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JPC ON SIMULTANEOUS ELECTION BILL

Context

- The **Joint Parliamentary Committee (JPC)** on **'One Nation, One Election'** has said that **simultaneous elections** can save **nearly 7 lakh crore rupees,** improve governance efficiency and increase India's GDP growth by up to 1.6%.

Background

- To introduce simultaneous elections, the **Constitution (One Hundred and Twenty-Ninth Amendment) Bill, 2024** and the **Union Territories Laws (Amendment) Bill, 2024** were introduced in Lok Sabha in 2024.
    - The Bills provide for **synchronising the Lok Sabha and Assembly elections** by **curtailing the terms of state assemblies** that are elected after a particular Lok Sabha to end with the term of that Lok Sabha.
    - **Once the terms of the legislatures align,** the next general election will be held simultaneously.
- The bills were **referred to the Joint Parliamentary Committee**, the JPC has not shared its recommendations yet.

Key Features of the Bills

- **Bodies Responsible:** The Constitution (129th Amendment) Bill, 2024 empowers the **Election Commission** to conduct elections for Lok Sabha and all State Assemblies together (referred to as simultaneous elections).
    - The Union Territories Laws (Amendment) Bill, 2024 extends this framework to **Union Territory (UT) Assemblies**.
- **Commencement of simultaneous elections:** The terms of all State and Union Territory Assemblies constituted after the date of the notification will expire with the expiry of the full term of Lok Sabha. Hence, elections to Lok Sabha and all State and UT Assemblies thereafter will be conducted together.
- **Premature dissolution of Lok Sabha or Assemblies:** If Lok Sabha or a State/UT Assembly is dissolved sooner than its full term of five years, a fresh election will be held for a term equal to the remainder of the five-year term.
    - This will synchronise elections for Lok Sabha and all Assemblies every five years.
- **Deferring a state election:** If the Election Commission is of the opinion that the election for a particular State Assembly cannot be held as part of the simultaneous elections, it may make a recommendation to the President in this regard.
    - Thereafter, the President may issue an order to conduct election for that State Assembly at a later date.
    - The UT Laws Amendment Bill does not have such provisions.

What are Simultaneous Elections?

- **Simultaneous Elections** (One Nation One Election) refer to the idea of holding Lok Sabha and State legislative assembly elections **together**, with the aim of **reducing the frequency of elections and their associated costs.**
- Simultaneous elections in India to the Lok Sabha and State Legislative Assemblies were held in the years **1951-52, 1957, 1962 and 1967.**
- Thereafter, the schedule could not be maintained and the elections to the Lok Sabha and the State legislative assembly have still not been realigned.

Arguments In Favour of One Nation One Election

- **Reduced Expenditure:** It will **reduce the huge expenditure** incurred for conducting separate elections every year.
- **Streamlined Process:** Managing one election cycle is logistically simpler than conducting multiple elections at different times. This can lead to more efficient use of administrative resources.
- The problem of frequent elections leads to **imposition of Model Code of Conduct (MCC)** over prolonged periods of time which affects the normal governance. Simultaneous elections can overcome such issues.
- The **focus on governance** will increase, instead of being constantly in election mode.
- **Direct Accountability:** With simultaneous elections, voters can hold parties accountable for both central and state governance at the same time, making it clearer how local and national policies impact their lives.
- **Strengthens Cooperative Federalism:** A harmonised electoral calendar encourages coordination between the Union and States, ensuring policy stability and reducing political friction from perpetual campaign cycles.

Arguments Against One Nation One Election

- **Logistical Challenges:** All states and the central government face massive **logistical challenges** including coordinating the schedules, resources etc.

- **Local Priorities:** It may **help the dominant national party** at the cost of regional parties and regions issues can be overshadowed by the national issues.
- **Complex Reforms Needed:** Implementing simultaneous elections would require significant constitutional amendments and changes to existing electoral laws, posing legal complexities.
- **Federalism & State Autonomy:** Synchronising terms effectively curtails or extends the tenure of State Assemblies, which undermines the constitutional autonomy of states.

Way Ahead

- Synchronized polls for all 3 tiers of government **will improve governance architecture**. It will enhance **"transparency, inclusivity, ease and confidence of voters.**
- The law commission is **likely to recommend holding simultaneous polls** for all three tiers of the government – the Lok Sabha, state assemblies and local bodies like municipalities and panchayats – starting 2029.

Source: AIR

HUMAN EVOLUTION IN THE LAST 10,000 YEARS

Context

- A major study led by scientists analysed ancient and modern human genomes to understand how humans evolved during the last 10,000 years.

