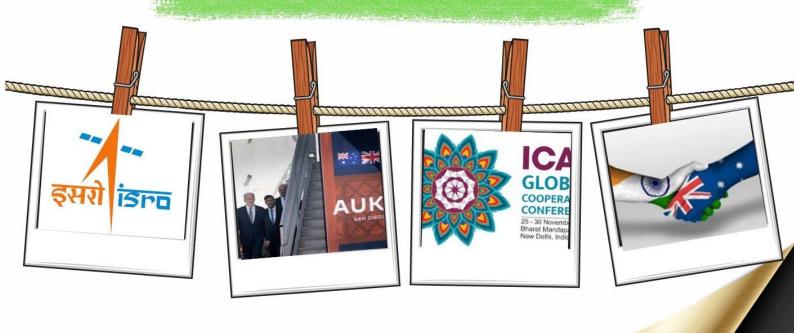


Weekly Current Affairs



by Dhananjay Gautam

24 - 30 Nov 2024



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GS Paper 2 – Environment, Ecology, and Disaster Management

Is Delhi Becoming an Uninhabitable City?

Context: Delhi's **air pollution crisis** has escalated to alarming levels, especially during winter, posing severe health risks to its residents. The worsening Air Quality Index (AQI), compounded by extreme weather conditions, highlights the city's declining **liveability**, particularly for its vulnerable populations.

Understanding the Air Quality Index (AQI):

The Air Quality Index (AQI), defined by the Central Pollution Control Board (CPCB), simplifies complex pollutant data into scores for public understanding. It evaluates eight major pollutants:



Pollutant	Description		
PM10 &	Fine particles that penetrate deeply into the lungs and bloodstream, causing asthma,		
PM2.5	bronchitis, heart disease, and other chronic conditions.		
Nitrogen	Emitted from burning fuels, these aggravate respiratory issues like asthma and can lead to		
Oxides	long-term susceptibility to infections.		
Ozone (0_3)	A surface-level pollutant formed by reactions in sunlight, linked to COPD , respiratory		
	illnesses, and premature deaths.		
Sulfur	Released by fossil fuel combustion, it harms cardiovascular health and damages plants,		
Dioxide	reducing air quality further.		
Ammonia	Predominantly from fertilizers and livestock waste, ammonia contributes to aerosol		
	pollution and ecological harm such as algal blooms and dead zones in water.		
Lead	A toxic heavy metal from industrial activities, particularly dangerous for children, causing		
	permanent developmental and beh <mark>avioral d</mark> amage.		
Carbon	An odorless, toxic gas from incomplete combustion of fuels, leading to heart disease risks and		
Monoxide	potentially fatal poisoning at high concentrations.		

Sources of Delhi's Air Pollution:

- 1. Beyond Stubble Burning
 - During peak stubble-burning season, PM2.5 levels increase by 15-35%. However, even without stubble burning, Delhi's AQI rarely drops below "very poor", revealing systemic internal issues.
- 2. Internal Pollution Sources
 - A 2023 report by IIT Kanpur, IIT Delhi, TERI, and Airshed Kanpur shows that 50% of PM2.5 during winter originates from within Delhi itself.
- 3. Vehicle Emissions
 - Responsible for **58%** of Delhi's pollution:
 - 34% from exhaust gases.
 - 24% from tyre and brake wear.
 - Addressing this requires a major shift to public transport powered by clean energy and enhanced last-mile connectivity.

Health and Environmental Consequences

- **Respiratory Illnesses**: Chronic exposure to pollutants like **PM2.5**, **ozone**, and **SO₂** significantly increases cases of asthma, bronchitis, and COPD.
- **Cardiovascular Risk**: Prolonged contact with **CO** and **PM particles** raises the likelihood of **heart disease**.
- Ecological Harm: Excessive ammonia leads to water dead zones, while lead contamination has longterm environmental and health impacts.
- **Child Vulnerability**: Young children face irreversible developmental harm due to exposure to pollutants like **lead**.

Conclusion: Can Delhi Overcome the Crisis?

Delhi's rising pollution levels and poor AQI pose an existential challenge to the city's **liveability**. While measures like banning stubble burning and transitioning to clean transport are critical, addressing internal pollution **sources** and fostering **public awareness** are equally vital. Without coordinated efforts, Delhi risks becoming an increasingly **uninhabitable city**, jeopardizing the health of millions.









GS Paper 3 - Science and Technology

Democratising AI needs a radically different approach

Context: To **democratize artificial intelligence (AI)** effectively, the world needs a transformative approach that ensures equitable access and widespread benefits. Current practices often centralize AI's power and resources in the hands of a few, leaving many excluded from its potential advantages. A shift toward inclusivity and transparency is essential.



Why Democratizing AI Matters:

1. Inclusive Growth

o AI has the power to drive **economic development**, but its benefits must reach all sections of society, not just privileged groups or tech giants.

2. Reducing Inequality

o A democratic AI ecosystem can bridge the gap between developed and developing nations, empowering marginalized communities with access to life-changing technologies.

3. Empowering Innovation

Opening AI to a broader audience can foster grassroots innovation, encouraging solutions tailored to local needs and challenges.

Barriers to AI Democratization:

1. Resource Centralization

Large corporations dominate AI due to their monopoly on data, computing power, and talent, creating barriers for smaller players.

2. High Entry Costs

 Developing and deploying AI requires substantial investment, making it inaccessible to startups, researchers, and governments in resource-constrained settings.

3. **Opaque Algorithms**

Lack of transparency in AI models raises concerns about bias, discrimination, and unfair decisionmaking, further excluding underrepresented groups.

A Radically Different Approach:

1. Open Data Ecosystems

Governments and organizations must promote open data platforms while safeguarding privacy. Shared data resources will lower barriers to entry and encourage participation from smaller players.

2. Collaborative Frameworks

Establish **global partnerships** among academia, industries, and governments to democratize AI tools and research for public good.

3. Decentralized AI Infrastructure

Transitioning to decentralized AI frameworks using blockchain and edge computing can reduce reliance on big tech, making AI more accessible to all.

4. AI Education and Awareness

Offering affordable education programs and free online resources can empower people worldwide with the skills to contribute to AI innovation.

