

DAILY CURRENT AFFAIRS (DCA)

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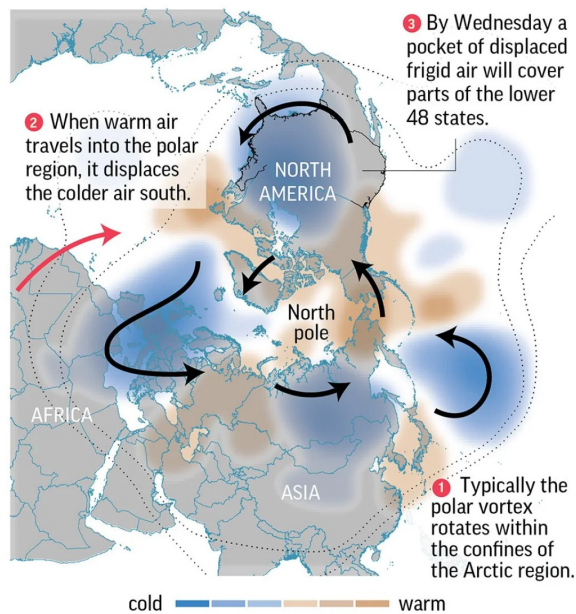
POLAR VORTEX AND WINTER STORM IN USA

Context

- Recently, the United States has experienced one of the most severe winter storms in over a decade, largely attributed to the polar vortex.

About the Polar Vortex

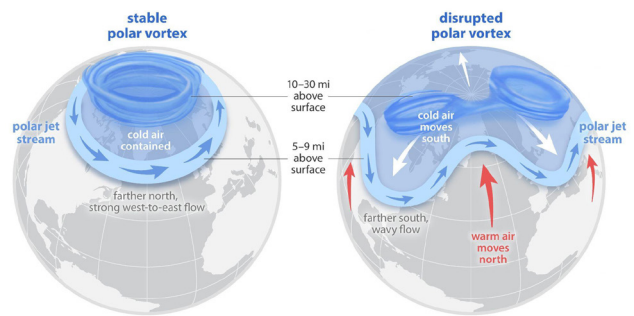
- It is a large area of **low-pressure and cold air** that swirls around the **Earth's polar regions**.



- It exists in **two forms**:
 - Tropospheric polar vortex**, which occurs in the lowest layer of the atmosphere (up to about 10-15 km), and
 - Stratospheric polar vortex**, which occurs higher up (around 15-50 km).
- The tropospheric polar vortex is responsible for most weather phenomena, while the stratospheric polar vortex is strongest during autumn and disappears in summer.

How Does the Polar Vortex Cause Extreme Cold?

- When the polar vortex is strong and stable, it keeps the jet stream (a narrow band of strong wind in the upper atmosphere) traveling in a circular path around the planet.
 - It helps maintain a separation between cold air in the north and warm air in the south.
- However, when the polar vortex weakens, it can cause the jet stream to become wavy and meandering.
 - It allows cold Arctic air to break off and move southward, bringing frigid temperatures to regions as far south as Florida.



Impacts of the Polar Vortex

- Cold Air Outbreaks:** When the polar vortex expands or shifts, it can push Arctic air southward into regions like the USA, Europe, and Asia. This often leads to extreme cold outbreaks in the Northern Hemisphere.
- Ozone Depletion and the Polar Vortex:** The polar vortex traps cold air, leading to ozone depletion over Antarctica. Cold temperatures cause harmful chlorine compounds to accumulate, breaking down ozone. This results in the creation of the ozone hole over Antarctica.
- Impact on Aviations:** It can impact **aviation operations** by causing very cold ground temperatures and increased winter precipitation.
- Impact on India:** A weakened polar vortex increases western disturbances in India. Western disturbances bring heavy snowfall to the western Himalayas.

Source: IE

EARTHQUAKE IN HIMALAYAS REGION

Context

- Recently a strong earthquake with a magnitude of 7.1 struck in western China near Nepal.

About

- The epicenter of the earthquake was identified in **Tingry County** in the **Shigatse** region of **Tibet**, a significant location as it serves as a **'gateway' to Mount Everest**.
- The earthquake's mainshock likely occurred within the **Lhasa terrane**, a distinct crustal fragment involved in major hydroelectric projects, including the world's largest hydroelectric dam under construction by China.

What is an Earthquake?

- An earthquake is the shaking of the ground caused by movement beneath the earth's surface when **two blocks slip past each other** along a fault.

- This sudden movement **releases stored elastic strain energy** in the form of seismic waves, which causes ground shaking.
- **Epicentre and Hypocenter:** The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter.
- **Earthquakes are measured** using the **Richter scale** for magnitude and the **Mercalli scale** for intensity based on visible damage.

