoveries.

What is a Non-Performing Asset?

➤ About:

- As per **RBI**, an asset becomes non-performing when it ceases to generate income for the bank.
- NPA is usually a loan or advance for which the **principal or interest** payment remained overdue for a certain period of time.
 - In most cases, **debt is classified as non-performing**, when the loan payments have not been made for a **minimum period of 90 days**.
 - For agriculture, if principle and interest is not paid for **2 cropping seasons**, the loan is classified as NPA.

➤ Types:

- Banks are required to classify NPAs further into the following three categories based on the period for which the asset has remained non-performing and the realizability of the dues:
 - **Sub-standard Assets:** A substandard asset is an asset classified as an NPA for a period less than or equal to 12 months.
 - **Doubtful Assets:** A doubtful asset is an asset that has been non performing for a period exceeding 12 months.
 - **Loss Assets:** Assets that are uncollectible and where there is little, or no hope of recovery and that needs to be fully written off.

Note:

➤ **Gross NPA(GNPA) and Net NPA:**

- **GNPA:** This is the total amount of NPAs **without deducting the provisional amount.**
- **Net NPA:** This is the gross NPA **minus the provision.**
 - Provision refers to **funds left aside by banks** to cover potential losses arising from bad loans or NPAs.

➤ **Provisions to Deal with NPAs in India:**

- **The Recovery of Debts due to Banks and Financial Institutions Act (RDB Act), 1993:** It established **Debt Recovery Tribunals (DRTs) and Debts Recovery Appellate Tribunals (DRATs)** to quickly

adjudicate and recover debts owed to banks and financial institutions.

- **The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI Act), 2002:** Empowers banks and financial institutions to take possession and **sell secured assets of defaulting borrowers** without court intervention.
- **The Insolvency and Bankruptcy Code (IBC), 2016:** Provides a **fast-track corporate insolvency resolution** process for stressed assets, including NPAs.
 - IBC has helped resolve **Rs 3.16 lakh crore of debt stuck** in 808 cases, since its inception.

- **Write-offs:** Write-offs refer to the **removal of a non-performing loan or asset from the bank's books** as an acknowledgment that the debt is unlikely to be recovered.
 - This action does not absolve the borrower from the obligation to repay but acknowledges the unlikelihood of recovery.
- **Upgrades:** It refers to the process of reclassifying a loan account from NPA back to a **"standard" asset category**, if certain conditions are satisfied including: arrears of interest and principal are paid by the borrower.
- **Recoveries:** Recoveries represent the **funds or assets regained by the bank after taking actions** to collect on defaulted loans or NPAs.
 - These can include repayments, collateral liquidation, or settlements after pursuing recovery mechanisms.



Note:

International Relations

Highlights

- India and Saudi Arabia Sign Bilateral Haj Agreement 2024
- Annual Exchange of Nuclear Installation Lists: India and Pakistan
- Issue of Indians Jailed Abroad
- Global Geopolitical Intricacies and Opportunities for India
- India-Italy Migration and Mobility Agreement
- Red Sea and Panama Canal

India and Saudi Arabia Sign Bilateral Haj Agreement 2024

Why in News?

The Indian government has recently signed a **Bilateral Haj Agreement for the year 2024** with the **Kingdom of Saudi Arabia (KSA)**, marking a significant development in the facilitation of the annual [Haj pilgrimage](#).

- The agreement sets a total quota of **1,75,025 pilgrims from India** for Haj 2024, with 1,40,020 seats reserved for the **Haj Committee of India** and 35,005 for **Haj Group Operators**.
- The agreement also appreciates and supports the initiative of the Indian government to encourage the participation of **women pilgrims without a Mehram (Male Companion)**.

What are the Key

Highlights of the Haj Pilgrimage?

- The Hajj is a sacred pilgrimage to the holy city of **Mecca in Saudi Arabia** that every adult Muslim must make at least once in their lifetime. It is **one of the five pillars of Islam**.
 - **The Other Pillars of Islam:**
 - **Shahada (Faith):** The declaration of faith in the oneness of God and the acceptance of Muhammad as God's prophet.
 - **Salah (Prayer):** Performing the five daily prayers facing the Kaaba in Mecca.
 - **Zakat (Charity):** Giving a portion of one's wealth to those in need.
 - **Sawm (Fasting):** Fasting during the month of Ramadan.

- It takes place during **Dhu'al-Hijjah**, the **final month of the Islamic calendar**, and is performed over five to six days.
- The pilgrims wear simple white garments (Ihram) to symbolize equality and purity.
- The pilgrims circle the **Kaaba**, a black cubic structure at the **Grand Mosque**, seven times in a counter-clockwise direction, and kiss or touch the **Black Stone** on its corner.
 - This ritual is called **Tawaf**, which means "going round and round" in Arabic.

Haj pilgrimage for the Indian Pilgrims

- Haj pilgrimage for the Indian Pilgrims is conducted either through **Haj Committee of India (HCoI)**, which is a **statutory organization** under the administrative control of Ministry of Minority Affairs or through the **Haj Group Organisers (HGOs)** duly approved by Ministry.
 - **The Ministry of Minority Affairs is the nodal ministry** to conduct Haj pilgrimage in India.
- The **Haj Committee of India (HCI)** was established in 2002 under the **Haj Committee Act, 2002**.
 - All aspects of the arrangements for the HCI pilgrims in Saudi Arabia are coordinated by the **Consulate General of India (CGI), Jeddah, Saudi Arabia**.

Annual Exchange of Nuclear Installation Lists: India and Pakistan

Why in News?

Recently, [India and Pakistan](#) have exchanged lists of their respective [nuclear installations](#) and facilities

Note:

through diplomatic channels in **New Delhi (India) and Islamabad (Pakistan)**.

- This exchange falls under the **Agreement on the Prohibition of Attack against Nuclear Installations and Facilities** between the two countries.

What is the Agreement on the Prohibition of Attack Against Nuclear Installations and Facilities?

- **About:** The Agreement on the **Prohibition of Attack against Nuclear Installations and Facilities** was signed on 31st December, 1988, by the then Pakistani Prime Minister **Benazir Bhutto** and **Indian PM Rajiv Gandhi**.
 - The treaty came into force on **27th January, 1991**.
 - The recent one is the **33rd consecutive exchange of such lists between the two countries**, the first one having taken place on **01st January, 1992**.
- **Background:** While other factors might have played a role, the direct trigger for the negotiation and signing of the agreement was the tension generated by the **1986-87 Brasstacks exercise by the Indian Army**.
 - **Operation Brasstacks** was a **military exercise** conducted in the Indian state of **Rajasthan**, near the Pakistan border.
- **Mandate:** The agreement mandates both countries to **inform each other about any nuclear installations and facilities** to be covered under the agreement on the **1st of January of every calendar year**, providing a confidence-building security measure environment.
 - According to the agreement, the term '**nuclear installation or facility**' includes **nuclear power and research reactors, fuel fabrication, uranium enrichment, iso-topes separation, and reprocessing facilities** as well as any other installations with fresh or irradiated nuclear fuel and materials in any form and establishments storing significant quantities of radioactive materials.

What are the Major Areas of Dispute Between India and Pakistan?

- **Kashmir Dispute:**
 - **Line of Control Violations:** Frequent ceasefire violations along the LoC, resulting in casualties and escalating tensions.

- **Disagreements over Demilitarization:** Calls for demilitarization on both sides of the LoC remain unaddressed, hindering progress towards peaceful resolution.
- **Terrorism:**
 - **Cross-border Infiltration:** Accusations by India of **Pakistan-backed militants infiltrating** the LoC to carry out **terrorist attacks**.
 - **Designation of Terror Groups:** Differences in **designating militant groups as terrorist organizations** by both countries create obstacles to counter-terrorism cooperation.
 - **Impact on Civilian Populations:** Terrorist attacks claim **innocent lives and foster further animosity** between the two communities.
- **Water Sharing:**
 - **Construction of Dams:** Dispute over construction of dams and hydroelectric projects on the **Indus River and its tributaries**, impacting water flow and usage rights.
 - **Implementation of Indus Water Treaty:** Differences in interpreting and implementing clauses of the treaty regarding water allocation and dispute resolution mechanisms.
- **Trade and Economic Ties:**
 - **Trade Barriers:** Restrictive trade policies and high tariffs imposed by both countries hinder cross-border trade and economic connectivity.
 - In August 2019, Pakistan halted trade with India in response to constitutional amendments made in the Jammu and Kashmir region.
 - India imposed a 200% tariff on Pakistani imports in 2019, when Pakistan's **Most Favored Nation (MFN) designation** was removed in the aftermath of the **Pulwama terrorist incident**.
 - **Limited Cross-border Investment:** Political tensions and security concerns **discourage investment and joint ventures** between businesses in both countries.
 - **Dependence on Third-party Trade Routes:** Reliance on **trade routes outside the region** increases costs and reduces efficiency for both economies.
- **Regional Geopolitics:**
 - **China's Role in Pakistan:** Increased **Chinese investment and presence in Pakistan**, including

Note:

projects like the [China-Pakistan Economic Corridor](#), create concerns for India about strategic alliances and balance of power.

How can India and Pakistan Move Towards Dispute Resolution?

- **Building Confidence Measures:**
 - **Strengthening Communication:** Establishing **direct, secure communication channels** at various levels for open dialogue and crisis management.
 - **De-escalation at the LoC:** Implementing and **strengthening ceasefire agreements**, reducing troop deployments, and establishing joint mechanisms for investigating violations.
 - **People-to-People Initiatives:** Promoting **cultural and academic exchanges, sports events**, and joint initiatives addressing common challenges like climate change and healthcare.
- **Addressing Core Issues:**
 - **Kashmir Dispute Resolution:** Seeking a **just and lasting solution to the Kashmir issue through dialogue**, considering the aspirations of the Kashmiri people and respecting international legal frameworks.
 - **Combating Terrorism:** Intensifying **joint efforts to dismantle terrorist networks**, addressing financing and ideological sources, and ensuring accountability for past acts.
 - **Water Cooperation:** Implementing the **Indus Water Treaty effectively**, sharing data and information transparently, and exploring joint water management projects for mutual benefit.
- **Regional and International Cooperation:**
 - **Encouraging Mediation:** Facilitating talks through regional forums like [SAARC](#), seeking solutions acceptable to both parties.
 - **Balancing External Influences:** Both countries need to navigate their relationships with **external powers like China and the US** to avoid jeopardizing bilateral progress.
- **Fostering Public Understanding and Support:**
 - **Media Responsibility:** Promoting **responsible media coverage, avoiding negative stereotyping**, and emphasizing positive stories of cooperation and shared history.

Issue of Indians Jailed Abroad

Why in News?

With India being the highest diaspora of citizens the world over, more than **9,500 Indians are currently in Jails abroad.**

- Three in every five are lodged in jails in the Middle East, and the third-largest population of prison inmates in the region is in Qatar.

NOTE: According to the Ministry of External Affairs (MEA), more than 1.3 crore [Non-Resident Indians \(NRIs\)](#), over **1.8 crore Persons of Indian Origin (PIOs)**, and as many as **3.2 crore Overseas Indians** stay in 210 countries.

Where are Most Indian Prisoners Lodged?

- **Total Indians Jailed Abroad:**
 - As many as 9,521 Indians are lodged in jails in 89 of the 210 countries where diaspora from the country is based.
 - **Middle East:**
 - More than **62% are lodged in the Middle East**, followed by Asia.
 - The highest number of Indian prisoners — 2,200 — are lodged in **Saudi Arabia, followed by the United Arab Emirates.**
 - Qatar has **752 Indian prisoners** followed by Kuwait, Bahrain and Oman.
 - **Asia:**
 - In Asia, a little over 23% of the total **1,227 prisoners are in Nepal followed by Malaysia, Pakistan, China, Singapore, Bhutan and Bangladesh.**
 - **Europe:**
 - In Europe, the **majority of Indian prisoners are lodged in the United Kingdom (278)** followed by Italy, Germany, France and Spain.
- ### **What Happens When an Indian is Imprisoned Abroad?**
- **Monitor:**
 - **Indian Missions and Posts** abroad closely **monitor incidents of Indian nationals being jailed** for alleged violation of local laws, according to the MEA's Standard Operating Procedure.

Note:

- As soon as information about the detention or arrest of an Indian national is received by the Mission or Post, it **gets in touch with the local Foreign Office and other local authorities** to get consular access to such individuals.
- **Ensure Welfare and Consular Assistance:**
 - MEA officials then ascertain the facts of the case, confirm Indian nationality, and ensure the **welfare of such individuals in various ways**, such as extending all possible consular assistance, assistance in providing legal aid wherever needed, and approaching local law enforcement agencies to complete judicial proceedings at the earliest possible.

What are the Government Steps to Provide Assistance to the Prisoners Abroad?

- **Legal Assistance:**
 - Indian Missions and Posts maintain a **local panel of lawyers in countries where the Indian community** is based in **sizable numbers**.
 - No fee is charged for the **facilities extended by the Embassy**.
 - The **Indian Community Welfare Fund (ICWF)** is set up at Missions and Posts abroad to assist **overseas Indian nationals in distress situations** in deserving cases.
 - The support extended under ICWF includes financial assistance for legal aid as well as travel documents and air tickets during repatriation.
- **Repatriation of Indian Nationals:**
 - The government follows up the issue of release and repatriation of Indian nationals in foreign prisons during consular and other consultations with countries.
- **Pardon and Reduction in Prison Sentences:**
 - Some countries **grant pardon or reduction of sentence to inmates of various nationalities** from time to time but do not share the data with the countries concerned.
 - Since 2014, 4,597 Indian nationals have received pardon or reduction of their sentences by foreign governments due to **efforts by the Indian Government** through various channels.
- **Agreement(s) on Transfer of Sentenced Persons (TSP):**

- India has signed Agreement(s) on TSP with **31 countries** under which Indian prisoners lodged in foreign countries **can be transferred to India** to serve the remainder of their sentence and vice-versa.
 - These include Australia, Bahrain, Bangladesh, Bosnia & Herzegovina, Brazil, Bulgaria, Cambodia, Egypt, Estonia, France, Hong Kong, Iran, Israel, Italy, Kazakhstan, Korea, Kuwait, Maldives, Mauritius, Mongolia, Qatar, Russia, Saudi Arabia, Somalia, Spain, Sri Lanka, Thailand, Turkey, United Arab Emirates (UAE), United Kingdom and Vietnam.
- India has also signed two **multilateral conventions on transfer of sentenced persons** — the Inter-American Convention on Serving Criminal Sentences Abroad and Council of Europe Convention on Transfer of Sentenced Persons — under which sentenced persons of member states and other countries which have acceded to these can seek transfer of prisoners.
 - From 2006 till January 2022, 86 prisoners were transferred under the TSP; these included **75 imprisoned Indians transferred to India and 11 foreign prisoners transferred to their respective countries**.

Global Geopolitical Intricacies and Opportunities for India

Why in News?

Despite India's emphasis on that, **"this is not the era of war"**, the Year 2023 became a year of wars: Russia-Ukraine conflict and the ongoing war in the Gaza Strip are now among the most destructive conflicts of recent decades.

- These conflicts, alongside China's assertive behavior, pose significant challenges and disrupt diplomatic efforts, causing **worry not only in the West but also in India**.

What is the Overview of 2023 Global Geopolitical Trends and Challenges for India?

- **Crisis in the Middle East:**
 - Two years of sustained effort to normalize ties between **Israel and the Arab world** was **disrupted**

Note:



by the [Hamas attack](#) in which more than 1,200 civilians and military personnel were killed, and more than 230 taken hostage.

- Israel's angry and disproportionate **response has so far killed more than 20,000 Palestinians in Gaza** — which has attracted criticism from even the US. The Israeli-Arab reconciliation process has been derailed for now, and the future of Gaza is unknown.
 - India backed a **two-state solution** to resolve the decades-old Israel-Palestine conflict and bring lasting peace to the troubled region.

➤ **Stress in India-US Ties:**

- After successful visits by the Indian and President Joe Biden to each other's capitals, **bilateral ties are facing headwinds over allegations of an Indian official link** to an assassination plot against a [Khalistani separatist in the US](#).
- India's response has been **different from the way it reacted to Canada when it suggested an Indian government link** to the murder of another Khalistani in that country.
- India has expressed **India's "commitment to the rule of law"**, and promised to "look into" the role of Indian citizens in the alleged US plot if information is provided.

➤ **Russia-Ukraine War:**

- As the war drags on, the **West is facing funding challenges**. Ukraine hopes to get Euro 18.5 billion from the European Union and more than USD 8 billion from a US package that also **contains vital military assistance**.
- But the **assistance has been blocked** — by Republicans in the US Congress and by Hungary in the EU — so far.
- Meanwhile, Putin's re-election as Russia's President is a foregone conclusion. The Russian economy has been resilient despite sanctions, and proximity between Moscow and Beijing worries the West.

➤ **India's Maldives Challenges:**

- The **government of President Mohamed Muizzu**, who rode an "[India Out" campaign](#) to power, has asked India to withdraw military personnel stationed in the Maldives, and conveyed its intention to terminate a water survey pact. The Muizzu establishment is considered close to China.

➤ **China's Behaviour:**

- China continues to be **India's biggest worry and strategic challenge**. The [Border Standoff](#) is in its fourth year, with the force posture being maintained to rival the Chinese military presence. The dependence of Moscow, India's strategic defence partner, on Beijing for economic survival, and the Maldives getting closer to China in the Indian Ocean have added to the concern.

➤ **G-20 and Global South:**

- India's success in **negotiating a joint declaration at the [G20 summit](#)** came as a surprise for many in the international community.
- A big takeaway from the **G20 process was New Delhi's mobilisation** of developing and less developed countries under the umbrella of the Global South.
- The idea of leading the Global South is seen as taking forward the legacy of India's Non-Alignment leadership, only adapted to the 21st century.

➤ **Engagement with Taliban:**

- There has been a change of guard in the Afghanistan embassy in New Delhi, with the incumbent ambassador leaving and that country's diplomats in Mumbai and Hyderabad stepping in to take charge.
- To India's relief, they have assured **they won't fly the Taliban flag** or have Taliban nomenclature in their official correspondence.

What are the Upcoming Challenges for India in 2024?

➤ **US & Canada Relations:**

- Resolving the US 'assassination plot' issue is a challenge. The US President's absence at **Republic Day caused irritation, delaying the [Quad summit](#)**.
- Canada's allegations also strain ties, but public support backs India's response. Different approaches are needed for US and Canada issues, as both countries hold distinct importance for India.

➤ **Pakistan Relations:**

- Since 2019, when the Indian government was re-elected and the constitutional changes in Jammu and Kashmir were affected, ties **with Pakistan have been at a low**.

Note:

- The change of guard in Islamabad and Rawalpindi did not make much difference, and India kept to its doctrine of indifference towards Pakistan.
 - Elections are now due in Pakistan, and there could be a new government there after February 2024.
- **Bangladesh Elections:**
 - Bilateral ties have gained positive momentum in the last 15 years of the Sheikh Hasina government, and Indian will be keen to see her return to power in the elections due early in the new year.
 - Security imperatives guide India's choice in Dhaka; the Bangladesh opposition is viewed with **suspicion and animosity**, going by the track record of the Khaleda Zia government in the early 2000s.
- **China Border Standoff:**
 - The border standoff is ongoing **since 2020**, and any fresh escalation will impact both the security environment and India's domestic political atmosphere.
 - India will be extra careful in its response to a challenge from its biggest adversary. That imperative will frame India's diplomacy towards China in the next few months, and even later.
- **West Asia Dynamics:**
 - India's evolving stance in the Israel-Hamas conflict and the nuanced diplomatic positioning in the region present complex challenges.
- **Balancing Interests between Russia and US:**
 - Balancing interests between imports of Russian oil and pressure from the US amid the ongoing war shapes India's foreign policy strategy.

India-Italy Migration and Mobility Agreement

Why in News?

Recently, the **Union Cabinet** granted **ex-post facto approval** to the **Migration and Mobility Agreement** between [India and Italy](#).

What is Migration and Mobility Agreement between India and Italy?

- **About:**
 - The agreement is set to strengthen cooperation on issues related to [irregular migration](#) while

bolstering people-to-people ties between India and Italy.

- It facilitates mobility for various segments, including **students, skilled workers, businesspersons, and young professionals**, fostering exchange and collaboration.
- **Key Provisions:**
 - **Temporary Residence for Indian Students:** Graduates seeking professional exposure in Italy post-academic or vocational training can secure temporary residency for **up to 12 months**.
 - **Reserved Quotas for Workers:** The agreement outlines quotas for **non-seasonal and seasonal Indian workers**, with a reserved quota range over the years **2023-2025** under the existing Flows Decree.
 - The Italian government's annual "**Flow Decree**" (**Decreto Flussi**) sets the maximum number of non-EU citizens who can enter Italy for work and self-employment

Implementation:

- The agreement will remain in force for **5 years**, with automatic renewal unless terminated.
- A **Joint Working Group (JWG)** will oversee its implementation, convening periodically to evaluate progress and propose supportive measures for effective execution.

Key Facts About Italy

- **About:**
 - Italy is a boot-shaped peninsula that juts out of southern Europe into the **Adriatic Sea, Tyrrhenian Sea, Mediterranean Sea**, and other waters.
- **Bordering Countries:**
 - Italy has international borders with **Austria, France, the Holy See (Vatican City), San Marino, Slovenia, and Switzerland**.
 - Italy also shares maritime borders with **Albania, Algeria, Croatia, Greece, Libya, Malta, Montenegro, Spain, and Tunisia**.
- **Form of Government:** Republic
- **Capital:** Rome
- **Money:** Euro
- **Major Mountains:** Alps, Apennines
- **Major Rivers:** Po, Adige, Arno, Tiber

Note:



What are the Other Areas of Cooperation Between India and Italy?

- **Historical Ties:**
 - India and Italy are ancient civilizations but young states. Italian port cities were important trading posts on the **spice route**.
 - The **Venetian merchant Marco Polo**, during his travels to the east, also traveled to India in the 13th century and wrote about his experiences.
- **Political:**
 - Political relations between India and Italy were established in **1947**.
 - In **March 2023**, India and Italy elevated their relationship to a **Strategic Partnership**.
- **Economic:**
 - The bilateral trade between the two countries was valued at **USD 14.25 billion in 2022-23**.
 - Italy is among India's top **5 trading partners in the European Union**.
 - Main items of Indian exports to Italy are **ready-made garments, leather, iron ore, motor vehicles, textiles, chemicals, gems & jewelry**.
 - The main items of import from Italy are general and **special purpose machinery, machine tools, metallurgical products, and engineering items**.

- **Security:**
 - The **India-Italy Military Cooperation Group (MCG)** is a forum established to boost defense cooperation between the both countries.
- **Other Initiatives Involving India and Italy:**
 - [India-Middle East-Europe Economic Corridor](#)
 - [Global Biofuel Alliance](#)
 - **Blue-Raman project**

Red Sea and Panama Canal

Why in News?

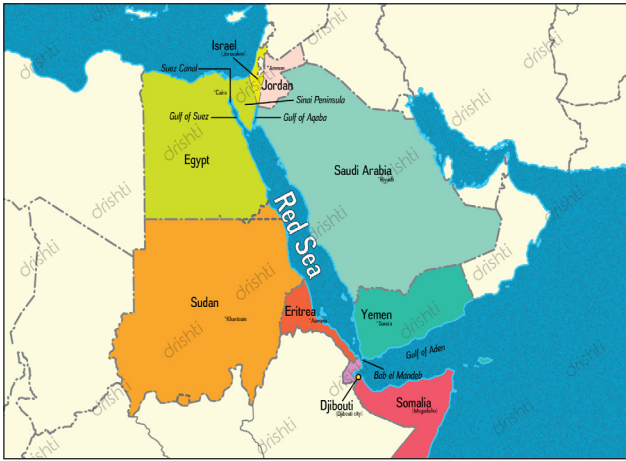
Recent attacks on ships in the [Red Sea trade route](#) and the ongoing drought problem at the **Panama Canal** have raised worries about global trade disruptions.

What are the Key Issues in the Red Sea and Panama Canal Presently?

- **Red Sea:**
 - **Issue: Chemical tanker MV Chem Pluto** was struck by a drone attack, approximately 200 nautical miles off Gujarat's coast.
 - **MV Chem Pluto** is a Liberia-flagged, Japanese-owned, and Netherlands-operated chemical tanker. It had started its journey carrying crude from **Al Jubail, Saudi Arabia** and was expected to arrive in **New Mangalore, India**.
 - **Alleged Involved Entity:** It is believed to have been carried out by [Houthi rebels based in Yemen](#), citing protest against **Israel's actions in Gaza**.
 - Houthi rebels are also engaged in a **decade-long civil conflict with Yemen's government**.
 - **Impact on India:** Concerns arise for Indian **oil importers and exporters of key commodities like basmati and tea** due to disruptions in this critical trade route.
 - Disruption in the Red Sea route could **increase Indian agricultural product prices by 10-20%** as shipments reroute through the [Cape of Good Hope](#).

NOTE: Global oil and petroleum flows have declined due to major shipping companies avoiding the Red Sea. However, **India's oil imports from Russia remain unaffected**.

Note:



- **India's reliance on Russian oil**, perceived as Iran's ally, has remained stable amid the conflict in the Red Sea.
- **Panama Canal:**



What is the Significance of Maritime Transport in Global Trade?

- **Unrivaled Volume and Value Carrier:** Maritime transport shoulders a colossal **80% of global trade by volume and over 70% by value**, far surpassing other modes of transportation as per the **United Nations Conference on Trade and Development**.

- **Issue:** Due to drought conditions, shipping through the **51-mile stretch of the Panama Canal has decreased by over 50%**.
- A naturally occurring **El Nino climate pattern** associated with warmer-than-usual water in the central and eastern tropical Pacific Ocean is contributing to Panama's drought.
- **Impact:** This shortage of water is compelling vessels traveling from **Asia to the US to opt for the Suez Canal**, adding six extra days compared to the Panama Canal route.
- While the **Bab-el-Mandeb Strait** that leads to the **Suez Canal** in the Red Sea region connects Asia to Europe, the 100-year-old Panama Canal connects the Atlantic and Pacific Oceans.
- ◆ **Both these routes are among the busiest in the world.**



- As of 2019, the total value of the annual world shipping trade had reached more than **14 trillion US Dollars**.
- **Environmental Considerations:** While shipping does contribute to around **3% of global greenhouse gas emissions**, it is relatively more fuel-efficient and emits less per ton of cargo transported compared to other modes of transportation like air freight.

Note:

- **Energy Transportation:** The majority of the world's energy resources, such as oil and natural gas, are transported by sea. Tankers carry these resources from **production areas to consuming regions**, playing a critical role in meeting global energy demands.

What Measures India can Adopt to Reduce Vulnerability to These Issues?

- **Joint Maritime Security Initiative:** Propose a collaborative security framework with key Red Sea stakeholders (**Egypt, Saudi Arabia, UAE, Yemen**) involving **intelligence sharing, coordinated patrols, and joint exercises**.
- **Deploy Advanced Surveillance Systems:** Install **integrated radar and drone surveillance** systems along India's western coastline to enhance early threat detection and response capabilities.
- **Negotiate Preferential Access:** Engage with **Panama Canal** authorities to explore **preferential passage for Indian vessels** or potential toll discounts for specific routes.

Key Facts About Italy

- Alternate Trade Routes Under Consideration
- Recently, there has been renewed interest in the [Ben Gurion Canal Project](#), a proposed 160-mile-long sea-level canal that would connect the Mediterranean Sea with the Gulf of Aqaba, bypassing the Suez Canal.



Note:

Social Issues

Highlights

- Vaccine Drive to Fight Cervical Cancer
- Global Risks Report 2024: WEF
- Rise of Child Marriages in West Bengal
- Immoral Traffic (Prevention) Act, 1956 67
- Caste Based Discrimination in Indian Prisons
- Sickle Cell Disease
- Prioritizing the Poor, Youth, Women, and Farmers
- Huntington's Disease

SAVITRIBAI PHULE

(03 January 1831 - 10 March 1897)

A 19th century social reformer who worked in the field of women education

EARLY LIFE

- ▶ Born in **Mali community (Maharashtra)**
- ▶ Aged 9 - married to 13 y/o Jyotirao Phule - an **extraordinary couple in India's social & educational history**

SOCIAL ENDEAVOURS

▶ Individual

- Published **Kavya Phule (1854) & Bavan Kashi Subodh Ratnakar (1892)**
- Started **Mahila Seva Mandal (1852)** - raise awareness about women's rights
- Wrote poem - **Go, Get Education** for oppressed communities
- Carried forward the **Satya Shodhak Samaj** after Jyotiba's death (1890)

▶ With Jyotiba

- Started a school for girls, Shudras and Ati-Shudras in Poona (1848) (India's **first school for women - started by Indians**)
- Opened **Native Female School (Pune)** and **The Society for Promoting the Education of Mahars, Mangs and Etceteras in 1850s**
- Started - **Balhatya Pratibandhak Griha** (Home for the **Prevention of Infanticide**) in their own house



Note:

Vaccine Drive to Fight Cervical Cancer

Why In News?

The Indian Government intends to initiate a **three-phase vaccination drive** against **human papillomavirus (HPV)** for girls **aged 9-14**, aiming to mitigate the **risk of cervical cancer**.

- The vaccine also offers protection against the **HPV strains** that cause cancer of the **anus, vagina and oropharynx**. Additionally, it also protects against the **HPV strains** that are responsible for **genital warts**.

NOTE: The Serum Institute of India in 2023 launched an indigenous HPV vaccine known as **CERVAVAC**.

What is Cervical Cancer?

- **About:**
 - Cervical cancer develops in a **woman's cervix**. It is the **4th** most common type of cancer among women, globally and **2nd most common** among women in India.
 - India contributes the largest share of the **global cervical cancer** burden; nearly **1 in every 4 deaths** globally due to **cervical cancer** (as per The Lancet study).
 - Almost all cervical cancer cases (**99%**) are linked to infection with **high-risk Human Papillomavirus (HPV)**, an extremely common virus transmitted through sexual contact.
 - Effective primary (HPV vaccination) and secondary prevention approaches (screening for

and treating precancerous lesions) will prevent most cervical cancer cases.

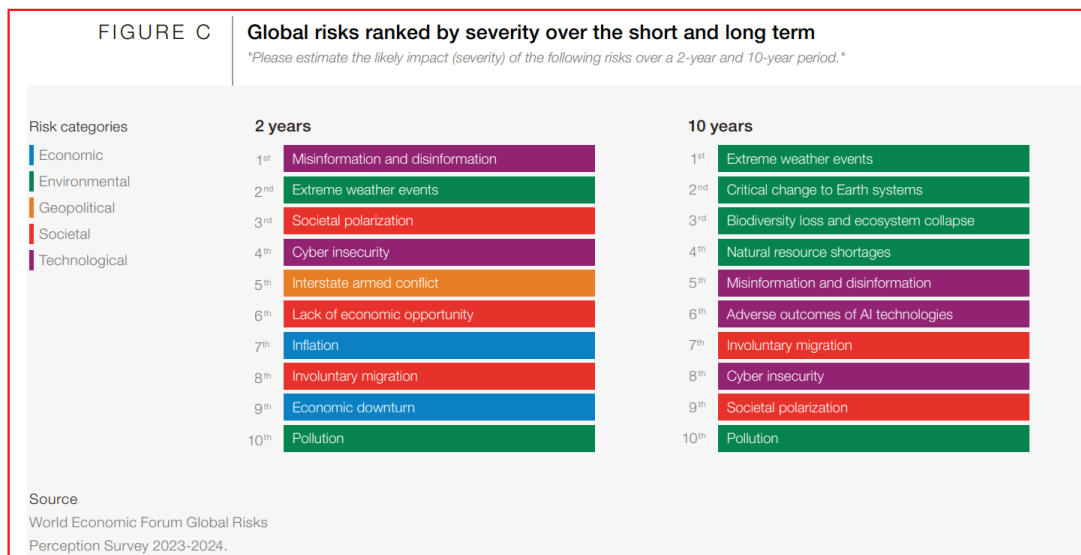
- When diagnosed, cervical cancer is **one of the most successfully treatable** forms of cancer, as long as it is detected early and managed effectively.
- India accounts for about a **fifth** of the global burden for **cervical cancer**, recording about **1.25 lakh cases** and about **75,000 deaths** each year.
- **Types of Strain:**
 - Persistent infections with certain **high-risk HPV strains** lead to nearly **85%** of all cervical cancers.
 - At least **14 HPV types** have been identified as **oncogenic** (potential to cause cancer).
 - Among these, **HPV types 16 and 18**, considered to be the most **oncogenic**, have been found to be responsible for about **70%** of all cervical cancer cases globally.