5. Transparent and Ethical AI

o Enforcing **accountability mechanisms** will ensure that AI systems are fair, explainable, and free from harmful biases.

Conclusion: Building an Inclusive AI Future

Democratizing AI demands radical change, moving beyond business-as-usual to embrace an inclusive and equitable framework. By prioritizing openness, collaboration, and education, we can ensure AI's transformative power benefits **all of humanity**, fostering a future where innovation knows no boundaries.





24-30 Nov 2024





GS Paper 2- Governance, Constitution, Polity, Social Justice, and International Relations

Global Alliance Against Hunger and Poverty: A Collective Step Toward Eradication

Context: The **Global Alliance Against Hunger and Poverty** was officially unveiled at the **G20 Leaders' Summit** in Rio de Janeiro, Brazil. This initiative aims to accelerate the fight against **hunger** and **poverty** while promoting the achievement of the **Sustainable Development Goals (SDGs)**.

What is Hunger?

The **Food and Agriculture Organization (FAO)** defines hunger as the habitual consumption of fewer calories than needed for a person's minimum dietary energy requirement. Factors like **sex**, **age**, **stature**, and physical activity levels determine this threshold.



India's Hunger Scenario:

- India ranks 105th out of 127 countries in the Global Hunger Index (GHI) 2024, reflecting a 'serious' hunger level.
- India's **GHI score of 27.3** highlights the country's challenges, especially when compared to neighbors like **Bangladesh**, **Nepal**, and **Sri Lanka**, which fall under the 'moderate' category.

Global Alliance Against Hunger and Poverty:

Why is This Alliance Important?

- The **2030 Agenda for Sustainable Development** set ambitious goals to eradicate **poverty**, **hunger**, and achieve **food security**. However:
 - The **COVID-19 pandemic** reversed progress, increasing extreme poverty and worsening nutrition levels.
 - o By **2030**, an estimated **622 million people** will live in extreme poverty, and **582 million** will face hunger—numbers unchanged from **2015**.
 - **Climate change, global conflicts**, and **inequalities** have further slowed progress.

What is the Alliance?

Launched during the **G20 Summit**, the alliance brings together nations and resources to combat hunger. Led by **Brazilian President Luiz Inácio Lula da Silva**, it emphasizes strategies like:

- Cash transfers
- School meal programs
- Farmer support initiatives

Goals and Objectives:

The alliance is committed to:

- Eradicating hunger and poverty by 2030, aligning with the SDGs.
- Removing all nations from the FAO Hunger Map by fostering collaboration and resource-sharing.

Structure and Membership:

Who Can Join?

- Members:
 - o 148 entities, including **82 countries**, the **African Union**, the **European Union**, and 24 international organizations.
 - o **Financial institutions** (9) and **NGOs** (31) are also part of this network.
 - o Non-G20 nations have been eligible for membership since **July 2024**.
- Early participants include **Brazil**, **Bangladesh**, and G20 members, with representation across continents.

Key Pillars of the Alliance:

- 1. **National Framework**: Focuses on coordinating public policies to address hunger.
- 2. **Knowledge Integration**: Leverages **data** and **technology** to create evidence-driven solutions.
- 3. **Financial Mobilization**: Aims for large-scale funding to implement anti-hunger programs.

Strategic Commitments:

- **Income Support**: Reach **500 million people** through income distribution programs by **2030**.
- **School Meals**: Provide nutritious meals to **150 million children** in hunger-affected regions.
- **Financial Mobilization**: Partner with multilateral banks to generate billions for poverty alleviation projects.

Operational Framework:









Funding:

- Operates without an exclusive fund, relying on contributions from members and partners like FAO, UNICEF, and the World Bank.
- Estimated cost: \$2-3 million annually.

Technical Office:

- Headquartered under FAO's supervision with functional autonomy.
- Likely location: **Brasilia** or another **Global South country**.

Core Activities:

- **Regular Summits Against Hunger and Poverty.**
- Establishing a **High-Level Champions Council** to oversee alliance operations.
- Sharing **best practices** among members and offering **technical expertise** or **financial aid**.

Features of the Alliance:

- **Policy Tools**: A basket of over 50 strategies, including:
 - **School meal programs**
 - **Cash transfers**
 - Support for smallholder farmers
 - Maternal and early childhood interventions
 - Water access solutions
- **Matchmaking Platform:** Connects countries in need with donors and support organizations.

A Unified Effort to End Hunger:

The **Global Alliance Against Hunger and Poverty** represents a bold, collaborative initiative to tackle one of humanity's oldest challenges. By leveraging resources, technology, and knowledge-sharing, it aims to create a **world free of hunger and poverty** by **2030**, fostering hope for a better, equitable future.







24-30 Nov 2024





GS Paper 2 – Social Justice, and International Relations

ICC Issues Arrest Warrants for Netanyahu and Gallant Over Gaza Crisis

Context: The International Criminal Court (ICC) has issued arrest warrants for Israel Prime Minister Benjamin Netanyahu, former defense minister Yoav Gallant, and Hamas leader Mohammed Diab Ibrahim Al-Masri for alleged war crimes and crimes against humanity.

Why in News?

The **International Criminal Court (ICC)** has issued **arrest warrants** for:

- Israeli Prime Minister Benjamin Netanyahu
- Former Defense Minister Yoav Gallant
- Hamas leader Mohammed Diab Ibrahim Al-Masri

The charges include **war crimes** and **crimes against humanity**. These warrants were issued after **ICC Prosecutor Karim Khan** linked these figures to:

- 1. The October 7 Hamas attack on Israel.
- 2. **Israeli military actions** in Gaza.

What is the International Criminal Court (ICC)?

About the ICC

- The **ICC** is a **permanent court** designed to prosecute individuals for severe international crimes such as:
 - Genocide
 - War crimes
 - Crimes against humanity
 - Crimes of aggression
- Established under the **Rome Statute** in 1998, it became functional in **2002**.

Key Features:

- The ICC is independent of the **United Nations**, but both are headquartered in **The Hague**, Netherlands.
- It differs from the International Court of Justice (ICJ), which handles disputes between nations.