Foreshocks and Aftershocks

- **Foreshocks:** These are smaller earthquakes that happen in the same place as the larger earthquake that follows.
 - ♦ The largest, main earthquake is called the **mainshock**.
- **Aftershocks:** These are smaller earthquakes that occur afterwards in the same place as the mainshock.

Measuring Earthquakes

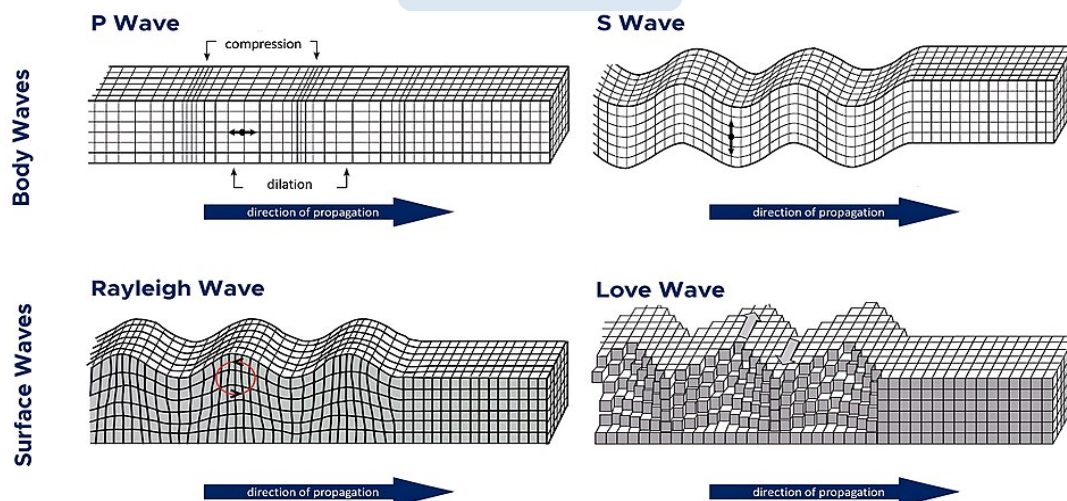
- The earthquake events are scaled either according to the **magnitude or intensity** of the shock.
- **Richter Scale:** Measures small to medium earthquakes based on seismic wave amplitude.
- **The intensity scale**, named after **Mercalli**, considers the visible damage caused by the event.

Seismic Waves

- Seismic waves are **energy waves generated by an earthquake** that travels through the Earth's layers, causing ground shaking.
- They are mainly classified into two types: **body waves and surface waves**.
 - ♦ **Body Waves:** These waves travel through the interior of the Earth. They are faster and arrive before surface waves during an earthquake.
 - ♦ **Surface waves** travel along the Earth's surface and are slower than body waves but cause the most damage due to their larger amplitude.

Types of Body Waves

- **P-Waves (Primary Waves):** They are the fastest seismic waves and the first to be recorded by seismographs. They move in a compressional or longitudinal manner.
 - ♦ P-waves can travel through solids, liquids, and gases.
- **S-Waves (Secondary Waves):** They move in a transverse manner, where particles move perpendicular to the wave's direction of propagation.
 - ♦ S-waves can travel only through solids, as liquids and gases do not support shear stress.



Reason of Earthquake in Himalayas

- Around **50 million years ago**, the **Indian plate** collided with the **Eurasian plate**, causing rocks to fold and rise to create the Himalayas Mountains.
- The tension between the two plates has continued to build as the Indian plate is still pushing in at around **60 mm/year**.

- Earthquakes and tremors occur when the rock formations in the region shift ever so slightly as they adjust to the tension.

Impacts of Earthquake in Himalayas

- **Tectonic Activity:** The region lies along the convergence zone of the Indian and Eurasian plates.

- ♦ The area remains seismically active due to continuous plate movement, which contributes to frequent earthquakes.
- **Hydrological Significance:** The broader Himalayan region is known as the 'Third Pole' due to its vast reserves of water stored in glaciers, lakes, and rivers.
 - ♦ Earthquakes can destabilize glaciers, alter river courses, and heighten flood risks, threatening millions who rely on Himalayan water sources.
- **Strategic and Infrastructural Importance:** Earthquakes in such areas could impact major energy generation projects and raise safety concerns.