Global Risks Report 2024: WEF

Why in News?

Recently, the **World Economic Forum (WEF)** has released the **Global Risk Report 2024**, highlighting some of the **most severe risks** we may face over the next decade, against a backdrop of rapid technological change, economic uncertainty, a warming planet and conflict.

- The report is based on a survey of nearly 1,500 experts, industry leaders and policymakers.



Note:

What are the Key Highlights of the Global Risk Report 2024?

- **Deteriorating Global Outlook:**
 - Various global events in 2023, including lethal conflicts, [Extreme Weather Conditions](#), and societal discontent, have **contributed to a predominantly negative outlook**.
- **AI Powered Misinformation and Disinformation:**
 - Misinformation and disinformation are listed as the **most severe risks** over the next two years, highlighting **how rapid advances in technology also are creating new problems** or making existing ones worse.
 - It is concerning that the boom in [Generative AI](#) chatbots like [ChatGPT](#) means that creating sophisticated synthetic content that can be used to manipulate groups of people won't be limited any longer to those with specialized skills.
 - AI-powered misinformation and disinformation is emerging as a **risk just as billions of people in a slew of countries**, including large economies like the United States, Britain, Indonesia, India, Mexico, and Pakistan, are set to head to the polls in 2024 and next.
- **Structural Forces Shaping Global Risks:**
 - There are four structural forces shaping global risks over the next decade: [Climate change](#), Demographic Bifurcation, Technological Acceleration, and Geostrategic shifts.
 - These forces represent **longer-term shifts in the global landscape**, and their interactions will contribute to uncertainty and volatility.
- **Environmental Risks at the Forefront:**
 - Environmental risks, particularly extreme weather, dominate the risk landscape over all time frames.
 - Concerns about climate change, biodiversity loss, and critical changes to Earth **systems are evident, with potential irreversible consequences**.
- **Economic Strains and Inequality:**
 - The cost-of-living crisis and economic risks such as [Inflation](#) and economic downturn are **significant concerns for 2024**.
 - Economic uncertainty will **disproportionately affect low- and middle-income countries**, leading to

potential digital isolation and worsening societal and environmental impacts.

- **Security Risks and Technological Advances:**
 - Interstate armed conflict is identified as a new entrant into the top risk rankings over the next two years.
 - Technological advances, especially in artificial intelligence, pose security risks as they enable non-state actors to access disruptive tools, potentially leading to increased conflict and crime.
- **Geopolitical Shifts and Governance Challenges:**
 - A deeper divide between global powers, especially between the **Global North and South**, may lead to **challenges in international governance**.
 - The growing **influence of states in the Global South**, combined with geopolitical tensions, could reshape security dynamics and impact global risks.

What are the Recommendations?

- Localized strategies leveraging investment and regulation can **reduce the impact of those inevitable risks** that we can prepare for, and both the public and private sector **can play a key role to extend these benefits** to all.
- Single breakthrough endeavors, grown through efforts to prioritize the future and focus on research and development, can **similarly help make the world a safer place**.
- The **collective actions of individual citizens**, companies and countries may seem insignificant on their own, but **at critical mass they can move the needle on global risk reduction**.
- Even in a world that is increasingly fragmented, cross-border collaboration at scale remains critical for risks that are decisive for human security and prosperity.

What is Global Risk?

- Global risk is **defined as the possibility of the occurrence of an event** or condition which, if it occurs, would negatively impact a significant proportion of global gross domestic product, population or natural resources.
- The Global Risks Report is an **annual study published by the World Economic Forum** ahead of the Forum's Annual Meeting in Davos, Switzerland.

Note:

What is the World Economic Forum?

- **About:**
 - The WEF is a Swiss nonprofit foundation established in 1971, based in Geneva, Switzerland.
 - Recognized by the Swiss authorities as the international institution for public-private cooperation.
- **Mission:**
 - Committed to improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas.
- **Founder and Executive Chairman:** Klaus Schwab.
- Some **major reports published by WEF** are:
 - [Energy Transition Index](#).
 - [Global Competitiveness Report](#).
 - **Global IT Report**
 - WEF along with INSEAD, and Cornell University publishes this report.
 - [Global Gender Gap Report](#).
 - Global Travel and Tourism Report.

Rise of Child Marriages in West Bengal

Why in News?

A recent *Lancet* study on [child marriage in India](#) highlighted an overall decrease in child marriage across the country. However, it emphasized that certain states, specifically **Bihar (16.7%), West Bengal (15.2%), Uttar Pradesh (12.5%), and Maharashtra (8.2%)**, collectively contributed to over half of the total headcount burden of child marriages in girls.

- Despite the implementation of multiple **policy interventions in West Bengal aimed at curbing child marriage**, the region has experienced a **substantial surge of 32.3% in the incidence of child marriages**. This increase corresponds to over 500,000 additional girls getting married as children.

NOTE:

- **National Family Health Survey-5 (2019-21):**
 - The National Family Health Survey-5 indicates that the prevalence of women **aged 20-24 years** married before 18 remains high in **West Bengal at 41.6%, compared to the national figure of 23.3%**.

Has Policy Intervention in West Bengal Effectively Curbed Child Marriage?

- **Policy Interventions to Stop Child Marriage in West Bengal:**
 - **The Kanyashree Prakalpa Scheme:**
 - Launched in 2013, Kanyashree Prakalpa incentivizes the **schooling of teenage girls aged 13 to 18** while simultaneously discouraging child marriage. The scheme has **covered 81 lakh girls**, according to the West Bengal Budget for 2023-24.
 - ◆ The scheme received international recognition with the **United Nations Public Service Award in 2017**.
 - While the **school enrolment of girls has increased in the State**, questions are being posed based on [National Family Health Survey](#) data and the Lancet study of whether the scheme has achieved its promise of arresting child marriage.
 - **Rupashree Prakalpa:**
 - In addition to Kanyashree, the state government runs the Rupashree Prakalpa, **providing cash incentives for girls' marriages**.
 - ◆ Some families utilize benefits from both schemes, organizing marriages shortly after cashing in on the school scheme.
- **Educational Stride and Child Marriage Rates:**
 - Despite **girl's enrolment in schools has "significantly increased"** over the past few years and **yet the incidence of child marriage remains high** in West Bengal".
 - The All-India Survey of Higher Education for 2020-21 puts the number of **estimated enrolment of girls in West Bengal at 9.29 lakh**, which is higher than the boys enrolment which stood at 8.63 lakh.
 - As per NFHS-5, the Purba Medinipur district with **over 88% literacy rate** has the highest incidence of **child marriage of more than 57.6%**.
 - Experts noted **migration in West Bengal fuels child marriage** as families fear **leaving unmarried daughters behind**, driven by societal norms and economic factors.
 - This perpetuates a cycle where cultural expectations prioritize early marriages for **wives to bear children while men work**.

Note:

- **Challenges in Law Implementation:**
 - Beyond social issues, **challenges in law implementation contribute to the persistence of child marriage.**
 - As West Bengal's 105 cases under The Prohibition of Child Marriage Act (PCMA), 2006 in 2021 raise concerns. Because comparatively, states with **smaller populations reported more cases.**
 - The Ministry introduced the [Prohibition of Child Marriage \(Amendment\) Bill, 2021](#), proposing raising the age of marriage for women to 21, currently under Parliamentary review.
 - The data suggests gaps in law enforcement and highlights the need for comprehensive strategies.

What are the Impacts of Child Marriage?

- **Ending Childhood:**
 - **Child marriage is a global problem and is compounded by poverty.** It abruptly ends a boy's/girl's childhood, pushing them into adulthood before they are physically and mentally prepared.
 - Arranged marriages often involve girls marrying significantly older men, intensifying the challenges they face.
 - Early marriage significantly decreases the likelihood of girls staying in school, leading to **lifelong economic repercussions.**
 - Child marriage leads **childhood grooms to drop out of school** and often **settle for low-paying jobs to provide for their families.**
 - Child brides and grooms often experience isolation and have their freedom curtailed, limiting their social interactions and personal autonomy.
- **Human Rights Violation:**
 - Child marriage is considered a [human rights violation](#) and a **recognised form of sexual and gender-based violence**, the adverse impact of child marriage is manifested across maternal and child health in the State.
 - Child brides are frequently denied their [fundamental rights](#), including access to health, education, safety, and the opportunity for active participation.
 - [United Nations Children's Fund \(UNICEF\)](#) categorizes **child marriage as a human rights violation** due to its adverse impacts on the development of both girls and boys.

- Each year, some **12 million more girls will marry before reaching age 18** and of those, 4 million are under age 15.
- **Save the Children's Global Girlhood Report** estimates that an additional **2.5 million girls are at risk of child marriage** globally between 2020 and 2025, as a result of reported increases in all types of **gender-based violence** due to the [Covid-19 pandemic](#).

➤ **Maternal and Child Health Implications:**

- The adverse impact of child marriage extends to maternal and child health.
 - Child brides often become **pregnant during adolescence**, when the risk of **complications during pregnancy** and childbirth increases. The practice can also isolate girls from family and friends, taking a heavy toll on their mental health.
- Child brides are also more susceptible to contracting [Human Immunodeficiency Virus \(HIV\)](#).

What are the Initiatives to Tackle Child Marriage?

- [Prohibition of Child Marriage Act, 2006 \(PCMA\)](#)
- [BetiBachaoBetiPadhao \(BBBP\) scheme.](#)
- [National Commission for Protection of Child Rights \(NCPCR\).](#)
- [Protection of Children from Sexual Offences Act 2012.](#)
- [CHILDLINE.](#)

Immoral Traffic (Prevention) Act, 1956

Why in News?

Recently, the Kerala High Court has widened the definition of the word 'procure' in [Section 5 of the Immoral Traffic \(Prevention\) Act, 1956](#), to include customers seeking the services of prostitutes.

What is the Immoral Traffic (Prevention) Act of 1956?

➤ **About:**

- The Immoral Traffic (Prevention) Act (ITP), 1956, aims to prevent the **commercialisation of vices and the trafficking of females.**

Note:

- It delineates the legal framework surrounding sex work. While the act itself **does not declare sex work illegal, it prohibits running brothels**. Engaging in prostitution is legally recognized, but soliciting people and luring them into sexual activities are considered illegal.
- **Definition of Brothel:**
 - Section 2 defines a brothel as any **place used for sexual exploitation or abuse for the gain of another person or for the mutual gain of two or more prostitutes**.
- **Definition of Prostitution:**
 - Prostitution, as per the act, is the sexual exploitation or abuse of persons for commercial purposes.
- **Offenses Under the Act:**
 - The section 5 of the act penalizes those who **procure, induce, or take individuals for prostitution purposes**. The punishment includes rigorous imprisonment for **3–7 years and a fine of Rs 2,000**.
 - For offenses against a **person's will or a child**, the maximum sentence can extend to fourteen years or life.
 - ◆ Child means a person who has not completed the age of **sixteen years**.

What did the Kerala High Court Rule?

- **The current case:**
 - The petitioner was arrested for being a customer in a brothel. Accused of offenses under the ITP Act's Sections 3 (keeping a brothel or allowing premises to be used as one), 4 (living on prostitution earnings), 5 (procuring, inducing, or taking persons for prostitution), 7 (punishing prostitution in or around public places),
 - The accused filed a plea seeking discharge, arguing that as a **customer, he should not be implicated under the ITP Act**.
- **Ruling:**
 - The Kerala High Court, while recognizing that the **term "procure" in section 5 is not explicitly defined in the 1956 Act**, interpreted it in the context of the act's objective of suppressing immoral trafficking and preventing prostitution.
 - The court ruled that the **term includes customers, and therefore, a customer can be charged under Section 5**.

- **Implications of the Ruling:**
 - The Kerala High Court ruling expands the meaning of "procure" in Section 5, asserting that **customers, in addition to pimps and brothel-keepers**, can be held liable for procuring persons for prostitution.
 - The ruling does not declare the petitioner guilty under Section 5; rather, it **allows charges to be filed, necessitating a trial**.
 - Notably, the petitioner was discharged of offences under Sections 3, 4, and 7 by the High Court.
- **Differing High Court Opinions:**
 - **Mathew vs the State of Kerala(2022):**
 - The Kerala HC ruled that a customer caught in a brothel can be prosecuted under the ITP Act. **"Section 7(1) of the Act penalizes two types of persons for indulging in prostitution within the areas specified.**
 - ◆ Those persons are (i) the person who carries on prostitution and (ii) the person with whom such prostitution is carried on," the HC said, adding that the act of immoral traffic **cannot be perpetrated or carried on without a 'customer'**.
 - **Goenka Sajan Kumar vs The State Of AP (2014) and Sri Sanaula vs State Of Karnataka (2017):**
 - The Andhra Pradesh and Karnataka HCs ruled against prosecuting brothel customers under sections 3-7 of the ITP Act.

What is the Legality of Sex Work?

- **Sex Work as a Profession:**
 - The Supreme Court has **recognised sex work as a "profession"** and observed that its practitioners are **entitled to equal protection of the law and criminal law** must apply equally in all cases, on the basis of **'age' and 'consent'**.
 - The Court held that **Voluntary sex is not a crime**.
- **Equality in Business:**
 - Courts have held that individuals, regardless of their chosen profession, have an **equal right to carry on any business**.
 - The **Supreme Court of India** in **Budhadev Karmaskar v. State of West Bengal (2011)**, secured the rights of sex workers and emphasized the **protection afforded by Article 21**.

Note:

- **Fundamental and Human Rights:**
 - In the case of **Gaurav Jain vs Union Of India And Ors(1989)** the Supreme Court recognized the fundamental and human rights of sex workers, asserting their right to dignity and protection under the law.
 - The Court found that the children of the sex workers have the **right to equality of opportunity, dignity, care, protection and rehabilitation** and to be part of the “**mainstream of social life**” without any attached “**pre-stigma**”.

What Initiatives Have Been Taken to Address Sex Workers?

- **Ujjawala:**
 - The Ministry of Women and Child Development is implementing “Ujjawala” – a Comprehensive Scheme for the Prevention of Trafficking and Rescue, Rehabilitation, Re-integration and **Repatriation of Victims of Trafficking for Commercial Sexual Exploitation**.
- **National Commission for Women:**
 - The establishment of the [National Commission for Women](#) reflects the government’s commitment to ensuring the rights of women and girls involved in prostitution are protected.
- **National Human Rights Commission:**
 - [NHRC](#) recognised sex workers as informal workers.
- **Awareness Campaigns:**
 - The Supreme Court urged the government in 2018 to take action against the **exploitation of women in the sex industry** and consider legalization in specific locations with rigorous regulation.
 - In response to the court’s directive, the **government initiated widespread awareness campaigns** to educate the public about the risks associated with the commercial sex trade.

What are the Societal Perceptions Regarding the Sex Work?

- **Cultural Stigma:**
 - While legal in certain contexts, prostitution is often viewed as unethical and a breach of cultural values. Some cultures perceive it as a threat to the sanctity of marriage and family.
 - Women in Sex Work (WSW) have been identified as one of the most discriminated and vulnerable populations in India.

- Sex workers often face **social isolation** due to the stigma attached to their profession.

- **Gender Dynamics:**
 - Many see prostitution as a **degrading and abusive profession**, particularly targeting women.
 - The profession is often associated with exploitation and harm.
 - Sex workers encounter derogatory terms, physical violence, and discrimination, exacerbating their vulnerability.
- **Advocacy for Autonomy:**
 - On the flip side, proponents argue that **women should have the agency to decide how they use their bodies**.
 - Some view prostitution as a profession where women can exercise their freedom of choice.

Caste Based Discrimination in Indian Prisons

Why in News?

The [Supreme Court \(SC\) of India](#) recently issued notice to the Centre and 11 states on a [public interest litigation \(PIL\)](#) that alleged [caste-based discrimination and segregation of prisoners in jails](#) and sought a direction to repeal provisions that mandate such practices under the state prison manuals.

What are the Instances of Caste Based Discrimination Highlighted by the PIL?

- **Instances of Discrimination:**
 - The PIL exposes instances from Madhya Pradesh, Delhi, and Tamil Nadu jails where **cooking is allocated to dominant castes**, while “**specific lower castes**” are assigned menial jobs such as sweeping and cleaning toilets.
 - The Prison system in India is alleged to perpetuate discriminatory practices, including the division of labour based on **caste hierarchy and the caste-based segregation of barracks**.
 - Caste-based labour distribution is deemed a relic of colonial India and is considered humiliating and unhealthy, violating the prisoners’ right to life with dignity.

Note:

- **State Prison Manual Sanctions:**
 - The petition claims that prison manuals in various states sanction caste-based discrimination and forced labour within the prison system.
 - **Rajasthan Prison Rules 1951:**
 - ◆ Assignment of **Mehtars to latrines and Brahmins to kitchens** based on caste.
 - **Palayamkottai Central Jail in Tamil Nadu:**
 - ◆ The petition highlights the caste-based segregation of inmates in Palayamkottai Central Jail in Tamil Nadu, pointing to the separation of **Thevars, Nadars, and Pallars into different sections.**
 - **West Bengal Jail Code:**
 - ◆ Directs menial tasks like sweeping to prisoners from the **Mether or Hari caste, Chandal, and other castes.**
- **2003 Model Prison Manual Guidelines:**
 - The petition refers to the **2003 Model Prison Manual**, emphasizing guidelines for **classification based on security, discipline, and institutionalized programs.**
 - It argues against any classification based on socio-economic status, caste, or class.
- **Fundamental Rights:**
 - The petition argues that a **person does not lose fundamental rights or the equality code** merely for being a prisoner, citing the Supreme Court's judgment in the ***Sunil Batra v. Delhi Administration (1978)*** case on the fundamental rights of prisoners.
- **Call for Repeal of Discriminatory Provisions:**
 - The petition emphasises the need to **repeal discriminatory provisions in state prison manuals**, advocating for the protection of prisoners' fundamental rights and equality within the prison system.

What are the Supreme Court's Observations on Caste Discrimination in Prisons?

- Three-judge Bench, headed by the **Chief Justice of India**, finds that prison manuals in over 10 states support caste-based discrimination and forced labour.
 - States include Uttar Pradesh, Odisha, Jharkhand, Kerala, West Bengal, Madhya Pradesh, Andhra Pradesh, Maharashtra, Telangana, Punjab, and Tamil Nadu.

- Caste-based discrimination, segregation, and treatment of **denotified tribes** as "**habitual offenders**" within prisons are deemed a "**very important issue**" by the SC.
 - SC emphasized the **need for prompt and comprehensive addressing** of alleged discriminatory practices.
- The SC sent a notice and asked for a response from the States and the Union within four weeks on the petition.

How do the Laws Allow Caste Discrimination Inside Indian Jails?

- **Legacy of Colonial Policies:**
 - India's criminal justice system, rooted in **colonial legacy**, primarily focuses on **punishment rather than reformation or rehabilitation.**
 - The '**Prisons Act of 1894**,' dating back almost 130 years, underscores the outdated nature of the legal framework.
 - The Act lacks provisions for the **reform and rehabilitation of prisoners.**
 - Recognizing the deficiencies in existing laws, the Ministry of Home Affairs (MHA) reviewed '**The Prisons Act, 1894**,' '**The Prisoners Act, 1900**,' and '**The Transfer of Prisoners Act, 1950**.'
 - This review led to the assimilation of relevant provisions into the forward-looking '**Model Prisons Act, 2023**.'
 - ◆ The effective implementation of the **Model Prisons Act, 2023** which was finalized by the MHA in May 2023, is **expected to improve the prison conditions and administration** and protect the human rights and dignity of the prisoners.
- **Prison Manuals:**
 - State-level prison manuals, largely unchanged since the establishment of the modern prison system, reflect both colonial and caste mentalities.
 - Existing prison manuals **enforce the central premise of the caste system**, emphasizing notions of purity and impurity.
 - State prison manuals mandate that duties like cleaning and sweeping must be performed by members of specific castes, perpetuating caste-based discrimination.
 - ◆ Prison manuals, such as the one in West Bengal under Section 741, safeguard the monopoly of "savarna Hindus" on cooking and carrying food for all prisoners.

Note:

- Despite constitutional and legal provisions against untouchability, caste-based rules persist in prison administration.
- The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (MS Act, 2013):
 - Despite the outlawing of [manual scavenging](#) by the 2013 Act, it does not explicitly cover prison administration, and hence, the prison manuals that **allow caste discrimination and manual scavenging in jails** are not in violation of the Act.
 - Manual scavenging refers to the practice of manually cleaning, handling and disposing of human excreta and other waste materials from dry latrines, open drains, and sewers.

Sickle Cell Disease

Why in News?

- More than 1 crore people have been screened for [Sickle Cell Disease \(SCD\)](#) under the [National Sickle Cell Anaemia Elimination Mission](#).
- The National Sickle Cell Anemia Elimination Mission launched in **2023**, aims to eliminate sickle cell anemia from India by 2047.

What is Sickle Cell Disease (SCD)?

- **About:**
 - SCD is a group of inherited [red blood cell](#) (RBC) disorders. RBCs **contain hemoglobin, a protein** that carries oxygen and healthy RBCs are round. In SCD, the hemoglobin is abnormal, which causes the RBCs to become hard and sticky and look like a **C-shaped farm tool called a "sickle"**.
- **Symptoms:**
 - Symptoms of sickle cell disease can vary, but some common symptoms include:
 - [Chronic Anaemia](#): leading to fatigue, weakness, and paleness.
 - Painful episodes (also known as sickle cell crisis): these can cause sudden and intense pain in the bones, chest, back, arms, and legs.
 - Delayed growth and puberty
- **Treatment:**
 - **Blood Transfusions:** These can help relieve anemia and reduce the risk of pain crises.
 - **Hydroxyurea:** This is a medication that can help reduce the frequency of painful episodes and prevent some of the long-term complications of the disease.

- It can also be treated by bone marrow or [stem cell](#) transplantation.
- **Government Initiatives to Tackle SCD:**
 - The government released technical operational guidelines for the prevention and control of sickle cell anaemia in 2016.
 - The [State Haemoglobinopathy Mission](#) has been **established in Madhya Pradesh** to address the challenges in screening and management of the disease.
 - [Anaemin Mukh Bharat Strategy](#).

Prioritizing the Poor, Youth, Women, and Farmers

Why in News?

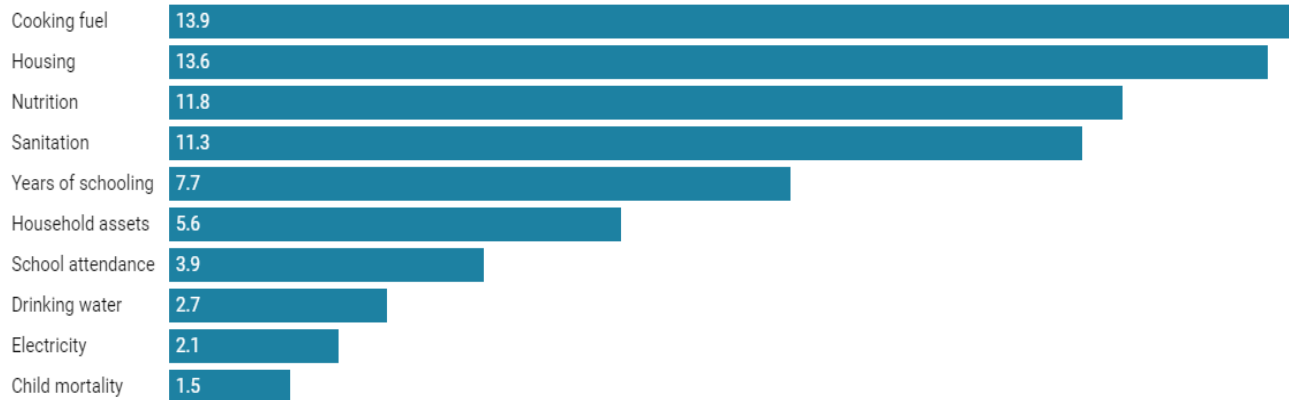
- The Prime Minister of India has underscored the imperative of prioritizing the well-being of four groups: **the poor, youth, women, and farmers**.
- This emphasis reflects a commitment to ensuring dignity and respect for the deprived.

What are the Socioeconomic Dynamics of the Highlighted Groups in India?

- **Poor:**
 - **Multidimensional Poverty Index:**
 - India has more than 230 million poor people.
 - According to the [2023 Global Multidimensional Poverty Index](#), published by the [United Nations Development Programme \(UNDP\)](#) and the Oxford Poverty and Human Development Initiative, some **415 million Indians escaped poverty between 2005-06 and 2019-21**.
 - Approximately **18.7% of the population falls into the category of being 'vulnerable' to multidimensional poverty**, as defined by the UNDP.
 - ◆ This refers to individuals who, while not classified as poor, but have experienced deprivations in 20-33.3% of all weighted indicators.
 - ◆ [Cooking fuel, housing, and nutrition](#) are major areas of deprivation. Approximately 13.9%, 13.6%, and 11.8% of the population were classified as deprived in these respective metrics.

Note:

Headcount ratio of Indians deprived on individual sub-indicators (in %)



○ Unemployment:

- India's [unemployment](#) rate rose to the highest level in over two years in October 2023, with **rural areas experiencing an increase in joblessness**.
- The [National Sample Survey Office's Periodic Labour Force Survey](#) for 2022-23 revealed a **decrease in unemployment from 5.3% to 2.4% in rural areas and from 7.7% to 5.4% in urban areas compared to 2017-18**.
- The proportion of [self-employed](#) individuals in the total employed population increased from 52% in 2018-19 to 57% in 2022-23.
 - ◆ Self-employment covers various activities such as running a tea stall, farming, assisting in household enterprises, practising medicine, and undertaking unpaid work within one's economic activities.
 - ◆ A high level of self-employment levels indicates a **lack of alternatives**, with individuals often adhering to these less rewarding jobs.
 - ◆ Typically, **countries with lower per capita income** tend to have higher proportions of self-employed populations.

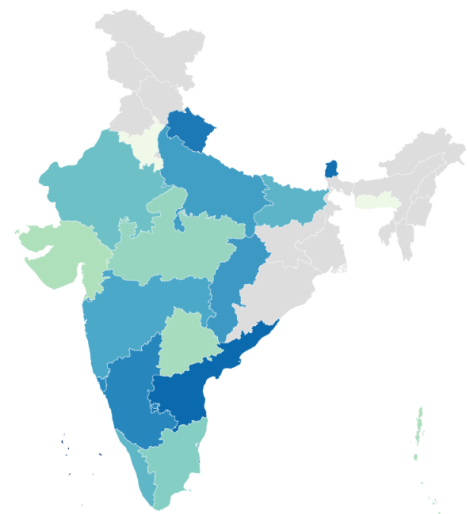
➤ Women:

- India ranked **127 out of 146 countries** in the [Global Gender Gap Report 2023](#) released by the [World Economic Forum](#) showing an improvement of 1.4% points and eight positions from 135 in 2022.
- According to the [National Crime Records Bureau \(NCRB\)](#) reports Crimes **against women rose by 4% in 2022** compared to 2021, with over 4.45 lakh crimes registered.

- Majority of crimes were related to cruelty by husbands or relatives, kidnapping, assault, and rape.
- 12 states and Union territories recorded crime rates higher than the national average.
- The [Women's Reservation Act, 2023](#) also known as the **Nari Shakti Vandan Adhiniyam**, was passed to reserve **one-third of seats** in legislative assemblies and Lok Sabha for women.

States where crimes against women increased in one year

Darker the shades, higher the % increase in crimes
0.51 77.78



States in grey have seen a decline in crimes against women

➤ Farmers:

- Farmers lost **standing crops to excess and untimely rain**, leading to a significant blow to their incomes.
 - [Southwest monsoon](#) was below normal and erratic, impacting [Kharif crop](#) yields in many parts of the country.

Note:

- States like **Karnataka, Maharashtra, and Jharkhand** are facing drought and drought-like conditions.
- Recurring losses due to the **pink bollworm pest on the BT cotton crop** in north India added to farmers' distress.
- NCRB data revealed an increase in **deaths by suicide** among those involved in farming.
 - At least **one farmer died by suicide every hour in India**, with 11,290 suicide cases reported in 2022.
 - Deaths by the **suicide of agricultural labourers were higher** than farmers/cultivators, with 53% of the suicide cases being agricultural labourers.
- The dependence of an average agricultural household for income has been increasing on wages from farming rather than crop production.
- **Youth:**
 - According to the **World Bank** the **youth unemployment rate in India was at 23.2%**, higher than its neighbours Pakistan (11.3%), Bangladesh (12.9%), and Bhutan (14.4%), in 2022.
 - The unemployment rate in China stood at 13.2%, South Korea 6.9% and Singapore 6.1%.
 - Although the youth unemployment rate in India dropped from 23.9% in 2021, it is still marginally higher than the 22.9% recorded in the Pre-Covid year of 2019.
 - The youth unemployment rate refers to those in the workforce who are aged 15 to 24 years and without a job, but actively seeking one.
 - The **State of Working India 2023 study** found that unemployment among graduates under the age of 25 was at 42.3% in 2021-2022, while the overall joblessness rate was 8.7%.

What are the Related Initiatives Aimed at Addressing these Specific Groups?

- **Poor:**
 - [Pradhan Mantri Awaas Yojana](#)
 - [Mahatma Gandhi National Rural Employment Guarantee Act \(MGNREGA\) 2005](#)
 - [Deendayal Antyodaya Yojana - National Rural Livelihood Mission \(DAY-NRLM\)](#)
 - [Pradhan Mantri Kaushal Vikas Yojana](#)
 - [Pradhan Mantri Jan Dhan Yojana](#)

- **Women:**
 - [Beti Bachao Beti Padhao Scheme](#)
 - [Ujjawala Yojna](#)
 - [Pradhan Mantri Mahila Shakti Kendra Scheme](#)
 - [One Stop Centre](#)
 - [The Sexual Harassment of Women at Workplace \(Prevention, Prohibition, and Redressal\) Act, 2013](#)
 - [The Protection of Children from Sexual Offences \(POCSO\), 2012](#)
 - [NARI SHAKTI PURASKAR](#)
 - [Mahila police Volunteers](#)
 - [Mahila Shakti Kendras \(MSK\)](#)
- **Farmers:**
 - [The Pradhan Mantri Kisan Samman Nidhi \(PM-KISAN\)](#)
 - [Agriculture Infrastructure Fund \(AIF\)](#)
 - [Kisan Credit Cards \(KCC\)](#)
 - [Paramparagat Krishi Vikas Yojana \(PKVY\)](#)
 - [Rashtriya Krishi Vikas Yojana](#)
- **Youth:**
 - [YUVA: Prime Minister's Scheme For Mentoring Young Authors](#)
 - [National Youth Policy-2014](#)
 - [National Skill Development Corporation](#)
 - [Rashtriya Yuva Sashaktikaran Karyakram Scheme](#)

Huntington's Disease

Why in News?

Recently, a study by researchers from the University of Szeged in Hungary published in *Scientific Reports* has uncovered new insights into **Huntington's disease** using **fruit flies (*Drosophila melanogaster*)** as a model organism.

- This innovative approach has provided promising revelations about disease progression and potential therapeutic targets.

What is Huntington's Disease?

- **About:**
 - Huntington's disease is a severe **neurodegenerative disorder** affecting the central nervous system.
 - It is caused by a **mutation in the HTT gene**, producing a faulty **huntingtin (Htt)** protein.

Note:

- Mutant Htt proteins are cleaved into toxic fragments, disrupting various cellular processes.

➤ **HTT Gene and Polyglutamine Tract:**

- The HTT gene codes for the huntingtin protein crucial for nerve cell functioning.
 - Mutations in the HTT gene result in an expanded **polyglutamine tract** in the Htt protein, leading to misfolding and dysfunction.
 - The severity of Huntington's disease correlates with the length of the expanded polyglutamine tract.
- Huntington's disease is **inherited in an autosomal dominant manner**, which means that a **person only needs to inherit one copy of the mutated gene** from either parent to develop the condition.
 - Each child of a parent with Huntington's disease has a 50% chance of inheriting the mutation.

➤ **Symptoms:**

- Initial symptoms include forgetfulness, loss of balance, and clumsiness in daily tasks.
- Symptoms worsen over time, affecting mood, and reasoning, and leading to uncontrollable movements. Patients face difficulties in speaking, swallowing, and walking as the disease advances.
- Symptoms typically emerge **between ages 30-50**.

➤ **Treatment:**

- There is **currently no cure for Huntington's disease**, and available treatments only alleviate symptoms.

What are the Key Highlights of the Study?