Membership:

- **124 countries** are ICC members.
- Notable non-members: India, China, Israel, United States, Russia, and Turkey.

How the ICC Functions

Judges and Prosecutors:

• The ICC has 18 judges and prosecutors, each serving non-renewable nine-year terms.

Investigation Process:

- 1. Preliminary Examination:
 - o The prosecutor evaluates the case's **gravity** and relevance.
- 2. Approval:
 - o Pre-trial judges must grant permission for a full investigation.

Ways to Open Investigations:

- Member State Referral: A country requests investigation of crimes in its territory.
- **UN Security Council Referral**: The UN instructs the ICC to investigate.
- **Proprio Motu**: The prosecutor acts independently.

Investigating Non-Member States

Non-members, like Israel, can be investigated if:

- Crimes occur within a member state.
- The state accepts ICC jurisdiction.
- The UN Security Council authorizes action.

Details of the Arrest Warrants

Accusations Against Netanyahu and Gallant

War Crimes:

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- o Depriving civilians in Gaza of essential resources (food, water, medicine, fuel, electricity).
- o Restricting medical supplies, causing immense suffering.
- Crimes Against Humanity:
 - o Murder, persecution, torture, violence, and rape.
 - o Property destruction under their leadership.

Role of Hamas Leader Mohammed Diab Ibrahim Al-Masri: Accused of orchestrating October 7 Hamas attacks, including mass killings and kidnappings.

Impact of ICC Warrants

- **Enforcement**: ICC relies on **member states** to arrest the accused.
 - o Example: If Netanyahu visits an ICC member country, it is obligated to extradite him to The Hague.
- Geopolitical Implications:
 - o Countries like **Germany**, **France**, and the **UK** (ICC members and Israeli allies) face diplomatic dilemmas.
 - **Palestinian Victory**: The warrant boosts **international pressure** on Israel.

Conclusion:

The ICC's warrants signify a major development in holding leaders accountable for **war crimes**. While enforcement faces challenges, the move highlights the **international community's commitment** to addressing crimes against humanity, regardless of political stature.











GS Paper 1 – Indian Heritage and Culture, History, and Geography of the World and Society

Significant Archaeological Discovery Unearthed in Kerala

Context: A remarkable archaeological discovery has been made in Kanhirapoil, a region located in the Madikkai grama panchayat of Kasaragod district, Kerala. This discovery offers new insights into the **prehistoric culture** and artistic traditions of the area.

Details of the Discovery

- 1. Rock Carvings Unearthed
 - A set of rock carvings was uncovered on private property in Kanhirapoil, revealing 24 pairs of footprints and an intricately etched human figure, surrounded by four circular pits.
- 2. Age and Significance of the Carvings
 - Experts date the carvings back to the **Megalithic period**, approximately **2,000 years ago**. These were created using **iron tools**, highlighting the advanced skills of the region's early inhabitants.
- **Symbolism of the Footprints**
 - The footprints, ranging from 6 to 10 inches in size, suggest representations of both adults and children. They are all oriented westward, symbolizing spiritual significance. While experts believe these may represent the souls of the deceased, local folklore suggests they belong to a goddess.
- 4. Artistic Style
 - The carvings are similar to prehistoric rock art found in Avalakki Pera in Udupi district, Karnataka, and other locations in **north Kerala**, indicating a **shared artistic tradition** across the region.
- **Cultural and Historical Context**
 - This discovery offers valuable insights into the artistic and cultural practices of the region's **prehistoric inhabitants**, shedding light on their rituals and symbolism.
- Regional Significance
 - Similar artefacts and carvings have been found in other parts of **north Kerala**, including **Erikulam** Valiyapara, Cheemeni Ariyittapara, Ettukudukka, and the famous Edakkal Caves in Wayanad. These finds point to a **shared cultural heritage** across prehistoric Kerala.
- 7. Implications for Further Research
 - This discovery underscores the **historical importance** of the region, highlighting the need for **further archaeological exploration** to uncover more about Kerala's ancient past.

Conclusion:

The findings at **Kanhirapoil** offer a fascinating glimpse into Kerala's **prehistoric past**, emphasizing the **artistic** expressions and cultural traditions of its early inhabitants. This discovery invites further investigation into the **region's rich history**, promising exciting revelations about the **ancient civilizations** that once thrived there.









State of the World's Children Report 2024

GS Paper 2 – Polity, Social Justice, and International Relations

Context: The UNICEF State of the World's Children Report 2024 offers a comprehensive analysis of child survival, development, and protection across the globe. This vital report assesses the future of childhood amid rapid changes and challenges.

Findings and Key Highlights:

1. **Global Snapshot of Children's Well-being**: The report provides vital statistics on child survival, development, and protection, highlighting the challenges faced by children worldwide and examining future indicators that will affect their lives.



- 2. Three Megatrends Shaping Children's Futures
 - **Demographic Transitions: Migration and population shifts** may offer opportunities but also present significant risks, such as **exploitation** and **separation from families**.
 - Climate and Environmental Crises: Pollution, extreme weather, and environmental degradation are harming children's **development**—especially their **brains**, **lungs**, and **immune systems**.
 - Frontier Technologies: Emerging technologies will reshape how future generations learn, work, and communicate. Their development and governance will significantly impact children's well-being in the years to come.
- 3. **Three Future Scenarios for Children:** The report presents potential scenarios for children's futures based on varying rates of progress and decision-maker actions:
 - Business-as-usual trendlines: By 2050, child populations in low-income and lower-middle-income countries will significantly increase, exacerbating existing challenges.
 - **Accelerated Development**: Children in regions facing **conflict** and **climate change** will experience harsher conditions, including exposure to prolonged violence and extreme heatwaves.
 - **Delayed Development**: With ongoing **gender inequality**, 1.1 billion children will live in **societies** where gender discrimination remains a significant barrier to their progress.

UNICEF's Role and Vision:

UNICEF is a **United Nations agency** dedicated to improving the lives of children worldwide. It operates in over **190 countries and territories**, focusing on ensuring every child has the opportunity to **survive**, **thrive**, and **fulfill their potential**. Key areas of focus include:

- **Education, health, and nutrition** services
- Protection from violence and abuse
- Safeguarding children against climate change and disease

UNICEF is also the world's largest provider of vaccines and manages the world's largest humanitarian warehouse.