India's Vulnerability to Earthquakes

- **India is highly vulnerable** to earthquakes, with **58.6%** of India's landmass is prone to moderate to very high intensity earthquakes.
- India is divided into **four seismic zones** based on the level of seismic hazard, as outlined by the **Bureau of Indian Standards (BIS)**.
 - ♦ **Seismic Zone II (Low Seismic Risk):** This zone is the least seismically active, with low-intensity earthquakes. It includes parts of the southern peninsula, such as Tamil Nadu, Andhra Pradesh, and parts of Karnataka.
 - ♦ **Seismic Zone III (Moderate Seismic Risk):** This zone experiences moderate seismic activity. This includes regions like Delhi, parts of Maharashtra, Rajasthan, Uttar Pradesh, and Madhya Pradesh.
 - ♦ **Seismic Zone IV (High Seismic Risk):** This zone experiences a high frequency of earthquakes with higher intensity. Areas in the northern and northeastern parts of India, including Jammu and Kashmir, Himachal Pradesh, parts of Uttarakhand, and parts of Assam, Nagaland, and Manipur.
 - ♦ **Seismic Zone V (Very High Seismic Risk):** This zone is the most seismically active, with frequent and intense earthquakes. It includes mainly the Himalayan region, northeastern states, and Gujarat.

Source: TH

CASHLESS TREATMENT SCHEME FOR ROAD ACCIDENT VICTIMS

In News

- The Ministry of Road Transport and Highways (MoRTH) has recently unveiled a **nationwide cashless treatment initiative** aimed at providing essential aid to victims of road accidents.

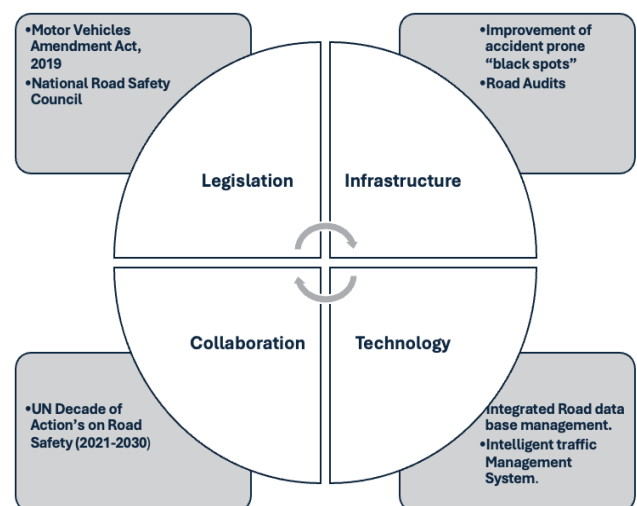
Background

- The scheme builds on a pilot program launched on March 14, 2024 which has since been expanded to include Assam, Punjab, Haryana, and Puducherry.
- This sought to establish a framework for delivering swift medical assistance to vehicle accident victims, particularly during the **crucial "golden hour" following an incident.**

Key Highlights of the Scheme

- **Nationwide Coverage:** The scheme now applies to all road accident victims, offering cashless treatment for trauma and polytrauma cases at hospitals under the **Ayushman Bharat Pradhan Mantri-Jan Arogya Yojana (AB PM-JAY)**.
 - ♦ The treatment cost is covered **up to ₹1.5 lakh per accident for seven days.**
- **Implementation Framework:** National Health Authority (NHA) has to collaborate with police, hospitals, and state health authorities for streamlined execution.
 - ♦ Utilizes the **e-Detailed Accident Report (eDAR) system** and the NHA's Transaction Management System to ensure seamless registration and claim processing.
- **Support for Hit-and-Run Victims:** Families of hit-and-run fatalities will receive 2 lakh in compensation.

Need/Significance of the Scheme



- **Road Accidents:** Statistics show 1.80 lakh fatalities in 2024, including 30,000 deaths due to not wearing helmets and 10,000 deaths of children near educational institutions.
- **Comprehensive Coverage:** Extending the scheme to all road accident victims ensures inclusivity and widens the scope of lifesaving interventions.

- **Efficient Implementation:** Collaboration between key stakeholders and advanced IT systems enhances accessibility and reduces bureaucratic delays.
- **Financial Relief:** The compensation for hit-and-run fatalities and the cost coverage for treatment alleviate financial burdens on victims and families.

Source: DD News

RESERVATION DEBATE WITHIN TRANSGENDER COMMUNITY

Context

- National Commission for Scheduled Castes (NCSC) has taken cognisance of atrocity complaint against **Uttar Pradesh's Transgender Welfare Board Member**, a strong proponent of vertical reservation.

About

- Under the **Vertical reservations all trans people would qualify** for reservation, irrespective of their socio-economic category.
- Many trans activists across the country have **stressed that horizontal reservations** are the need of the hour as vertical quotas ignore the layered nature of discrimination trans people from marginalized castes face.