What is Ancient DNA?

- Ancient DNA refers to genetic material extracted from **skeletal remains, teeth, and bones of humans** who lived thousands of years ago.
- Scientists sequence this DNA and compare it with modern genomes to understand human migration, evolutionary adaptations, disease susceptibility and changes in physical and behavioural traits.

Carbon Dating

- Scientists use **Carbon-14** dating to **determine the age** of ancient skeletal remains.
- Carbon-14 is a **radioactive isotope** formed by interaction between cosmic rays and atmospheric nitrogen.
- The amount of Carbon-14 decreases after death because radioactive decay converts it back into nitrogen. It has a half-life of 5,730 years.
- Scientists use mass spectrometers to measure isotope ratios and estimate the age of remains.

Major Findings of the Study

- **Continuing Natural Selection:** The study found that natural selection continued to shape human evolution during the last **10,000 years.**
  - Several genetic variants increased or decreased in frequency because of environmental and disease-related pressures.
- **Changes in Blood Group Genetics:** The frequency of the B blood-group variant increased in Western Eurasia over the last 6,000 years.
  - The A blood-group variant declined during the same period.
- **Rise in Coeliac Disease Susceptibility:** A variant of the **HLA-DQB1 gene** associated with coeliac disease increased significantly over the last **4,000 years.**
  - **Gluten consumption triggers immune attacks** on the small intestine in affected individuals.
  - Researchers stated that agriculture alone cannot explain this increase.
- **Skin Colour:** Humans increasingly selected for lighter skin tones around **8,000 years ago.**
  - Lighter skin helped populations living in regions with low sunlight synthesise more **vitamin D.**
  - **Agricultural diets poor in vitamin D** may have strengthened this adaptation.
- **Evolution of Disease Resistance:** The **CCR5-Δ32 gene variant** provides resistance against **HIV-1 infection and the frequency** of this variant increased thousands of years before HIV emerged.
  - Ancient infectious diseases likely drove the spread of this protective gene.

Significance of the Study

- **Understanding Human Adaptation:** The study explains how humans adapted to climate change, diseases, agriculture and dietary transformations. It demonstrates that evolution is a continuous and dynamic process.
- **Importance for Medical Science:** Ancient DNA research improves understanding of immunity, genetic diseases and long-term health patterns.
- **Relevance for South Asia:** South Asians possess ancestry from Iranian farmers, steppe pastoralists, ancient South Indians and East Asian-related populations.
  - Ancient DNA studies in India can improve understanding of migration, adaptation and disease history.

Concerns

- **Risk of Misinterpretation:** Genetic findings can be oversimplified or misused to justify racial or cultural superiority.
- **Limited Geographical Representation:** Most ancient DNA studies are concentrated in Europe and Western Eurasia.
  - Large regions such as South Asia, Africa and Southeast Asia remain underrepresented.

Concluding remarks

- The study demonstrates that human evolution is an ongoing process shaped by climate, diet, disease and environmental pressures.
- Ancient DNA research is transforming understanding of human history, health and biological adaptation.

Source: TH

SELF-HELP GROUPS AS INSTRUMENTS OF WOMEN'S EMPOWERMENT

Context

- The Ministry of Rural Development (MoRD) has initiated a nationwide roadmap for establishing **SHE-MARTs (Self Help Entrepreneurs–Marketing Avenues for Rural Transformation)** to strengthen women-led rural enterprises, enhance market access, and increase rural incomes.

About SHE-MARTs

- SHE-MARTs are **decentralised, women-led rural marketing and enterprise ecosystems** designed to provide market access, branding support, aggregation facilities, and retail opportunities for products made by **Self-Help Groups (SHGs)** and women producer collectives.
- The initiative aims to transform rural women **from livelihood seekers into rural entrepreneurs** and market leaders.
- SHE-MARTs were announced in the **Union Budget 2026** as part of the government's strategy for women-led rural economic transformation.

What are Self-Help Groups (SHGs)?

- Self-Help Groups are **small voluntary associations**, generally comprising **10–20 members from similar socio-economic backgrounds,** who come together for savings, credit, livelihood activities, and collective empowerment.
- SHGs function on the **principles of mutual trust, collective responsibility, regular savings, and democratic participation.**

Role of SHGs in Women's Empowerment

- **Financial Inclusion:** SHGs empower women by providing access to savings, microcredit, and formal banking services.
- **Political Empowerment:** SHGs enhance women's participation in **Gram Sabhas, Panchayats, and local decision-making processes.**
- **Social Empowerment:** SHGs strengthen women's awareness, and social participation through campaigns on health, education, and gender equality.
- **Educational Empowerment:** SHGs promote literacy, digital awareness, and education of girls in rural communities.
- **Decision-Making Power:** SHGs strengthen women's participation in household and community-level decision-making processes.