- Researchers engineered fruit flies to express the polyglutamine tract of a mutated human HTT gene in their nervous system.
- They used a gene called Gal4 from **baker's yeast (*Saccharomyces cerevisiae*)**, which activates the expression of genes when bound to a DNA sequence called the upstream activating sequence (UAS).
- The Gal4/UAS system works in the fruit fly genome, allowing the expression of proteins specifically in neurons.
- Fruit flies with the mutated HTT gene displayed neuronal degeneration, impaired climbing ability, and lower viability and longevity.
- A **'control' group of fruit flies** with a normal range of glutamine units in the HTT protein **showed little to no effect**.
- The study found that expressing a **longer glutamine tract** produced symptoms resembling Huntington's disease in humans, while the **shorter tract did not**.
- Researchers found that overexpression of one gene (out of 32 investigated genes in flies) called **Yod1 gene** in flies effectively **eliminated disease-like effects** associated with Huntington's disease, including neurodegeneration and motor impairments.



Note:



drishti

Science & Technology

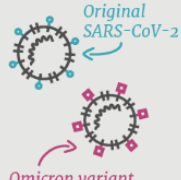

Highlights

- Heat-Tolerant Covid-19 Vaccine by IISc
- ISRO Tests Polymer Electrolyte Membrane Fuel Cell
- Counter-Drone Technology and UAV Development
- Antimicrobial Resistance
- Peregrine Mission One
- GSAT-20 (GSAT-N2) Aboard SpaceX's Falcon-9
- India to Join SKAO as a Full Member
- Space Missions in 2024
- Efficacy of Liquid Nano Urea
- Lithium-Deal with Argentina
- Pegasus Spyware
- X-ray Polarimeter Satellite: ISRO

Heat-Tolerant Covid-19 Vaccine by IISc

Why in News?

A heat-tolerant vaccine developed by the [Indian Institute of Science \(IISc\)](#) researchers is **said to be** effective against all **current strains of SARS-CoV-2** besides having the potential to be quickly adapted for future variants as well.

What is a viral variant?	What is immunity?
<p>A version of the SARS-CoV-2 coronavirus that has evolved & changed shape, which can alter its behaviour.</p> <p><i>Original SARS-CoV-2</i></p>  <p><i>Omicron variant</i></p>	<p>The immune response generated by vaccination or infection activates:</p> <p>B cells which make highly specific antibodies that bind to the virus & stop it entering your cells.</p> <p>T cells which can stimulate B cells & kill infected cells.</p>  <p>The cells & antibodies remain in the body to protect against future infection. This is immunity but immunity can wane over time.</p>

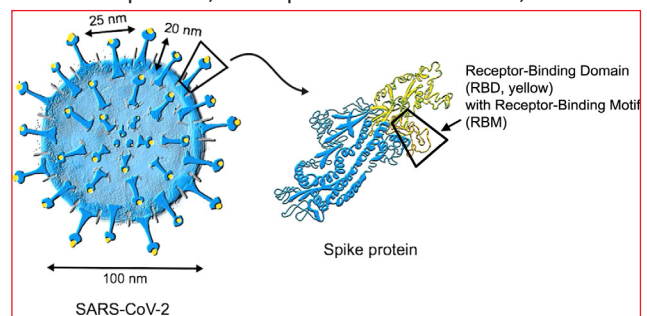
What are the Key Points Related to the Vaccine Developed by IISc?

- **Background:** According to IISc, while current vaccines are proven to be effective against most SARS-CoV-2 strains, **their efficacy has declined due to rapid mutation by the virus.**
- **Antigen Selection:** After analyzing various proteins found in the virus, the researchers selected two parts of SARS-CoV-2's spike protein, the **S2 subunit** and the **Receptor Binding Domain (RBD)** for designing their vaccine candidate.

- The **S2 subunit** is **highly conserved**. It mutates much less than the S1 subunit, which is the target of most current vaccines and the RBD can provoke a robust immune response.
- A hybrid protein, **RS2**, was created by **combining the selected components**.
- The researchers then tested the effects of the protein in both mice and hamster models. They found that the hybrid protein triggered a strong immune response.

NOTE: A **receptor-binding domain** is a key part of a virus located on its 'spike' domain that allows it to dock to body receptors to gain entry into cells and lead to infection.

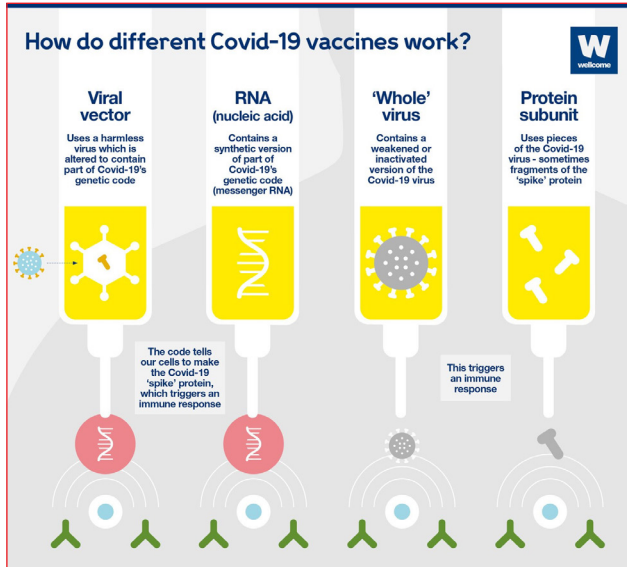
- The **spike (S) protein of SARS-CoV-2**, which plays a key role in the receptor recognition and cell membrane fusion process, is composed of two subunits, **S1 and S2**.



- **Characteristics of RS2 Antigen:**
 - **Adaptability to Variants:** The RS2 antigen can be customized to incorporate the **RBD region of any new SARS-CoV-2 variant including XBB.1.5 and JN.1 variants.**
 - This adaptability addresses concerns related to the virus's rapid mutation.

Note:

- **Storage and Distribution:** RS2 antigen can be stored at room temperature for a month without requiring cold storage.
- **Economic Advantage:** Reduced production and distribution costs make it economically viable.



ISRO Tests Polymer Electrolyte Membrane Fuel Cell

Why in News?

The [Indian Space Research Organisation \(ISRO\)](#) successfully tested a **100 W class Polymer Electrolyte Membrane Fuel Cell (PEMFC)** based Power System aboard the orbital platform, **POEM3**.

What are the Major Takaways from the Recent PEMFC Test?

- **Technology Tested:** ISRO tested a **100-watt class PEMFC**, which **converts hydrogen and oxygen into electricity, water, and heat**. This technology offers several advantages over traditional power sources in space, including:
 - **High Efficiency:** PEMFCs **convert fuel directly into electricity**, resulting in significantly higher efficiency compared to batteries.
 - **Clean Operation:** PEMFCs **produce only water as a byproduct**, eliminating the need for complex waste management systems.

- The water produced by the PEMFC can be used for onboard consumption or for electrolysis to generate additional oxygen.

➤ **Test Platform:** The PEMFC was tested In orbital platform, **POEM3**, launched aboard [PSLV-C58](#) on 1st January, 2024.

- POEM3 serves as a platform for testing new technologies in space under real-world conditions.

➤ **Implications for Future Missions:** The successful test of the PEMFC paves the way for several exciting possibilities for future space missions:

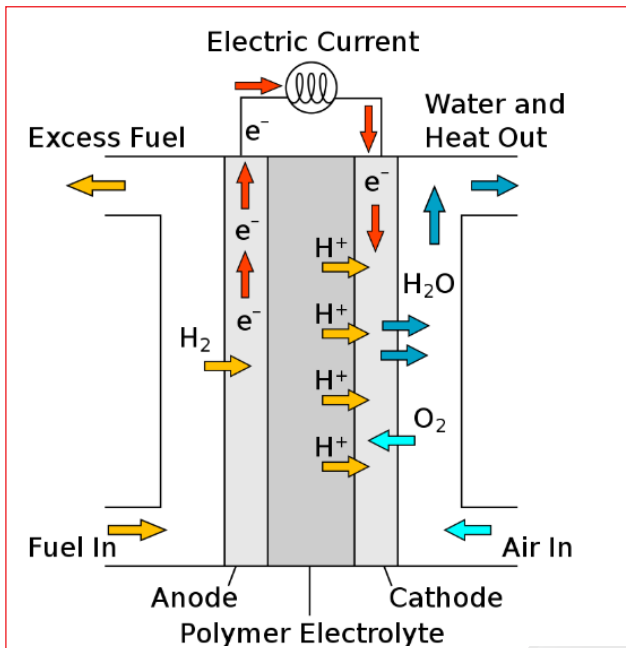
- **Powering the Indian Space Station:** The high efficiency and water production capabilities of PEMFCs make them **ideal for powering the proposed Indian space station**.
- **Deep Space Exploration:** PEMFCs can provide a **reliable and sustainable source of power** for long-duration missions to deep space destinations like Mars.

NOTE: ISRO also noted that it has qualified **10 Ah Silicon–Graphite anode based high energy density Li-ion cells** as a low weight and low cost alternative to present cells being used.

What is a Fuel Cell?

- **About:** A **fuel cell** is an **electrochemical device** that converts the chemical energy of a **fuel (like hydrogen) and an oxidant (like oxygen)** directly into electricity.
 - Unlike batteries, which store chemical energy that gets converted to electrical energy, fuel cells continuously **produce electricity as long as they are supplied with fuel and oxidant**.
- **Major Types of Fuel Cells:**
 - **Polymer Electrolyte Membrane Fuel Cells:** They use a **thin, solid polymer membrane as the electrolyte** and are well-suited for portable applications.
 - **Solid Oxide Fuel Cells (SOFCs):** SOFCs use a **ceramic electrolyte** that can operate at high temperatures. They are highly efficient but are more expensive and complex than PEMFCs.
 - **Alkaline Fuel Cells (AFCs):** AFCs use a **liquid electrolyte made of potassium hydroxide (KOH)**. They are less efficient than PEMFCs and SOFCs but are less expensive and can be more tolerant of impurities in the fuel.

Note:



➤ Applications of Fuel Cells:

- **Transportation:** Fuel cells can be used to power [electric vehicles](#), boats, and even airplanes.
 - Fuel cells can also power space missions, providing electrical power for spacecraft, and a dependable energy source for long-duration missions.
 - Highly efficient with [zero emissions](#), making them ideal for space missions
- **Portable Power:** Fuel cells can be used to power laptop computers, cell phones, and other portable devices.
- **Stationary Power:** Fuel cells can be used to power homes, businesses, and even entire cities.

Counter-Drone Technology and UAV Development

Why in News?

The [Defence Research and Development Organisation \(DRDO\)](#) has made substantial strides in developing a comprehensive counter-drone system, as well as focusing on the advancement of high-endurance [Unmanned Aerial Vehicles \(UAVs\)](#).

What are the Recent Developments in Counter-Drone Technology and UAV Development?

➤ Counter-Drone Technology Development:

- DRDO has developed a comprehensive anti-drone system encompassing **detection, identification, and neutralization of drones**.
 - The technology is capable of **countering attacks, soft kill and hard kill of all types of drones**, including micro drones.
- Also, the technology has been transferred to private companies like **BEL, L&T, and Icom** for mass production
- **UAV Development:**
 - **Tapas MALE UAV:** The **Tapas Medium Altitude Long Endurance (MALE) UAV** developed for **Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR)** applications is in an advanced stage of developmental trials.
 - **Lithium Ion-based battery** with indigenous battery management system has been developed by the DRDO in association with a private vendor and is **being used on Tapas UAV**.
 - **Archer UAV:** Short-range armed UAV Archer is under development for **reconnaissance, surveillance, and low-intensity conflict scenarios**, with developmental flight trials in progress.

DRONE TECHNOLOGY

Drone is a pilotless flying machine, using aerodynamics for lift, can operate autonomously or remotely, and may carry lethal or nonlethal cargo.

COMPONENTS

- Unmanned aircraft (UA)
- Control system (ground control station - GCS)
- Control link (specialized datalink)
- Other related support equipment

CLASSIFICATION

(as per Drone Rules, 2021)

- Nano: <250 gm
- Micro: 250 gm to 2 kg
- Mini: 2 kg to 25 kg
- Small: 25 kg to 150 kg
- Large: >150 kg

APPLICATIONS

- Mapping & Surveying (asset inspection, roof inspections)
- Agriculture (bird control, crop spraying & monitoring etc)
- Multispectral/thermal/NIR cameras, Aerial Photo/videography and Live streaming events
- Emergency Response (search and rescue, marine rescue, fire fighting)
- Disaster (zone mapping, disaster relief etc)
- Mining
- Monitoring Poachers
- Meteorology, Aviation, Payload carrying

DRONES IN DEFENCE

Purpose

- Surveillance and Reconnaissance
- Search and Rescue
- Maritime Surveillance
- Combat Drones
- Offensive (heterogeneous SWARM drones)
- Counter-Terrorism Operations

India's Counter-Drone System

- Indrajal (India's inaugural autonomous drone-defense drone)
- Procurement of combat-capable Heron drones from Israel
- Acquisition of MQ-9B Armed Drones from the US

RELATED REGULATIONS

- Aircraft (Security) Rules, 2023
- Drone Rules, 2021 and Drone (Amendment) Rules, 2022

INDIA'S INITIATIVES

- Digital Sky Platform
- No-Permission-No-Takeoff (NPNT) framework
- PLI Scheme for Drones
- Drone Shakti Scheme

ISSUES

- Increased risk of armed attacks
- Data security
- Cheaper cost enables a larger population to procure drones
- Use of drones in warfare (remote warfare)
- Procurement by non-state actors can pose serious threats
- Ease in delivering mass destruction weapons

Drishti IAS

What is the Defence Research and Development Organization?

- **About:** DRDO is the R&D wing of the Ministry of Defence, Govt of India, with a vision to empower

Note:

India with **cutting-edge defense technologies and a mission to achieve self-reliance in critical defense technologies.**

- **Core Principle:** “Balasya Mulam Vigyanam” (Science is the source of strength)
- **Foundation:** Established in **1958** by amalgamating existing establishments from the **Indian Army and Directorate of Technical Development & Production.**
- **Significant Contributions:** Developed strategic systems and platforms like **Agni and Prithvi** series of missiles, **Tejas** (Light Combat Aircraft), **Pinaka** (Multi-barrel Rocket Launcher), **Akash** (Air Defence System), radars, and electronic warfare systems.

Antimicrobial Resistance

Why in News?

Recently, a survey conducted by the **National Centre for Disease Control (NCDC)** highlighted several key findings regarding the prescription and use of antibiotics in hospitals amidst growing concerns about **Antimicrobial Resistance (AMR).**

What are the Key Findings of the Survey?

- **Preventative Use of Antibiotics:**
 - Over half of the surveyed patients (55%) were prescribed antibiotics for prophylactic indications, meant to prevent infections, rather than for therapeutic purposes (45%) to treat infections.
- **Antibiotic Prescription Patterns:**
 - Only a small fraction (6%) of patients **were prescribed antibiotics** after a confirmed diagnosis of the **specific bacteria causing their illness** (definitive therapy), while the majority (**94%**) **were on empirical therapy**, based on the doctor’s clinical assessment of the likely cause of the illness.
- **Lack of Specific Diagnosis:**
 - **94% of patients received antibiotics** before a definitive medical diagnosis was confirmed, highlighting the **prevalent use of antibiotics** without precise knowledge of the infection’s cause.
- **Variation Among Hospitals:**
 - There were wide variations in antibiotic prescription rates among the hospitals, ranging from **37% to 100% of patients being prescribed antibiotics.**

- A significant proportion (86.5%) of the prescribed antibiotics were administered through the parenteral route (not orally).

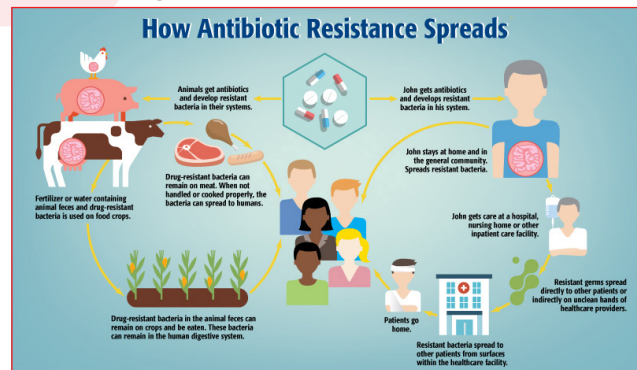
Drivers of AMR:

- The NCDC survey notes, that one of the main drivers for the development of antibiotic resistance is the **excessive and inappropriate use of antibiotics.**

What is Antimicrobial Resistance (AMR)?

About:

- Antimicrobial resistance is the **resistance acquired by any microorganism (bacteria, viruses, fungi, parasites, etc.)** against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
 - As a result, standard treatments become ineffective, infections persist, and may spread to others.
- It is a **natural phenomenon** as bacteria evolve, making drugs used to treat infections less effective.
- Microorganisms that develop antimicrobial resistance are sometimes referred to as “**superbugs**”.
 - The **World Health Organization (WHO)** has identified AMR as one of the top ten threats to global health.



What are the Reasons for the Spread of AMR?

- **High Prevalence of Communicable Diseases:** High burden of communicable diseases, such as tuberculosis, diarrhoea, respiratory infections, etc. that require antimicrobial treatment.
- **Overburdened Public Health System:** This limits the laboratory capacity for etiology-based diagnosis and appropriately targeted treatment.
- **Poor infection Control Practices:** Hygiene lapses in hospitals and clinics facilitate the spread of resistant bacteria.

Note:

- **Injudicious use:** Overprescribing by doctors under pressure from patients (often self-medication), incomplete antibiotic courses, and broad-spectrum antibiotics used unnecessarily create selective pressure for resistant bacteria.
 - **Easy Access:** Unregulated over-the-counter availability and affordability of antibiotics fuel self-medication and inappropriate use.
- **Lack of Awareness:** Low public understanding of AMR and proper antibiotic use encourages misuse.
- **Limited Surveillance:** Lack of adequate monitoring systems makes it difficult to track and understand the scope of AMR.

What are the Implications of the Spread of Antimicrobial Resistance?

- **Healthcare Impact:**
 - AMR can render previously effective antibiotics **ineffective against bacterial infections**. This complicates the treatment of common illnesses like pneumonia, urinary tract infections, and skin infections, leading to prolonged illnesses, more severe symptoms, and increased mortality rates.
- **Increased Healthcare Costs:**
 - Treating resistant infections **often requires more expensive and prolonged therapies**, increased hospital stays, and sometimes more invasive procedures. This leads to higher healthcare costs for individuals, healthcare systems, and governments.
- **Challenges in Medical Procedures:**
 - AMR makes **certain medical procedures riskier**. Surgeries, cancer chemotherapy, and organ transplants become more hazardous due to the increased risk of infections that are resistant to standard antibiotics.
- **Limitations in Treatment Options:**
 - As resistance grows, the **available arsenal of effective antibiotics diminishes**. This limitation in treatment options may lead to a scenario where previously manageable infections become untreatable, reverting medicine to a pre-antibiotic era where common infections could be fatal.

What are the Measures Taken to Address AMR?

- **Indian:**
 - **National Programme on AMR containment:** Launched in 2012. Under this programme, AMR

Surveillance Network has been strengthened by establishing labs in State Medical College.

- **National Action Plan on AMR:** It focuses on [One Health approach](#) and was launched in April 2017 to involve various stakeholder ministries/departments.
- **AMR Surveillance and Research Network (AMRSN):** It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
- **AMR Research & International Collaboration:** [Indian Council of Medical Research \(ICMR\)](#) has taken initiatives to develop new drugs /medicines through international collaborations to strengthen medical research in AMR.
 - ICMR along with the Research Council of Norway (RCN) initiated a joint call for research in antimicrobial resistance in 2017.
 - ICMR along with the Federal Ministry of Education and Research (BMBF), Germany has a joint Indo-German collaboration for research on AMR.
- **Antibiotic Stewardship Program:** ICMR has initiated an antibiotic stewardship program (AMSP) on a pilot project across India to control the misuse and overuse of antibiotics in hospital wards and ICUs.
 - DCGI has banned 40 Fixed Dose Combinations (FDCs) which were found inappropriate.
- **Global Measures:**
 - **World Antimicrobial Awareness Week (WAAW):** Held annually since 2015, WAAW is a global campaign that aims to raise awareness of AMR worldwide and encourage best practices among the general public, health workers and policymakers to slow the development and spread of drug-resistant infections.
 - **The Global Antimicrobial Resistance and Use Surveillance System (GLASS):** WHO launched the GLASS in 2015 to continue filling knowledge gaps and to inform strategies at all levels.
 - GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain, and the environment.
 - **Global Point Prevalence Survey Methodology:** To deal with the challenge of limited information on **how antibiotics are prescribed and used at the patient level**, WHO has introduced the global point

Note:

prevalence survey methodology to understand the prescribing patterns in hospitals, with repeated surveys showing the changes in antibiotic use over time.

- Few studies have been conducted in India using this methodology.

Peregrine Mission One

Why in News?

The United States embarked on the **Peregrine Mission One**, its first attempt to land on the Moon in over 50 years. However, the landing attempt was seemingly doomed after the spacecraft developed a “critical” fuel leak just hours after launch.

- The mission is spearheaded by private space enterprises, **Astrobotic Technology and United Launch Alliance**, this collaborative mission, signals a shift towards leveraging private sector capabilities for space exploration.

What are the Key Highlights of Peregrine Mission One?

- The **Peregrine Lander** is expected to be one of the first American spacecraft to land on the Moon since the **Apollo program**.
 - The Peregrine Lunar Lander, also known as Peregrine Mission One, is a lunar lander built by Astrobotic Technology.
- It is part of the **National Aeronautics and Space Administration (NASA)’s Commercial Lunar Payload Services (CLPS) programme**, which aims to stimulate a **broader lunar economy**.
 - NASA is partnering with diverse American companies under the CLPS initiative to **transport science and technology payloads to the lunar surface**.
 - The CLPS contracts aim to facilitate lunar exploration, experimentation, and technology demonstrations in preparation for upcoming human missions.
- It is expected to touch down on a **mid-latitude region of the Moon called Sinus Viscositatis, or Bay of Stickiness**.
- This mission will also help prepare for **Artemis**, the NASA-led programme to **return astronauts to the Moon** later this decade, in preparation for missions to Mars.

- Artemis is NASA’s ambitious initiative named after the **moon goddess in Greek mythology**. With a **mission to land humans on the Moon by 2024**, including the first woman and person of colour on the lunar surface.
- The program envisions an **Artemis Base Camp on the lunar surface** and a strategic Gateway in lunar orbit.

NOTE: Until now, a **soft landing on the Moon** has only been accomplished by a handful of national space agencies: the **Soviet Union was first, in 1966**, followed by the **United States**, which is still the **only country to put people on the Moon**. China has successfully landed three times over the past decade, while India with **Chandrayaan-3** is the most recent to achieve the feat on its second attempt, in 2023.

GSAT-20 (GSAT-N2) Aboard SpaceX’s Falcon-9

Why in News?

The commercial arm of the **Indian Space Research Organisation (ISRO)**, **NewSpace India Limited (NSIL)** is set to launch **GSAT-20 (GSAT-N2)**, aboard **SpaceX’s Falcon-9** in 2024.

- Falcon 9 is the world’s first orbital class **reusable, two-stage rocket** designed and manufactured by **SpaceX** for the reliable and safe transport of people and payloads into Earth orbit and beyond.

What is GSAT-20?

- GSAT-20 is a **high throughput Ka-band satellite** that provides **high-speed broadband internet connectivity**, digital video transmission, and audio transmission.
 - It is being launched to address the growing broadband communication needs of India. It is designed to provide comprehensive coverage across India, including remote regions like **Andaman and Nicobar Islands** and **Lakshadweep Islands**.
- This satellite offers an impressive **HTS (High Throughput Satellite) capacity** of nearly 48Gbps. Notably, it comprises **32 beams specifically designed to meet the demanding service** needs of underserved areas, aiming to bridge the connectivity gap.

NOTE: The Ka-band refers to radio frequencies ranging from **27 to 40 GHz**. It allows high-speed satellite data transfers with wide coverage through focused spot beams.

Note:

What is NewSpace India Limited (NSIL)?

- NSIL, incorporated on 6th March 2019 (under the [Companies Act, 2013](#)), is a wholly owned **Government of India company**, under the administrative control of **Department of Space (DOS)**.
 - Its primary responsibility is **enabling Indian industries to take up high technology space related activities** and is also responsible for promotion and commercial exploitation of the products and services emanating from the Indian space programme.
- **The Major Business Areas of NSIL include:**
 - Production of [Polar Satellite Launch Vehicle \(PSLV\)](#) and [Small Satellite Launch Vehicle \(SSLV\)](#) through industry
 - Production and marketing of **space-based services**, including launch services and space-based applications like transponder leasing, remote sensing and mission support services;
 - Building of **Satellites (both Communication and Earth Observation)** as per user requirements.
 - Transfer of technology developed by ISRO centres/units and constituent institutions of Dept. of Space;
 - Marketing spin off technologies and products/services emanating out of ISRO activities
 - Consultancy services
- In June 2022, **NSIL successfully completed its first demand-driven satellite mission**, GSAT-24, which was fully secured by Tata Play, a satellite television service.
 - Currently, NSIL manages and operates **11 communication satellites in orbit**.

<https://youtu.be/gYeYWpuozKw>

India to Join SKAO as a Full Member

Why in News?

- India will also be part of the **world's largest [radio telescope project](#)** called the [Square Kilometre Array Observatory \(SKAO\)](#).
- Countries have to **sign, and ratify, the SKAO convention** to formally become members. The **Government of India's** approval for joining the project, with a financial sanction of Rs **1,250 crore**, is the first step towards the ratification.

What is the SKAO?

- **About:** SKAO is an intergovernmental organization that aims to build and operate **cutting-edge radio telescopes**. Its global headquarters is located in the **Jodrell Bank Observatory, United Kingdom**.
 - The project will not have a single telescope but an **array of thousands of antennas**, to be installed in **remote radio-quiet locations in South Africa and Australia**, that will operate as one large unit meant to observe and study celestial phenomena.
 - SKAO objectives also include study of [gravitational waves](#).
 - Some of the countries taking part in building the SKA include the **UK, Australia, South Africa, Canada, China, France, India, Italy and Germany**.
- **India's Role in SKAO:**
 - India, through the Pune-based [National Centre for Radio Astrophysics \(NCRA\)](#) and other institutions, has played a key role in the development of the ambitious SKAO project since its inception in the **1990s**.
 - India's primary contribution to SKAO lies in the development and operation of the **Telescope Manager element**, essentially the "**neural network**" or software that controls the entire telescope's operation.

NOTE: NCRA is a research institution in India that specializes in radio astronomy. It is located on the Pune University Campus and is part of the Tata Institute of Fundamental Research (TIFR) in Mumbai.

What is a Radio Telescope?

- **About:** A **radio telescope** is a specialized type of **antenna and receiver system** used to detect and collect radio waves emitted by celestial objects.
 - Radio waves are **EM (Electromagnetic)** waves that have wavelengths between **1 millimeter and 100 kilometers**.
 - Unlike optical telescopes, **radio telescopes can be used in the daytime as well as at night**.
- **Applications:** Radio telescopes are used to study a wide range of astronomical phenomena, including:
 - The formation and evolution of stars and galaxies
 - Black holes and other active galactic nuclei
 - The interstellar medium
 - Planets and moons in our solar system
 - The search for extraterrestrial life

Note:

- **Major Radio Telescopes:**
 - [Giant Metrewave Radio Telescope \(India\)](#)
 - In **June 2023**, GMRT (near Pune) played a crucial role in the **first-ever detection of nano-hertz gravitational waves**, showcasing its vital role in cutting-edge astronomical research.
 - [SARAS 3 \(India\)](#)
 - [Atacama Large Millimetre/submillimetre Array \(ALMA\)](#) (Atacama Desert, Chile)
 - **Five-hundred-metre Aperture Spherical Telescope (FAST)** (China)

What are Gravitational Waves?

- **About:** Gravitational waves are ripples or vibrations in the very fabric of spacetime. For instance, when a pebble is dropped in a pond, the resulting ripples are analogous to gravitational waves, but instead of water, **they propagate through the fundamental structure of the universe.**
 - In 1916, Albert Einstein forecasted the presence of gravitational waves within his theory of general relativity.
- **Prominence:** Gravitational wave research, **as evidenced by the 2017 Nobel Prize awarded for the first detection using [Laser Interferometer Gravitational Wave Observatory \(LIGO\)](#)**, holds immense potential for scientific breakthroughs.
 - Recently, India gave its go-ahead to construct the third node of the LIGO in **Hingoli district of Maharashtra.**

Space Missions in 2024

Why in News?

The year 2023 proved to be an **important one for space missions**, with [NASA's OSIRIS-REx mission](#) returning a sample from an asteroid and [India's Chandrayaan-3 mission](#), and 2024 is shaping up to be **another exciting year for space exploration.**

- Several new missions under [NASA's Artemis plan](#) and Commercial Lunar Payload Services initiative will target the moon.

What are the Space Missions Planned for 2024?

- **Europa Clipper:**
 - NASA will launch **Europa Clipper**, which will explore one of Jupiter's largest moons, Europa.

- Europa is **slightly smaller than the earth's moon**, with a surface made of ice. Beneath its icy shell, Europa likely harbours a saltwater ocean, which scientists expect contains over twice as **much water as all the oceans here on Earth combined.**
- With Europa Clipper, scientists want to **investigate whether Europa's ocean** could be a suitable habitat for extraterrestrial life.
 - The mission plans to do this by **flying past Europa nearly 50 times** to study the moon's icy shell, its surface's geology and its subsurface ocean.
- The mission will also **look for active geysers spewing out from Europa.**

➤ Artemis II launch:

- Artemis II, part of NASA's Artemis program, is a **crewed lunar mission set to orbit the Moon, marking humanity's return since 1972.**
 - The Artemis programme is named after **Apollo's twin sister in Greek mythology.**
 - Planned for a 10-day journey, it aims to validate systems for sustained lunar presence.
- This pivotal mission, including the **first woman and person of color**, follows Artemis I's success, testing an uncrewed lunar capsule in late 2022.
 - Artemis II underscores NASA's **commitment to lunar exploration**, preparing for extended space habitation, and laying the groundwork for future missions to Mars.

➤ VIPER to Search for Water on the Moon:

- VIPER (Volatiles Investigating Polar Exploration Rover), is a **robot the size of a golf cart that NASA will use to explore the moon's south pole in late 2024.**
- This robotic **mission is designed to search for volatiles**, which are molecules that easily vaporize, like water and carbon dioxide, at lunar temperatures.
 - These materials could provide resources for future human exploration on the moon.
- The VIPER robot will **rely on batteries, heat pipes and radiators throughout its 100-day mission**, as it navigates everything from the extreme heat of lunar daylight – when temperatures can reach 224 °C (107 °F) – to the moon's frigid shadowed regions that can reach as low as -240 °C.

Note:

- **Lunar Trailblazer and PRIME-1 Missions:**
 - NASA has **recently invested in a class of small, low-cost planetary** missions called **SIMPLEx**, which stands for **Small, Innovative Missions for Planetary Exploration**.
 - These missions save **costs by tagging along on other launches** as what is called a rideshare, or secondary payload.
 - One example is the **Lunar Trailblazer**. Like VIPER, Lunar Trailblazer will look for water on the moon.
 - But while VIPER will land on the moon's surface, studying a specific area near the south pole in detail.
 - Lunar Trailblazer will orbit the moon, measuring the temperature of the surface and mapping out the locations of water molecules across the globe.
 - Lunar Trailblazer's launch timing depends on **the primary payload's launch readiness**.
 - The PRIME-1 mission, scheduled for a mid-2024 launch, is Lunar Trailblazer's ride. PRIME-1 will drill into the moon – it's a test run for the kind of drill that VIPER will use.
- **JAXA's Martian Moon eXploration Mission:**
 - The JAXA MMX mission concept to study Mars' moons - Phobos and Deimos.
 - The Japanese Aerospace Exploration Agency, or JAXA, has a robotic mission in development called the Martian Moon eXploration, or MMX, planned for launch around September 2024.
 - The mission's **main science objective is to determine the origin of Mars' moons**.
 - Scientists aren't sure whether Phobos and Deimos are former asteroids that Mars captured into orbit with its gravity or if they formed out of debris that was already in orbit around Mars.
 - The spacecraft will **spend three years around Mars** conducting science operations to observe Phobos and Deimos. MMX will also land on Phobos' surface and collect a sample before returning to Earth.
- **ESA's Hera Mission:**
 - It is a **mission by the European Space Agency** to return to the Didymos-Dimorphos asteroid system that **NASA's DART mission** visited in 2022.
 - But DART didn't just visit these asteroids, it collided with one of them to test a planetary defence technique called "**kinetic impact**".