Aspect	Horizontal Reservation	Vertical Reservation
Definition	Reservation for a specific group within a larger category.	Reservation for specific categories such as caste, class, etc.
Target Group	Beneficiaries within the group or class of a larger category (e.g., disabled people within SC).	Entire categories or classes
Example	Reservation for women within SC or OBC groups.	Reservation for SC, ST, and OBC categories in general.
Significance	Used to address sub-categories within a reserved category.	Used to allocate a percentage of seats to specific castes.

Supreme Court's 2014 Judgement

- In 2014, the Supreme Court directed governments to provide reservation to trans people in government jobs and education.
 - ♦ Since then the demand for quotas from the community has only grown.
- **Ambiguity:** There is an ambiguity in the Supreme Court's direction, which called for transgender people to be treated as **socially and educationally backward classes of citizens**.
 - ♦ It has divided opinion within the transgender community **on what kind of reservations should be provided**.
 - ♦ This also raises the question that there are transgender people in all caste categories. How is bunching them up as OBCs serving the purpose of equality?

Queer community

- The queer community is an inclusive and diverse group of people who identify as lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, or any other sexual orientation, gender identity, or expression that falls outside of societal norms.

Legal Rights to Transgenders in India

- **Supreme Court's NALSA Judgment (2014):** The National Legal Services Authority v. Union of India (NALSA) case was a landmark judgment where the Supreme Court of India recognized transgender individuals as a third gender.
 - ♦ This judgment granted them legal recognition, fundamental rights, and a constitutional right to live with dignity.
 - ♦ Recognising third gender persons as a **"socially and educationally backward class of citizens"**, entitled to reservations in educational institutions and public employment.
- **Transgender Persons (Protection of Rights) Act, 2019:** This law was passed to safeguard the rights of transgender people in India. It includes provisions for:
 - ♦ **Self-identification:** Transgender individuals have the right to self-identify their gender, and they can apply for a certificate that recognizes their gender identity as per their choice (male, female, or transgender).
 - ♦ **Prohibition of Discrimination:** Discrimination against transgender people in areas like education, employment, healthcare, and public services is illegal.

- ♦ **Establishment of National and State Transgender Welfare Boards:** These boards are set up to address issues related to transgender people.
- **Transgender Bill (2021):** Although the 2019 Act laid a foundation, the 2021 amendments were proposed to strengthen provisions related to their legal recognition and welfare, but debates continue on whether it provides enough protection or falls short in certain areas.

Challenges

- Despite the legal protections, transgender individuals face widespread social stigma and discrimination.
- Violence and harassment in public spaces.
- Limited access to education and employment.
- Challenges in accessing healthcare and legal recognition.
- Economic and social exclusion often forces transgender people into marginalized roles, such as begging or sex work.

Way Ahead

- While there has been significant progress in advancing LGBTQ+ rights and reducing discrimination, there are still many challenges to address.
- Continued advocacy, education, and policy change are necessary to ensure full equality and acceptance for the LGBTQ+ community worldwide.

Source: TH

SECTIONS 33 AND 81 OF DELHI LAND REFORMS ACT 1954

Context

- The demands to repeal **Sections 33 and 81 of the Delhi Land Reforms Act of 1954** resurfaced after allegations that the Union government failed to fulfill its promise.

Delhi Land Reforms Act, 1954

- The Delhi Land Reforms Act, 1954 was enacted to modify the **Zamindari System** and unify the tenancy laws in Delhi.
- It repealed several other acts, including the **Punjab Tenancy Act, 1887**, the **Agra Tenancy Act, 1901**, and the **Punjab Land Revenue Act, 1887**.

- The act established two classes of land tenure holders: **Bhumidhar and Asami**.
- When a village is declared as an urban area, it is no longer governed by the Delhi Land Reforms Act; it comes under the **Delhi Municipal Act 1957** and the **Delhi Development Act 1954**.

Sections 33 and 81 of the Delhi land Reform Act 1954

- **Section 33**, prohibits the sale, gift, or transfer of agricultural land if such a transaction results in the owner holding less than 8 acres of land.
 - ♦ The objective is to **prevent fragmentation of agricultural holdings** to ensure economic viability for farming.
 - ♦ **Exceptions:** Transfers are permitted only to religious or charitable institutions and individuals associated with the **Bhoodan movement**.
- **Section 81** states that a landowner can be ejected if the land is used for non-agricultural purposes such as housing or commercial activities.
 - ♦ The land, in such cases, would vest with the Gram Sabha.
 - ♦ **The permitted activities** under this section include agriculture, horticulture, animal husbandry, pisciculture, and poultry farming.

Why are these sections contested?