Government Initiatives Supporting Women-Led Rural Enterprises

- **Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM):** DAY-NRLM promotes SHGs, women's collectives, and rural livelihoods through financial and institutional support.
- **Lakhpati Didi Initiative:** The Lakhpati Didi Initiative aims to transform women associated with **Self-Help Groups (SHGs)** into successful rural entrepreneurs by promoting skill development, enterprise creation, financial inclusion, and sustainable income generation.
- **Namo Drone Didi scheme:** It is an initiative aimed at providing drones to **15,000** selected women self-help groups (SHGs) for providing rental services to farmers.
  - The women beneficiaries are trained to become drone pilots under the initiative.
- The SHG-Bank Linkage Programme launched by **National Bank for Agriculture and Rural Development (NABARD) in 1992** played a transformative role in expanding women-led SHGs across India.

Success Stories of SHGs in India

- **Kudumbashree (Kerala):** Kudumbashree is one of the world's largest women's community networks focusing on poverty eradication and women empowerment.

- **Mission Shakti (Odisha):** Mission Shakti has successfully promoted women-led enterprises and SHG networks across Odisha.
- **Jeevika (Bihar):** Bihar Rural Livelihoods Promotion Society (Jeevika) has improved livelihoods and financial inclusion among rural women.
- **Bibi fathima Swa Sahaya Sangha (Bibi Fatima SHG):** Founded in **Karnataka**, this women-led initiative supports over **5,000 farmers** across **30 villages** through **millet-based multi-cropping, seed banks, and solar-powered processing.**

Challenges Faced by SHGs

- **Limited Market Access:** Many SHGs face difficulties in branding, packaging, transportation, and market integration.
- **Inadequate Financial Literacy:** Lack of financial and digital literacy limits effective enterprise management.
- **Dependence on Subsidies:** Some SHGs remain dependent on government assistance rather than sustainable business models.
- **Gender and Social Barriers:** Patriarchal attitudes and mobility restrictions continue to affect women's participation.
- **Weak Institutional Capacity:** Many SHGs require stronger managerial, accounting, and technical capabilities.
- **Credit Constraints:** Delays in credit disbursement and limited access to large-scale financing hinder growth.

Way Ahead

- **Affordable and timely institutional credit** should be ensured for SHG women entrepreneurs.
- **Improving Market Linkages:** SHGs should be connected with e-commerce platforms, retail chains, and export markets.
- **Digital payments,** online marketing, and technology-based business systems should be promoted among SHGs.
- **Public-Private Partnerships:** Collaboration between government, private sector, NGOs, and financial institutions should be enhanced.

Concluding remarks

- Self-Help Groups have become a powerful instrument for women's empowerment and inclusive rural development in India.
- By promoting **financial independence, social awareness, leadership, and entrepreneurship**, SHGs have transformed the **socio-economic status of millions of rural women.**

Source: DD News

INDIA'S URBAN AND RURAL LOCAL BODIES

In Context

- India's rapid urbanisation has highlighted the weak state of Urban Local Bodies (ULBs).

Present Status

- **The Panchayati Raj system**: It was introduced by the 73rd Constitutional Amendment in 1993, gave constitutional status to local self-government (Part IX). Panchayats are a state subject under Article 243, and each state governs them through its own laws.
- **Urban Local Bodies:** The 74th Constitutional Amendment Act, 1992 (Nagarpalika Act) introduced Part IXA (Articles 243P to 243ZG) in the Constitution, giving constitutional status to Urban Local Bodies (Municipalities).
  - It came into force on 1 June 1993 and made it mandatory for states to establish and organize municipalities as per constitutional provisions.

Importance

- **Democratic Deepening:** Local Governments brings governance closer to citizens, ensuring participation in decision-making.
  - Local bodies play a crucial role in decentralised governance by addressing the social, economic, and political needs of local areas.
- **Service Delivery:** Local bodies support rural development through welfare activities, infrastructure maintenance, and basic administration, while urban local bodies handle essential services like sanitation, water supply, education, and urban infrastructure, along with discretionary development works.
- **Inclusive Development:** local governments promote social inclusion, economic development, and public participation by reducing inequalities, ensuring grassroots democracy, and acting as a link between citizens and higher levels of government.
  - It empowers marginalized groups through reservations for women, SCs, and STs.