Children: The Agents of Change for a Better Future

UNICEF emphasizes that **children and young people** are not just recipients of aid, but **powerful agents of change**. Their fresh perspectives and ideas will play a crucial role in shaping a **better, more sustainable** future for all.









GS Paper 3 – Bio-diversity, Environment, Security, and Disaster Management

Why the World Needs a Global Plastic Treaty

Context: In 2022, the United Nations Environment Assembly (UNEA) initiated the process of creating a **legally binding global treaty** to combat the growing crisis of plastic pollution, including its impact on marine ecosystems. Now, representatives from over **170 nations** are convening in **Busan**, **South Korea**, for the fifth and final round of negotiations, aiming to finalize the treaty by **2024**.



- The Growing Challenge: A Surge in Plastic Production:
 - Plastic production has doubled from 234 million tonnes (mt) in 2000 to **460 mt** in 2019.
 - By **2040**, this figure is expected to soar to **700 mt**, as per the **OECD**.

Why a Global Plastic Treaty is Essential:

- 1. Longevity of Plastic
 - o Plastic takes **20 to 500 years** to decompose, with less than **10% of plastic** being recycled.
 - o Annually, **400 mt of plastic waste** is generated, a number predicted to grow by **62%** by **2050**.
- 2. Environmental and Health Impacts
 - o Plastic production contributed to **6% of global greenhouse gas emissions** in 2020.
 - If unchecked, emissions from plastic could increase by **20%** by 2050.
 - Plastic waste pollutes ecosystems, breaks into microplastics, and poses serious health risks, including cancer, endocrine disruption, and reproductive disorders.
- 3. **Ecosystem Destruction:** Rivers, oceans, and land ecosystems face severe threats due to plastic waste, affecting biodiversity and natural habitats.

India's Contribution to Plastic Pollution:

- India is responsible for around 20% of global plastic pollution, producing 9.3 million tonnes of plastic waste annually.
- In 202<mark>2, India b</mark>anned **single-use plastics** to curb environmental damage.

Key Focus of Treaty Negotiations:

- 1. **A Life-Cycle Approach**: The treaty emphasizes addressing plastic pollution across its entire **life cycle**—from production to disposal and recycling.
- 2. Production Caps Debate
 - Some nations, like **Rwanda**, advocate for ambitious targets, proposing a 40% reduction in plastic pollution by 2040.
 - Others, including **Saudi Arabia**, **Russia**, and **India**, oppose strict production limits, focusing instead on improving waste management and sustainable use.

India's Position on the Global Treaty:

- 1. Opposition to Production Caps
 - India argues that restricting polymer production exceeds the UNEA's mandate.
 - It prefers measures focusing on downstream management and sustainable practices.
- 2. Call for Financial and Technical Support
 - India emphasizes the need for financial assistance and technical expertise for effective implementation of the treaty.
- 3. Scientific Regulation of Chemicals
 - o Decisions regarding harmful chemicals in plastics should be science-based and managed at the national level.

A Global Responsibility:

The proposed treaty represents an opportunity to address one of the most pressing environmental challenges of our time. Global cooperation and decisive action are essential to curtail the harmful impacts of plastic pollution, protecting both human health and the planet's ecosystems for future generations.





GS Paper 2 – International Relations



India's Engagement at the 11th ADMM-Plus Forum

Context: India's Defence Minister participated in the 11th ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus) in Vientiane, Laos, highlighting India's vision for regional cooperation.

Key Highlights:

- 1. Freedom of Navigation:
 - Emphasized adherence to the **United Nations Convention on the** Law of the Sea (UNCLOS, 1982) to ensure free navigation and overflight in the Indo-Pacific region.
 - Advocated for a **Code of Conduct** that respects international law.
- 2. Adoption of Buddhist Principles:
 - Highlighted the relevance of **Buddhist values** in resolving conflicts and fostering peace in a **polarized** world.
- "Asian Century" Vision:
 - Celebrated ASEAN's economic dynamism, emphasizing vibrant trade, commerce, and cultural
 - Stressed India's Act East Policy, which has deepened ties with ASEAN nations since its launch in 2014.
- 4. Climate Change and Defence:
 - Proposed the development of an ADMM-Plus Defence Strategy to address interlinked challenges of climate change and security.
- 5. Safeguarding Global Commons:
 - o Advocated for the protection of shared natural resources such as the high seas, outer space, and Antarctica, which lie beyond national boundaries.

What is ADMM-Plus?

- Multilateral Defence Framework: Brings together the 10 ASEAN members and 8 dialogue partners, including India, China, Russia, Japan, South Korea, Australia, New Zealand, and the US.
- Established: Inaugural meeting held on October 12, 2010, in Hanoi, Vietnam.
- **Annual Engagement:** Since 2017, the forum meets yearly to strengthen **regional security** and foster **practical** cooperation.

Focus Areas of ADMM-Plus:

The framework focuses on **seven areas of practical cooperation**:

- 1. Maritime Security
- 2. Counter-Terrorism
- 3. Humanitarian Assistance and Disaster Relief (HADR)
- 4. Peacekeeping Operations
- 5. Military Medicine
- 6. Humanitarian Mine Action
- 7. Cyber Security

Conclusion:

Each focus area is led by Experts' Working Groups (EWGs) co-chaired by ASEAN member states and Plus countries, operating in three-year cycles. The ADMM-Plus forum and India's proactive contributions emphasize its commitment to fostering **peace**, **security**, **and stability** in the Indo-Pacific and beyond.



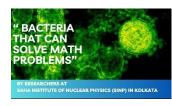






Bacteria That Solve Math Problems: A New Era in Synthetic Biology

Context: Scientists at the Saha Institute of Nuclear Physics, Kolkata, have achieved a groundbreaking feat by engineering bacteria to perform mathematical computations. This innovation marks a significant step forward in **synthetic biology** and its potential applications.