- **Outdated Provisions:** Delhi has shifted from a primarily agricultural region to an urban hub, making the laws less relevant.
- **Urbanization Needs:** Restrictions delay infrastructure development and housing expansion.
- **Bureaucratic Hurdles:** Complex procedures for obtaining permissions can lead to corruption.

Way Ahead

- Modification of Section 81 to impose **monetary penalties for the misuse** of agricultural land instead of transferring ownership to the Gram Sabha.
- Providing **alternative livelihood opportunities** and support for farmers with small landholdings could ensure better economic security while preventing exploitation.
- A balanced approach should be considered that preserves agricultural viability while allowing **controlled development** to benefit both rural communities and urban expansion needs.

Source: IE

INDIA AND TALIBAN HOLD FIRST TOP-LEVEL TALKS

In Context

- The meeting took place in Dubai, marking the highest-level engagement between India and the Taliban since the latter's takeover of Afghanistan in 2021.
 - ♦ **India has not formally recognized the Taliban administration** but it maintains a small mission in Kabul for trade, aid, and medical support, alongside ongoing humanitarian assistance.

Key Outcomes of recent meeting

- India discussed ongoing **humanitarian aid to Afghanistan**, including support for Afghan refugees and earthquake relief.
 - ♦ India has already provided wheat, medicine, pesticides, vaccines, clothing, and other materials.
 - ♦ Additional aid will be directed towards Afghanistan's health sector and **refugee rehabilitation**.
- The Taliban aims to **strengthen political and economic ties** with India, aligning with its balanced, economy-focused foreign policy.
- The use of **Iran's Chabahar port** for accessing Afghanistan and promoting trade was also discussed.
- They focused on **Strengthening cricketing ties**, as India has assisted Afghan cricketers, including training in Noida.
- India raised concerns about **anti-India terror groups** operating from Afghanistan.

Factors Driving India's Engagement with Taliban

- **Geopolitical Considerations:** The evolving geopolitical landscape in the region, including the growing influence of China, has also influenced India's approach to Afghanistan. Engaging with the Taliban is seen as a way to maintain its strategic interests in the region.
- **Counter Terrorism:** India is concerned about the possibility of terrorist groups, particularly those with a focus on targeting India, using Afghanistan as a base for their operations. Engaging with the Taliban is seen as a way to address these security concerns.
- **Counteracting Pakistan's Influence:** Pakistan has historically wielded considerable influence in Afghanistan, often seen as detrimental to India's interests. Engaging with the Taliban allows India to maintain a presence and potentially counterbalance Pakistan's influence.

- **Protecting Indian Investments:** India has invested heavily in infrastructure projects in Afghanistan. Maintaining these investments and ensuring their security is a key consideration for India.
 - ♦ The Taliban has assured India of security guarantees for its facilities.

Approach of Other Countries

- Russia has begun engaging with the Taliban, primarily to counter the threat of **regional terrorism**. This includes addressing concerns over the spread of extremist groups like ISIS-K, which could destabilize **Central Asia and threaten Russian interests**.
- **China has increased its influence** in Afghanistan, eyeing natural resources and supporting Taliban-led development projects.
- **Iran**, once critical of the Taliban, is now preoccupied with other regional concerns and has become more neutral towards the regime.
- **Pakistan's once-close relationship** with the Taliban has deteriorated, particularly after Pakistani airstrikes in Afghanistan's Paktika province. This has created friction, with the Taliban condemning these actions and India joining in criticism of Pakistan's military operations in Afghan territory.

Issues and Concerns

- The official statement did not address concerns regarding the protection of
 - ♦ women's rights,
 - ♦ minority rights, or their inclusion in the Taliban government.
- **Pakistan's Reaction:** The meeting could provoke Pakistan, given its historical tensions with India and strained relations with Afghanistan.
 - ♦ Pakistan has accused Afghanistan of harboring militant groups responsible for attacks in Pakistan, a charge the Taliban denies.

Future Outlook

- India's future relations with the Taliban will focus on balancing security concerns with involvement in Afghanistan's reconstruction, especially in education, healthcare, and infrastructure.
- Both sides agreed to maintain regular contact at various levels, keeping the door open for future political-level engagement.

Source :TH

DAM SAFETY ACT OF 2021

Context

- The Supreme Court seeks Centre's response on **Mullaperiyar dam safety** and questions the delay in forming an expert committee under the **Dam Safety Act of 2021**.
 - ♦ Mullaperiyar dam is built on the **Periyar River in Kerala**. It is a 130-year-old year old dam.
 - ♦ People in Kerala living downstream Mullaperiyar dam have questioned the dam's safety.