- DART hit Dimorphos with such force that it actually changed its orbit.
- The kinetic impact technique smashes something into an object in order to alter its path. This could prove useful if humanity ever finds a potentially hazardous object on a collision course with Earth and needs to redirect it.
- Hera will launch in October 2024, making its way in late 2026 to Didymos and Dimorphos, where it will study the physical properties of the asteroids.

What are ISRO's Space Missions set for 2024?

- **PSLV-C58 with XPoSat:**
 - **XPoSat**, India's first X-Ray Polarimeter Satellite, was launched in January 2023 aboard the **Polar Satellite Launch Vehicle (PSLV-C58)**.
 - This mission aims to investigate the polarization of intense X-ray sources in the universe, focusing on pulsars, black hole X-ray binaries, and other celestial objects.
- **NASA-ISRO Synthetic Aperture Radar (NISAR):**
 - The **NISAR**, a collaborative mission between NASA and ISRO, is a dual-frequency synthetic aperture radar satellite designed for remote sensing, providing insights into various Earth systems including ecosystems, ice mass, vegetation biomass, and natural hazards.
- **Gaganyaan 1:**
 - The **Gaganyaan 1** mission is a critical step in India's Human Spaceflight Programme.
 - This test flight, involving three crew members, is a collaborative effort between ISRO and Hindustan Aeronautics Ltd (HAL) to pave the way for **Manned Space Exploration**.
- **Mangalyaan-2 (MOM 2):**
 - Mangalyaan-2, or **Mars Orbiter Mission 2 (MOM 2)**, is ISRO's ambitious sequel to its successful Mars mission.
 - This mission, aimed at studying the surface, atmosphere, and climatic conditions of Mars, will equip the orbiter spacecraft with advanced scientific instruments, including a hyperspectral camera, magnetometer, and radar.
 - MOM 2 is a testament to India's expanding prowess in planetary exploration.

Note:

- **Shukrayaan-1:**
 - Under the [Venus Orbiter Mission](#), ISRO plans to launch Shukrayaan-1, a spacecraft destined to orbit Venus for five years.
 - It aims to study the atmosphere of Venus, marking India's first foray into exploring the mysteries of the second planet from the Sun.

Efficacy of Liquid Nano Urea

Why in News?

A two-year field experiment on the efficacy of [Liquid Nano Urea](#) by scientists from **Punjab Agricultural University (PAU)** has found a **substantial decrease in rice and wheat yields** when compared to conventional nitrogen (N) fertiliser application.

- The findings emphasize the necessity for further long-term field evaluations spanning 5-7 years to ascertain nano urea's **equivalence to conventional urea** and its sustainability in maintaining crop yields.

What are the Key Findings about the Efficacy of Liquid Nano Urea?

- **Yield Reduction:**
 - There is a significant decrease in crop yields when nano urea was used compared to conventional nitrogen fertilizers.
 - Specifically, there was a **21.6% decrease in wheat yield and a 13% decrease** in rice yield.
- **Grain Nitrogen Content:**
 - The application of nano urea **resulted in a decline in grain nitrogen content** in both rice and wheat crops.
 - There is a 17 and 11.5% **decrease in grain N content of rice and wheat**, respectively.
 - The lowered grain nitrogen content implies reduced protein levels in the harvested crops.
 - This is a concern in a country like India, where rice and wheat are staple foods providing protein and carbohydrates. Low protein content could impact the population's protein energy requirements.
- **Cost Considerations:**
 - The cost of nano urea formulation was 10 times higher than that of granular urea and will add to the cost of cultivation for farmers.

- **Crop Biomass and Root Volume:**
 - The application of nano urea led to a **reduction in above-ground biomass** and root volume. This decrease in root volume resulted in decreased root-surface area, **impacting nutrient uptake processes by the roots.**

What is Liquid Nano Urea?

➤ About:

- It is urea in the **form of a nanoparticle**. It is a **nutrient (liquid) to provide nitrogen to plants** as an alternative to the conventional urea.
 - Urea is a chemical nitrogen fertilizer, white in colour, which artificially provides nitrogen, a major nutrient required by plants.
- It is developed to **replace conventional urea** and it can **curtail the requirement** of the same by at **least 50%**.
 - It contains **40,000 mg/L of nitrogen in a 500 ml bottle** which is equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea.
- Nano liquid urea was launched in June 2021 by the **Indian Farmers and Fertiliser Cooperative (IFFCO)**.

➤ Developed At:

- It has been indigenously developed at IFFCO-**Nano [Biotechnology](#) Research Centre, Kalol, Gujrat in line with [Atmanirbhar Bharat](#)** and Atmanirbhar Krishi.
 - India is dependent on imports to meet its [urea requirements](#).

➤ Application:

- This fertiliser is a **foliar spray**, meaning it should **only be used once leaves arrive** on the crops.

Lithium-Deal with Argentina

Why in News?

The **Ministry of Mines**, Government of India through the **state-owned [Khanij Bidesh India Ltd \(KABIL\)](#)**, has entered into a draft exploration and development agreement with **Argentinan miner CAMYEN** for possible acquisition and development of **five-odd [lithium blocks](#)**.

- The company has also entered into a **non-disclosure agreement with Chilean miner ENAMI** for "possible exploration, extraction, processing and commercialisation" of the mineral.

Note:

What is Lithium?

➤ About:

- Lithium is an alkali mineral, also called 'white gold'. It is soft, silvery-white metal, the lightest metal of the periodic table.

➤ Major Properties:

- High Reactivity
- Low Density
- Excellent Electrochemical Properties

➤ Occurrence and Top Producers:

- Lithium is found naturally in various minerals, including **spodumene, petalite, and lepidolite**.

- It is extracted from these minerals and refined into lithium metal or its compounds.
- The top producers of lithium are **Australia, Chile, China, and Argentina**.
- In 2022, **Australia** was the world leader in terms of lithium mine production. **Chile and China** ranked second and third.
- Recently, a massive lithium deposit beneath **California's Salton Sea (US)**, holding an estimated **18 million tons of lithium**, was discovered.

NOTE: Lithium triangle made up of **Argentina, Chile, and Bolivia**—contain roughly half the world's known lithium.



Note:



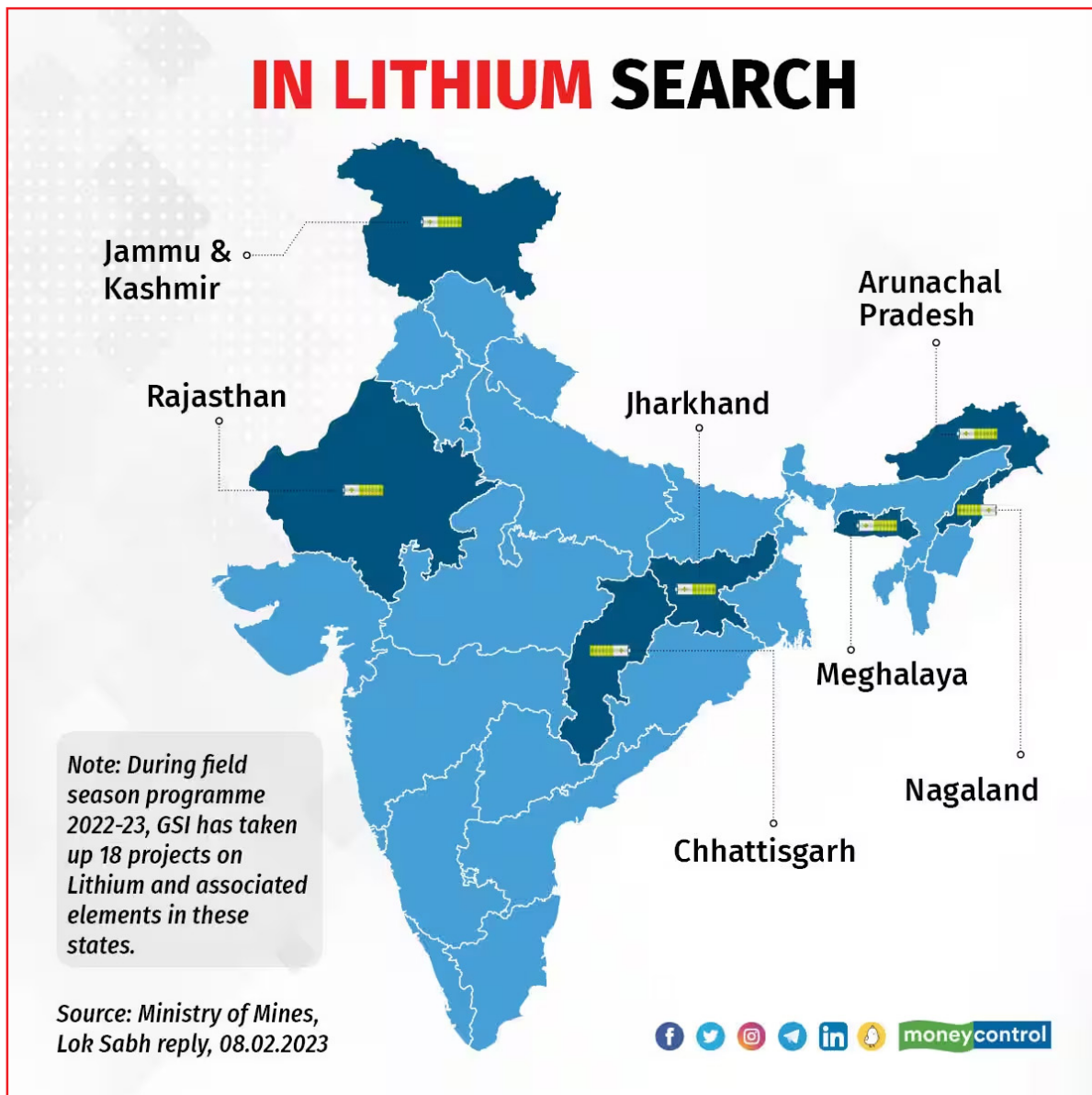
➤ **Applications:**

- **Batteries:** Lithium is a crucial component of [rechargeable batteries](#) used in smartphones, laptops, electric vehicles, and other electronics.
- **Glass and Ceramics:** Lithium compounds are used to **strengthen glass and ceramics**, making them more durable and heat-resistant.
- **Medicine:** Lithium is used as a **mood stabilizer** in the treatment of [bipolar disorder](#).
- **Lubricants:** Lithium greases are used in **high-pressure and high-temperature** applications.

➤ **Lithium in India:**

- **2023 saw a surge in lithium discoveries:**

- Massive reserves unearthed in **Salal-Haimna areas of Reasi district of Jammu and Kashmir** (estimated 5.9 million tonnes).
- Additional reserves identified in Koderma and Giridih regions of **Jharkhand**.
- However, India has put up lithium blocks for auction: **one in J&K and another in Chhattisgarh**, with most of its domestic requirements, across categories like [EVs](#), lithium-ion battery making, and other energy storage solutions, being met completely through imports. Import bill is pegged at around **₹24,000 crore**.



Note:

Pegasus Spyware

Why in News?

The [Pegasus spyware](#) has once again ignited a debate on **privacy and security**. Recent reports by **Amnesty International** point to its utilization in targeting the **phones of two prominent Indian journalists**, prompting inquiries into potential government involvement.

- Amnesty International is a global movement of more than 10 million people who are committed to creating a future where **human rights are enjoyed by everyone**.

What is Pegasus Spyware?

➤ About:

- Pegasus spyware is a **highly invasive mobile surveillance tool** that can secretly infiltrate and monitor smartphones, collecting data and information from various apps and sources.
- It was developed by the **Israeli cyber-intelligence firm NSO Group**, which claims to sell it only to government agencies for fighting crime and terrorism.
 - NSO emphasizes mechanisms in place to avoid targeting journalists, lawyers, and human rights defenders not involved in terror or serious crimes.

➤ Operating Procedure:

- Pegasus uses “**zero-click**” methods to infect devices; it is a malicious software that allows spyware to be installed on a device **without the device owner’s consent**.
 - The spyware doesn’t necessitate any **user actions for installation**, distinguishing it from **regular apps that require explicit user confirmation**.
 - It can exploit vulnerabilities in apps such as WhatsApp, iMessage, or FaceTime, and send a message or a call that triggers the installation of the spyware, even if the user does not open or answer it.

- Pegasus is a spyware that can **exploit zero-day vulnerabilities** to deploy spyware on Apple products.

- A zero-day vulnerability is an **undiscovered flaw or bug** in an operating system that the mobile phone’s manufacturer does not yet know about and so has **not been able to fix**.

➤ Targets:

- Several investigations and reports have revealed that Pegasus spyware has been used to spy on **journalists, human rights activists, lawyers, opposition leaders, and heads of state**.
- Some of the countries that have been accused of using Pegasus spyware to target their critics and enemies include **Saudi Arabia, Mexico, India, Morocco, Hungary, Azerbaijan, and Rwanda**.

➤ Implications:

- Pegasus spyware threatens **privacy and security for individuals** and groups exposing corruption, defending human rights, and advocating democracy.
- It undermines **press freedom by exposing journalists’ sources**, methods, and materials, compromising their independence.
- The spyware poses a risk to the sovereignty and stability of nations, enabling foreign interference and **espionage in internal affairs and decision-making processes**.

➤ Challenges:

- Pegasus spyware is difficult to detect and remove, as it can hide its presence and activity on the device, and can **self-destruct** if it senses that it is being discovered or analyzed.
- Pegasus spyware is difficult to regulate and control due to its operation in legal grey areas.
 - NSO Group and its clients commonly deny or evade responsibility for the misuse and abuse of spyware.

Note:



Major Types of Cyber Threats

Cyber Threat	Description
Malware	Malicious software designed to harm or exploit systems by infecting, disrupting, or gaining unauthorized access.
Phishing	Deceptive attempts to acquire sensitive information, often through fake emails, websites, or messages impersonating trusted entities.
Ransomware	Encrypts data and demands payment (usually in cryptocurrency) for its release, posing significant threats to data integrity.
DDoS Attacks	Overwhelms a system with a flood of traffic, causing service disruption by exhausting resources or bandwidth.
Man-in-the-Middle (MitM)	Intercepts and potentially alters communication between two parties, leading to unauthorized access or information theft.
SQL Injection	Exploits vulnerabilities in SQL databases by injecting malicious code, allowing unauthorized access or data manipulation.
Zero-Day Exploits	Attacks targeting undiscovered vulnerabilities in software before developers can create a patch, posing a serious and often potent threat.
Social Engineering	Manipulating individuals into divulging sensitive information through psychological manipulation or deception.
Insider Threats	Risks originating from individuals within an organization, either intentionally or unintentionally causing harm or data breaches.
Advanced Persistent Threats (APTs)	Prolonged and targeted cyber attacks often linked to espionage, aiming to infiltrate and remain undetected in a network.
Cross-Site Scripting (XSS)	Injects malicious scripts into web pages viewed by others, potentially compromising the security and privacy of users.
Credential Stuffing	Uses stolen usernames and passwords from one breach to gain unauthorized access to other accounts due to individuals reusing passwords.
Internet of Things (IoT) Threats	Exploits vulnerabilities in connected devices, potentially allowing unauthorized access or disruption of IoT networks.
Cryptojacking	Unauthorized use of a computer's resources for cryptocurrency mining, slowing down systems and consuming energy without the user's consent.
Wi-Fi Eavesdropping	Unauthorized interception of wireless communication, where attackers may capture sensitive data transmitted over Wi-Fi networks.

What are the Related Cybersecurity Initiatives?

- **India:**
 - [Information Technology Act, 2000.](#)
 - [National Cyber Security Strategy.](#)
 - [Cyber Surakshit Bharat.](#)
 - [Computer Emergency Response Team - India \(CERT-In\).](#)
 - [Critical Information Infrastructure.](#)
 - [Indian Cyber Crime Coordination Centre \(I4C\).](#)
- **International Mechanisms:**
 - [International Telecommunication Union \(ITU\)](#)
 - [Budapest Convention on Cybercrime](#)

X-ray Polarimeter Satellite: ISRO

Why in News?

Recently, the [Indian Space Research Organisation \(ISRO\)](#) has launched its **first X-ray Polarimeter Satellite (XpoSat)** to study X-ray polarisation and its cosmic sources, like [Black holes](#), [Neutron stars](#), and [Magnetars](#).

- The mission is propelled by the PSLV-C58 rocket in **Low Earth Orbit.**

What is an X-ray Polarimeter Satellite (XpoSat)?

- **Purpose:**
 - XPoSat is designed to study X-ray polarization in the medium X-ray band, offering insights into celestial sources' radiation mechanisms and geometry.
 - This study is crucial for **understanding the physics behind these celestial bodies.**
- **Payloads:**
 - The satellite carries two main payloads, **POLIX (Polarimeter Instrument in X-rays)** and XSPECT (X-ray Spectroscopy and Timing).
 - POLIX will observe **about 40 bright astronomical sources**, while XSPECT will study the electromagnetic spectrum generated by different matter.
- **Development:**
 - Entirely **built by two Bengaluru-based institutes**— ISRO's UR Rao Satellite Centre and Raman Research Institute—XPoSat's development began in 2008, with a formal agreement signed with ISRO in 2015.

Note:

➤ **Global Context:**

- XPoSat is **only the world's second mission dedicated to X-ray polarization** in the medium X-ray band. [NASA's Imaging X-ray Polarimetry Explorer \(IXPE\)](#), launched in 2021, was the first such mission by a space agency.

➤ **National Contribution:**

- XPoSat will be India's third space-based observatory, following the recently launched solar mission [Aditya-L1](#) and [AstroSat](#), which was launched in 2015. Its launch is seen as a significant stride for Indian astronomy and space research.

What is X Ray and How will it Study the Celestial Objects?

- X-rays are electromagnetic radiation whose wavelength is 0.01-10 nanometres.

- Electromagnetic radiation is characterised by **an electric field and a magnetic field vibrating perpendicular to each other.**

- The **polarisation of electromagnetic radiation** refers to the orientation of these two fields as the radiation moves through space.

- X-rays can be polarised when they get scattered. Polarised X-rays are also produced when the path of a fast-moving charged particle is bent by a magnetic field.

- Measuring the polarization of X-rays using instruments like POLIX enables astronomers to understand the **orientation and strength of magnetic fields in celestial objects**. This, in turn, provides crucial insights into the **nature and behavior of pulsars**, regions around black holes, and other cosmic phenomena emitting X-rays.



Note:

Environment and Ecology

Highlights

- Project Tiger
- Natural Pathogenic Fungi to Save Eucalyptus Forests
- Darjeeling Zoo's Conservation Breeding Programme for Snow Leopards
- Varied Progress in Clean Air Target
- Northeast African Cheetah
- Sustainable Agriculture
- Wetland City Accreditation
- Buxa Tiger Reserve
- Biodiversity Credits
- Captive-bred Wolves into the Wild in Gujarat
- Pelagic Birds
- Balancing Climate Goals and Biodiversity Protection

Project Tiger

Why in News?

Over time, the tiger conservation initiative has evolved, establishing Tiger Reserves (55) and implementing crucial wildlife protection laws.

- However, conflicts in Tiger Reserves between the forest bureaucracy and forest dwellers have intensified due to violations of the [Wildlife \(Protection\) Act, 1972](#), and the [Forest Rights Act, 2006](#).
- The **Ministry of Environment, Forest and Climate Change** announced the merger of the two flagship programmes [Project Tiger \(PT\)](#) and [Project Elephant](#) as **Project Tiger and Elephant (PTE)**.

What are the Shortcomings in Tiger Conservation?

- The [Wildlife Protection \(Amendment\) Act, 2006](#) didn't prohibit the diversion of a "tiger's forest" for development projects and allowed wildlife to be killed as a last resort if they threatened human lives.
- The government planned to notify the FRA Rules in 2009 and operationalise the Act.
 - But in November 2007, the [National Tiger Conservation Authority \(NTCA\)](#) passed an order that gave the Chief Wildlife Wardens 13 days' time to submit a proposal to delineate Critical Tiger Habitats (CTHs), each with an area of 800-1,000 sq. km.
 - As a result, the government ended up notifying 26 Tiger Reserves in 12 States Section 38 (V) of WLPA, and without complying with its provisions.

- Tiger Reserves in **Similipal, Odisha**, the **Critical Tiger Habitats (CTHs)** lacked a **Buffer Area**.
 - It was only in **2012** that they were included following a directive from the Supreme Court, which gave the **National Tiger Conservation Authority (NTCA)** a three-month ultimatum.
- The **Tiger Task Force** found the approach of using guns, guards, and fences wasn't protecting tigers, and that the increasing conflict between the **forest/wildlife bureaucracy** and those who coexist with the **tigers** was a recipe for disaster.

What are Initiatives Taken for Tiger Conservation?

Project Tiger:

- **About:**
 - **Project Tiger** is a **wildlife conservation initiative** in India that was launched in 1973.
 - The primary objective of Project Tiger is to ensure the survival and maintenance of the tiger population in their natural habitats by creating dedicated [Tiger Reserves](#).
 - Starting with only **nine reserves** covering **9,115 sq. km**, the project marked a paradigm shift in wildlife conservation efforts.
- **Method of Tiger Census:**
 - The unreliable **pug-mark method** of the **first tiger census** in **1972** gave way to more accurate techniques like the [camera-trap method](#).
- **Growth Rate in Tiger Population:**
 - The first tiger census, in **1972**, used the unreliable pug-mark method to count **1,827** tigers.

Note:

- As of **2022**, the tiger population is estimated at **3,167-3,925**, showcasing a growth rate of **6.1%** per year.
- India is now home to **three-quarters** of the **world's tigers**.
- **Tiger Reserve:**
 - In 1973, **Project Tiger** began with **nine reserves** covering **9,115 sq. km**. By **2018**, it had grown to **55 reserves** in different states, totalling **78,135.956 sq. km** or **2.38%** of India's land area.

Wildlife (Protection) Act, 1972:

- The **Wild Life (Protection) Act, 1972** provides a legal framework for the protection of various species of wild animals and plants, management of their habitats, regulation, and control of trade in wild animals, plants, and products made from them.

- The **Wildlife (Protection) Act (WLPA), 1972** laid the groundwork for tiger conservation. It established **National Parks** and **Wildlife Sanctuaries**, segregating rights in favour of State governments and introducing the concept of **Critical Tiger Habitats (CTH)**.
- The amendment to **WLPA** in **2006** led to the creation of the **National Tiger Conservation Authority (NTCA)** and a comprehensive tiger conservation plan.
- This marked a departure from the **earlier fortress conservation approach**, acknowledging the **inseparable link between tiger protection, forest conservation, and the well-being of local communities**.

Tiger Task Force:

- In 2005, the formation of the **Tiger Task Force**, prompted by concerns about tiger conservation, emphasized the necessity for a reassessment. The task force pointed out flaws in the existing strategy that heavily depended on **weapons, guards, and fences**.

TIGER

Royal Bengal Tiger (*Panthera Tigris*) is the National animal of India.

Subspecies of Tiger

- * The continental (*Panthera tigris tigris*)
- * The Sunda (*Panthera tigris sondaica*)

Habitat

Tropical rainforests, evergreen forests, temperate forests, mangrove swamps, grasslands, and savannas

Countries Where Tiger Population Is Found

- ▣ Found only in **13 Tiger Range countries**- India, Nepal, Bhutan, Bangladesh, Myanmar, Russia, China, Thailand, Malaysia, Indonesia, Cambodia, Laos, and Vietnam
- ◆ As per the latest report by IUCN, tiger has gone extinct in Cambodia, Laos, and Vietnam

Protection Status

- ▣ **IUCN Red List:** Endangered
- ▣ **CITES:** Appendix I

Threats

- ▣ Habitat loss
- ▣ Poaching and illegal trade



Note:



drishti

What is the Recognition of Forest Rights Act, 2006?

- The enactment of the [Scheduled Tribes and Other Traditional Forest Dwellers \(Recognition of Forest Rights\) Act, 2006](#) recognized the customary and traditional forest rights in communities.
- This empowered [Gram Sabhas](#) to democratically manage forest resources and biodiversity within their boundaries.
- **Critical Wildlife Habitat (CWH):**
 - The **Forest Rights Act (FRA)** introduced a 'Critical Wildlife Habitat' (CWH), similar to the **Critical Tiger Habitat (CTH)** under the **Wildlife Protection Act (WLPA)**.

However, a key difference was that **once a CWH was notified, it couldn't be redirected for non-forestry purposes**. This particular clause was insisted upon by Adivasi movements during negotiations.

- **Critical Tiger Habitats (CTH)** cover 42,913.37 sq. km, or 26% of the area under **National Parks** and **Wildlife Sanctuaries**.
- The **Gram Sabhas** were given the authority to **safeguard, preserve, and oversee the forest, wildlife, and biodiversity** within their customary boundaries.

Natural Pathogenic Fungi to Save Eucalyptus Forests

Why in News?

Recently, scientists have found a natural remedy to protect **eucalyptus** forest plantations from a pest, **eucalyptus snout beetle**, which is known to cause serious damage to eucalypts.

- The researchers have managed to collect a naturally occurring **pathogenic fungi** and characterized it to turn it into a [biopesticide](#) for controlling beetle populations.
- **Eucalyptus (evergreen tree)** wood is a crucial material for **paper pulp production**.

What is Eucalyptus Snout Beetle?

- **Eucalyptus snout beetle** (*Gonipterus platensis*) is a **leaf-feeding beetle** that is a major defoliator of eucalypts, according to the [Food and Agriculture Organization](#) of the **United Nations**.
 - The pest is indigenous to **Australia** but occurs in many countries throughout the world where eucalypts are grown.
- It can cause damage over vast areas as it has a great flight capability and gets transferred with transport of forest products.
- The beetle feeds on **leaves, buds and shoots**, resulting in stunted growth and defoliation and causing heavy losses.



Note:

How can Fungi Control the Eucalyptus Snout Beetle?

- In the recent research, the scientists collected the **fungi** from **naturally infected beetles** in **eucalyptus forest plantations** and characterized them to develop a **bio-pesticide** for controlling the beetle.
- The **fungi** belong to the genera **Beauveria** and **Metarhizium**, which are known to infect and kill insects.
 - **Beauveria pseudobassiana** and **Metarhizium brunneum** were the most virulent fungi.
 - **B bassiana** was highly effective both by contact and ingestion, with a mortality rate of 100%.
- The fungi could be used to develop a **bio-pesticide** for sustainable forestry using integrated pest management.
- The fungi is developed by treating insecticidal activity, **UV-B radiation tolerance** among other parameters to ensure that recovered **fungi** are suitable to produce **bio-insecticide** and **mass production** and **commercialisation**.

Darjeeling Zoo's Conservation Breeding Programme for Snow Leopards

Why in News?

The **Padmaja Naidu Himalayan Zoological Park (PNHZP), West Bengal** also commonly known as **Darjeeling zoo** has achieved international recognition from the **World Association for Zoos and Aquariums (WAZA)** for its successful conservation breeding programme (CBC) for **snow leopards**.

- This recognition is a testament to the zoo's dedication to wildlife conservation and the preservation of endangered species.

What is the World Association for Zoos and Aquariums (WAZA)?

- WAZA is the **global alliance of regional associations, national federations, zoos and aquariums**, dedicated to the care and conservation of animals and their habitats around the world.

- The membership consists of nearly 400 leading institutions and organisations around the world, and this number continues to grow.

What are the Conservation Efforts of Snow Leopards in the Darjeeling Zoo?

- **About:**
 - Darjeeling Zoo has the **only conservative breeding programme for snow leopards** in India.
 - Apart from snow leopards, it has conservative breeding programmes for **red pandas, mountain orals and pheasants**.
 - Darjeeling zoo is the largest **high altitude zoo in India**.
- **Conservation Breeding Programme:**
 - The first ex-situ conservation breeding program started in 1986 as a Snow Leopard conservation breeding project.
 - The CBC at Darjeeling Zoo **recorded the first birth of a snow leopard** in 1989. Since then, **77 snow leopards have been born at the zoo**, marking a remarkable achievement in wildlife conservation.
 - The zoo's success in breeding snow leopards can be attributed to careful **pairing of male and female snow leopards**, creating a **natural environment** within the enclosures, and using a wide **genetic pool to avoid inbreeding**.
 - Before pairing, the snow leopards are kept in **adjoining enclosures to develop courtship**. Once their compatibility is observed, they are paired and kept in the same enclosure.
 - Pregnant female leopards are separated and kept under 24X7 CCTV surveillance, with regular blood tests and monitoring of body weight.
 - The zoo practices the highest biosecurity protocols for all captive animals, including regular screening for parasites, deworming, and advanced veterinary facilities.

Note:

Snow Leopard

Panthera Uncia

Often referred to as the "ghost of the mountains"

HABITAT

- Mountainous regions of **Central and Southern Asia**
- **12** Range Countries
- In India:
 - **Western Himalayas:** Jammu and Kashmir, Ladakh, Himachal Pradesh
 - **Eastern Himalayas:** Uttarakhand and Sikkim and Arunachal Pradesh

MAJOR SITES

- Hemis National Park, Ladakh
 - **Snow leopard capital of the world**
- Great Himalayan National Park, Himachal Pradesh
- Gangotri National Park, Uttarakhand
- Khangchendzonga National Park, Sikkim

PROTECTION STATUS

- **Vulnerable:** IUCN Red List
- **Appendix I:** CITES
- **Schedule I:** Indian Wildlife (Protection) Act 1972

CONSERVATION EFFORTS

- Global Snow Leopard and Ecosystem Protection (GSLEP) Programme
- Himal Sanrakshak- Community Volunteer Programme
- Project Snow Leopard
- Snow Leopard Conservation Breeding Programme- Padmaja Naidu Himalayan Zoological Park, West Bengal

THREATS

- Human Snow Leopard Conflict
- Climate Change
- Loss of Prey and Habitat
- Poaching



Note:

Varied Progress in Clean Air Target

Why in News?

Recently, the **Climate Trends and Respirer Living Sciences** have conducted a study, revealing that the majority of cities are far from the clean air targets of the India's **National Clean Air Programme (NCAP)**.

NOTE: Climate Trends and Respirer Living Sciences are both involved in the NCAP Tracker, an online hub for updates on India's clean air policy.

- Climate Trends is a **research-based consulting and capacity building initiative** that focuses on environment, climate change, and sustainable development.
- Respirer Living Sciences is a climate-tech startup partner to the Government of India. It **supported the Centre of Excellence ATMAN on Clean Air Technologies** which was established at IIT Kanpur.

What are the Key Highlights of the Study?

- **PM2.5 Reduction Disparities:**
 - Among 49 cities with consistent PM2.5 data over five years, only 27 cities **showed a decline in PM2.5 levels**, while merely four cities met or surpassed the targeted decline as per **National Clean Air Campaign (NCAP)** Goals.
 - The NCAP's goal is to reduce **average particulate matter (PM) concentrations by 40% by 2026** in 131 cities.
 - Initially aimed for a 20-40% reduction by 2024, the target was later **extended to 2026**.
- **Mixed Progress Across Cities:**
 - While some cities like Varanasi, Agra, and Jodhpur exhibited significant reductions in PM2.5 levels, others, including **Delhi, reported marginal declines (only 5.9%) or even increased pollution** loads.
 - Varanasi showed the **most substantial reduction with a 72%** average decrease in PM2.5 levels and a 69% reduction in PM10 levels from 2019 to 2023.
- **Regional Vulnerabilities:**
 - The **Indo-Gangetic Plain (IGP)** remains highly vulnerable to elevated particulate matter

concentrations, hosting around 18 of the top 20 most polluted cities for PM2.5.

- Only **Guwahati and Rourkela**, outside the IGP, were **among the 20 most polluted cities for PM 2.5**.

➤ Monitoring Challenges:

- The availability and distribution of continuous ambient air quality monitors significantly **influence annual pollutant concentrations**.
- However, many Indian cities **lack an adequate number of such monitoring stations**.
- While cities such as Mumbai and Delhi have several such stations, most **Indian cities have only a handful**.
 - Only four of the 92 cities have more than 10 such stations.

➤ Factors Impacting Pollution:

- Variations in pollution levels can be **attributed to geographical locations**, diverse emission sources, meteorological influences, and the interplay between emissions and **Meteorology**, requiring further investigation.

What is the National Clean Air Programme?

- It was launched by the **Ministry of Environment, Forests and Climate Change (MoEFCC)** in January 2019.
- It is the first-ever effort in the country to frame a **national framework for air quality management** with a time-bound reduction target.
- The NCAP's goal is to reduce **average particulate matter (PM) concentrations by 40% by 2026 in 131 cities**. Initially aimed for a 20-40% reduction by 2024, the target was later extended to 2026
- It covers 131 non-attainment cities which were identified by the **Central Pollution Control Board (CPCB)**.
 - Non-attainment cities are those that have fallen short of the National Ambient Air Quality Standards (NAAQS) for over five years.
 - NAAQs are the standards for ambient air quality with reference to various identified pollutant notified by the CPCB under the Air (Prevention and Control of Pollution) Act, 1981.
 - List of pollutants under NAAQS: PM10, PM2.5, SO2, NO2, CO, NH3, Ozone, Lead, Benzene, Benzo-Pyrene, Arsenic and Nickel.