- **Economic Role**: Local governments are critical for implementing schemes like MGNREGA, AMRUT, Smart Cities Mission, and Swachh Bharat Abhiyan.

Major Issues

- **Administrative weakness and state control**: Local governments are dominated by state governments, which restrict their autonomy and keep them dependent, giving them a weak "stepchild" status in India's governance system.
  - Municipal bodies lack real control over staff since state governments manage personnel, limiting their ability to hire, promote, or enforce accountability even for transferred functions.
- **Weak staffing and capacity:** In India, only about 10% of government employees work for local bodies.
  - In contrast, countries like the US and China have nearly two-thirds of public employees in local governments.
  - As a result, most public services in India are not delivered effectively by local bodies.
- **Financial Dependence:** PRIs and ULBs rely heavily on state transfers; own revenue generation remains weak.
  - Urban local bodies collect only about 0.3% of GDP in taxes and spend less than 1% of GDP, relying heavily on central and state transfers, unlike higher levels of government that have increased their revenues.
- **Land and property taxation failure:** India's land and property revenues remain low (~1% of GDP) due to restrictive laws, fragmented ownership, inefficient policies, and poor use of public land.
  - Distorted land and rental markets promote black money and reduce tax collection and transparency in real estate.

Conclusion and Way Forward

- Local governments in India are essential for strengthening democracy and promoting inclusive development.
- Local government acts as an important link in implementing national development policies by identifying local issues through close citizen engagement. It plays a key role in decision-making on essential services like housing, health, education, and environmental protection, thereby increasing public participation in development.
- However, its effectiveness is limited without adequate fiscal decentralisation.
- Strengthening local bodies with sufficient funds, functions, and trained personnel is necessary to make them more effective instruments of socio-economic development.

Source :IE

LEGUMES: A CLIMATE-SMART ALTERNATIVE FOR INDIAN AGRICULTURE

Context

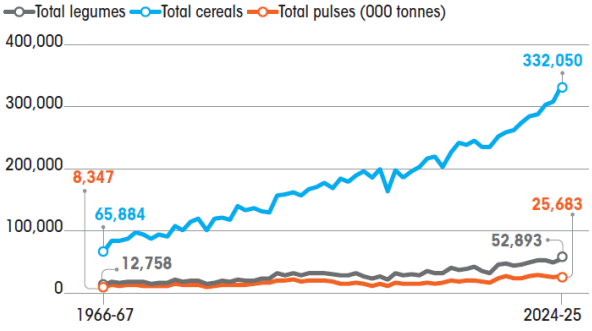
- **Legumes** offer a way **to cut fertiliser use and import dependence**, as India is facing an import crisis of **nitrogen-based fertilizer (urea)** triggered by Middle East conflicts and disruptions at the Strait of Hormuz.

Why Does India Need a Shift in Cropping Patterns?

- Agriculture contributes nearly **16% of India's greenhouse gas emissions**, largely due to the **rice-wheat cropping system** promoted **after the Green Revolution.**
  - Excessive use of nitrogen fertilisers releases **nitrous oxide (N_2O)**, a potent greenhouse gas.
  - Flooded paddy fields emit large quantities of **methane**.
  - Continuous cereal monocropping degrades soil fertility and biodiversity.
  - Overexploitation of groundwater has led to severe water stress in states such as Punjab and Haryana.
- The **Green Revolution** created a policy ecosystem favouring cereals through fertiliser subsidies, Minimum Support Price (MSP), assured procurement, irrigation support, research and extension services.
  - As a result, cereals occupy nearly **half of India's cropped area**, while legumes cover only about **21%**.

Production disparities

Production of cereal crops, paddy and wheat, has accelerated since the Green Revolution, while that of legumes has stagnated



Legumes as a Sustainable Solution

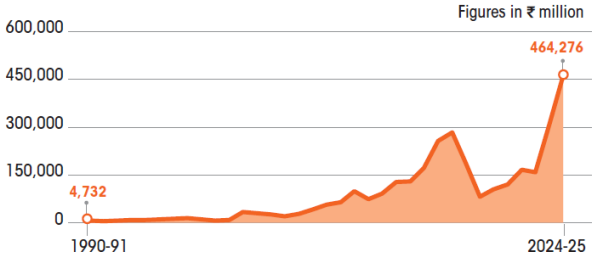
- Leguminous crops such as **chickpea, pigeon pea (tur), lentils, soybean and groundnut** provide a climate-resilient **alternative to cereal monoculture**.
- Their key advantage lies in their biological ability to **fix atmospheric nitrogen through symbiotic bacteria in root nodules.**
  - This naturally enriches the soil and reduces dependence on chemical fertilisers.
- According to the **Agricultural Economics Research Review (2023)**, legumes fix nearly **70 kg nitrogen per hectare**, equivalent to about **152 kg of urea,** reduce the need for synthetic fertilisers, and lower nitrous oxide emissions.
  - Thus, legumes can play a crucial role in achieving sustainable agriculture and climate mitigation simultaneously.