Dam Safety Act (DSA) 2021

- **Aim:** Preventing dam failure related disasters and providing institutional mechanisms to ensure their safe functioning.
- **National Committee on Dam Safety:** It has been constituted to prevent dam failure related disasters and maintain standards of dam safety and evolve dam safety policies and recommend necessary regulations.
- **National Dam Safety Authority:** It has been established as a **regulatory body** for ensuring the nationwide implementation of dam safety policies and standards.
 - ♦ Its functions include implementing policies of the National Committee, and resolving matters between State Dam Safety Organisations (SDSOs), or between a SDSO and any dam owner in that state.
 - ♦ The central government may notify the qualifications, and functions of the officers of the National Dam Safety Authority.
- **At the State level:** The Act provides for the constitution of the **State Committee on Dam Safety (SCDS)** and the establishment of the **State Dam Safety Organization (SDSO)**.
 - ♦ All the **28 States and 3 Union Territories** having specified dams have constituted/ established the SCDSs/SDSOs.
- **Dam Safety Unit:** Dam owners are now required to have a **dedicated Dam Safety Unit**, prepare Emergency Action Plans, and conduct Comprehensive Safety Evaluations at regular intervals.
 - ♦ **Chairman of the Central Water Commission (CWC)** would head dam safety protocols at the national level.
- **Penalty:** An offence under the Act can lead to imprisonment of up to two years, or a fine, or both.

Dams in India

- India has 4,407 large dams, the **third highest number in the world** after China and the USA.

- **Maharashtra** has the maximum number of large dams followed by Madhya Pradesh and Gujarat.

Dam Failures in India

- The first failure was recorded in **Madhya Pradesh during 1917** when the **Tigra Dam failed due to overtopping**.
- The worst dam disaster was the **failure of Machu dam (Gujarat) in 1979** in which about 2000 people died.
- There are 40 reported failure cases so far.

Reasons for the Dam Failures in India

- **Poor Monitoring & Maintenance:** Many dams suffer from inadequate or irregular maintenance, leading to structural weaknesses, cracks, and deterioration over time.
- **Design Flaws:** Some dams were designed with outdated or incorrect specifications, not suitable for the current environmental or operational conditions.
- **Natural Disasters:** Earthquakes, floods, and heavy rainfall put immense pressure on dams, causing structural damage or even failures.
- **Over-topping:** When a dam's reservoir exceeds its storage capacity due to excessive rainfall or snowmelt, water spills over, leading to erosion or breaching.
- **Sedimentation:** The accumulation of silt and sediment in reservoirs reduces storage capacity and increases pressure on the dam, which leads to structural failure.

Why Dam Safety is a Priority Concern in India?

- **Aging of Dams:** With the increasing number of dams becoming older and older, the likelihood of dam failures in India is expected to be an ascending path. There are 227 large dams in India which are more than 100 years old.
- **Structural Deficiencies:** Many dams have varied structural deficiencies and shortcomings in operation and monitoring facilities, while few do not meet the **present design standard- both structurally and hydrologically**.
- **Lack of Institutional and Technical Capacities:** Most of the States have been failing to provide **sufficient budgets** for maintenance and repair of the dam.
 - ♦ Many States also lack the **institutional and technical capacities** for addressing dam safety issues.
- **Hazard** to human life and property downstream.

What more needs to be done?

- There is a need to classify dams based on hazard risk,

- Designing and constructing dams that adhere to safety margins,
- Conduct regular inspections,
- Create emergency action plans,
- Institute emergency flood warning systems, and undertake safety reviews and period risk assessment studies.

Source: TH

NEWS IN SHORT

SOAPSTONE MINING

Context

- Uttarakhand High Court has ordered an immediate stop to mining operations in Bageshwar district after illegal activities led to cracks in houses and hills.

What is Soapstone?

- Soapstone is a **metamorphic rock** composed mainly of talc, a naturally occurring mineral. It is widely used for;
 - ♦ **Construction and interior design** (e.g., countertops, sinks, hearths, sculptures).
 - ♦ **Industrial applications** such as cosmetics and pharmaceuticals due to its softness and heat resistance.
- According to the Indian Bureau of Mines, the states of **Rajasthan (57%)** and **Uttarakhand (25%)** boast substantial reserves of soapstone in India.

Regulation and Governance in India

- **The Mines and Minerals (Development and Regulation) Act, 1957** governs mining activities.
- **The National Mineral Policy, 2019** emphasizes sustainable mining practices.

Source: IE

MARATHI LANGUAGE OFFICIALLY GRANTED CLASSICAL STATUS

Context

- Months after granting classical language status to Marathi, the Union government issued an official notification to this effect.
- Recently, the Union Cabinet has granted classical language status to **Marathi, Pali, Prakrit, Assamese, and Bengali**, increasing the classical languages to **eleven**.