Note:

- **PRANA (Portal for Regulation of Air-pollution in Non-Attainment cities)**, is a portal for monitoring of implementation of NCAP.

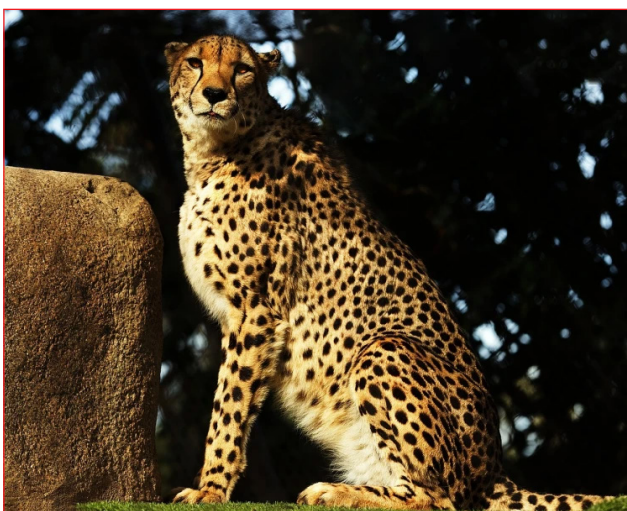
What are the Initiatives Taken for Controlling Air Pollution?

- [System of Air Quality and Weather Forecasting and Research \(SAFAR\) Portal.](#)
- **Air Quality Index:** AQI has been developed for eight pollutants viz. PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulphur dioxide, ozone, and carbon monoxide.
- [Graded Response Action Plan](#) (for Delhi).
- For Reducing Vehicular Pollution:
 - [BS-VI Vehicles,](#)
 - [Push for Electric Vehicles \(EVs\),](#)
 - [Odd-Even Policy](#) as an emergency measure (for Delhi).
- [New Commission for Air Quality Management](#)
- Subsidy to farmers for buying [Turbo Happy Seeder \(THS\) Machine](#) for reducing stubble burning.
- [National Air Quality Monitoring Programme \(NAMP\):](#) Under NAMP, four air pollutants viz. SO₂, NO₂, PM10, and PM2.5 have been identified for regular monitoring at all locations.

Northeast African Cheetah

Why in News?

Northeast African Cheetah is facing decline in genetic diversity due to illegal trade in cubs to Arab countries.



Note:

What are the Key Facts About Northeast African Cheetahs?

- **Scientific Name:** *Acinonyx jubatus soemmeringii*
- **About:**
 - It is a Cheetah subspecies and was first described under the scientific name *Cynailurus soemmeringii* by the **Austrian zoologist Leopold Fitzinger in 1855** on the basis of a specimen from Sudan's Bayuda Desert brought to the Tiergarten Schönbrunn in Vienna.
 - It is also known as the **Sudan cheetah**. This subspecies is more closely related to the **Southern African cheetah** than to Saharan cheetah populations.
- **Distribution:**
 - They are found in Northeast Africa, Ethiopia and In South Sudan.
 - They **live in wide open lands**, grasslands, semi-arid areas, and other open habitats where **prey is abundant such as in the East Sudanian Savanna**.
- **Habitat:**
 - Their habitats typically encompassed a **range of environments such as savannas**, grasslands, and semi-arid areas, often with sparse vegetation that allowed for their hunting strategy of high-speed pursuits.
- **Threat:**
 - They are being heavily trafficked across the [Red Sea to Arab countries](#) like Saudi Arabia, the United Arab Emirates and Yemen.
 - Due to habitat loss, human encroachment, and hunting, their numbers have significantly dwindled, with only a few scattered populations remaining, primarily in protected areas.
- **Conservation Status:**
 - [IUCN Red List:](#) Endangered.

Sustainable Agriculture

Why in News?

Recently, the **Indigenous Seed Festival** in West Bengal showcased a **remarkable effort by farmers** to conserve native seed varieties and exchange traditional knowledge, exemplifying a significant shift towards **Sustainable Agriculture Practices**.

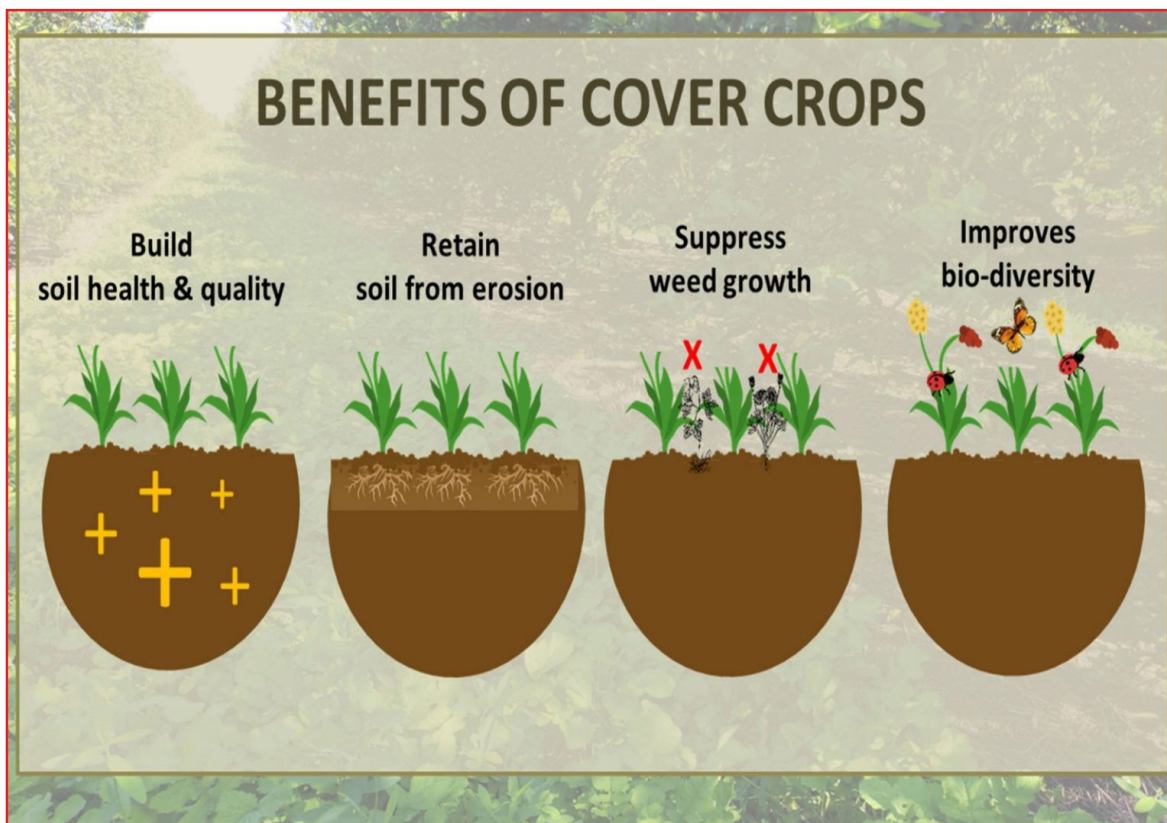


- The festival is a part of ActionAid's climate justice campaign, facilitating discourse between farmers on climate change, organic farming, and indigenous seed access.
- ActionAid's focus on climate resilience and sustainable farming across 22 Indian states. The NGOs aim to establish grassroots-level seed banks across West Bengal.

What is Sustainable Agriculture?

- **About:**
 - Sustainable agriculture **refers to a holistic approach to farming and food production** that aims to meet the current needs for food and fiber while ensuring the long-term viability of agricultural systems and preserving natural resources for future generations.

- It encompasses various practices and principles such as [Crop Switching](#), [Organic Farming](#), Community Supporting Agriculture etc, that focus on **environmental stewardship, economic profitability, and social equity**.
- **Benefits:**
 - **Environmental Conservation:** Practices that **minimize the impact on ecosystems**, soil, water, and biodiversity. This involves using methods that reduce soil erosion, conserve water, and avoid or minimize the use of synthetic fertilizers and pesticides.
 - Techniques like crop rotation, cover cropping, and [agroforestry](#) are employed to maintain soil fertility and health.



- **Economic Viability:** Ensuring that **agricultural practices are economically feasible for farmers**, enabling them to earn a fair income while sustaining their livelihoods.
 - This involves strategies that enhance productivity, reduce production costs, and open up markets for sustainably produced goods.
- **Social Equity:** Fostering **fair and equitable relationships among farmers**, consumers, and other stakeholders in the food system.
 - This includes ensuring fair wages and working conditions for agricultural laborers, supporting rural communities, and promoting access to healthy and nutritious food for all.

Note:



- **Resilience to Climate Change:** Building agricultural systems that are resilient to climate variability and change. Sustainable agriculture practices aim to adapt to changing climatic conditions, mitigate greenhouse gas emissions, and contribute to overall climate resilience.
- **Biodiversity Preservation:** Supporting diverse ecosystems and genetic diversity within crops and livestock. Maintaining biodiversity is critical for resilience against pests, diseases, and environmental changes. This involves preserving heirloom and indigenous crop varieties, as well as promoting diverse landscapes that support wildlife and pollinators.

What are the Limitations of Sustainable Agriculture in India?

- **High Labor Demand:** Sustainable agriculture often requires more manual labor than conventional agriculture, as it involves practices such as **Crop Rotation**, **Intercropping**, **Organic Fertilization**, and pest management.
 - This can increase the cost of production and reduce the profitability of farmers.
- **Time Consumption:** Sustainable agriculture also takes more time to implement and show results than conventional agriculture, as it relies on natural processes and gradual improvements.
 - This can discourage farmers who need immediate returns and face uncertainties such as weather, market, and policy changes.
- **Limited Production Potential:** Sustainable agriculture may not be able to meet the growing demand for food in India, as it tends to have lower yields than conventional agriculture, especially in the short term.
 - This can pose a challenge to **Food Security** and **Poverty Alleviation**, especially in a country with a large and increasing population.
 - The recent Sri Lanka crisis was triggered by the policy of shifting to Organic farming.
 - Rice, Sri Lanka's dietary staple, saw average yields slashed by some 30%.
- **High Capital Cost:** Sustainable agriculture may require high initial investment in infrastructure, equipment, and inputs, such as **Irrigation systems**, micro-irrigation devices, organic fertilizers, and seeds.
 - This can be a barrier for small and marginal farmers who lack access to credit and **Subsidies**.

- **Storage and Marketing Challenges:** Sustainable agriculture may face storage and marketing challenges in India, as it produces perishable and heterogeneous products that require proper handling and packaging.
 - This can increase post-harvest losses and reduce the marketability of the produce, especially in the absence of adequate certification and labeling systems that ensure quality and traceability.

What are the Recent Government Initiatives Related to Sustainable Agriculture?

- [National Mission on Sustainable Agriculture](#)
- [Paramparagat Krishi Vikas Yojana \(PKVY\)](#)
- [Sub-mission on AgroForestry \(SMAF\)](#)
- [Rashtriya Krishi Vikas Yojana](#)
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)**

Wetland City Accreditation

Why in News?

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has recently submitted three nominations from India for the **Wetland City Accreditation (WCA)**.

- The nominated cities include **Indore (Madhya Pradesh)**, **Bhopal (Madhya Pradesh)**, and **Udaipur (Rajasthan)**.
- The ongoing **Amrit Dharohar initiative** by MoEF&CC aligns with WCA goals, promoting the conservation values of **Ramsar Sites**.

NOTE: Amrit Dharohar, part of the 2023-24 budget announcement, promotes the unique **conservation values of the Ramsar Sites** in the country while generating employment opportunities and supporting local livelihoods.

What is Wetland City Accreditation (WCA)?

- **About:**
 - The WCA is a voluntary accreditation system established by the **Ramsar Convention** during the **Conference of the Contracting Parties (COP) 12, 2015** to recognize cities that have taken exceptional steps to safeguard their urban wetlands.
 - The scheme aims to promote the **conservation and wise use of urban and peri-urban wetlands**, as well as sustainable socio-economic benefits for local populations.
 - The WCA is valid for 6 years.

Note:

- **Significance:**
 - Encourages cities to develop positive relationships with valuable ecosystems like Wetlands of International Importance.
 - Aims to **gain international recognition for cities** valuing their natural or human-made wetlands.

What are the Key Highlights of the Cities Nominated for WCA?

- **Indore:**
 - Founded by Holkars, **Indore is the cleanest city in India** and was awarded India's Smart City 2023 for sanitation and urban environment.
 - **Sirpur Lake, a Ramsar Site** in the city, has been recognised as an **important site for water bird congregation** and is being developed as a Bird Sanctuary.
 - Over 200 wetland mitras actively engage in bird conservation and raising awareness to protect the [Sarus Crane](#).
- **Bhopal:**
 - **One of the cleanest cities in India** that has proposed conservation zones around the wetlands in its draft City Development Plan 2031.
 - **Bhoj Wetland, Ramsar Site** is the city's lifeline, equipped with the world-class wetlands interpretation centre, Jal Tarang.
 - Additionally, the Bhopal Municipal Corporation has a dedicated **Lake Conservation Cell**.
- **Udaipur:**
 - The city is surrounded by **five major wetlands, namely, Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar, and Doodh Talai**.
 - These wetlands are an integral part of the city's culture and identity, help maintain the **city's microclimate, and provide a buffer from extreme events**.

Buxa Tiger Reserve

Why in News?

[Buxa Tiger Reserve \(BTR\)](#) in West Bengal witnessed the return of a [tiger](#) for the second time in two years after a 23-year absence, sparking hope for a flourishing ecosystem and a potential resurgence of tiger populations.

What are the Key Facts About Buxa Tiger Reserve?

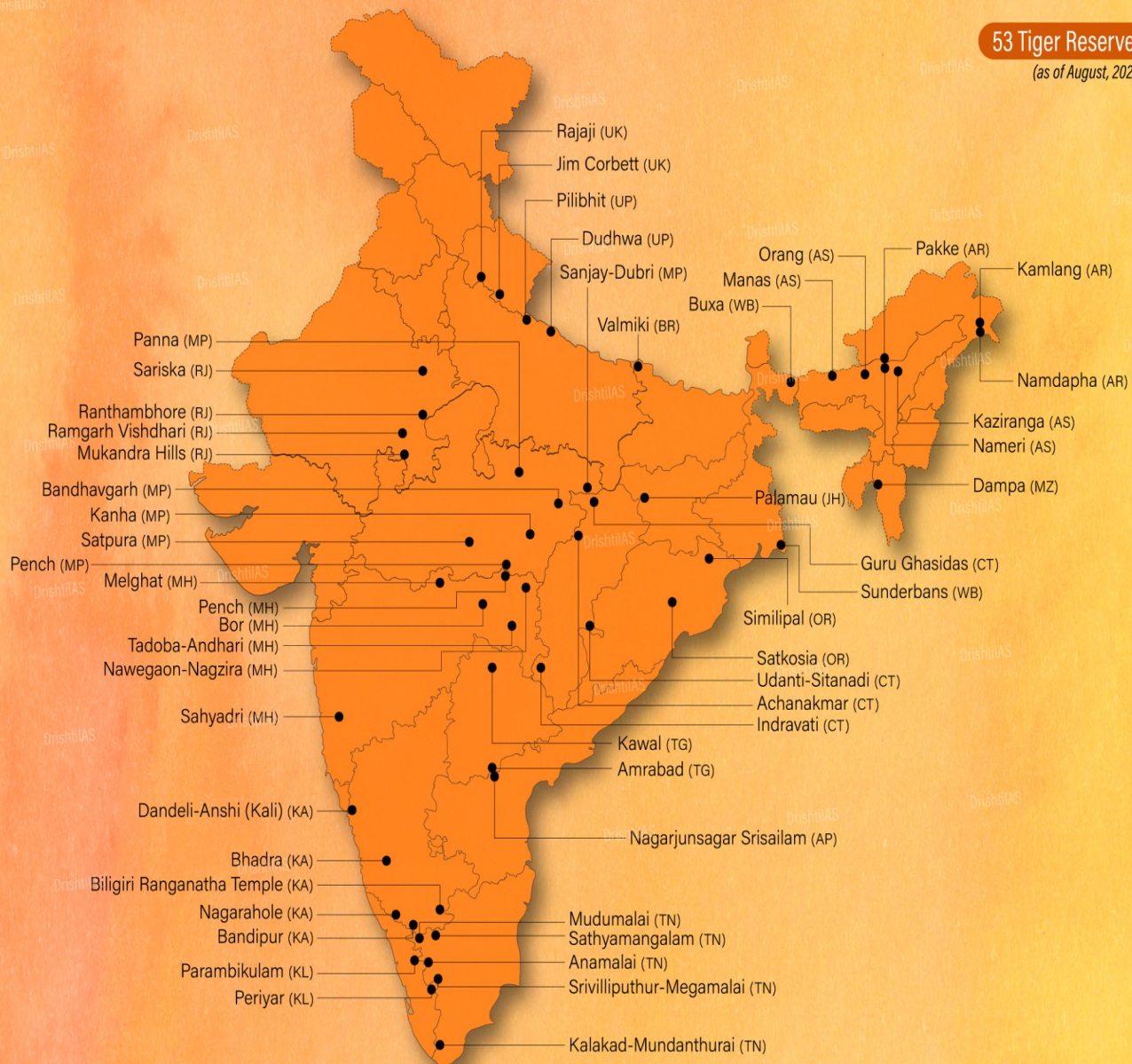
- **About:**
 - **Buxa Tiger Reserve and National Park** covers 760 square kilometers and is located in North Bengal's Alipurduar district.
 - Buxa is a "**low density**" reserve and part of a larger tiger territory that stretches to Bhutan.
 - The rivers Sankosh, Raidak, Jayanti, Churnia, Turturi, Phashkhawa, Dima, and Nonani flow through Buxa National Park.
- **Corridor Connectivity:**
 - According to the [National Tiger Conservation Authority \(NTCA\)](#), the Reserve has corridor connectivity across the border with the **forests of Bhutan in the North; linkages with the Kochugaon forests (Assam) and Manas Tiger Reserve (Assam) in the East; and with the Jaldapara National Park in the West**.
 - The reserve's connectivity serves as a vital link in promoting the migration and genetic diversity of Bengal tigers.
- **Flora:**
 - Prominent tree species include **Sal, Champ, Gamar, Simul, and Chikrasi**, contributing to the reserve's diverse and vibrant ecosystem.
- **Fauna:**
 - The primary wildlife species include the [Asian Elephant](#), **Tiger, gaur (Indian bison), Wild boar, Sambar, and Wild dog (Dhole)**.
 - **Endangered species** in Buxa Tiger Reserve encompass the Leopard cat, Bengal florican, Regal python, Chinese [Pangolin](#), Hispid hare, and Hog deer.
- **Conservation Initiatives:**
 - Introduced **chitals (spotted deer) to enhance the tiger's prey base**, fostering favorable conditions for their return, and showcasing successful conservation efforts.
 - Proactive measures have been taken to **expand the grassland**, creating an ideal habitat for tigers and other wildlife.
 - Initiatives focus on **reducing human interference**, curbing infiltration, and controlling trespassing to create a harmonious coexistence between humans and wildlife.
 - **Tiger Augmentation Project** was launched in 2018, this collaborative project involves the state forest department, the **Wildlife Institute of India**, and the NTCA, focusing on monitoring and enhancing the tiger population.

Note:

Tiger Reserves

53 Tiger Reserves

(as of August, 2022)



FACTS

- A State Government, on the recommendation of the National Tiger Conservation Authority, notify an area as a tiger reserve.
- Largest Tiger Reserve (Core Area): Nagarjunsagar Srisailem (Andhra Pradesh).
- Smallest Tiger Reserve (Core Area): Orang (Assam).
- Reserve with Highest Tiger Density: Corbett (Uttarakhand) (All India Tiger Estimation 2018).
- State with Maximum Tigers: Madhya Pradesh (All India Tiger Estimation 2018).



Note:

Other Protected Areas in West Bengal

- Gorumara National Park
- [Sundarbans National Park](#)
- Neora Valley National Park
- [Singalila National Park](#)
- Jaldapara National Park
- Sundarban Tiger Reserve
- Mayurjharna Elephant Reserve
- Eastern Dooars Elephant Reserve

Biodiversity Credits

Why in News?

Biodiversity Credits or biocredits are increasingly being pushed as a means for financing work on the various targets set under the [Kunming-Montreal Global Biodiversity Framework \(KMGBF\)](#).

- The KMGBF, established at the [15th Conference of Parties \(CoP15\)](#) of the [Convention on Biological Diversity \(CBD\)](#), sets forth ambitious targets for biodiversity conservation, sustainable utilization, and equitable benefit sharing.

What is Biodiversity Credit?

- **About:**
 - Biodiversity credits are a **financial instrument designed to generate funding for the conservation, restoration, and sustainable use of biodiversity-rich areas.**
 - They operate on a concept **similar to Carbon Credits but with a distinct focus on biodiversity preservation** rather than offsetting negative impacts.
 - The core purpose of biodiversity credits is to attract private investments toward initiatives aligned with the goals of conserving and restoring biodiversity, as outlined by international agreements such as the **KMGBF under the CBD.**
- **Biodiversity Credit Alliance:**
 - To promote Bio credits, the **Biodiversity Credit Alliance** was launched at CoP15 of CBD.
 - Through 2023, efforts were made to promote them at different fora. They were discussed at [CoP28 of the UNFCCC in Dubai](#) in December 2023.
 - Its aim is to mobilize support and generate awareness among various stakeholders, including

governmental bodies, non-profits, and private enterprises.

Implementation and Initiatives:

- **Ocean Conservation Commitments (OCCs):** Launched in September 2023, OCCs are tied to Niue's Moana Mahu Marine Protected Area, covering 127,000 square kilometers.
 - OCCs are available for purchase by interested buyers, each representing a commitment to support conservation efforts for 20 years.
 - Priced at USD 148 per OCC, these commitments have attracted investments from non-governmental organizations like the Blue Nature Alliance, Conservation International, and private donors.
- **Wallacea Trust:** This UK-based organization focused on biodiversity and climate research has made **substantial financial commitments**, amounting to 5 million biodiversity credits. Their engagement signals a significant interest from research-oriented entities in utilizing biodiversity credits to support conservation efforts.

Challenges and Uncertainties:

- Despite their potential, the success of biodiversity credits remains uncertain. Challenges encompass **regulatory frameworks, pricing structures** that ensure fairness for both buyers and sellers, and ensuring that these mechanisms genuinely serve biodiversity conservation rather than corporate interests.

What are the Initiatives Related to Biodiversity Conservation?

- **India:**
 - [India Business & Biodiversity Initiative \(IBBI\)](#)
 - [Wetland \(Conservation and Management\) Rules 2010](#)
 - [National Plan for Conservation of Aquatic Ecosystem](#)
 - [Wildlife Crime Control Bureau](#)
 - [Biological Diversity Act, 2002](#)
- **Global:**
 - [Nagoya Protocol](#)
 - [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#)
 - [World Wide Fund for Nature](#)

Note:

Captive-bred Wolves into the Wild in Gujarat

Why in News?

Gujarat's ambitious project to **reintroduce wolves bred in captivity to the wild** shows early signs of success.

- This initiative is the **first of its kind outside the United States**, aiming to restock wolf populations and they can perform their role as **biocontrol agents** that keep the population of wild herbivores, like **nilgai (blue bulls) and wild boars** under control.

What are the Major Points Related to Wolves?

- **About:**
 - Wolves are the largest members of the dog family (**Canidae**), known for their **majestic physique, thick fur, sharp eyes, strong jaws, pointed ears**, and a long bushy tail add to their formidable presence.
- **Ecology and Behavior:**
 - **Social Animals:** They live in packs typically consisting of a breeding pair and their offspring, working together to hunt and raise pups.
 - **Apex Predators:** Primarily hunting large ungulates like **deer, elk and moose**, they play a crucial role in maintaining ecosystem balance.
 - **Communicative Masters:** Their famous howls are not just eerie calls, they serve to **strengthen pack bonds, defend territory, and communicate with other packs**.
- **Subspecies Found in India:**
 - India boasts two wolf subspecies: the **grey wolf** (*Canis lupus pallipes*) in the peninsular region and the **Himalayan or Tibetan wolf** (*Canis lupus chanco*) in the north.
- **Distribution Range in India:**
 - The range of grey wolf stretches across several states, including **Gujarat, Rajasthan, Uttar Pradesh, Madhya Pradesh, Maharashtra** among others.
 - The Himalayan wolf is primarily found in the **Ladakh region** and the **Lahaul and Spiti region of northeastern Himachal Pradesh** among others.

Protection Status:

- **Grey Wolf:**
 - **IUCN Red List:** Least Concern
 - **Wildlife Protection Act (India):** Schedule I
 - **CITES Appendix:** I
- **Himalayan Wolf**
 - **IUCN Red List:** Vulnerable

Pelagic Birds

Why in News?

Bird enthusiasts were able to **document rare 'pelagic' birds** throughout 2023 just off the Karnataka coast.

- Besides pelagic birds, Karnataka has drawn attention to **land-based species**, with the **New Mangalore Port (NMP)** transforming into a **green port**, fostering avian diversity.



What are the Key Facts About Pelagic Birds?

- **About:**
 - Pelagic birds are birds that spend a **large portion of their lives on the open ocean**.
 - They can be found thousands of miles offshore but can get blown onto land during high winds and storms. The only other time they come inland is to breed.

Note:

➤ Features:

- These birds vary greatly in size and description from each other, but they all live on **open water, dive for food, and are excellent swimmers.**
- Pelagic birds possess **remarkably long, slender wings** enabling extended flights without rest.
 - Some can stay airborne for days or weeks, even sleeping during flight.
- These birds feature a unique **salt gland that extracts salt from seawater, preventing its accumulation to toxic levels.**
- They feed on planktonic crustaceans (related to shrimp and crabs), and squid and hunt fish far from land.

➤ Examples:

- One of the better-known pelagic birds is the **Laysan Albatross**, which breeds almost exclusively on the Hawaiian islands but roams the nutrient-rich waters of the Pacific to feed.
 - Pelagic birds also include **Sooty Shearwater, Brown Skua, Brown Booby, Streaked Shearwater** and Masked Booby, Pomarine Skua, Arctic skua, Long-tailed skua, Swinhoe's storm-petrel, Wilson's storm-petrel, and other oceanic wanderers.

➤ Threats:

- Human activities pose threats to birds, including those in remote open oceans.
- Seabirds, globally, face significant threats, with issues arising both from terrestrial nesting grounds and oceanic factors.
 - **Oil spills, climate change-induced alterations** to prey availability, and fishing nets contribute to the challenges.
- The decrease in pelagic bird density is attributed to a decline in fish populations, possibly influenced by factors such as **sea rains** pushing fish to deeper waters.
- **Plastic pollution** is a major concern for pelagic birds, as plastics persist in oceans, breaking into smaller pieces.
 - Birds often mistake plastic fragments for prey, leading to ingestion and associated health risks.

Balancing Climate Goals and Biodiversity Protection

Why in News?

Recently, a study has been published titled *Balancing climate goals and biodiversity protection: legal implications of the 30x30 target for land-based carbon removal*, highlighting the conflicts between land-based **Carbon Dioxide Removal (CDR) Strategies** and the establishment of protected areas, focusing on international environmental law.

What are the Key Highlights of the Study?

➤ Limited Land Availability:

- The Limitations in land availability is a **critical challenge in implementing both biodiversity targets and land-based climate mitigation** strategies.
- With countries pledging significant portions of land for CDR activities, this poses a challenge to establishing protected areas due to limited available land.

➤ Global Targets and Current Status:

- Nations have committed to the **"30x30" biodiversity target** to safeguard 30% of the world's terrestrial and marine areas by 2030. However, as of 2023, protected areas cover only around 16% of terrestrial areas and 8% of marine areas, falling short of the 30x30 goal.
 - The 30x30 target implies **protection of at least 30 % of the world's land and ocean by 2030.**
 - The 30x30 target is a global target that aims to halt the accelerating loss of species and protect vital ecosystems that are the source of our economic security.

➤ Land Use and Conflict:

- Certain land-based mitigation strategies conflict with the need to establish more protected areas **due to land use constraints.**
- Large-scale deployment of CDR could result in further biodiversity loss and competition for land used in food crop production.

➤ Insufficiency of Targets:

- Despite the ambitious nature of the 30x30 target, researchers estimate that a minimum of **44% of global land should be under protected areas** to effectively conserve biodiversity.
- Moreover, CDR activities **alone may not fulfill the goals outlined in the Paris Agreement** to limit global warming to 1.5 or 2 degrees Celsius.

Note:



- **Challenges in Implementation:**
 - Questions arise regarding how countries will allocate additional land for protected areas and restoration while expanding food production and implementing CDR strategies.
 - Balancing these objectives poses a significant challenge.
- **Legal Perspectives:**
 - While some land-based CDR approaches could benefit biodiversity, current international **environmental law does not prevent the implementation of CDR** techniques alongside protected areas on the same land parcels.

- **Recommendations:**
 - There is a need to focus on CDR policies that effectively absorb greenhouse gases while also protecting biodiversity. They emphasize the urgent need to mitigate climate change, stating that the threat it poses to biodiversity far outweighs other concerns.

What is Carbon Dioxide Removal (CDR)?

- **About:**
 - CDR refers to technologies, practices, and approaches that remove and durably store carbon dioxide (CO₂) from the atmosphere.
- **Methods:**

Earth system: Land

CDR METHOD	Afforestation, Reforestation, Improved Forest Management	Soil carbon sequestration	Biochar	Bioenergy with Carbon Capture and Storage (BECCS)	Direct Air Carbon Capture and Storage (DACCS)	Enhanced rock weathering	Peatland and wetland restoration
IMPLEMENTATION OPTIONS	Agroforestry; tree planting; silviculture; timber in construction; bio-based products	Agricultural practices; pasture management	Cropping and forestry residues; urban and industrial organic waste; purpose-grown biomass crops		Solid sorbent; liquid solvent	Spreading crushed silicate rock	Rewetting; revegetation
STORAGE TIMESCALE	Decades to centuries (in vegetation, buildings, soils)	Decades to centuries (in soils, sediments)	Centuries to millennia (in soils and sediments)	10,000+ years (in geological formations)	10,000+ years (in geological formations)	10,000+ years (in minerals)	Decades to centuries (in vegetation, soils, sediments)
FINANCIAL COST (\$ per tonne of CO ₂)	Afforestation/reforestation: \$0-\$240 Agroforestry and forest management: not enough data	-\$45-\$100	\$10-\$345	\$50-\$200	\$100-\$300	\$50-\$200	Not enough data
TRADE-OFFS and RISKS	Afforestation/reforestation: Inappropriate deployment at large scales can increase competition for land (limiting land for biodiversity conservation and food) Agroforestry: limited impacts on agricultural crop production Forest management: If fertiliser use and introduced species are involved, risks include: reduced biodiversity, increased eutrophication, and upstream GHG emissions	Increasing carbon sequestration can occur at the expense of production Sequestration contribution per hectare is small and hard to monitor	Negative impacts from dust Competition for biomass	Growing energy crops increases competition for land (limiting land for biodiversity conservation and food)	High energy requirement could lead to growing competition for low-carbon energy or increased GHG emissions. Some DACCS processes require water.	Dust emissions Potential for increased GHG emissions from energy generation	Some peatlands are used for food production, so could result in competition for land

Earth system: Ocean



CDR METHOD	Blue carbon management	Ocean alkalinity enhancement	Ocean fertilisation
IMPLEMENTATION OPTIONS	Rewetting; coastal revegetation (e.g. mangroves, seagrass, saltmarsh)	Adding alkaline materials such as carbonate or silicate rock	Iron fertilisation; nitrogen and phosphorus fertilisation; enhanced upwelling
STORAGE TIMESCALE	Decades to centuries (in vegetation, soils, sediments)	10,000+ years (in minerals)	Centuries to millennia (in marine sediment)
FINANCIAL COST (\$ per tonne of CO ₂)	Not enough data	\$40-\$260	\$50-\$500
TRADE-OFFS and RISKS	If subsequently degraded or destroyed, these ecosystems are likely to release carbon back to the atmosphere. Maximum benefits will require many years to be achieved	Potential for increased GHG emissions from mining, transport and deployment	Ocean acidification and deoxygenation Altered supply of ocean macronutrients Fundamental changes to food webs and biodiversity



Note:

Security

Highlights

- Peace Pact with ULFA

Peace Pact with ULFA

Why in News?