Bacteria as Biological Computers:

- Researchers modified **Escherichia coli (E. coli)** to function as **biological computers**, capable of solving mathematical problems such as:
 - o Determining whether a number is **prime**.
 - Identifying whether a letter is a **vowel**.
- By introducing **genetic circuits**, the bacteria were programmed to respond to specific **chemical** inducers, mimicking the behavior of artificial neural networks (ANNs).

How It Works: Bactoneurons and Binary Code:

1. Bactoneurons:

- o Engineered bacteria act like **neurons** in a neural network, capable of processing inputs and producing
- o These neurons respond to chemical signals by emitting fluorescent proteins, which serve as the answers.

2. Binary Code System:

- Mathematical problems are translated into binary code, represented by the presence or absence of specific chemicals.
- The bacteria decode the input and provide a "yes" or "no" answer through their fluorescent response.

Beyond Simple Calculations:

- These bacterial computers can also tackle **complex optimization problems**, such as calculating how many pieces a pie can be divided into with a set number of straight cuts.
- This demonstrates their ability to handle increasingly **sophisticated computational tasks**, opening doors to new possibilities in various domains.

Potential Applications:

- This innovation could revolutionize fields such as:
 - Data processing in biological systems.
 - **Optimization** in industrial processes.
 - **Problem-solving** in healthcare and environmental science.

Future Prospects:

The use of engineered bacteria as biological computers not only showcases the synergy between biology and mathematics but also hints at a future where living organisms could solve problems once confined to traditional computing. This exciting development is a testament to the limitless potential of synthetic biology.



GS Paper 3- Technology, Security



24-30 Nov 2024





GS Paper 2 – Governance, Constitution, Polity, Social Justice and International relations

Access to Medicine Index Report 2024: Bridging Healthcare Gaps in LMICs

Context: The **Access to Medicine Foundation** has released its **2024 Index Report**, shedding light on global pharmaceutical companies' efforts to improve **medicine accessibility** in **low- and middle-income countries (LMICs)** amidst persistent challenges.

Key Findings of the Report:

1. Limited Clinical Trials in LMICs

 Despite hosting 80% of the global population, LMICs account for only 43% of clinical trials globally.

• This exclusion restricts LMIC populations from participating in the development of new medicines, delaying access to innovative treatments.



• **Voluntary licensing** and **technology transfers** are largely concentrated in countries like **Brazil, China, and India**, leaving **sub-Saharan Africa** significantly underserved.

3. Inequities in Medicine Access

• Over **61% of assessed pharmaceutical products** lack strategies to address the needs of **low-income countries**, leading to uneven distribution efforts concentrated in upper-middle-income regions.

4. Decline in R&D for Priority Diseases

• Pharmaceutical companies are pulling back from research into **priority diseases** such as **malaria**, **tuberculosis**, and **neglected tropical diseases**, which disproportionately impact LMICs.

Challenges in Accessing Medicines in LMICs:

Economic Barriers:

- **High costs of essential medicines**, especially patented drugs, limit access for individuals and strained healthcare systems.
- Out-of-pocket expenses force families to choose between medical treatment and basic necessities, worsening health inequities.

Infrastructure and Supply Chain Issues:

- Poor transportation infrastructure and unreliable **cold chain systems** hinder medicine delivery, especially in rural areas.
- Supply chain disruptions during pandemics or natural disasters exacerbate shortages.

Regulatory Weaknesses:

- Weak regulations allow the spread of **counterfeit and substandard medicines**, reducing treatment efficacy and safety.
- LMIC-specific diseases remain under-prioritized in pharmaceutical innovation.

Workforce and Cultural Challenges

- Shortages of **trained healthcare professionals** in rural regions limit proper prescription and medication management.
- Low health literacy and cultural barriers reduce adherence to prescribed treatments.

Way Forward: Solutions for Equitable Access:

1. Strengthening Local Manufacturing

- Establish **regional pharmaceutical hubs** to ensure consistent medicine supply and reduce import dependency.
- Example: African Union's plan to produce 60% of vaccines needed on the continent by 2040.

2. Investing in R&D for LMIC-Specific Needs

- **Public-private partnerships** should focus on affordable, region-specific solutions for diseases like malaria and tuberculosis.
- Collaborations like the Medicines Patent Pool can expand access to essential medicines.

3. Digital Healthcare Expansion

- **Digital health platforms** like **telemedicine** and AI-driven diagnostics can revolutionize care delivery.
- Models like India's Co-WIN and U-WIN portals demonstrate scalable solutions for vaccinations and healthcare coordination.

4. Streamlined Regulatory Processes

- Harmonized regulatory frameworks can accelerate medicine approvals and ensure high standards.
- Policies to prevent patent evergreening and promote local generic production are crucial.

5. Expanding Financing Mechanisms

• **Pooled procurement models** and increased international funding can make essential medicines more affordable.

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6. Addressing Gender Disparities

Expanding R&D for women's and transgender health and targeting gender-based barriers in healthcare are vital for improving equity.

Conclusion:

The Access to Medicine Index Report 2024 highlights the urgent need for pharmaceutical companies and policymakers to address inequities in healthcare access for LMICs. By focusing on innovative solutions, local capacity building, and inclusive strategies, we can bridge the gaps and ensure that life-saving medicines reach the most vulnerable populations.









GS Paper 2 – Governance, Constitution, Polity, Social Justice and International Relations

UNHCR Global Appeal 2025: A \$10 Billion Initiative to Address the Refugee Crisis

Context: The United Nations High Commissioner for Refugees (UNHCR) has launched a \$10 billion global appeal for 2025, aimed at addressing the urgent needs of millions of refugees, displaced persons, and stateless **people** worldwide. This ambitious funding appeal is crucial to meet the challenges of **protecting**, **assisting**, and **empowering** refugees while helping them find sustainable solutions for their precarious situations.



The Global Refugee Crisis: An Ongoing Challenge:

As of 2023, 117.3 million people globally have been forcibly displaced, with 40% of them being children, according to the UNHCR Global Trends Report. Refugees are individuals who have been forced to flee **conflict**, **violence**, **persecution**, and the adverse effects of **climate change**.

Key Causes of Forced Displacement:

- **Conflict and violence** (e.g., ongoing crises in **Syria** and **Ukraine**)
- Persecution (e.g., Myanmar Rohingya crisis)
- **Climate change** and environmental disasters.