Classical Languages

- **India had six classical languages** — Tamil, Sanskrit, Telugu, Kannada, Malayalam, and Odia.
 - ♦ Tamil was declared a classical language in **2004**, Sanskrit in **2005**, Kannada in **2008**, Telugu in **2008**, Malayalam in **2013**, and Odia in **2014**.
 - ♦ All the Classical Languages are listed in the **Eighth Schedule of the Constitution**.
- **Criteria:** It should have **high antiquity** of its early texts/recorded history over a period of 1,500-2,000 years,
 - ♦ a body of ancient literature or texts that is considered a valuable heritage by generations of speakers,
 - ♦ the presence of “knowledge texts”, especially prose texts in addition to poetry, epigraphical and inscriptional evidence,
 - ♦ the said language and literature should be distinct from its modern format.
- **Benefits:** The Education Ministry provides certain benefits to promote it such as:
 - ♦ two major annual international awards for scholars of eminence in the said languages,
 - ♦ a Centre of Excellence for Studies in the classical language is set up,
 - ♦ and the University Grants Commission is requested to start with a certain number of Chairs for the classical language at least in the Central Universities.

Source: IE

INDIA'S RECALCULATED COASTLINE UP 48% IN 53 YEARS

Context

- India's coastline expanded by almost half in just over five decades - from **7,516km in 1970** to **11,098km in 2023-24**.

About

- **Major Changes:**
 - ♦ States like **Bengal, Gujarat and Goa added significantly** to their shoreline while **Puducherry shrunk by 10.4%**.
 - ♦ **Gujarat's recalculated coastline almost doubled** from 1,214km in 1970 to 2,340km in the past 53 years.
 - ♦ **Bengal's** was the **highest increase in percentage terms** during this period - up 357% from 157km to 721km.
 - ♦ Nationally, the coastline increase compared to 1970 data stands at **47.6%**.

- **Gujarat** retains its position as the state with the longest coastline, Tamil Nadu has overtaken Andhra Pradesh based on the new survey.
- **Reason for Increase:** It is attributed primarily to using a **new methodology** to measure India's maritime parameter.
 - ♦ Older methods relied on **straight-line distance measurements**.
 - ♦ The scientifically updated approach is developed by the **National Maritime Security Coordinator**.
 - ♦ It incorporates the measurement of **complex coastal formations** such as bays, estuaries, inlets, and other geomorphological features.

Source: TOI

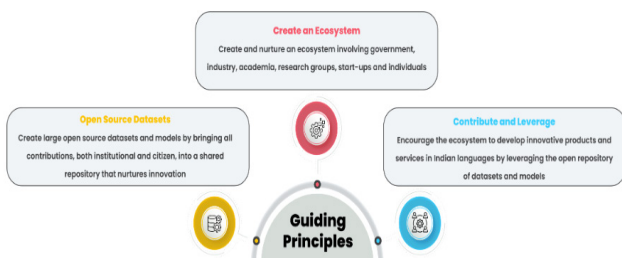
BHASHINI PROJECT

In News

- The Ministry of Electronics and Information Technology's Bhashini project has been leveraged to upgrade the **eShram portal with 22 languages**.

Bhashini Project

- It was launched in 2022. It is part of the broader **National Language Translation Mission (NLTM)**.
- It aims to enable easy access to the internet and digital services in Indian languages, including voice-based access, and help create content in Indian languages.



Significance

- It empowers Indian citizens by connecting them to digital initiatives in their own language, promoting digital inclusion.
- It increases the content in Indian languages on the internet, especially in governance, policy, and science.
- It promotes self-reliance (Atmanirbhar) by enabling citizens to easily contribute through the crowd-sourcing platform, Bhasha Daan

Source: BS

FUTURE OF JOBS REPORT 2025

In News

- The **Future of Jobs Report 2025** is released by the **World Economic Forum (WEF)**.

Key Takeaways

- **Job Disruption and Creation:** By 2030, 22% of jobs are expected to face disruption. 170 million new jobs will be created, driven by technological advancements and other factors.
- **Fastest Growing Jobs:** Employers are increasingly looking to automation and AI to reduce workforce size and upskill employees.
 - ♦ AI and big data skills will rise by 87%, followed by cybersecurity (70%).
- **Fastest Declining Jobs:** Roles such as postal service clerks, bank tellers, data entry clerks, cashiers, and telemarketers are expected to experience the greatest decline.
- **India-Specific Insights:** Digital access, geopolitical tensions, and climate change efforts will drive job trends in India.
 - ♦ There is significant investment in AI, robotics, autonomous systems, and energy technologies.