- The pro-talks faction of the [United Liberation Front of Assam \(ULFA\)](#) signed a tripartite peace deal with the Centre and the Assam government recently.

What are the Major Provisions of Peace Pact with ULFA?

- **Context and History:**
 - **Background:** From the 19th century, Assam's rich culture faced challenges due to an **influx of migrants drawn by its thriving tea, coal, and oil industries**.
 - This influx, compounded by **Partition and then refugees from East Pakistan**, heightened insecurity among the indigenous population.
 - Resource competition sparked a six-year mass movement, **culminating in the 1985 Assam Accord** aiming to address the issue of foreigners in the state.
 - **Origin of ULFA:** ULFA was formed in **1979**, advocating for an independent Assam through armed struggle against the Indian state.
 - Over a decade, ULFA recruited and trained members in Myanmar, China, and Pakistan, resorting to abductions and executions to establish a sovereign Assam.
 - In 1990, the government's **Operation Bajrang** resulted in the capture of a large number of ULFA rebels. **Assam was labeled a 'disturbed area'**, prompting the imposition of President's rule and invoking the **Armed Forces Special Powers Act (AFSPA)**.
 - **Protracted Peace Talks:** Negotiations between ULFA, the Indian government, and the Assam state government began in **2011**.
- **The Recent Peace Pact:**
 - **Key Terms:**

- **ULFA to:**
 - ◆ Renounce violence and disband their organization.
 - ◆ Join the democratic process.
 - ◆ Surrender weapons and camps.
- **Government to:**
 - ◆ Address ULFA's concerns regarding Assamese identity, culture, and land rights.
 - ◆ A **₹1.5 lakh crore investment for Assam's holistic development**
 - ◆ Following the principles applied for the 2023 delimitation exercise for future delimitation exercises in Assam
- **Legislative Safeguards:** The pact aims to **restrict non-indigenous communities' representation in the Assam Assembly** and seeks exemptions from specific sections of the [Citizenship Act of 1955](#).

What Should be the Additional Considerations to Enhance the Recent Peace Pact?

- **Transparency and Accountability:** Establishing mechanisms for **transparent implementation of the pact's provisions** and holding responsible parties accountable for their commitments.
- **Engagement with Anti-Talks Faction:** Strategically engaging with the **ULFA's anti-talks faction** to work towards a unified resolution and wider acceptance of the peace pact.
- **Legal Safeguards:** Ensuring that legislative changes or reforms align with constitutional principles and **protect the rights of all residents**, ensuring no discrimination based on ethnicity or origin.
- **International Cooperation:** Collaboration with neighboring countries to **prevent cross-border insurgencies** and maintain regional stability.
- **Long-Term Development Plans:** Creating sustainable and **detailed developmental strategies beyond immediate investments** to foster holistic growth in the region.



Note:



drishti

Art and Culture

Highlights

- GI Tags for Over 17 Products

GI Tags for Over 17 Products

Why in News?

Recently, over 17 products from Odisha, Arunachal Pradesh, West Bengal, and J&K have received the [Geographical Indication \(GI\)](#) tag.

What Products have Received the GI Tags from Odisha?

➤ Kapdaganda Shawl:

- Woven and embroidered by the **women of the Dongria Kondh tribe**, a [Particularly Vulnerable Tribal Group \(PVTG\)](#) in the Niyamgiri hills in Odisha's Rayagada and Kalahandi districts, the shawl reflects the rich tribal heritage of the Dongria Kondhs.



➤ Lanjia Saura Painting:



- The art form belongs to the Lanjia Saura community, a PVTG largely **residing in the Rayagada district**.
- These paintings are in the form of **exterior murals painted on the mud walls of homes**. White paintings figure over a crimson-maroon background.

➤ Koraput Kala Jeera Rice:

- The black-coloured rice variety, also known as the **'Prince of Rice'**, is famous for its aroma, taste, texture and nutritional value.
- Tribal farmers of the Koraput region have preserved the rice variety for around 1,000 years.

➤ Similipal Kai Chutney:

- The chutney made with **red weaver ants** is a **traditional delicacy** of the tribals in Odisha's Mayurbhanj district. These ants are found in the forests of Mayurbhanj, including in the Similipal forests.

➤ Nayagarh Kanteimundi Brinjal:

- This Brinjal is **known for its prickly thorns on the stems** and the whole plant. The plants are resistant to major insects and can be grown with minimal pesticide.

➤ Odisha Khajuri Guda:

- Odisha's **"Khajuri Guda" or jaggery** is a natural sweetener extracted from date palm trees and has its origin in the Gajapati district.

➤ Dhenkanal Magji:

- It is a **type of sweet made from cheese** from buffalo milk, with distinct characteristics in terms of appearance, taste, flavour, shape, and size.

Note:

What are the other Products Which Received GI Tag?

State	Product Name	Brief Explanation
Arunachal Pradesh	Wancho Wooden Craft	Ethnic wood craft integral to Wancho tribes, used for decoration and gifting, historically used in various aspects of their community life.
	Adi Kekir	Ginger variety from Arunachal Pradesh.
West Bengal	Tangail Saree	Saree style originating from Bengal with distinct weaving patterns.
	Garad Saree	Saree, known for its unique texture and appearance, is a traditional attire from Bengal.
	Korial Saree	Saree variety is recognized for its weaving style and traditional significance in Bengal.
	Kalo Nunia Rice	Rice variety from West Bengal.
	Sundarban Honey	Honey sourced from the Sundarbans area of West Bengal.
Gujarat	Kachchhi Kharek	Product of date palm harvested at Khalal (fresh stage), which are bold, crisp and sweet.
Jammu Kashmir	Ramban Anardana	Ramban Anardana, locally referred to as Dhruni, is an important fruit tree growing wild in hilly tracts and forests of J&K.

What is a Geographical Indication (GI) tag Tag?**> About:**

- A GI tag is a **name or sign used on certain products** that correspond to a specific geographical location or origin.
- The GI tag ensures that only the **authorised users or those residing in the geographical territory** are allowed to use the popular product name.
 - It also protects the product from being copied or imitated by others.
- A registered GI is **valid for 10 years**.
- GI registration is overseen by **the Department for Promotion of Industry and Internal Trade** under the Ministry of Commerce and Industry.

> Legal Framework and Obligations:

- The [Geographical Indications of Goods \(Registration and Protection\) Act, 1999](#) seeks to provide for the registration and better protection of geographical indications relating to goods in India.
- It is governed and directed by the [WTO Agreement on Trade-Related Aspects of Intellectual Property Rights \(TRIPS\)](#).
 - Furthermore, the significance of protecting industrial property and geographical indications **as integral components of intellectual property** is acknowledged and emphasised in Articles 1(2) and 10 of the Paris Convention.



Note:



Geography

Highlights

- 150 Years of India Meteorological Department
- Rock Glaciers

150 Years of India Meteorological Department

Why in News?

[India Meteorological Department \(IMD\)](#) with the mandate of providing public weather services will complete 150 years of presence on 15th January, 2025.

- To mark this milestone, IMD plans a nationwide celebration in all sub-offices from January 15, 2024, to January 15, 2025.

What is India Meteorological Department (IMD)?

- **About:**
 - It is the **National Meteorological Service** of the country and the principal government agency in **all matters relating to meteorology** and allied subjects.
 - It is an agency of the **Ministry of Earth Sciences**, Government of India.
- **Objectives:**
 - To take **meteorological observations** and to provide current and forecast meteorological information for optimum operation of weather-sensitive activities like agriculture, irrigation, shipping, aviation, offshore oil explorations, etc.
 - To **warn against severe weather phenomena** like tropical cyclones, norwesters, duststorms, heavy rains and snow, cold and heat waves, etc., which cause destruction of life and property.
 - To **provide meteorological statistics** required for agriculture, water resource management, industries, oil exploration and other nation-building activities.
 - To **conduct and promote research** in meteorology and allied disciplines.

How has the IMD Evolved Over The Years?

- **Historical Background:**
 - In 1864, two devastating cyclones hit Kolkata and the Andhra coast, causing significant loss of life.
 - The severity of these calamities highlighted the absence of a system to monitor atmospheric parameters, leading to the **establishment of the India Meteorological Department (IMD) in 1875**.
- **Evolution of IMD:**
 - The IMD commenced its official operations with the appointment of just one individual, **HF Blanford**, an Englishman recognized as the Imperial Meteorological Reporter.
 - Under the leadership of **Gilbert Walker**, appointed as the head of IMD in 1903, significant progress was made in understanding monsoons.
 - Walker identified large-scale oscillations in atmospheric circulations, laying the foundation for modern comprehension of the [El Niño phenomenon](#).
 - Over 150 years, IMD has grown into a **massive organization with permanent observatories** and automatic weather stations across the country.
- **Advancements in Cyclone Forecasting:**
 - The IMD experienced a pivotal moment in **1999 during the Odisha super cyclone**, prompting significant investments in technology and manpower. Since then, **cyclone-related casualties have notably decreased**, attributed to IMD's effective forecasts.
 - IMD's cyclone forecasts now serve not just India but **the entire neighbourhood, with as many as 13 countries** in the region operating their cyclone management systems using these forecasts.
- **Diversified Roles :**
 - Initially focused on weather forecasting, IMD now provides specialized services for elections, sporting events, space launches, and various sectors.

Note:

- **Global Role and Recognition :**
 - IMD's enhanced capabilities have led to its recognition as the **Regional Climate Centre for South Asia**.
 - IMD has partnered to contribute to the **United Nations' 'Early Warning for All'** programme, for which 30 countries have been identified.

What are the Major Initiatives Related to Meteorology in India?

- [National Monsoon Mission \(NMM\)](#)
- [Mausam App](#)
- [Doppler Weather Radars](#)

Rock Glaciers

Why in News?

A recent study has shed light on the presence of over **100 active permafrost structures in the Jhelum basin of the Kashmir Himalayas**. These structures, known as **rock glaciers**, have significant implications for the region's hydrology and pose potential risks as the **climate warms**.

What are Rock Glaciers?

- **About:**
 - Rock glaciers are a type of landform that consists of a **mixture of rock fragments and ice**.
 - Rock glaciers typically form in **mountainous regions** where there is a combination of **permafrost, rock debris, and ice**.
 - **Permafrost** is a permanently frozen layer on or under Earth's surface. It consists of **soil, gravel, and sand, usually bound together by ice**.
 - One common scenario involves a **pre-existing glacier** that accumulates debris and rocks as it moves. Over time, if the glacier recedes or thaws, the debris-covered ice can transform into a rock glacier.
 - These rock glaciers occur in highly elevated regions with steep slopes.
 - To the **naked eye, the rock glaciers look like regular ground**, they require a geomorphological view for proper identification.
- **Classification:**
 - They are classified as **active or relict**, depending on whether they have ice and movement or

not. **Active rock glaciers are more dynamic and hazardous**, while **relict rock glaciers are more stable and inert**.

➤ **Importance:**

- Rock glaciers are important indicators of **mountain permafrost**, which is the permanently frozen ground that underlies many high-altitude regions.
- Rock glaciers also store **significant amounts of water** in their frozen cores, which could be a valuable resource in the face of **water scarcity and glacial retreat**.

What are the Potential Impacts of the Active Rock Glaciers on the Region?

- **Glacial lake outburst floods (GLOFs):**
 - These are sudden and **catastrophic floods that occur when a glacial lake bursts** its natural or artificial dam, releasing large volumes of water and debris downstream.
 - The **active rock glaciers could increase the risk of GLOFs** by destabilizing the slopes or the dams of glacial lakes.
 - Rock glaciers near glacial lakes, such as **Chirsar Lake and Bramsar Lake, increase the risk of GLOFs**.
- **Landslides:**
 - These are the **rapid movements of soil, rock, or snow down a slope**, often triggered by [earthquakes](#), rainfall, or human activities.
 - The active rock glaciers could **cause landslides by weakening** the slope stability or by melting and releasing water that could lubricate the sliding mass.
 - The melting permafrost makes these areas unstable, posing risks to nearby settlements and critical infrastructure.
 - For example, the **Nunavik area in Quebec was mostly built on permafrost** ground many years ago. In the last decades, the **ice in the underlying layers began to melt** due to global warming, increasing the frequency of mudslides and other dangers.
- **Thermokarst:**
 - This is a type of **terrain that is characterized by irregular surfaces of marshy hollows** and small hummocks (ridges), formed by the **thawing of ice-rich permafrost**.

Note:

- The **active rock glaciers could lead to the formation of thermokarst features**, such as ponds or lakes, that could alter the **hydrology, ecology, and carbon cycle of the region**.
- The presence of **water bodies near Kulgam town, Jammu and Kashmir suggests the existence of permafrost underground, resembling ‘thermokarst lakes’**, which can pose further risks.
 - The melting of ice underneath the earth’s surface is a high risk of collapse. The collapse leads to formation of a landscape whose features are sinkholes, hummocks, caverns, and tunnels.
 - The **Batagaika crater is an example of thermokarst**, it is the **biggest permafrost crater in the world, it belongs to the Sakha Republic, Russia**.

Jhelum Basin of the Kashmir Himalayas

- The Jhelum basin is drained by the **upper Jhelum River**, which originates from a deep spring at **Vernag at Anantnag**, situated at the base of the **Pir Panjal range in the Kashmir Valley**, the river passes through **Srinagar and Wular Lake** before entering Pakistan.
- As a tributary of the **Indus River**, the Jhelum contributes to the larger river system in the Indian subcontinent.
 - The river flows through Jammu and Kashmir and into Pakistan, where it joins the **Chenab River**.
- The primary tributary is the **Kishenganga (Neelum) River**. The **Kunhar River**, another significant tributary, connects Pakistan-occupied Kashmir and Pakistan via the Kohala Bridge in the Kanghan Valley.



Note:

Ethics

Highlights

- *Decoding Psychoanalysis*

Decoding Psychoanalysis

Why in News?

Recently, the [Delhi Police](#) revealed that six individuals accused in the [Parliament breach](#) incident underwent **psychoanalysis** to decipher their motives.

What is Psychoanalysis?

- **About:** Psychoanalysis is a **set of theories and therapeutic techniques** that treat mental disorders.
 - It aims to treat a range of mental health issues by investigating the **relationship between the unconscious and conscious elements** of psychological experience.
 - It was pioneered by **Sigmund Freud**, a Viennese psychiatrist, in the late 19th and early 20th centuries
- **Key Aspects Related to Psychoanalysis:**
 - **Unconscious Mind:** Freud proposed that much of human behavior is influenced by **unconscious desires, fears, memories, and conflicts**, often stemming from early childhood experiences.
 - Psychoanalysis delves into the unconscious mind, exploring how it shapes **thoughts, behaviors, emotions, and personality**.
 - **Id, Ego, Superego:** Freud introduced a structural model of mind comprising the **id (driven by instincts and pleasure), ego (mediates between id and reality), and superego (internalizes societal norms and values)**.
 - This model helps understand conflicts within the mind.
 - **Psychoanalytic Therapy:** It involves verbal exchanges between the patient and therapist, aimed at exploring unconscious conflicts and gaining insight into one's emotions and behaviors.

What are the Ethical Aspects Involved in Psychoanalysis?

- **Informed Consent:** The patient must be fully informed about the nature of psychoanalysis, its **potential benefits, risks and alternatives** before beginning treatment.
 - This is crucial because the process often involves delving into personal and sensitive topics.
 - Furthermore, obtaining informed consent also safeguards against potential **violations of Article 21**, as highlighted in the [Selvi vs State of Karnataka & Anr Case \(2010\)](#).
- **Confidentiality:** Maintaining patient **confidentiality is paramount in therapy**. However, in some situations, therapists may face ethical dilemmas, such as when a patient poses a danger to themselves or others.
 - Balancing confidentiality with the duty to warn or protect can be challenging.
- **Transference and Countertransference:** Both the **patient and therapist can experience strong feelings or reactions toward each other** due to past experiences or unresolved issues.
 - Managing these emotions ethically to ensure they don't interfere with treatment or professional boundaries is important.
- **Cultural Sensitivity:** Therapists need to be **culturally competent and aware of their biases** to ensure they provide appropriate care and respect diverse perspectives.

How Psychoanalysis can Help in Criminal Rehabilitation?

- **Developing Empathy:** Psychoanalysis can foster empathy by helping individuals **understand the impact of their actions on others**.

Note:

- Through self-reflection and insight gained in therapy, offenders can develop a greater understanding of the consequences of their behavior, leading to increased [empathy](#).
- **Impulse Control:** For individuals with a **history of violent or impulsive behavior**, psychoanalysis can assist in understanding and managing these tendencies.
- By **exploring deep-seated emotions** and unresolved conflicts, individuals can learn to better regulate their emotions and impulses, reducing the likelihood of reoffending.
- **Preventing Recidivism:** By addressing the core motivations, individuals are better equipped to **break free from destructive patterns** and reintegrate into society in a meaningful way.



Note:

Miscellaneous

Highlights

- Atal Setu Nhava Sheva Sea Link
- President of India Presents Sports and Adventure Awards 2023
- US Religious Freedom Designations
- Proposed Hypotheses on the Parting of the Red Sea
- India as a MICE Destination
- Expansion of Litchi Cultivation Across India
- PMLA Notice to Offshore Crypto Firms

Atal Setu Nhava Sheva Sea

Link

Why in News?

The Prime Minister of India inaugurated the **Mumbai Trans Harbour Link (MTHL)** officially known as **Atal Setu Nhava Sheva Sea Link**, a monumental 22 km sea bridge.

- This mega-infrastructure project aims to revolutionize travel between Sewri and Chirle, promising a significant reduction in travel time.

What are the Key Highlights of MTHL?

- **About:**
 - Atal Setu is the **longest bridge in India** and also the **longest sea bridge in the country**.
 - The bridge is about **21.8 km long six-lane bridge** having about 16.5 km length over sea and about 5.5 km on the land.
 - The bridge has been named after former prime minister **Atal Bihari Vajpayee**.
 - The bridge originates from **Sewri in Mumbai** and ends at **Nhava Sheva in Uran taluka in Raigad district**.
 - The project is financed by the **Japan International Cooperation Agency (JICA)**, covering 80% of the total project cost, while the remaining portion is shared between the state and central governments.

NOTE: Earlier **Dr. Bhupen Hazarika Bridge** was the **longest bridge in India**, over the River **Brahmaputra**, in Assam. The 9.15 Km long river bridge.



Technologies Incorporated:

- MTHL incorporates various innovative technologies, such as **Reverse Circulation Drilling (RCD) piling**, **Orthotropic Steel Deck (OSD) bridge girders**, and **Open Road Tolling (ORT) system**.
 - **RCD** is used for the first time in India, an innovative technology employed for **pile foundation laying**, it minimizes noise disturbances compared to the traditional vertical drilling method.
 - **OSD** is a construction method that **combines strength and flexibility**. This technology allows the bridge's steel deck to withstand heavy loads, such as vehicles, while maintaining a lightweight structure.
 - MTHL became the **country's first project to adopt the ORT method** of collecting tolls without requiring vehicles to stop or slow down.

Benefits:

- According to a study conducted by Mumbai Metropolitan Region Development Authority (MMRDA) and JICA, the MTHL will **bring down the average travel time** between Sewri and Chirle from 61 minutes currently to less than 16 minutes.
- Close to 40,000 vehicles are expected to use the link every day in the opening year (2024).

Note:

- The project is expected to **facilitate greater economic integration of Navi Mumbai with Mumbai**, with benefits extending to Panvel, Alibaug, Pune, and Goa.
- The bridge also reduces the distance between Mumbai and Pune Expressway.

President of India Presents Sports and Adventure Awards 2023

Why in News?

Recently, the [President of India](#) presided over a ceremony at Rashtrapati Bhavan to bestow the **prestigious National Sports and Adventure Awards 2023**.

- The awards are administered by the **Ministry of Youth Affairs & Sports, Government of India**.

What Awards Were Included in the Ceremony?

➤ [Major Dhyan Chand Khel Ratna Award](#):

- India's highest sporting honor established in **1991-92**.
- Named after hockey legend **Major Dhyan Chand**.
- Given for outstanding performances over **4 years**.
- Notable awardees include **MC Mary Kom, PV Sindhu, Sachin Tendulkar, and Virat Kohli**.
 - **2023**: Chirag Shetty and Satwik Sairaj Rankireddy (badminton).

➤ **Arjuna Award**:

- Instituted in **1961**, it was India's highest sporting honor before the Khel Ratna came into being.
- Named after the **Mahabharata character Arjuna**.
- Awarded for consistent good performance over 4 years.
- Winners receive a statuette of Arjuna, a certificate, and a cash prize.
- First awarded to football **Olympian PK Banerjee in 1961**.
- First woman awardee: **Hockey player Anna Lumsden**.
 - **2023**: Aditi Gopichand Swami (archery), Mohammed Shami (cricket), Aishwary Pratap Singh Tomar (shooting), among others.

➤ **Dronacharya Award**:

- India's highest sports honor for coaches, instituted in **1985**.
- Named after **Dronacharya**, Arjuna's coach in Mahabharata.
- Awardees receive a bronze statue of Dronacharya, a certificate, and a cash prize.
- First woman awardee: **Athletics coach Renu Kohli in 2002**.
- Given for both recent accomplishments and lifetime contributions.

➤ **2023**:

- **Regular Category**: Lalit Kumar (wrestling), RB Ramesh (chess) among others.
- **Lifetime Category**: Jaskirat Singh Grewal (golf), Bhaskaran E (kabaddi) among others.

➤ **Major Dhyan Chand Award**:

- Instituted in **2002**, honors lifetime achievements in sports.
- Recognizes contributions to the promotion of sports in an individual capacity.
- First awardees include **Olympian boxer Shahuraj Birajdar and hockey player Ashok Diwan**.
 - **2023**: Manjusha Kanwar (badminton), Vineet Kumar Sharma (hockey), Kavitha Selvaraj (kabaddi).

➤ [Maulana Abul Kalam Azad Trophy \(MAKA\)](#):

- Oldest National Sports Award in India, instituted in 1956–1957.
- Given to an **institution or university for top performance** in inter-university tournaments.
- Award comprises a rolling **MAKA Trophy and a cash prize**.
- First awarded to **Bombay University in 1956-57**.
 - **2023**: Guru Nanak Dev University, Amritsar (overall winner university); Lovely Professional University, Punjab (first runner-up); Kurukshetra University, Kurukshetra (second runner-up).

➤ **Rashtriya Khel Protsahan Puraskar**:

- Instituted in **2009**.
- Awarded to organizations and individuals for sports promotion and development.
- Categories include talent identification, corporate social responsibility, employment of sportspersons, and sports for development.

Note:

- **2023:** JAIN (Deemed-to-be-University), Odisha Mining Corporation Limited.

➤ **Tenzing Norgay National Adventure Award:**

- It has been presented since 1993-1994 and is named after **Tenzing Norgay**, one of the first two individuals to reach the summit of **Mount Everest** along with Edmund Hillary in 1953.
- The recipients are honored for their “outstanding achievement in the field of adventure activities on **land, sea and air**” over the last three years.
- The status of this award is considered to be equivalent to the Arjuna Award conferred in the field of sport.
- **2022:** Late Ms. Savita Kanswal (land), Shri Tulsi Chaitanya Mothukuri(water), Shri Anshu Kumar Tiwari (air).

US Religious Freedom Designations

Why in News?

The United States Secretary of State recently declared a list of countries designated as “**Countries of Particular Concern(CPCs)**”, ‘Special Watch List (SWL)’ countries and ‘**Entities of Particular Concern(EPCs)**’ due to **violations of religious freedom**.

What are the US Religious Freedom Designations?

➤ About:

- The [United States Commission on International Religious Freedom \(USCIRF\)](#) recommends countries to the Secretary of State for designation as CPCs.
 - The US acknowledges ongoing religious freedom violations in countries not officially designated. Governments are urged to **halt abuses such as attacks on religious minorities**, communal violence, prolonged imprisonments for peaceful expression, transnational repression, and calls to violence against religious communities.

NOTE:

- Earlier, the [USCIRF in its 2023 report](#), designated **India as a CPC**, citing severe violations of **religious freedom** against various religious minorities, especially **Muslims, Christians, and Dalits**.
 - The report also criticized some of the laws and policies of the Indian government, such as the [Citizenship \(Amendment\) Act, 2019](#), the [National Register of Citizens \(NRC\)](#), as well as the alleged harassment, violence, and discrimination faced by religious dissenters and activists.
- The **Indian government rejected the report** as ‘biased and motivated’. The government also defended its commitment to protect and promote the rights and freedoms of all its citizens, regardless of their faith.

➤ Criteria for the Designation:

- The US emphasizes that **promoting the freedom of religion or belief** has been a **fundamental goal of US foreign policy** since the enactment of the **International Religious Freedom Act (IRFA) in 1998**.
- Criteria for Designation of Countries in Different Categories
 - **CPCs:** When the governments of the countries engage in or tolerate “systematic, ongoing, and egregious violations” of the right to freedom of religion or belief under IRFA 1998.
 - **SWL:** It is based on the governments’ perpetration or toleration of severe religious freedom violations.
 - **EPCs:** For systematic, ongoing, and egregious religious freedom violations.

Note:

➤ **Countries Designated for Religious Freedom Violations in 2024:**

○ **Countries of Particular Concern:**

- The designated countries include China, North Korea, Pakistan, Cuba, Eritrea, Iran, Nicaragua, Russia, Saudi Arabia, Tajikistan, Turkmenistan, and Myanmar.

○ **Special Watch List Countries:**

- Algeria, Azerbaijan, the Central African Republic, Comoros, and Vietnam are labeled as “Special Watch List countries”.

○ **Entities of Particular Concern:**

- Terrorist organizations such as al-Shabab, Boko Haram, Hayat Tahrir al-Sham, the Houthis, ISIS-Sahel, ISIS-West Africa, al-Qa’ida affiliate Jamaat Nasr al-Islam wal-Muslimin, and the Taliban are designated as “Entities of Particular Concern.”

State of Freedom of Religion

➤ **India:**

- The **Indian Constitution’s Articles 25-28** guarantee **freedom of religion** as a **fundamental right**. The Constitution also states that India is a **secular state** and does not declare any religion as the country’s official religion.
 - [Article 25](#) (Freedom of conscience and free profession, practice and propagation of religion).
 - [Article 26](#) (Freedom to manage religious affairs).
 - Article 27 (Freedom as to payment of taxes for promotion of any religion).
 - Article 28 (Freedom as to attendance at religious instruction or religious worship in certain educational institutions).
- Further, [Article 29 and 30 of the Constitution](#) deal with the protection of interests of minorities.

➤ **Globally:**

- **Article 18 of the [Universal Declaration of Human Rights](#)** affirms that, “Everyone has the right to **freedom of thought, conscience and religion**; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.”

Proposed Hypotheses on the Parting of the Red Sea

Why in News?

The story of parting the [Red Sea](#) for the **Hebrews to escape from Egypt** is seen as a miracle in the **Book of Exodus**. But now, some researchers have looked at this story in a different way, **explaining it using some [meteorological phenomena](#)**.

What are the Recent Meteorological Hypotheses Related to Parting of the Red Sea?



- The researchers propose **4 potential meteorological phenomena** that could have temporarily parted the waters of the Red Sea:
 - **Medicane:** These [hurricane-like storms](#) in the Mediterranean can cause extreme **negative storm surges**, pushing coastal waters back and exposing landmasses.
 - The researchers note **Hurricane Irma’s effect on Florida’s coastline** as a similar example.
 - **Wind Setdown:** Sustained high-speed winds could temporarily expose raised reefs in the **Gulf of Suez**, facilitating a passage.
 - The Bible mentions an “**east wind**” during the **Exodus**, which aligns with this phenomenon.
 - **Tidal Resonance:** When external forces like **strong winds coincide with a location’s natural [tidal patterns](#)**, it can result in unusually low tides and expose large areas of seabed.

Note:

- The **Bay of Fundy** on the US-Canada border in the North Atlantic is a prominent example of this phenomenon.
- **Rosby Waves:** These large-scale waves in **oceans and atmosphere**, caused by **Earth's rotation**, can shift water masses.
- Their **occurrence in the Red Sea** could have temporarily created a shallow or dry pathway for the Israelites.
- **Napoleon Bonaparte's** historical account during his Egyptian campaign also mentioned crossing the Red Sea amidst tidal changes.
- However, the study's conclusions are limited by the **uncertainties of ancient geography and climate**, as well as the inherent challenges of modeling complex natural phenomena. Further research and archaeological work are needed to strengthen the evidence.

India as a MICE Destination

Why in News?

The Ministry of Commerce & Industry is promoting India as a **global MICE (Meetings, Incentives, Conferences, and Exhibitions) destination**.

- The objective is to showcase **India's MSME sector, traditional handicrafts**, artisanal offerings, weavers, and manufacturing prowess internationally.
- The Ministry also **unveils India's ambitious Mega Events line-up** for the coming months; Aatmanirbhar Bharat Utsav, Indus Food, **Bharat Mobility Global Expo 2024** and Bharat Tex.

What is MICE (Meetings, Incentives, Conferences and Exhibitions)?

- **About:**
 - MICE is a term used in the **tourism and events industry to categorize and represent a segment** related to business and corporate tourism.
 - MICE tourism involves organizing and hosting events, meetings, conferences, exhibitions, and incentives for companies and groups.
 - These activities aim to facilitate networking, knowledge exchange, business collaborations, and the showcasing of products and services within a professional or business context.

- The **main purpose is to create a networking platform for business**, industry, government and Academic Community and engage in meaningful conversations.
- **Scope in India:**
 - Core MICE infrastructure amenities are at par with most developed countries.
 - India has consistently improved its rank in **World Bank Ease of Doing Business** and WEF Travel and Tourism Competitiveness Rank (**54th in 2021**).
 - **Growing Economic Strength of India.**
 - India has progressed rapidly in the areas like Information Technology, and Scientific Research.
- **Global Scenario and India:**
 - The **International Congress and Convention Association (ICCA)** brings out the ranking of countries and cities based on the international association meetings tracked by ICCA.
 - As per ICCA Country and City Rankings 2019, USA remained as number 1 country with 934 meetings out of a total 13,254 meetings followed by Germany, France.
 - **India:**
 - Indian MICE has less than 1% share in the estimated global MICE business despite the natural & cultural advantages of India and being one of the highest growing economies.
 - India is ranked **28th with 158 meetings in the 2019 ICCA ranking** of countries.
- **Major Strategy:**
 - "Meet in India" Brand for promoting MICE Industry.
 - Providing **infrastructure status** for financing of MICE infrastructure.
 - Skill development for the MICE industry.

Expansion of Litchi Cultivation Across India

Why in News?

The cultivation of **Litchi**, traditionally restricted to Muzaffarpur Bihar, has witnessed a significant expansion **across 19 Indian states, highlighting the** Horticulture boost in India.

- This development stems from the efforts of the **National Research Centre on Litchi (NRCL)** based in Muzaffarpur, Bihar.

Note:

What are the Key Facts about Litchi?

- **Botanical Classification:** Litchi belongs to the Sapindaceae family and is known for its delicious, juicy, translucent aril or edible flesh.

Climatic Requirements: Litchi thrives in **sub-tropical climates and prefers moist conditions**. It grows best in regions with low elevation, up to an altitude of around 800 meters.



- **Soil Preference:** The ideal soil for litchi cultivation is **deep, well-drained loamy soil** rich in organic matter.
- **Temperature Sensitivity:** Litchi is sensitive to extreme temperatures. It does not tolerate temperatures above 40.5 degrees Celsius in summer or freezing temperatures in winter.
- **Rainfall Impact:** Prolonged rain, especially during flowering, can interfere with pollination and affect the crop adversely.
- **Geographical Cultivation:** In India, the commercial cultivation was traditionally restricted to the north in the foot hills of **Himalayas from Tripura to Jammu & Kashmir** and plains of Uttar Pradesh and Madhya Pradesh.
 - But due to increased demand and viability, cultivation has expanded to states like **Bihar, Jharkhand, and Chhattisgarh**.
 - Bihar alone accounts for nearly **40% of India's litchi production**. Bihar is followed by West Bengal (12%) and Jharkhand (10%).

- **Global Production:** India ranks as the **second largest producer of litchi globally**, following China. Other significant litchi-producing countries include Thailand, Australia, South Africa, Madagascar, and the United States.

What is Horticulture?