Challenges Faced by Refugees and Host Countries:

For Refugees:

- Lack of basic necessities such as **food**, **shelter**, and **healthcare**.
- Exposure to **discrimination**, **exclusion**, and **trafficking**.
- Vulnerability to exploitation and other forms of abuse.

For Host Countries:

- **Sudden population increases** strain local **resources** (healthcare, housing, etc.).
- **Unemployment** and **social tensions** among host communities.
- Pressure on infrastructure and public services.

Key Initiatives to Address the Crisis:

Global Compact on Refugees (2018)

This agreement provides a comprehensive framework to support both refugees and their host countries, aiming for better management of refugee movements and ensuring longer-term solutions.

Global Refugee Forum:

Held every four years, this forum brings together governments, international organizations, and other stakeholders to discuss the challenges refugees face and to find lasting solutions for both refugees and host communities.

United Nations Relief and Works Agency (UNRWA):

Established in 1949, UNRWA provides assistance and protection to Palestinian refugees, ensuring that they receive basic support and are protected in their host countries.

UNHCR: Mission and Achievements

About UNHCR:

- Headquarters: Geneva, Switzerland
- Founded: In 1950 by the UN General Assembly
- **Mission**: To **protect the rights** and build a **better future** for people forced to flee their homes due to **conflict** and **persecution**.
- **Operations**: UNHCR works in **136 countries**, providing life-saving **aid** and facilitating **solutions** for refugees, internally displaced people, and stateless individuals.

Notable Achievements:

Nobel Peace Prizes: UNHCR has been awarded the Nobel Peace Prize twice, in 1954 and 1981, for its tireless efforts in supporting displaced people and advocating for their rights globally.

Conclusion:

The **UNHCR Global Appeal 2025** marks a critical step toward addressing the **growing refugee crisis**. With a focus on **humanitarian aid**, **long-term solutions**, and **collaboration** with host countries, the appeal seeks to alleviate the suffering of millions while paying the way for a **sustainable and inclusive future** for refugees and displaced populations around the world.

Google Play







GS Paper 3 – Technology, Economic Development

WAVES OTT Platform: A New Era of Digital Entertainment

Context: WAVES, developed by **Prasar Bharati**, is India's latest digital streaming platform designed to meet the nation's growing appetite for online entertainment. This innovative **platform** offers a comprehensive suite of features, blending traditional and modern content formats to cater to diverse audiences.

Features of WAVES OTT Platform:

WAVES offers an **all-in-one digital experience**, including:

- 1. On-Demand Content
 - o Access to **movies**, **shows**, **ebooks**, and **historical archives** of India's rich cultural and social heritage.
- 2. Live Events
 - o Streaming of **religious programs**, **cricket tournaments**, and other significant events as they happen.
- 3. **Gaming Hub**
 - o Interactive **games** for users of all ages, making it a family-friendly destination.
- 4. Radio and TV Streaming
 - Seamless access to live TV and radio, with 65 channels, including private broadcasters.
- 5. E-Commerce Integration
 - Explore online shopping through partnerships with the ONDC network, blending entertainment and convenience.

Understanding OTT Platforms:

Over-the-Top (OTT) platforms are digital streaming services that deliver content directly over the internet, bypassing traditional cable or satellite networks.

Key Features of OTT Platforms:

- **On-Demand Content**: Watch what you want, when you want.
- Flexibility: Choose from subscription-based or free models.
- **Device Compatibility**: Stream across multiple devices, from smartphones to smart TVs.
- **Personalized Experience**: Get content tailored to your preferences.

Why WAVES Stands Out:

With its unique blend of **entertainment**, **education**, **and commerce**, WAVES offers a platform that resonates with Indian audiences, making it a **one-stop destination** for streaming and beyond.





24-30 Nov 2024





NBFCs: A Vital Pillar of India's Financial System

GS Paper 3 – Economic Development

Context: The **Reserve Bank of India (RBI)** has been actively urging **Non-Banking Financial Companies (NBFCs)** to adopt sustainable growth strategies while ensuring their long-term stability. NBFCs are instrumental in strengthening the financial ecosystem, especially in **rural and semi-urban areas**, where traditional banking networks remain limited.



What are Non-Banking Financial Companies (NBFCs)?

NBFCs are entities registered under the **Companies Act, 1956**, engaging in a range of **financial activities**, such as:

- Providing loans and advances.
- Acquiring shares, stocks, bonds, and other marketable securities.
- Operating varied deposit schemes.

However, NBFCs **do not include** institutions primarily involved in:

- Agricultural or industrial activities.
- Trade of goods or real estate transactions.

The **Ministry of Corporate Affairs** and the **Reserve Bank of India** oversee NBFC operations.

Banks vs. NBFCs: Key Differences

While NBFCs perform functions similar to banks, there are notable differences:

- 1. **Demand Deposits**: NBFCs cannot accept demand deposits like banks.
- 2. Payment Systems: NBFCs are not part of the payment and settlement system and cannot issue cheques.
- 3. **Deposit Insurance**: Unlike banks, NBFCs lack **Deposit Insurance and Credit Guarantee Corporation (DICGC)** protection for their depositors.

The Significance of NBFCs:

NBFCs play a crucial role in advancing **financial inclusion** and **economic growth**, particularly in underserved regions. Their contributions include:

- Expanding Financial Access: Extending credit to remote areas.
- **Efficient Services**: Simplified processes and **doorstep delivery**.
- **Priority Sector Lending (PSL)**: Addressing credit demands in sectors like **agriculture** and **microfinance**.
- Boosting Growth: Financing housing, infrastructure, and small businesses.

Challenges Faced by NBFCs:

Despite their significance, NBFCs encounter numerous challenges:

- 1. Higher Risk Weights:
 - o RBI's increased **risk weights** for loans to NBFCs have raised borrowing costs.
 - o Bank funding to NBFCs has dropped from **22% to 15%** as of April 2024.
- 2. **Funding Constraints**: Smaller NBFCs with low credit ratings face **high borrowing costs** and limited financing options.
- 3. **Underdeveloped Debt Market**: India's **bond market** lacks depth, restricting access to diversified funding sources.
- 4. **Regulatory Barriers**: Caps by **SEBI** on International Securities Identification Numbers (ISINs) and a lack of market makers hinder market efficiency.
- 5. **Rising Costs**:Credit costs are projected to rise from **2.6% in 2024 to 4% in 2025**, affecting profitability.
- 6. **Challenges in Overseas Borrowing**: Although overseas funding offers lower hedging costs, many NBFCs are still exploring its full potential.