About World Economic Forum (WEF)

- The World Economic Forum (WEF) is an international organization for public-private cooperation.
- It was founded in 1971 by Professor Klaus Schwab and is headquartered in Davos, Switzerland.
- The WEF brings together leaders from business, government, academia, and civil society to discuss and address global challenges, with the aim of improving the state of the world.

Source: IE

ANDROGEN SIGNALLING

Context

- According to a study, androgen signalling plays a crucial role in the development, fertility, physiology and appearance of both sexes as well as sex-specific crowing behaviour in males.

About

- **The androgen sex hormones** are responsible for **male** sexual development while **oestrogen and progesterone** essay the same roles in females.
- The study found that the **androgen receptors** are as important for sexual development and fertility in females as in males.

Androgen signaling

- Androgen signaling refers to the process by which **androgens**, a group of male sex hormones including testosterone and its derivatives, **exert their effects on cells and tissues.**
- **The activation of androgen receptors influences various biological processes, such as:**
 - ♦ **Development of male secondary sexual characteristics:** These include facial hair, deep voice, and muscle mass.
 - ♦ **Anabolic effects:** They promote protein synthesis and muscle growth, contributing to physical strength and body composition.
 - ♦ **Reproductive health:** Androgens play a role in sperm production, and other aspects of male reproductive health.
 - ♦ **Neurodevelopment and behavior:** Androgen signaling also affects the central nervous system, influencing mood, cognition, and behavior.

Source: TH

MIYAWAKI TECHNIQUE

Context

- The Prayagraj Municipal Corporation has utilized the Miyawaki technique to transform barren areas into lush green forests.

Miyawaki Technique

- **Origin:** The Miyawaki technique, Often referred to as the '**pot plantation method**', was developed by renowned Japanese botanist **Akira Miyawaki** in the 1970s.
 - ♦ It is a revolutionary method for creating **dense forests in small urban spaces.**
- **Principle:** It involves planting trees and shrubs close to one another to accelerate their growth.
 - ♦ **Plants grow 10 times faster** with this technique, making it a practical solution for urban areas.
- **Significance:** In urban areas, the method is known to have successfully converted barren, polluted lands into thriving green ecosystems, simultaneously managing industrial waste and curbing pollution.

Source: PIB

FLAMINGO FESTIVAL 2025

In News

- The flamingo festival will celebrate the arrival of migratory birds, especially flamingos, to **Pulicat**

Lake and Nelapattu Bird Sanctuary, both important ecological sites located in Andhra Pradesh.

About the Festival

- It is an annual event dedicated to the migratory birds arriving at Pulicat Lake and Nelapattu Bird Sanctuary, with a focus on flamingos.
- **Activities and Attractions:**
 - ♦ Bird-watching tours to observe migratory species.
 - ♦ Eco-friendly biodiversity sessions to raise awareness about the local ecosystem.
 - ♦ Boating activities at BV Palem to offer visitors a close view of Pulicat Lake.

About Flamingos

- Flamingos are social creatures that live in large groups of varying sizes, sometimes gathering by the thousands.



- **Habitat :** Flamingos live in a wide variety of habitats such as lagoons, estuaries, coastal and inland lakes, and mudflats.
- **Types :** The six flamingo species and their IUCN Red List status are
 - ♦ The greater flamingo, - **Least Concern**
 - ♦ Chilean flamingo, - **Near Threatened**
 - ♦ American flamingo - **Least Concern**
 - ♦ Lesser flamingo - **Near Threatened**
 - ♦ Andean flamingo - **Vulnerable**
 - ♦ James's flamingo(puna flamingo)-Near Threatened
- **Status in India :** **Greater flamingos** usually migrate to India from Israel, Afghanistan, and Pakistan.the greater flamingo is the State bird of Gujarat
 - ♦ **Lesser flamingos** migrate from Siberia to Mumbai via the Rann of Kutch in Gujarat.

About Pulicat Lake

- Pulicat Lake is the **second-largest brackish water lake in India**, after Chilika Lake in Odisha. It plays a crucial role in supporting migratory birds and maintaining regional biodiversity.
- Pulicat Lake spans across the Andhra Pradesh-Tamil Nadu border, with 96% of the lake's area located in Andhra Pradesh.
- The lake serves as a key feeding and breeding ground for migratory birds, including flamingos, pelicans, and various other species.

About Nelapattu Bird Sanctuary

- Nelapattu is the **largest breeding site for spot-billed pelicans (*Pelecanus philippensis*) in Southeast Asia**. It is one of the most important bird sanctuaries in the region.
- Situated about 20 km north of Pulicat Lake, it is also located on the Andhra Pradesh-Tamil Nadu border.

Source :TH