Ecological and Economic Benefits of Legumes

- **Ecological Benefits:** Research shows that soils under legumes exhibit over **11% higher NPK availability, 16–17% greater carbon sequestration,** improved microbial activity and soil structure.
  - Legumes require nearly **25% less irrigation water** than non-legume crops, making them suitable for water-scarce regions.
- **Economic Benefits:** Legumes can generate ecosystem benefits worth nearly **₹15,000 per hectare** if ecological services are monetised.
  - Further, increased domestic production of pulses and oilseeds can reduce import dependence, improve farmers' incomes, and enhance nutritional security through protein-rich diets.
  - India remains the **largest importer** despite being the **world's largest producer** of pulses, reflecting **insufficient domestic support.**

Import reliance

By 1990, India began relying on imports to meet domestic demand for legumes, and is now the world's largest importer of pulses



Source: Centre for Monitoring Indian Economy

Policy Bias & Need for Reform

- Although initiatives such as the **Technology Mission on Oilseeds and Pulses (1985)** and recent relaxation of procurement limits for pulses have provided some support, policy focus remains largely yield-centric.
- Policy needs to recognise their environmental contributions to mainstream legumes.

Key Reforms Needed

- **Payment for Ecosystem Services (PES):** Under the **Green Credit Programme**, farmers cultivating legumes can be rewarded through tradable green credits for sustainable farming practices.
- **Inclusion in Carbon Markets:** The **Carbon Credit Trading Scheme (CCTS)** can be expanded to include legume farmers, allowing industries to purchase carbon credits generated through low-emission agriculture.
- **Rationalising Fertiliser Subsidies:** A portion of fertiliser subsidies can be redirected towards incentivising pulse cultivation and crop diversification.
- **Demand-Side Support:** Integrating pulses into Public Distribution System (PDS), Mid-day Meal Scheme, and other nutrition programmes can improve nutritional outcomes while ensuring stable market demand.

Way Forward

- India's transition towards climate-smart agriculture requires moving beyond cereal-centric policies.
- Legume-based cropping systems offer a **'triple dividend':**
  - Climate mitigation through reduced emissions;
  - Ecological restoration through soil and water conservation;
  - Nutritional and economic security for farmers and consumers;
- A balanced policy framework combining procurement support, ecosystem incentives and carbon financing can make legumes central to India's sustainable agricultural future.

Source: DTE

INDIA IS RAPIDLY SCALING UP RENEWABLE ENERGY BUT NOW IT NEEDS TO STORE IT

Context

- As India **rapidly scales up its renewable energy capacity** to meet its **climate goals,** a key challenge is emerging for its **power system i.e. energy Storage.**

About

- Renewable power generation sources come with a fundamental limitation of being **intermittent.**
  - **Solar power** generation **drops to zero after sunset** and **wind output fluctuates** with changing weather.
  - This creates a **growing mismatch** between when electricity is generated and when it is needed.
  - This mismatch **can stretch the grid** and even threaten its stability if not managed properly.

Renewable Energy in India

- Renewable sources account for **53% (283 gigawatts)** of the total installed power generation capacity of **532 GW.**
- **Solar power** alone contributes **over 150 GW,** making it the largest source in the renewable energy mix.
- This is where deploying systems that **"store" energy becomes critical** and where India has fallen short so far.

Energy Storage

- **Energy storage** refers to systems that can **store excess renewable electricity during periods of high generation** and discharge it when demand rises but power generation remains low.
- Energy storage systems **convert electricity** from renewable sources such as solar and wind, when it is available, **into forms that can be stored.**
- Later, it converts these **back into electricity when need arises.**

Types of Energy Storage

- **Pumped hydro storage (PHS)** uses **surplus electricity to pump water** from a lower reservoir to a higher one. When electricity demand peaks, it releases the stored water downhill through turbines to generate power.
- **Battery Energy Storage Systems (BESS) technology** stores **electricity chemically** and discharges it when needed.
  - **Lithium-ion batteries,** particularly lithium iron phosphate (LFP) batteries, are currently the dominant technology for grid-scale storage because of their falling costs, high efficiency and long operational life.
- **Concentrating solar-thermal storage systems:** This technology uses mirrors that capture and focus sunlight onto a receiver.
  - As the receiver gets heated, materials such as molten salt are circulated inside the receiver to store the heat.
- **Compressed-air energy storage systems** use excess electricity to compress air and store it in underground caverns or tanks.
- **Flywheel energy storage systems** store electricity as rotational energy by spinning a rotor at extremely high speeds.
- **Gravity energy storage systems** use electricity to lift heavy weights to higher elevations. When electricity is needed, the weights are lowered, converting gravitational energy back into electricity through generators.