The Road Ahead for NBFCs:

1. **Developing the Bond Market**: Creating a **liquid and vibrant bond market** will help NBFCs access **Download Ong-term cap**ital with reduced dependence on banks.









- 2. **Co-Lending Models**: Strengthening partnerships between **NBFCs and banks** can lower costs and ensure broader credit availability.
- 3. **Enhancing Compliance**: Adhering to RBI's regulations will improve **risk management** and **public trust**.
- 4. **Diversifying Funding Sources**: NBFCs should explore **securitization**, **commercial papers**, and **equity markets** while balancing domestic and international funding.

Conclusion:

NBFCs are the backbone of **India's financial ecosystem**, driving **financial inclusion** and supporting **economic growth**. However, addressing funding limitations, regulatory challenges, and market inefficiencies is crucial to ensuring their resilience and long-term sustainability.





24-30 Nov 2024



GS Paper 2 – Governance, Constitution, Polity, Social Justice, and International Relations



PAN 2.0 Project: A Modern Tax Revolution

Context: The PAN 2.0 Project, approved by the Cabinet Committee on Economic Affairs, is set to transform the Income Tax Department's egovernance landscape. With a budget of 1,435 crore, this initiative promises a free upgrade to PAN cards, introducing QR Codes as a unified identifier across various government agencies.



What is the PAN 2.0 Project?

The PAN 2.0 Project is a cutting-edge e-governance initiative aimed at modernizing PAN and TAN services with technology-driven upgrades. It focuses on making tax-related processes simpler, faster, and more user-friendly. Key Features and Benefits:

- 1. **Easy PAN Applications** The project simplifies the process, enabling individuals to **apply for a PAN card effortlessly**.
- 2. **Enhanced Tax Filing** Filing taxes will become **less cumbersome**, **faster**, and **highly accurate**, incorporating advanced **digital features**.
- 3. **Sustainability Boost** With the **digitalization** of services, the project will significantly reduce **paper waste**, contributing to **environmental sustainability**.
- 4. Cybersecurity Enhancements Robust cybercrime protections and enhanced security features will safeguard user data.

Responsibilities of Service Providers:

The companies implementing the PAN 2.0 system will undertake three crucial duties:

- 1. **Infrastructure Development**Establishing the required **hardware**, **software**, and **network systems** for the upgraded system.
- 2. **Data Migration** Ensuring a seamless transfer of **existing tax records** to the new system with **zero errors**.
- 3. **System Integration** Aligning the new system with **government regulations** and ensuring **smooth compatibility** with existing frameworks.

Why PAN 2.0 Matters?

- **Unified Identification**: The QR code upgrade enhances PAN's usability as a **universal identifier** for multiple services.
- **User-Friendly Approach**: This upgrade focuses on improving **taxpayer convenience** while reducing procedural complexities.
- Digital India Goal: Supports the government's vision of a tech-driven, efficient tax ecosystem.

The **PAN 2.0 Project** is more than just a system upgrade; it's a leap towards a **futuristic**, **streamlined**, **and citizen-friendly tax infrastructure**, setting new benchmarks in **digital governance**.



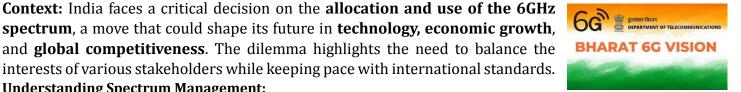






India's 6GHz Spectrum Debate: Balancing Progress and Priorities

Context: India faces a critical decision on the allocation and use of the 6GHz **spectrum**, a move that could shape its future in **technology**, **economic growth**, and **global competitiveness**. The dilemma highlights the need to balance the



GS Paper 3- Science and Technology

Understanding Spectrum Management:

Spectrum is a finite and vital resource enabling wireless communication. Effective spectrum management ensures efficient and equitable utilization of this resource. In India, the Telecom Regulatory Authority of India (TRAI) and the Department of Telecommunications (DoT) oversee spectrum allocation and regulation.

What is Spectrum?

- **Spectrum** refers to the range of invisible radio frequencies that carry **wireless signals**, forming a part of the electromagnetic spectrum.
- It spans from 3 Hz to 300 EHz, with frequencies used for communication ranging between 20 KHz and 300 GHz.
- These frequencies are grouped into **bands** based on their wavelength, with different bands serving various technological purposes.

Key Spectrum Bands:

1. 2.4GHz and 5GHz Bands:

- Widely used for WiFi and wireless communications.
- 2.4GHz offers wider coverage but slower speeds.
- o **5GHz** delivers **faster speeds** but covers shorter distances.

2. **6GHz Band** (WiFi 6E):

- o Operates between 5,925MHz and 7,125MHz.
- Allows maximum theoretical speeds of up to 9.6Gbps.
- Globally, countries like the U.S., U.K., Japan, South Korea, and others have de-licensed the 6GHz **spectrum for WiFi**, enabling faster internet speeds.
- **India and China**, however, are yet to approve this band for WiFi use, creating a regulatory bottleneck.

India's Current Status:

- The **6GHz spectrum** in India is primarily allocated to the **Indian Space Research Organisation (ISRO)** for satellite communications.
- This allocation limits its availability for **telecom operators** and **technology firms**, who view it as crucial for expanding **5G** and enabling advanced **WiFi services**.
- The Cellular Operators' Association of India (COAI) emphasizes that unlocking this spectrum is key to achieving the goals of the National Broadband Mission and ensuring cost-effective 5G deployment.
- The World Radiocommunications Conference has extended the deadline for global decisions on the 6GHz band until 2027.

The 6GHz Spectrum Debate:

Telecom Operators vs. Tech Companies

- **Telecom Operators**: Argue that the 6GHz band is essential for scaling **5G networks** and meeting rising **data**
- **Tech Firms**: Advocate for its unlicensed use in **WiFi** to support **connected devices** and the growing need for high-speed internet.