- **About:**
 - Horticulture refers to the **science, art, and practice of cultivating fruits, vegetables, flowers, ornamental plants, and other crops**.
 - It encompasses a broad spectrum of activities **related to plant cultivation, management, propagation, and improvement** for human use and enjoyment.
- **Initiatives for Horticulture:**
 - **Mission for Integrated Development of Horticulture (MIDH):**
 - **MIDH** is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables and other areas.
 - Under MIDH, Government of India contributes 60% of the total outlay for developmental programmes in all the states (except North Eastern and Himalayan states where GOI contributes 90%) & 40% is contributed by State governments.
 - **Horticulture Cluster Development Programme:**
 - It is a **central sector programme** aimed at growing and developing identified horticulture clusters to make them globally competitive.
 - Horticulture cluster is a regional/geographical concentration of targeted horticulture crops.

PMLA Notice to Offshore Crypto Firms

Why in News?

The **Financial Intelligence Unit India (FIU-IND)** has issued show cause notices to 9 offshore **cryptocurrency and virtual digital assets service providers (VDA SPs)** including **Binance**

- **Kucoin, Huobi** for not being compliant with the requisite provisions of the **Prevention of Money Laundering Act (PMLA)**.

Note:

What is the Prevention of Money Laundering Act (PMLA), 2002?

- **About:**
 - PMLA is an Indian law enacted in 2002 to prevent money laundering and related offenses.
 - Money laundering involves **making illegally obtained funds appear legitimate or “clean”** by integrating them into the financial system.
 - It was enacted in a 2002 response to India’s global commitment (**including the Vienna Convention**) to combat the menace of money laundering.
- **Regulating Authorities:**
 - The **Directorate of Enforcement (ED)** is the primary authority responsible for investigating and prosecuting money laundering.
 - It functions under the Department of Revenue of the Ministry of Finance.
 - Recently, the Supreme Court has ruled that the ED cannot arrest someone under the PMLA **simply for not responding to their queries and summons.**
 - **FIU-IND** is the national agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions to enforcement agencies and foreign FIUs.
 - The agency works under the **Finance Ministry.**

What are PMLA Compliance Obligations for VDA SPs?

- **Registration Requirement:** VDA SPs engaged in activities involving virtual digital assets and fiat currencies, transfers, safekeeping, or control over digital assets **must register with FIU-IND as reporting entities.**
- **Activity-Based Compliance:** Compliance obligations under PMLA are **not contingent on physical presence** but are **activity-based**, encompassing reporting, record-keeping, and other specified obligations.
- **Regulatory Framework Expansion and Enforcement:** The regulatory ambit expanded in March 2023, bringing **VDA SPs under the Anti Money Laundering (AML) and Counter Financing of Terrorism (CFT)** framework within the PMLA.
 - Under the anti-money laundering law, **reporting entities are obligated to maintain Know Your Customer (KYC) details**, client identity records, beneficial owner information, account files, and business correspondence related to clients.
 - Furthermore, reporting entities are required to **file Statements of Financial Transactions (SFT)** containing details of specific financial transactions or reportable accounts maintained during the year under the Income Tax Act.



Note:

Rapid Fire Current Affairs

Highlights

- India Celebrates 76th Army Day and 8th Armed Forces Veterans' Day
- Indian Air Force AN-32 (K-2743)
- Argentina's Inflation Surges Past 200%
- Spacetime: Geometry of Universe
- Gangireddu Melam
- Indian Army Eyes Upgraded 'Pup Tents' for Icy Heights Along LAC
- Indian of the Year Award 2023
- ICD 11 TM Module 2 Launch: Global Integration of Ayush Medicine
- National Youth Day 2024
- Startups for Railways
- Sisal Leaves: A Green Revolution in Menstrual Hygiene
- Impact of Wind Turbines on Forest Bats
- Privileges Committee to Seek Responses from Suspended Rajya Sabha MPs
- World Hindi Day
- Nanoplastic Contamination in Bottled Water
- High Court Nod: Yakshagana Mela Reinstates All-Night Shows
- Awards for Excellence in Public Administration 2023
- India-Myanmar Free Movement Regime Likely to End
- Floods in Telangana Reveal Paleolithic Tools
- Warmest Year on Record 2023
- Pravasi Bharatiya Divas
- World Typing Day
- National Birds Day
- BIS: 77 Years of Shaping Standards
- Martian Plasma Waves
- Moradabad's Brassware Industry
- Panspermia
- Term of Trade
- Roche's Breakthrough Antibiotic
- MeitY Launches ERNET India's Web Portal
- Qatari Court Decision on Indian Naval Personnel
- Reverse Flipping
- Rashtriya Khel Protsahan Puruskar 2023
- Aditya-L1 into L1 orbit
- Warlis' Lesson: Peaceful Leopard Coexistence in Maharashtra
- Cyber Kidnapping
- World Braille Day
- Reviving Ancient Water Bodies in Coastal Karnataka Towns
- Savitribai Phule Birth Anniversary
- Rani Velu Nachiyar Birth Anniversary
- IREDA's 2024 Roadmap
- Family Pension Guidelines for Government Servants/Pensioners
- Snow Leopard
- Prime Minister's National Relief Fund
- K-SMART App
- India-UAE Joint Exercise 'Desert Cyclone 2024'
- No Tsunami Threat to India
- Samvid Gurukulam Girls Sainik School
- Ayodhya's Transformational Projects
- Constitution of the Sixteenth Finance Commission
- Trial Essential to Define 'Religious Character of Place of Worship': Allahabad HC

India Celebrates 76th Army Day and 8th Armed Forces Veterans' Day

- **Army Day:** Every year, **15th January** is commemorated as "Army Day" to remember the occasion when **Field Marshal KM Cariappa** took over the command of the Indian Army from the last British Commander-in-Chief in 1949.
- **The Armed Forces Veterans' Day:** It is celebrated on **14th January** every year as it was on this day in 1953

that the first Commander-in-Chief of the Indian Army Field Marshal KM Cariappa, who led the forces to victory in the 1947 war, formally retired from the Service.

Read More: [Indian Army Enhancing Operational Preparedness](#)

Indian Air Force AN-32 (K-2743)

The debris from the Indian Air Force An-32 K-2743 aircraft was found near **the Chennai coast**, after it went missing over the Bay of Bengal in 2016.

Note:

- The [National Institute of Ocean Technology](#) which functions under the aegis of the **Ministry of Earth Sciences**, had recently deployed an **Autonomous Underwater Vehicle (AUV)** with deep sea exploration capability at the last known location of the missing **An-32**.
 - This search was conducted at a depth of 3400 m using multiple payloads, **including a multi-beam Sound Navigation and Ranging (SONAR)**, synthetic aperture SONAR and high resolution photography. The search images were scrutinised and found to be conforming **with an An-32 aircraft**.
- The **AN-32** is a Soviet-origin military transport aircraft that has been in service with Indian Air Force since 1984.

Read More: [Deep Ocean Mission](#), [Indian Fighter Jets](#)

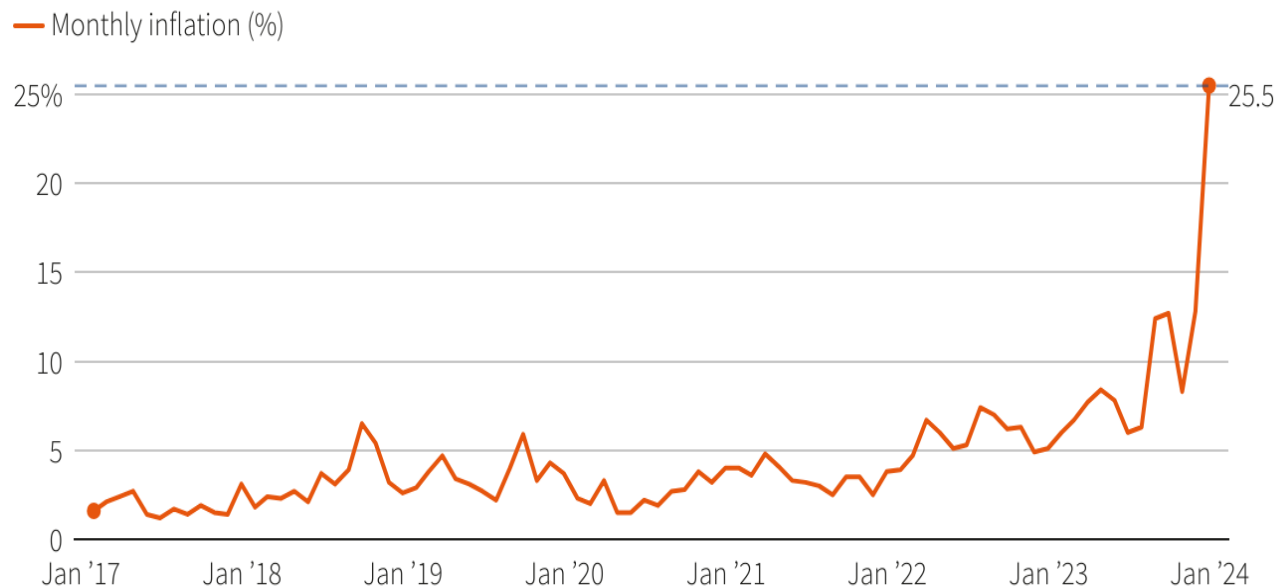
Argentina's Inflation Surges Past 200%

Argentina's annual inflation rate sped past 211% in December, 2023 as per official data released recently, hitting the highest level since the early 1990s, when the country was emerging from a period of [hyperinflation](#), with food prices climbing particularly fast.

- Argentina's **monthly inflation rate also hit 25.5% in the month**, slightly below forecasts, after a sharp [devaluation](#) of the peso currency to get inflation under control.
- The inflation reading **took Argentina past regional peer Venezuela,, where inflation cooled to an estimated 193% in 2023, following years of painful, out-of-control price rises.**
- **Hyperinflation** is an extreme and rapid increase in the general price level of goods and services within an economy, often exceeding 50% per month.

Battling inflation in Argentina

Argentina's monthly inflation rate is at the highest level since the 1990s, while annual inflation has nearing 200%.



Source: Refinitiv Eikon, INDEC

Read More: [Depreciation of Rupee](#), [IMF Bailouts](#)

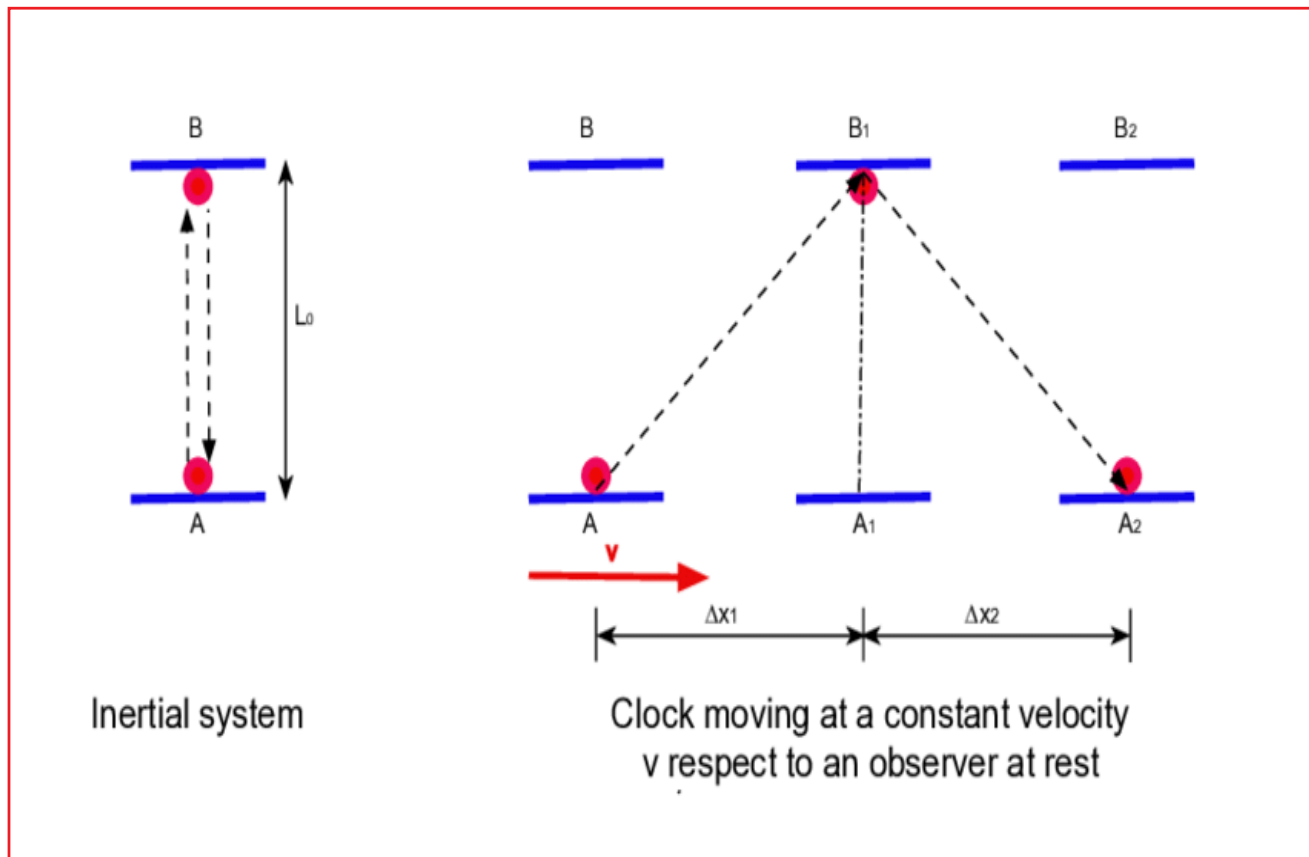
Note:

Spacetime: Geometry of Universe

Spacetime is a **mathematical model that combines the three dimensions of space** and the dimension of time into a single entity.

- The **universe at the largest scale** looked different from the scale of human experience due to the universe's geometry.
 - At the human scale, spacetime appears to be flat: a beam of light from a laser will travel in a straight line.

- But at the largest scale, **our spacetime may actually occupy a spherical space.**
- If you shine a powerful laser in front of you and wait for an incredibly long time, light from the laser could technically circle back to you.
- **Albert Einstein's special theory of relativity** posited that if there are two observers A and B, each with a clock, such that A is moving (but not accelerating) faster than B, A's clock will measure less time as having passed than B's clock.



Read more: [Einstein Was Right: Astronomers Confirm Key Theory of Relativity](#), [Time Dilation in Early Universe](#)

Gangireddu Melam

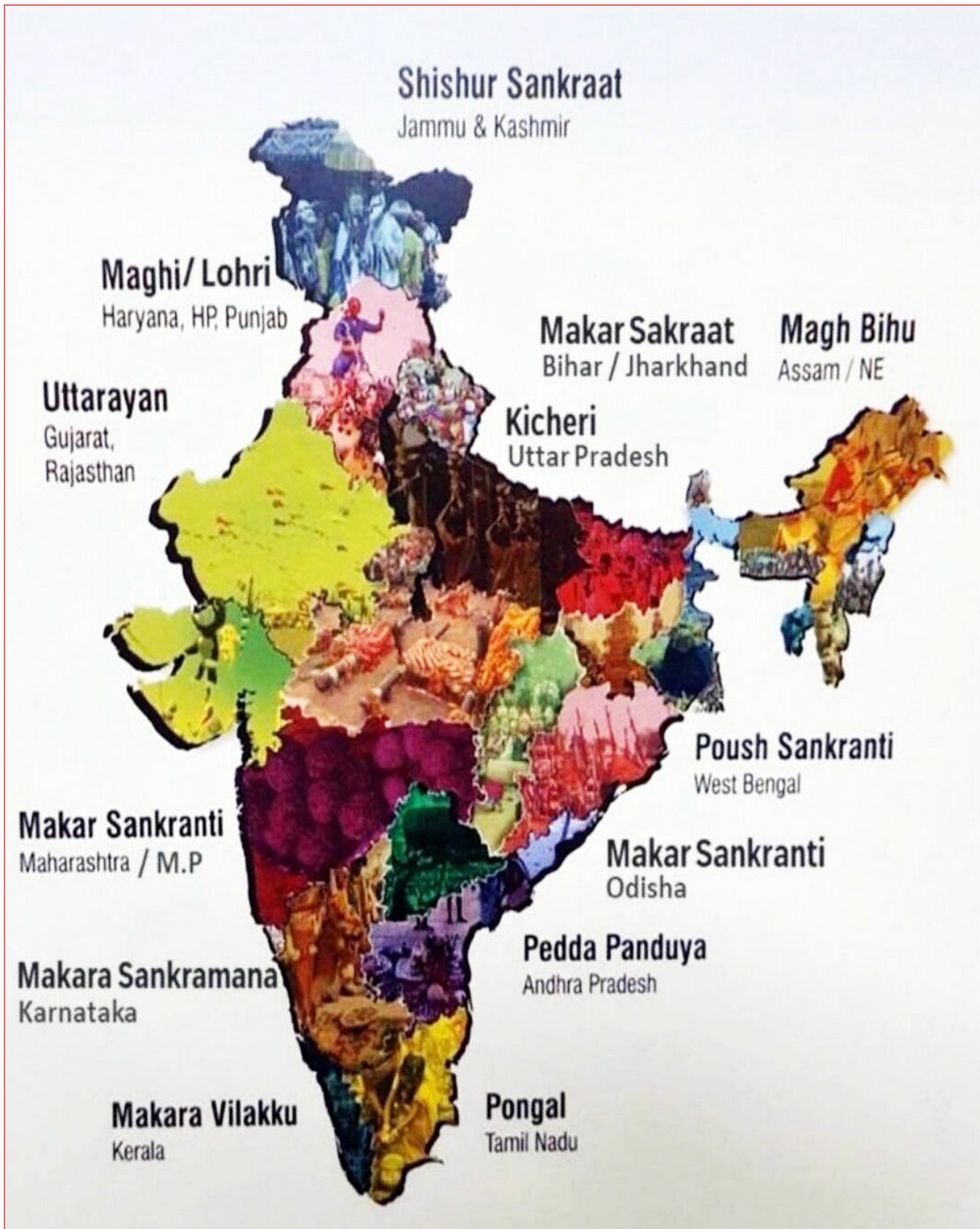
Gangireddu Melam, a traditional folk performance associated with the **Sankranti** harvest festival in **Telangana and Andhra Pradesh**.

- The **bulls**, adorned with colorful flowers and garments is the **central motif of the dance**. The performance also

incorporates elements of local folklore and storytelling, showcasing the region's rich cultural heritage.

- The harvest festival of 'Sankranti' is celebrated in Andhra Pradesh and Telangana for three days as **Bhogi, Sankranti, and Kanuma**.
 - **Sankranti** marks the **first day of the sun's transit into the Makara**, marking the **end of the winter solstice** and the start of longer days.
 - Sankranti is celebrated in various parts of the country with different names:

Note:



Read more: [Winter Solstice, Sankranti](#)

Note:

Indian Army Eyes Upgraded 'Pup Tents' for Icy Heights Along LAC

Army Plans insulated 'Pup Tents' for Troops on Icy [Line of Actual Control \(LAC\)](#) Heights at -50°C .

- The pup tents are meant for soldiers deployed in extreme cold weather conditions, such as in [eastern Ladakh](#), [Sikkim](#) and [Siachen glacier](#).
- The [Line of Actual Control \(LAC\)](#) is the border that divides the territories of India and Aksai Chin (China occupied Indian Territory).
 - It is divided into **three sectors**: the **eastern sector** which spans [Arunachal Pradesh](#) and [Sikkim](#) (1346 km), the **middle sector** in [Uttarakhand](#) and [Himachal Pradesh](#) (545 km), and the **western sector** in Ladakh (1597 km).



Read More: [India-China Conflict](#)

Indian of the Year Award 2023

Recently, the Union Minister of State for Science & Technology presented the "Indian of the Year Award" for 2023 to Team [Indian Space Research Organisation \(ISRO\)](#) in the category of 'Outstanding Achievement.'

- The award recognized ISRO's contribution to space exploration, particularly highlighting the historic soft landing of [Chandrayaan-3](#) on the Moon's uncharted South Polar region.

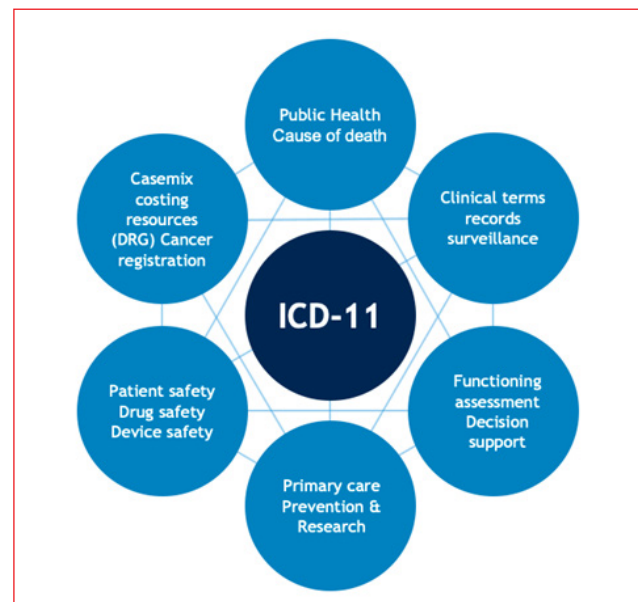
- The remarkable growth of the private space sector was also highlighted in the event, with **190 startups** and over Rs. 1,000 crore invested in the current financial year 2023-24.

Read more: [India's Space Endeavors](#)

ICD 11 TM Module 2 Launch: Global Integration of Ayush Medicine

The [World Health Organisation \(WHO\)](#) has officially unveiled the [International Classification of Diseases \(ICD\) 11](#), Traditional Medicine Module 2, marking the commencement of its implementation phase.

- This module incorporates data and terminology from [Ayurveda](#), [Siddha](#), and [Unani Medicine](#) into the [WHO ICD-11 classification](#), indexing the terminology as codes.
 - The Ministry of AYUSH, in collaboration with the WHO, has classified diseases from [Ayurveda](#), [Siddha](#), and [Unani](#) systems under the **TM-2 module**.
- WHO stated that including traditional medical terminologies in ICD-11 establishes a vital link between [traditional medicine](#) and global standards.

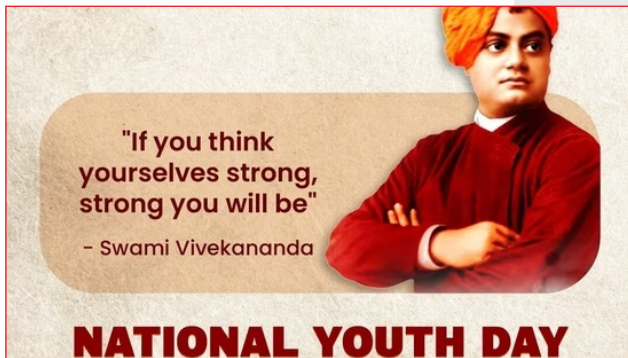


Read more: [International Classification of Diseases, Global Center for Traditional Medicine](#)

Note:

National Youth Day 2024

- India celebrates the **National Youth Day**, on 12th January every year on the occasion of **Swami Vivekananda's birth anniversary**.
 - Since 1984, the nation has marked the day by urging the youth to live up to the **values, principles and beliefs** that **Vivekananda** embraced.
- As a part of **National Youth Day** celebrations, India organizes an annual **National Youth Festival** from January 12 to 16.
 - The theme of this year's festival is "**Viksit Bharat@ 2047: Yuva ke liye, yuva ke dwara**".
- **Swami Vivekananda** is considered one of the **great Indian monks** who enlightened the Western world about Hinduism.
 - As a disciple of **Sri Ramakrishna Paramahansa**, he pushed for **national integration** in colonial India and is credited with **reviving Hinduism** in the nation.



Read More: [Swami Vivekananda](#)

Startups for Railways

Recently, Indian Railways has taken an important initiative in the field of innovation through participation of start-ups and other entities.

- "**Startups for Railways**" initiative was launched by the **Ministry of Railways** and **Indian Railways Innovation Portal** is a part of this initiative.
 - Its objective is to leverage innovative technologies developed by Indian Startups/MSMEs/Innovators/Entrepreneurs to improve operational efficiency and safety on Indian Railways.
- The **Ministry of Railways** aims to address **quality, reliability and maintainability** related issues of the Indian Railways.

- Under the policy, the Startup/MSME/Innovator/Entrepreneur will have exclusive ownership of **Intellectual Property Rights (IPR)** created in the project.
Read more: [Indian Railway Innovation Policy](#)

Sisal Leaves: A Green Revolution in Menstrual Hygiene

Recently, scientists at Stanford University have devised an innovative method utilizing **sisal leaves** to create a highly absorbent material, potentially **replacing cotton, wood pulp, and chemical absorbents** in sanitary napkins.

- This environmentally-friendly approach boasts higher absorption capacity than commercial alternatives, while the **cultivation of sisal requires significantly less water compared to cotton**.
- Sisal is a **xerophytic, semi-perennial leaf fiber** producing plant. Leaves are thick, fleshy and often covered with a **waxy layer**.



Read more: [Addressing the Menstrual Health & Hygiene](#)

Note:

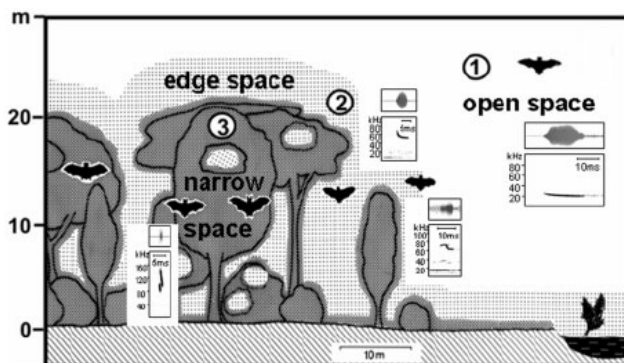


drishti

Impact of Wind Turbines on Forest Bats

A recent study conducted by scientists from Germany, has revealed the impact of **wind turbines on the activity of forest bats**.

- Three foraging groups of bat species were studied: **narrow-space**, **open-space** (hunt in open areas with few obstacles), and **edge-space** (specialized on hunting prey close to background objects), within a radius of 80 to 450 meters under variable wind conditions.
- **Narrow-space foraging bats**, which are particularly reliant on forest habitat, showed a **77% decline in activity as wind speed increased** in operational wind turbines.
 - The avoidance behavior was **not observed in edge-space and open-space** foraging bats, indicating a **habitat-specific response**.
 - The noise emitted by wind turbine rotors was identified as a significant cause of the avoidance behavior.
- Wind turbines, a key element in **national climate strategies**, are increasingly erected in forest sites worldwide, posing potential challenges to bat populations.
- The study, initially focusing on short-term impacts, suggests **potential long-term effects** on bat activity near operational wind turbines, particularly if noise emissions are the cause.



Read more: [Bamboo-Dwelling Bat](#)

Privileges Committee to Seek Responses from Suspended Rajya Sabha MPs

Recently, the **Privileges Committee** of the **Rajya Sabha**, decided to seek responses from 11 members

suspended on charges of breach of privilege during the recently concluded **Winter Session of Parliament**.

- The procedure for dealing with questions of privilege in Rajya Sabha is laid down in Rules 187 to 203 of the **Rules of Procedure and Conduct of Business in the Council of States**.
 - A question of privilege may be raised in the House **only after obtaining the consent** of the Chairman.
 - Parliament and its Committees, along with their members, possess **rights, privileges, and immunities** necessary for efficient functioning. However, these rights are limited to what is essential for parliamentary function, not **exempting members from general societal obligations**.
 - The Privilege Committee is a **Standing Committee**. It examines the cases of breach of the **privileges of the House** and its members and recommends appropriate action.
 - The **Lok Sabha committee has 15 members, while the Rajya Sabha committee has 10 members**.
- Read more: [Privilege Motion](#)

World Hindi Day

World Hindi Day, observed annually on **January 10**, honors the vast contributions of Hindi speakers and the language's global significance.

- Hindi was first spoken at the **United Nations General Assembly in 1949**. The inaugural **World Hindi Diwas** took place in **2006** under the leadership of **Dr. Manmohan Singh**. Since then, January 10 has been observed as World Hindi Day everywhere.
- According to **Article 343** of the Indian Constitution, **Hindi written in Devanagari script is the official language of the union**.
 - Hindi, along with English, are the official languages of India.
 - Hindi is one of the 22 languages listed in the **Eighth Schedule of the Indian Constitution**.
- Hindi belongs to the **Indo-Aryan branch of the Indo-European language group**.
- The **World Hindi Secretariat building** was inaugurated in **Port Louis, Mauritius in 2018**.
- The **National Hindi Day** is celebrated every year in **India on September 14** to mark the day of adoption of Hindi as the official language by the Constituent Assembly of India in 1949.

Note:

- After Mandarin and English, it is observed that **Hindi is the third-most spoken language in the world.**

Read more: [Vishwa Hindi Diwas](#)

Nanoplastic Contamination in Bottled Water

The latest United States study reveals an alarming reality about **bottled water**, uncovering the presence of hundreds of thousands of **nanoplastic particles** underscoring potential **health risks**.

- Each liter of bottled water contains **110,000 to 370,000 nanoplastic particles**. About **90% of these particles are nanosized, posing a higher risk to human health.**
- Nanoplastics are even smaller than [microplastics](#), ranging below 1 micrometer in size.
 - Unlike microplastics (ranging between 5 millimeters and 1 micrometer), nanoplastics can move from the intestines and lungs **directly into the bloodstream** before reaching the heart and brain.
- The study found that common [plastics](#) in bottled water such as polyamide, polypropylene, polyethylene, polyvinyl chloride, polyethylene terephthalate (PET) could play a significant role in micro-nano plastics exposure from bottled waters.
 - PET used in **disposable beverage bottles could leach into water** when exposed to heat or squeezed.

Read more: [Impact of Microplastics on Gut Microbiomes](#)

High Court Nod: Yakshagana Mela Reinstates All-Night Shows

The over-a-century old **Yakshagana mela**, the **Kateel Durgaparameshwari Prasadita Yakshagana Mandali**, in **Dakshina Kannada** will revert to all-night shows from 14th January, 2024 after the High Court of Karnataka gave the go-ahead, subject to adherence to **Noise Pollution (Regulation and Control) Rules, 2000**.

- Yakshagana is a dance-drama **performance unique to Karnataka**. It traditionally featured men portraying all roles. But, **women are now part of these troupes**.
- Key elements include episodic stories from Hindu epics like **Ramayana or Mahabharata**.

- Musical instruments like **Chande, Harmonium, Maddale, Taala**, and flute accompany these performances.

- Various renowned troupes such as **Saligrama Mela, Dharmasthala Mela, and Mandarthi Mela** showcase Yakshagana throughout the year.



Awards for Excellence in Public Administration 2023

The Scheme and Web-portal for **Prime Minister's Awards for Excellence in Public Administration 2023** was launched recently by the [Department of Administrative Reforms & Public Grievances](#).

- The Award Scheme has been **redesigned to spotlight the District Collector's performance** by targeting individual beneficiaries and employing a saturation approach in implementation.
- It aims to honor civil servants' contributions under two categories: 10 awards for the **Holistic Development of Districts** across 12 priority sectors and **6 awards for Innovations spanning Central Ministries/Departments** and various States and Districts.
- The scheme's goal is to foster **healthy competition, innovation, replication**, and the establishment of best practices.
- It prioritizes [good governance](#), **qualitative accomplishments**, and **enhancing last-mile connectivity** over solely achieving quantitative targets.

Read more: [Need to Restructure the District Collector's Role](#)

Note:

India-Myanmar Free Movement Regime Likely to End

The Government of India is planning to end the [Free Movement Regime](#) along the international border with [Myanmar](#) and initiate a comprehensive smart fencing system throughout the entire stretch.

- The **Free Movement Regime (FMR)**, implemented in 2018, allows people residing on either side of the India-Myanmar border to venture **16 km** into each other's territory without visa.
 - They can cross over, **on production of a border pass** with one-year validity and can stay up to two weeks.
- The border between India and Myanmar runs for **1,643 km** in the **4 states of Mizoram, Manipur, Nagaland, and Arunachal Pradesh**.



Read more: [India-Myanmar Relations](#)

Floods in Telangana Reveal Paleolithic Tools

The recent [floods](#) in the Mulugu district of Telangana has led to a fresh discovery of **paleolithic quartzite tools**.

The tools or hand axes were found in the **sand bed of a stream** that dried up after the flood.

- The hand axes were found in the stream between **Gurrevula and Bhupatipuram villages** in Mulugu district.
 - According to paleontologists, the **stone axe** belongs to the **Lower Paleolithic period** and is about 30 lakh years old.

Note:

- The **Paleolithic Age** dates back to approximately **33 lakh years BC**, spanning 10,000 years. Paleolithic hunter gatherers used heavy quartzite and large tools for woodcutting and hunting animals for sustenance.
- Also, in 1863, **East India Company's** Geological Survey team discovered a paleolithic site at **Attirampakkam near Madras** (present-day Chennai).
 - Since then, Paleolithic culture has been labeled as **Madras Hand-Axe Industry or Madrasian Culture**.