India's Energy Storage Capacity

- The government is primarily focusing on the **two major systems above: PHS and BESS.**
- At present, India has an **installed BESS capacity of around 0.27 GW.**
- **PHS capacity** stands at about **7.2 GW.** There are plans, however, for a massive scale-up over the next decade.
- A Central Electricity Authority (CEA) plan projects the **country's total energy storage capacity to reach 174 GW/888 gigawatt hours by 2035-36.**
  - This includes **80 GW/321 GWh of BESS and 94 GW/567 GWh of PHS.**

Global Scenario

- **China leads with nearly 66 GW** of installed capacity, followed by Japan at 21.8 GW and the US at 18.9 GW. **Europe** collectively accounts for around **28 GW** of pumped hydro capacity.
- According to the International Energy Agency, 108 GW of new battery storage capacity was added globally in 2025 alone, a **40% increase over 2024.**

Conclusion

- India's transition to renewable energy will depend not only on expanding solar and wind capacity, but also on **building robust energy storage infrastructure**.
- With ambitious plans for scaling up PHS and BESS, India is positioning itself to meet its climate commitments and strengthen energy security.
- However, achieving these targets will require **sustained policy support, technological innovation, domestic manufacturing capacity** and large-scale investments in the coming decade.

Source: IE

NEWS IN SHORT

NORDIC COUNTRIES

Context

- After the Third India-Nordic Summit, Prime Minister Modi said that **India and the Nordic countries** are committed to "democracy, rule of law and multilateralism".

Nordic Countries

- Nordic countries are a **group of countries in northern Europe** consisting of **Denmark, Finland, Iceland, Norway, and Sweden.**
  - The designation includes the **Faroe Islands and Greenland,** which are autonomous island regions of **Denmark,** and the **Åland Islands**, an autonomous island region of **Finland.**

- **The term is sometimes used interchangeably with Scandinavia,** a peninsular region of northern Europe that serves as the geographic core of the Nordic countries.
  - Scandinavia is typically defined more restrictively, however, and refers **primarily to Norway, Sweden, and Denmark.**
- **Denmark, Sweden and Finland** are **members of the EU** while Norway and Iceland are European Economic Area (EEA) members.
- Among them **Sweden** is the **most populated** country while **Iceland is the least populated.**

Source: TH

EUTHANASIA FOR RABID AND DANGEROUS STRAY DOGS

Context

- The Supreme Court has allowed euthanasia for rabid, incurably ill, or demonstrably dangerous stray dogs, citing the need to protect human life and public safety.

Key Observations of the Supreme Court

- The Supreme Court observed that the State has a **constitutional obligation** to protect citizens from repeated stray dog attacks and rabies threats.
- The Court upheld its earlier order directing the **removal of stray dogs** from **schools, hospitals, markets, and other high-footfall public spaces.**
- **Municipal bodies** may resort to euthanasia in areas where the stray dog population has reached alarming levels and where repeated dog bites or aggressive attacks continue to threaten public safety.

Constitutional and Legal Dimensions

- **Article 21 and Human Security:** The judgment expanded the interpretation of Article 21 by linking public safety with the right to life and dignity.
- **Prevention of Cruelty to Animals Act, 1960:** The Act protects animals from unnecessary cruelty while permitting humane treatment in exceptional situations.
- **Animal Birth Control (ABC) Rules, 2023:** The Rules emphasise sterilisation, vaccination, and scientific management of stray dog populations.

Source: AIR

UNLAWFUL ACTIVITIES (PREVENTION) ACT (UAPA)

Context

- Delhi Police has suggested a **larger SC Bench to review the Unlawful Activities (Prevention) Act (UAPA) bail curbs.**

About

- An earlier judgment by SC held that **"bail is the rule and jail is an exception"** even in prosecutions under the UAPA.
- **Section 43D(5) of the UAPA imposes stringent restrictions on bail.** A court has to conclude whether the allegation against the accused appears to be prima facie true while deciding bail.

Unlawful Activities (Prevention) Act (UAPA)

- It is **India's primary anti-terrorism law** aimed at **preventing unlawful activities,** and terrorist activities that threaten the sovereignty and integrity of India.
- It was enacted in **1967** by the Parliament of India.
- The Central Government can **designate organizations as terrorist organizations.**

- Accused can be detained for a **longer period without filing chargesheet** up to 180 days in certain cases.
- Cases are often investigated by the **National Investigation Agency.**

National Investigation Agency (NIA)

- **Established under:** NIA Act, 2008 after 26/11 Mumbai attacks.
- **Function:** Central counter-terrorism law enforcement agency.
- **Mandate:** Investigates offences affecting India's sovereignty, security, international treaties, etc.
- **NIA (Amendment) Act, 2019:**
  - **Jurisdiction extended:** Can investigate scheduled offences committed outside India involving Indian citizens/interests.
  - **Expanded mandate:** Covers offences under Explosive Substances Act, 1908 Human Trafficking, Cyber Terrorism Arms Act, 1959.
- **Headquarters:** New Delhi
- **Special Courts:** Total NIA Special Courts: 51
  - Exclusive NIA Courts: 2 (Ranchi & Jammu).

Source: TH

AYUSH ANUDAN PORTAL UNDER AYUSH GRID INITIATIVE

In News

- Union Minister of State for Health and Family Welfare launched the Ayush Anudan Portal at Kartavya Bhawan, New Delhi.

Ayush Anudan Portal

- It is developed by the **Ministry of Ayush under the Ayush Grid initiative.**
- It aims to streamline the submission, processing, approval, and monitoring of funding proposals under various **Central Sector Schemes.**
- It supports the government's vision of **"Ease of Doing Business"** and paperless governance by enabling organisations to submit grant proposals completely online.
- It is integrated with the **NGO Darpan Portal** and it ensures faster and more reliable verification of applicant organisations.
- Key features include scheme-wise application management, real-time tracking of proposals, and a user-friendly digital interface that replaces manual processes.

Do you know?

- The Ayush Grid Project is conceptualized by the Ministry of Ayush for creating a comprehensive Information Technology backbone for the entire Ayush sector.
- It envisages digitization of service delivery across the **six functional areas** — Health Services, Education, Research, Drug Administration, Medicinal Plants, and Ministry of Ayash Oversight along with capacity building and media outreach.
- It is aimed at establishing an integrated, transparent, and **citizen-centric digital ecosystem** for the Ayush sector through the use of modern technology.

Source : PIB

OSLO SUMMIT

Context

- PM Modi participated in the Third India–Nordic Summit held in Oslo.

About

- The summit brought together leaders of the five Nordic countries**; Norway, Sweden, Finland, Denmark and Iceland.**
- **The summit aims** to strengthen cooperation between India and Nordic countries in trade, investment, clean energy, technology, innovation, maritime affairs and sustainable development.
- **The first India–Nordic Summit** was held in Stockholm in **2018 and the second** summit took place in **Copenhagen in 2022.**

Significance of Nordic Countries for India

- **Technological Cooperation:** Nordic countries are global leaders in clean technologies, innovation and digital governance.
- **Green Energy Partnership:** Nordic expertise in offshore wind, green hydrogen and sustainable technologies supports India's energy transition goals.
- **Maritime Cooperation:** Nordic countries possess advanced capabilities in shipbuilding, maritime logistics and sustainable port infrastructure.
- **Arctic Significance:** Nordic cooperation is important for India's climate research and Arctic engagement.
- **Research and Innovation:** Collaboration in research, education and start-up ecosystems can strengthen India's knowledge economy.

Source: TH

PERSIAN GULF STRAIT AUTHORITY (PGSA)

Context

- Iran has established a new regulatory body named as **Persian Gulf Strait Authority (PGSA).**

About

- **Aim:** To oversee and manage operations in the strategically significant Strait of Hormuz.
  - The move marks the **formal creation of a dedicated authority** responsible for monitoring the strait.
- **Under the new system,** vessels will be required to follow directives issued by the authority and secure transit permits before entering the Strait of Hormuz.
- **Under the United Nations Convention on the Law of the Sea (UNCLOS),** the Strait of Hormuz falls under the transit passage principle protecting uninterrupted international shipping – a convention Iran signed but never ratified.
- **The US, Gulf states, and European nations** have all rejected the legality of Iran's fee regime.