Warmest Year on Record 2023

2023 emerges as the warmest year on record, surpassing the 2016 record, with significant implications for **global climate patterns** and **extreme weather events**.

- 2023 was **1.48°C warmer than the average** of the 1850-1900 pre-industrial level.
 - Approximately 50% of days were **more than 1.5°C warmer** than the same baseline.
- Record temperatures in 2023 led to widespread **heatwaves, floods, droughts, and wildfires**.
 - Marine heatwaves were observed in various regions, including the **Mediterranean, Gulf of Mexico, Indian Ocean, North Pacific**, and much of the **North Atlantic**.
- The onset of **El Niño in 2023** played a role in exacerbating temperature extremes.
 - El Niño is a natural weather phenomenon that **warms the surface waters in the eastern Pacific Ocean**, which contributes to higher global temperatures.

Read more: [The 1.5°C Warming Target and Climate Projections](#)

Pravasi Bharatiya Divas

Pravasi Bharatiya Divas (PBD) has been celebrated on **9th January** every year since **2003** to honor the **Indian diaspora** and the contribution of the **overseas Indian community** to the country's development.

- January 9 was chosen as the day to celebrate this occasion since it was on this day in **1915 that Mahatma Gandhi**, the greatest Pravasi, **returned to India from South Africa**, and led India's freedom struggle.
 - Since 2015, its format has been revised to celebrate the **PBD once every two years** and to hold theme-based PBD Conferences during the intervening period
- Read more: [Pravasi Bharatiya Divas](#)

World Typing Day

8th January is observed as **World Typing Day** to encourage people to express themselves via **written communication**.

- Celebration of the day started in Malaysia in 2011. It commemorates the **2011 Malaysian Speed Typing Contest**, which broke records for the fastest typist and largest participation.
- The day holds special significance as it **celebrates the ability to type and communicate with one another**.

Note:



National Birds Day

National Bird Day, which has **American origins**, is celebrated annually on **5th of January**, to raise awareness about the value of birds in the ecosystem.

- The day also aims to raise awareness for the conservation of **avian species** affected by **habitat destruction, reducing food choices, and [climate change](#)**.
- India's Union Cabinet Minister for Environment, Forest and Climate Change, called for saving the **[wetlands to preserve bird populations in the country](#)**.
 - Wetlands become home to various species of birds in India and sustain ecosystems vital to feed local avian populations.
- National Bird Day is different from occasions such as **International Migratory National Bird Day, [World Migratory National Bird Day \(May 13\)](#)**, and several other National Bird Days.

BIS: 77 Years of Shaping Standards

Recently, the **[Bureau of Indian Standards \(BIS\)](#)**, a body under the **Ministry of Consumer Affairs, Food, and Public Distribution, Government of India**, celebrated its **77th Foundation Day on 6th January 2024**.

- BIS is the **National Standard Body of India** established under the **[BIS Act 2016](#)** for the harmonious development of the activities of standardization, marking and quality certification of goods. BIS has its **headquarters at New Delhi**.
 - It operates various schemes like **[Product Certification \(ISI mark\)](#)**, **[Hallmarking](#)** of Gold and Silver Jeweller, **[ECO Mark Scheme](#)** (for labeling of environment friendly products).
- The BIS Act, 2016, has been implemented since October 2017. The major highlights of the act are:
 - Enables the government to **authorize any agency apart from BIS to certify and enforce** conformity to a standard.
 - Provides **consumer protection measures** like recall of non-conforming standard marked products, compensation to the consumer and more stringent penal provisions.

Read more: **[Bureau of Indian standards \(BIS\) Act 2016](#)**

Martian Plasma Waves

Scientists from the **Indian Institute of Geomagnetism** studied **high-frequency [plasma waves](#)** in Mars' upper atmosphere using data from **[NASA's MAVEN spacecraft](#)**.

- The study found two types of waves in Mars' magnetic environment—**some below and some above the electron plasma frequency**. These waves are important because they help us understand how electrons behave around Mars.
- NASA's MAVEN (**Mars Atmosphere and Volatile Evolution**) was launched in November 2013 with the mission to gain insights of the **planet's atmospheric conditions**.
- Plasma waves are **oscillations or disturbances in the electric and magnetic fields** that propagate through plasma, which is a state of matter consisting of charged particles like ions and electrons.
 - These waves play a significant role in various plasma phenomena, influencing **energy transfer, particle acceleration, and the behavior of charged particles within plasmas found in space**.

Read more: **[NASA's MAVEN spacecraft](#)**

Moradabad's Brassware Industry

The construction of the **Ram Temple in Ayodhya, Uttar Pradesh** has sparked a revival in **Moradabad's brassware industry**, as a surge in demand for religious idols, particularly those of Lord Ram.

- Moradabad was established in 1600 by Murad, the son of the **Mughal Emperor Shahjahan**, as a result, the city came to be known as Moradabad.
- Moradabad is **renowned for brass work** and has carved a niche for itself in the handicraft industry throughout the world.
 - The brassware is exported to countries like the US, Britain, Canada, Germany, the Middle East and Asia. Therefore **Moradabad is also called "Brass City" or Peetal Nagri**.
 - **Brass, an alloy of copper and zinc**, holds historical and enduring significance due to its remarkable **hardness and workability**.
- In the 1980s, the industry diversified with the introduction of **various metal wares such as brass**,

Note:

iron, and aluminium. This expansion brought new technologies like **Electroplating, lacquering, and powder coating** to Moradabad's art industry.

- Moradabad Metal Craft (Word Mark) has a [geographical indication \(GI\) tag](#).

Panspermia

The theory of panspermia, which posits that **life could travel between planets**, has been the subject of speculation and scientific inquiry for centuries.

- Panspermia, first proposed by the **Greek philosopher Anaxagoras**, suggests that **life has the potential to travel as 'seeds' between planets**.
- Scientific advances have demonstrated that microorganisms can endure the extreme conditions of **interplanetary travel and survive the impact of reaching a new world**.
 - 19th-century researchers, including **Svante Arrhenius**, suggested mechanisms, such as **radiation pressure from the Sun**, that could propel microorganisms through space.
- Modern panspermia theory involves three stages: **escape from a planet, transit through interplanetary space, and landing on another planet**.
- Panspermia, doesn't explain the origin of life itself and is considered a fringe theory due to the difficulty of proving its validity.

Term of Trade

Over the last decade and a half, **Terms of Trade (ToT)** for Indian agriculture has shown significant improvement based on national income statistics.

- The ToT improvement in agriculture is attributed to the **global agri-commodity price boom** and policy interventions, especially [minimum support price \(MSP\) hikes](#).
- **ToT** for Indian agriculture refers to the movement in prices of farm commodities relative to non-farm goods and services.
 - Terms of trade refers to the ratio of agricultural prices to industrial prices, measured as price indices.
- A rise in the terms of trade implies better purchasing power for the agricultural sector in terms of industrial goods.
 - A **ratio above one (or 100%) implies favorable pricing power**, in terms of what farmers sell versus what they buy.

- A **TOT ratio below one** indicates **unfavorable conditions of exchange**.

- The increase in procurement prices has led to a rise in food subsidy bills, contributing to fiscal deficit and macroeconomic management issues.

Roche's Breakthrough Antibiotic

Roche, a Swiss healthcare giant, has discovered a groundbreaking **antibiotic, Zosurabalpin**, targeting the notorious **gram-negative bacteria**.

- It has shown promising efficacy against **drug-resistant Acinetobacter strains**, particularly **Carbapenem-resistant A baumannii (CRAB)** that is listed as a critical pathogen by the WHO.
- **Zosurabalpin's** action **disrupts the bacteria's outer membrane construction**, specifically targeting the transport mechanism of **lipopolysaccharide**, a crucial barrier in gram-negative bacteria.
- Bacteria are classified into two groups: **Gram-positive or Gram-negative**, depending on whether they retain a specific stain color. Gram-positive bacteria retain a **violet-colored stain**, while Gram-negative bacteria appear **pinkish or red**.
 - **Gram-negative bacteria** have a **thin peptidoglycan layer in the cell wall**, which is sandwiched between two lipid membranes, giving them a complex structure.
 - This outer membrane acts as a **barrier**, making them **more resistant to antibiotics**.

Read more: [Increasing Efficacy of Antibiotics](#)

MeitY Launches ERNET India's Web Portal

The Ministry of Electronics & IT has recently unveiled **ERNET**, India's new **integrated web portal for educational institutes**, offering domain registration, [DNS \(Domain Name System\)](#), and value-added services.

- The portal includes **Website as a Service (WaaS)** and **Learning Management as a Service (LMaaS)**, allowing users to create customized websites and Learning Management Systems using various templates.
- The ERNET India is a **not-for-profit scientific society under MeitY**. It is the exclusive domain registrar for all the education & research institutes having 'ac.in', 'edu.in' & 'res.in' as domain name.

Read more: [DNS Server](#)

Note:



Qatari Court Decision on Indian Naval Personnel

Qatar has commuted the [death sentence](#) for eight Indian Navy veterans and turned that into a “**varying quantum**” of jail terms. The jailed former Indian Navy personnel in Qatar have been given **60 days to appeal** against the varying prison terms.

- **Commutation** of a death sentence refers to the reduction or change of a death penalty to a less severe punishment.
 - The eight Indians, whose death sentences are commuted, **now qualify for repatriation to India**. This falls under the **2015 Bilateral Agreement with Qatar**, permitting prisoners to serve their terms in their home country.
- **Qatar**, a strong regional player, is a key supplier of energy to India and at least seven lakh Indians form a part of the foreign workforce in the Gulf nation.

Read more: [Former Navy Personnel Case in Qatar](#)

Reverse Flipping

Reverse flipping has become a trend among Indian startups, especially in the **fintech sector**, as they plan for Initial Public Offers (IPOs) or seek **long-term benefits** in the home market.

- Reverse flipping is **the process of shifting the domicile of an Indian company back to India** after it had moved its headquarters overseas, usually for tax or regulatory reasons. It is also known as ‘**re-domiciling**’.
- This strategic move is fuelled by **India’s flourishing economy, a huge market**, promising venture capital, favorable tax structures, robust [intellectual property protection](#), young and educated population and supportive government policies.

Rashtriya Khel Protsahan Puruskar 2023

Recently, the Ministry of Youth Affairs and Sports announced [Rashtriya Khel Protsahan Puruskar\(RKPP\) 2023](#). **Odisha Mining Corporate Limited** has been awarded in the category of Encouragement to Sports through Corporate Social Responsibility. **Jain Deemed to be University, Bengaluru** has been awarded for identifying and nurturing budding and young talent.

- **RKPP introduced by the government in 2009** is given to corporate entities (both private and public sector), Sports Control Boards, NGOs, including sports bodies at the State and National level, who have **played a visible role in the area of sports promotion and development**.
- The Other five core awards that constitute India’s National Sports Awards are the [Major Dhyan Chand Khel Ratna Award](#), the [Arjuna Award](#), the [Dronacharya Award](#), the [Major Dhyan Chand Award](#), and the [Maulana Abul Kalam Azad\(MAKA\) Trophy](#).

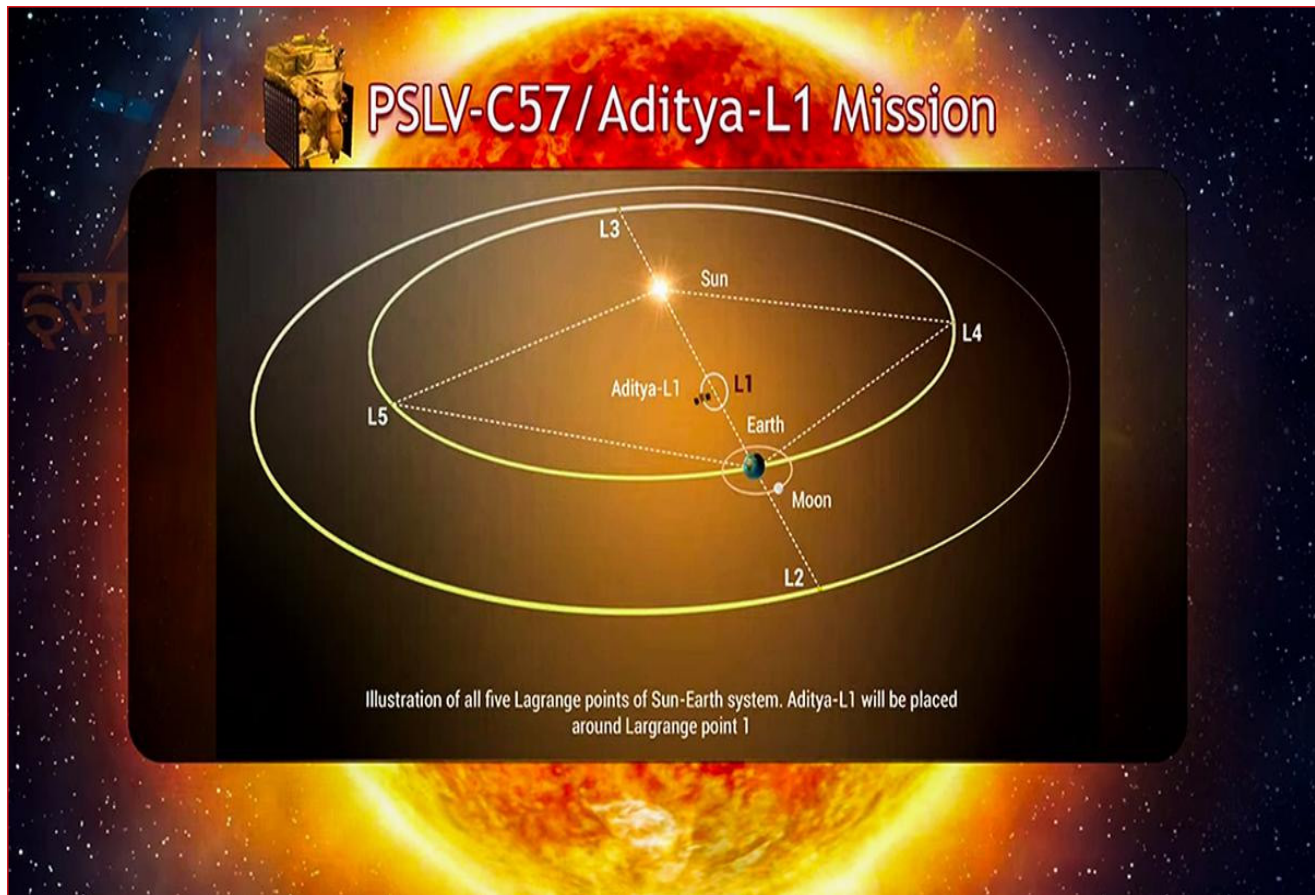
Read more: [National Sports and Adventure Awards 2022](#)

Aditya-L1 into L1 orbit

The [Indian Space Research Organisation \(ISRO\)](#) is set to perform a crucial manoeuvre to bind [Aditya-L1](#), aiming to place it into orbit around the **Lagrangian point (L1)**, located approximately 1.5 million km from Earth.

- Aditya-L1, the **first Indian space-based observatory dedicated to studying the Sun**, was launched in September 2023, using a [PSLV-C57 rocket](#) from the **Satish Dhawan Space Centre** in Sriharikota.
- Placing a satellite in the halo orbit around the L1 point **allows continuous observation of the Sun** without occultation or eclipse, providing an advantage in monitoring solar activities.
 - L1 is about **1.5 million km from the Earth** and the distance of L1 from Earth is approximately 1% of the Earth-Sun distance.
 - Lagrange points are **positions in space** where the **gravitational forces of two large masses balance the centripetal force** for a smaller object to stay in place.
 - Spacecraft leverage these points to minimize fuel consumption and allow spacecraft to maintain their position efficiently.
- Aditya-L1 carries seven payloads to observe the **photosphere**(the visible surface of the Sun), **chromosphere**(the second layer between the photosphere and the corona) and the **corona**(outermost layers of the Sun).
 - These payloads aim to provide crucial information on coronal heating, coronal mass ejection, space weather dynamics, and particle and field propagation.

Note:



Read more: [Aditya-L1 Mission](#), [India's Space Endeavors](#)

Warlis' Lesson: Peaceful Leopard Coexistence in Maharashtra

Maharashtra's indigenous Warlis teach a lesson about peaceful coexistence with leopards.

- Warlis living near **Sanjay Gandhi National Park**, worship leopards as their deity, showing respect instead of fear.
- **Dahisar river** flows through the **national park** and becomes a recreational center during **monsoons**.
- **Warli tribals** have a long history of encounters with leopards, viewing them as coexisting peacefully.
- The Warli culture is centered on the **concept of Mother Nature**, and natural elements are frequently depicted as focal points in **Warli painting**.

- The **Warli Tribes** perform **Tarpa Dance** along with **Tarpa music** instruments.

Read More: [International Leopard Day 2023](#)

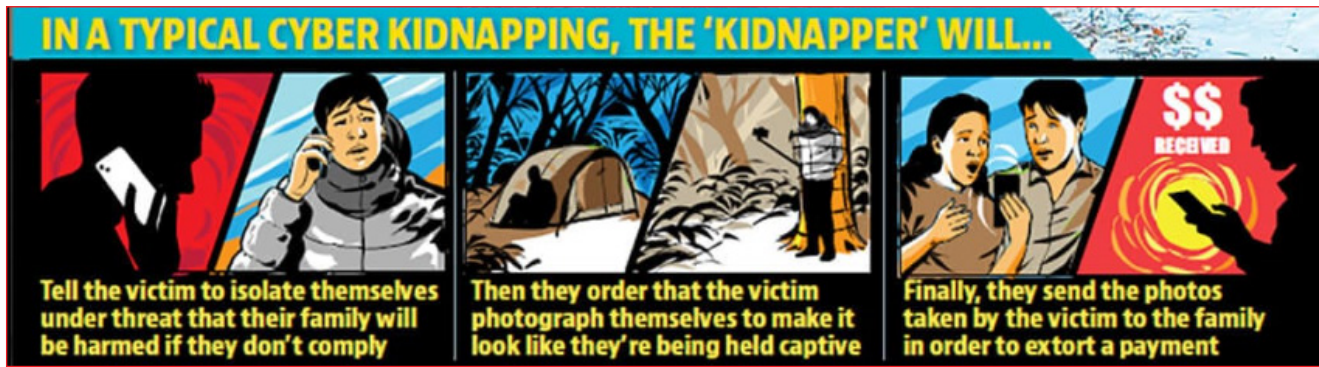
Cyber Kidnapping

Recently, a Chinese student who had been a **victim of 'cyber kidnapping,'** was discovered unharmed in rural **Utah**. Traced by the authorities, it was revealed that his parents from China had already paid a high ransom before his location being determined.

- **Cyber kidnapping** refers to a crime where the 'kidnappers' convince their victim to **hide**, and then contact their loved ones for ransom.
- In this type of scam, the **victim is not kidnapped**, but they are tricked into believing that they are in danger.
 - The '**kidnappers**,' **though not physically present**, monitor the victim online through video-call platforms.
 - They may **threaten the victim or their family with violence**, or they may create fake evidence of a kidnapping, such as photos or videos.

Note:





Read more: [Cyber Crime](#)

World Braille Day

[World Braille Day](#), celebrated annually on 4th January, since 2019, is observed to raise awareness of the **importance of Braille** as a means of communication in the full realization of the **human rights** for blind and partially sighted people.

- **Braille** is a tactile representation of alphabetic and numerical symbols using **six dots to represent each letter and number**, and even musical, mathematical and scientific symbols.
 - **Braille** (named after its inventor in 19th century France, Louis Braille) is used by blind and partially sighted people to read the same books and periodicals as those printed in a visual font.
- **Braille** is essential in the context of education, freedom of expression and opinion, as well as social inclusion, as reflected in **Article 2 of the [Convention on the Rights of Persons with Disabilities](#)**.

Read more: [Person with Disabilities in India](#)

Reviving Ancient Water Bodies in Coastal Karnataka Towns

Recently, the two coastal towns **Moodbidri** and **Karkala** in **Karnataka**, are reviving their ancient water bodies that date back to thousands of years ago.

- These water bodies are part of the **natural heritage** and cultural identity of the towns, which are also known for their **Jain temples** and **monasteries**.

- The citizens have taken up the initiative to **restore** these water bodies by petitioning the **authorities**, **raising funds**, and **engaging in community work**.
- **Moodbidri** town is known as '**Jain Kashi**' (Benares of the Jains). It is home to **Jain temples (Basadis and Nishidis)** as well as monasteries.
 - **Moodbidri** draws **Jain pilgrims** from across the world and has also grown into an educational hub.
- The revival of these water bodies has multiple benefits such as **improving [groundwater](#) recharge**, **enhancing biodiversity**, **providing [drinking water](#)**, and **preserving [cultural heritage](#)**.

Savitribai Phule Birth Anniversary

Recently, the Prime Minister of India paid tributes to [Savitribai Phule](#) on her birth anniversary (**3rd January 1831**).

SAVITRIBAI PHULE
(03 January 1831 - 10 March 1897)

A 19th century social reformer who worked in the field of women education

EARLY LIFE

- ▶ Born in **Mali community (Maharashtra)**
- ▶ Aged 9 - married to 13 y/o Jyotirao Phule - an **extraordinary couple in India's social & educational history**

SOCIAL ENDEAVOURS

- ▶ **Individual**
 - Published **Kavya Phule (1854)** & **Bavan Kashi Subodh Ratnakar (1892)**
 - Started **Mahila Seva Mandal (1852)** - raise awareness about women's rights
 - Wrote poem - **Go, Get Education** for oppressed communities
 - Carried forward the **Satya Shodhak Samaj** after Jyotiba's death (1890)
- ▶ **With Jyotiba**
 - Started a school for girls, Shudras and Ati-Shudras in Poona (1848) (India's **first school for women - started by Indians**)
 - Opened **Native Female School (Pune)** and **The Society for Promoting the Education of Mahars, Mangs and Etceteras in 1850s**
 - Started - **Balhatya Pratibandhak Griha** (Home for the Prevention of Infanticide) in their own house



DRISHTI IAS

Read more: [Savitribai and Jyotirao Phule](#)

Note:

Rani Velu Nachiyar Birth Anniversary

The Prime Minister of India has paid tributes to Rani Velu Nachiyar (3rd Jan 1730 – 25th Dec 1796) on her birth anniversary.

- Rani Velu Nachiyar, also known as **Veeramangai**, was the princess of the Ramnad Kingdom of Ramanathapuram, Tamil Nadu.
- She is revered as the **first queen to fight against the British colonial power** in India.
 - She was a scholar in languages like French, English, and Urdu.
- Nachiyar became queen of the **Sivaganga estate (present-day Tamil Nadu)** in 1780 after her husband Muthuvaduganathaperiya Udaiyathevar's death. She ruled until 1790.
 - She went on to produce the **first human bomb** as well as establish the **first army of trained women soldiers** in the late 1700s.



IREDA's 2024 Roadmap

2024 has been designated as the 'Year of Human Resource Development and Discipline' for [Indian Renewable Energy Development Agency Limited \(IREDA\)](#),

signifying the organization's strategic expansion into new sectors and regions.

- IREDA is a **Mini Ratna (Category – I)** Government of India Enterprise under the administrative control of the **Ministry of New and Renewable Energy (MNRE)**.
- It is a **Public Limited Government Company** established as a Non-Banking Financial Institution in **1987** engaged in promoting, developing and extending financial assistance for setting up projects relating to **new and renewable sources of energy** and energy efficiency.

Read more: [IREDA](#)

Family Pension Guidelines for Government Servants/ Pensioners

The Department of Pension & Pensioners' Welfare, in accordance with the [Central Civil Service \(Pension\) Rules, 2021](#), has delineated comprehensive provisions for the **disbursement of family pension** in cases involving a deceased Government servant or pensioner survived by a spouse and children.

- As per the provisions of **sub-rule (8) and sub-rule (9) of Rule 50 of CCS (Pension) Rules, 2021**, the family pension is initially granted to the spouse, while other eligible family members become eligible subsequently, following the spouse's ineligibility or demise.
- According to a recent development, in **scenarios where a female Government servant or pensioner is involved in divorce proceedings** or has filed cases under specific laws against her spouse, provisions have been outlined to enable the nomination of **her eligible child/children for family pension**, supplanting the spouse.

Read more: [Old Pension Scheme](#)

Snow Leopard

[Kyrgyzstan](#) has officially declared the [Snow Leopard \(Panthera uncia\)](#) as its national symbol, signifying its commitment to conservation and ecological balance.

- The snow leopard holds historical importance in Kyrgyz culture, featuring in the **story of Manas, a Kyrgyz folk hero**, revered as a symbol of greatness, courage, and resilience. It has come to be known as the **'ghost of the mountains'**.

Note:

- Snow leopards are **vital for ecological balance**, inhabiting 1/3 of the global territory. A decline in their population poses risks to various species.
 - Adapted to high-altitude terrains, their unique physique ensures agility in steep, rugged environments.
- Snow leopards face threats from **poaching, habitat loss, and declining prey**. **Human-wildlife conflict** and **warming in the high Himalayas**.
 - The Government of India has identified the snow leopard as a **flagship species for the high-altitude Himalayas**. It has developed a **Project Snow Leopard** to conserve the species and habitats.

Snow Leopard

Panthera Uncia



Often referred to as the "ghost of the mountains"

HABITAT

- Mountainous regions of **Central and Southern Asia**
- **12** Range Countries
- In India:
 - **Western Himalayas:** Jammu and Kashmir, Ladakh, Himachal Pradesh
 - **Eastern Himalayas:** Uttarakhand and Sikkim and Arunachal Pradesh



MAJOR SITES

- Hemis National Park, Ladakh
 - **Snow leopard capital of the world**
- Great Himalayan National Park, Himachal Pradesh
- Gangotri National Park, Uttarakhand
- Khangchendzonga National Park, Sikkim

THREATS

- Human Snow Leopard Conflict
- Climate Change
- Loss of Prey and Habitat
- Poaching

PROTECTION STATUS

- **Vulnerable:** IUCN Red List
- **Appendix I:** CITES
- **Schedule I:** Indian Wildlife (Protection) Act 1972

CONSERVATION EFFORTS

- Global Snow Leopard and Ecosystem Protection (GSLEP) Programme
- Himal Sanrakshak- Community Volunteer Programme
- Project Snow Leopard
- Snow Leopard Conservation Breeding Programme- Padmaja Naidu Himalayan Zoological Park, West Bengal




Read more: [Snow Leopard](#)

Note:

Prime Minister's National Relief Fund

An [acid attack](#) survivor has approached the Delhi High Court seeking **additional compensation** from the [Prime Minister's National Relief Fund \(PMNRF\)](#), highlighting delays and challenges in accessing the grant.

- PMNRF was instituted in 1948 by then **Prime Minister Jawaharlal Nehru**, to assist displaced persons from Pakistan. The fund is currently used to provide support to **people affected by natural and man-made disasters**.
 - This includes natural disasters like [floods, cyclones](#), and [earthquakes](#), and **man-made disasters** like major accidents, acid attacks, and riots.
- The fund consists entirely of **public contributions** and does **not get any budgetary support**.
- The corpus of the fund is invested with **banks in fixed deposits**. Disbursements are made with the **approval of the Prime Minister**.
- All donations towards the PMNRF are notified for **100% deduction from taxable income** under Section 80G of the [Income Tax Act, 1961](#).

Read more: [PM - CARES Fund](#)

K-SMART App

Recently, Kerala Government has launched **K-SMART (Kerala Solutions for Managing Administrative Reformation and Transformation) application**, which will bring all services of the three-tier [local self-government institutions](#) on a unified digital platform.

- It aims to bridge the digital divide and particularly benefit expatriates by eliminating the need for physical visits to government offices.
- Notably, K-SMART's technological framework encompasses an array of cutting-edge disciplines such as [blockchain](#), [Artificial Intelligence](#), [GIS](#), [chatbots](#), [machine learning](#), and [IoT](#).

Read more: [e-Governance](#)

India-UAE Joint Exercise 'Desert Cyclone 2024'

[India and UAE](#) will hold 'Desert Cyclone 2024' joint military exercise in **Rajasthan** from 2nd January to 15th January, 2024.

- The exercise aims to enhance interoperability by learning & sharing best practices in **Urban Operations**.
- It is also expected to not only strengthen the defense ties between India and the UAE but also contribute to the **broader goal of fostering regional peace and security**.
- India has also been a regular participant at the biennial [International Defence Exhibition \(IDEX\)](#) in Abu Dhabi.



Read more: [India-UAE Relations](#)

No Tsunami Threat to India

The [Indian Tsunami Early Warning Centre \(ITEWC\)](#), part of the [Indian National Centre for Ocean Information Services \(INCOIS\)](#) in Hyderabad, confirmed that **India faces no tsunami threat** despite a 7.5 magnitude [earthquake](#) near Honshu, Japan.

- The Pacific Ocean Tsunami Warning Centre (PTWC) and Japan Meteorological Agency (JMA) issued a tsunami bulletin for Japan.
 - ITEWC **monitors sea level changes** near the epicentral region and reports in case of a tsunami threat.
 - Epicentre is a point on the Earth's surface directly above the **hypocenter (or focus) of an earthquake**. It is the location on the surface of the Earth that is directly above the earthquake's point of origin within the Earth's crust.
 - INCOIS is an **autonomous body** under the **Ministry of Earth Sciences**, tasked with delivering optimal ocean information and advisory services to society, industry, government agencies, and the scientific community.
- Read more: [Tsunami Early Warning System in India](#)

Note:

Samvid Gurukulam Girls Sainik School

Recently, the Defence Minister of India, inaugurated **Samvid Gurukulam Girls Sainik School** in Vrindavan, Uttar Pradesh. This significant step reflects the government's commitment to providing equal opportunities for girls in the field of defence.

- The school is strategically positioned to play a pivotal role in furthering the **government's initiative to establish 100 new Sainik Schools** across all states and union territories, aligning with the objectives outlined in the [National Education Policy 2020](#).
- The initiative aims to provide quality education, better career opportunities, and encourage girls to join the [Armed Forces](#).

Read more: [Representation of Women in Armed Forces](#)

Ayodhya's Transformational Projects

Recently, the Indian Prime Minister inaugurated the newly constructed **Maharishi Valmiki International Airport in Ayodhya**.

- Pioneering sustainability features including [LED lighting](#), [rainwater harvesting](#), [solar power](#), and a sewage treatment plant ensure a [GRIHA - 5 star rating](#) for the terminal, promoting environmental consciousness.
- **Maharishi Valmiki**, also known as **Adi Kavi (the first poet)**, is revered as the author of the ancient Indian epic, the **Ramayana**. He is celebrated as a **revered sage and a significant figure in Hindu mythology and literature**.

Constitution of the Sixteenth Finance Commission

The **Government of India**, in adherence to **Article 280(1) of the Constitution**, has established the [Sixteenth Finance Commission](#), appointing **Dr. Arvind Panagariya**, former Vice-Chairman of NITI Aayog and Professor at Columbia University, as its **Chairman**.

- Specific terms of reference have been outlined, including the [distribution of tax proceeds](#) between the **Union and States**, principles governing **grants-in-aid to States**, and measures to **bolster State funds for local bodies like Panchayats and Municipalities**.
- The Commission has also been tasked with **reviewing disaster management financing arrangements under the [Disaster Management Act, 2005](#)**, and making recommendations for improvements.
- The Commission has been requested to make its report available by **31st October, 2025**.

Read more: [Sixteenth Finance Commission](#)

Trial Essential to Define 'Religious Character of Place of Worship': Allahabad HC

The Allahabad High Court's recent stance in the [Gyanvapi case](#) suggests that the [Places of Worship Act, 1991](#) does not clarify "religious character of any place of worship" and can only be determined in a trial, based on documentary and oral evidence, on a case-to-case basis.

- The Places of Worship Act, 1991 bars the conversion of religious sites into places of worship for a different religion or sect.
 - It also mandates preserving the religious identity of any place of worship as it stood on **15th August, 1947**.
- The Gyanvapi case is a legal battle concerning the **ownership and religious identity of Varanasi's Gyanvapi complex**, housing both a mosque and a temple.
 - Hindu plaintiffs argue that the entire area, including the mosque site, was originally a temple dedicated to **Swayambhu Lord Adi Vishweshwar**.
 - They claim that this temple, once on the **Gyanvapi plot**, was demolished by Emperor Aurangzeb in 1669.
- Neither the government nor the Supreme Court has presented a clear stance on this issue to date.

Read more: [Places of Worship Act, 1991](#)



Note:



drishti