Source: AIR

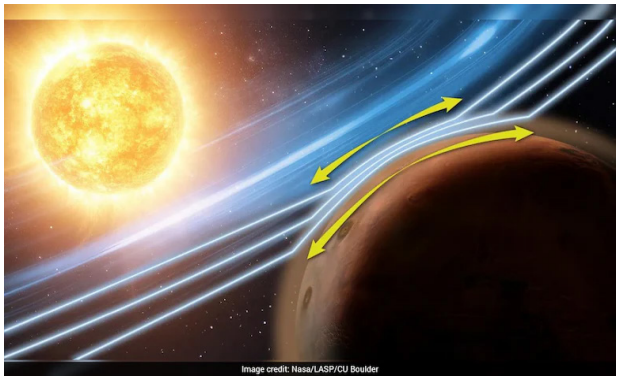
ZWAN-WOLF EFFECT

Context

- A recent study published in Nature Communications has provided evidence of the Zwan-Wolf effect at Mars using data from NASA's MAVEN spacecraft.

What is the Zwan-Wolf Effect?

- The Zwan-Wolf effect is a space weather phenomenon where **electrically charged particles (plasma) are compressed and squeezed** along magnetic field lines when a planet's magnetic boundary interacts with the solar wind.
  - The solar wind is a continuous stream of charged particles emitted by the Sun.
- First identified in **1976 by scientists B.J. Zwan and R.A. Wolf,** the phenomenon creates a plasma "depletion layer" near the planetary boundary, helping deflect solar wind flows.



Significance of Discovery

- Mars lacks a strong global magnetic field unlike the Earth.
- The discovery shows that even relatively "unmagnetised" planets can experience complex magnetic interactions.
- The findings may help explain atmospheric loss processes on Mars over geological timescales.
- The study also enhances understanding of space weather effects on planets without strong magnetic protection.

MAVEN Mission

- MAVEN stands for **Mars Atmosphere and Volatile Evolution Mission.**
- It is a NASA mission launched in **2013 to study the Martian atmosphere** and its interaction with the solar wind.
- The mission investigates **how Mars lost much of its atmosphere and water over time.**

Source: TH

APACHE HELICOPTERS

Context

- The United States has approved the proposed sale of support services and related equipment for Apache helicopters to India at an estimated cost of 198.2 million US dollars.

About

- The **Apache helicopters** are among the world's most advanced **multi-role attack helicopters**.
- Developed by **Boeing**, it combines firepower, agility, and modern avionics.
- It is equipped with **Hellfire missiles**, 70mm rockets, and a 30mm chain gun, enabling it to engage ground targets, armoured vehicles, and even low-flying aircraft.

- They have advanced sensors, targeting radar, and night vision systems that make it effective for operations in all weather conditions, including **high-altitude** and **low-visibility** combat zones.
- Besides India, other users include Egypt, Israel, Japan, Saudi Arabia, the UK, and more.

Source: IE

CHANDRAYAAN-3: LATEST RESEARCH

In News

- Scientists from the Physical Research Laboratory have used data from **Chandrayaan-3** to reveal new details about the Moon's surface.

Chandrayaan-3 Mission

- It is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface.
- It was launched by the Indian Space Research Organisation using the LVM3 M4 rocket from Satish Dhawan Space Centre.

Composition and Payloads

- **Lander payloads:** Chandra's Surface Thermophysical Experiment (ChaSTE) to measure the thermal conductivity and temperature; Instrument for Lunar Seismic Activity (ILSA) for measuring the seismicity around the landing site; Langmuir Probe (LP) to estimate the plasma density and its variations.
    - A passive Laser Retroreflector Array from NASA is accommodated for lunar laser ranging studies.
- **Rover payloads:** Alpha Particle X-ray Spectrometer (APXS) and Laser Induced Breakdown Spectroscope (LIBS) for deriving the elemental composition in the vicinity of landing site.

Mission objectives

- To demonstrate Safe and Soft Landing on Lunar Surface
- To demonstrate Rover roving on the moon and
- To conduct in-situ scientific experiments.

Latest Developments

- Scientists from the Physical Research Laboratory found that the Moon's regolith is not uniform: a loose, porous surface layer quickly transitions into a much denser layer just 2–6 cm below the surface.
- The findings came from the ChaSTE instrument (Chandra's Surface Thermophysical Experiment), which analysed the lunar surface after the Chandrayaan-3 lander performed its unexpected "hop" experiment in September 2023.
- ChaSTE data shows the Moon has distinct layered soil up to 6–9 cm deep and provides key insights for future lunar missions, including surface changes from rocket plumes, possible non-polar water-ice, and sharp temperature drops with depth useful for habitat planning.

Source :IE

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