Economic Implications:

- Using the 6GHz spectrum for unlicensed purposes could **reduce costs** for 5G rollout.
- Retaining it solely for **satellite communication** might hinder **innovation** and **economic growth**.

Global Standards and Competitiveness:

- Many countries have already **de-licensed** the 6GHz spectrum for unlicensed use.
- India's delay risks affecting its **global competitiveness** and reducing its appeal to **technology investors**.

Potential Solutions:

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Freedom UPSC with Dhananjay Gautam 20







- o Allocate a portion of the spectrum for **unlicensed use** while reserving some for satellite needs.
- 2. Phased Implementation:
 - o Gradually transition the spectrum for WiFi use, giving stakeholders time to adapt.
- 3. **International Collaboration**:
 - o Work with **global regulatory bodies** to align India's policies with **international best practices**.

Conclusion:

India's decision on the **6GHz spectrum** will shape its **technological future**. Striking the right balance between the needs of **telecom operators**, **technology firms**, and **satellite communication** is critical for fostering **innovation**, supporting **economic development**, and maintaining **global competitiveness**.





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Constitution Day

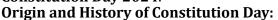


GS Paper 2 – Governance, Constitution, Polity, Social Justice and International relations

Constitution Day of India 2024: Celebrating the Spirit of Democracy

Context: Constitution Day, also known as Samvidhan Divas, is observed every year on November 26 to mark the adoption of the Indian Constitution in 1949. This monumental day celebrates India's transformation into a secular and democratic nation, emphasizing the principles of justice, liberty, equality, and fraternity.

Let's explore the **origin, significance**, and this year's highlights of **Constitution Day 2024**.



Constitution Day commemorates the day when the **Indian Constituent Assembly** adopted the **Indian Constitution** on **November 26, 1949**, which later came into effect on **January 26, 1950**.

Key Highlights of the Constitution's Origin:

- **Architect of the Constitution**: Drafted under the leadership of **Dr. B.R. Ambedkar**, the Constitution lays the foundation for India's **sovereignty**, **secularism**, **and democracy**.
- **Historical Adoption**: The adoption process involved contributions from **visionary leaders** who shaped the principles of governance and citizens' rights.
- Samvidhan Divas Initiative: First celebrated in 2015 to honor Dr. B.R. Ambedkar's 125th birth anniversary, this day recognizes the enduring legacy of the Constitution.

Significance of Constitution Day:

Why is Constitution Day Important?

- 1. **Tribute to Visionaries**: A day to honor the **members of the Constituent Assembly**, particularly **Dr. Ambedkar**, for crafting this historical document.
- 2. **Core Values of Governance**: Highlights the Constitution's principles, such as **Fundamental Rights**, **Directive Principles**, and the framework of **governance**, which uphold Indian democracy.
- 3. **Awareness and Education**: Encourages citizens to learn about their **rights and duties** while fostering a deeper understanding of the **Constitution's importance**.
- 4. **Inspiring the Youth**: Motivates younger generations to value the Constitution and contribute to building an **inclusive and equitable society**.

Difference Between Constitution Day and Republic Day:

Both days celebrate the Indian Constitution but focus on different aspects of its journey.

Aspect	Constitution Day	Republic Day
Date	November 26	January 26
Significance	Adoption of the Constitution	Implementation of the Constitution
Focus	Raising constitutional awareness	Celebrating national identity
Celebration	Discussions, readings, seminars	Parades, cultural events, awards
Style		

[&]quot;Hamara Samvidhan, Hamara Samman" Campaign:

To deepen public engagement with the **Constitution**, the **Vice President of India** launched the "**Hamara Samvidhan**, **Hamara Samman**" **Campaign** on **January 24**, 2024.

Objectives of the Campaign:

- Simplifying the Constitution: Spreading awareness about Fundamental Rights and Duties through interactive platforms.
- **Legal Empowerment**: Providing tools for citizens to access **justice** with initiatives like **Sabko Nyay** and **Har Ghar Nyay**.
- **Community Upliftment**: Special programs, such as **Vidhi Jagriti Abhiyaan**, aimed at empowering rural and marginalized communities.
- **Digital Outreach**: Launch of a dedicated **online portal** offering **quizzes, forums**, and **resources** to educate citizens about constitutional values.

Conclusion:

Constitution Day is a reminder of the **vision and ideals** that form the backbone of our nation. By celebrating this day, we not only honor the legacy of **Dr. B.R. Ambedkar** and the **Constituent Assembly** but also commit ourselves to uphold the Constitution's values in our daily lives.

This year's campaign, "Hamara Samvidhan, Hamara Samman", furthers the mission of empowering citizens and fostering active participation in nation-building. Let's take inspiration from our Constitution to work towards a more just, equitable, and inclusive India.

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24-30 Nov 2024





GS Paper 2 – Governance, Constitution, Polity, Social Justice

SC Upholds Inclusion of 'Secular' and 'Socialist' in the Constitution's Preamble

Context: The **Supreme Court of India** has dismissed petitions challenging the **constitutional validity** of the **42nd Amendment Act, 1976**, which introduced the words **'secular'** and **'socialist'** into the **Preamble of the Constitution**.

In its verdict on **Dr. Balram Singh & Others vs. Union of India**, the court emphasized the **acceptance** and **importance** of these terms in reflecting the ethos of the Indian Constitution.



Understanding the Preamble to the Indian Constitution:

The **Preamble** serves as the **introduction** to the Constitution, outlining its **philosophy**, **principles**, **and objectives**. It reflects the ideals envisioned by the **Objective Resolution**, adopted in **1947**, and was finalized on **November 26**, **1949**.

Key Highlights of the Preamble:

- **Source of Authority**: The Constitution derives its power from the "people of India".
- **Non-Justiciable**: While it is an integral part of the Constitution, violations of its principles cannot directly lead to legal action. However, it serves as a guiding framework for judicial interpretation.

'Socialist' and 'Secular' in the Preamble:

Historical Context

The terms 'socialist' and 'secular' were added through the 42nd Amendment, often referred to as the "mini-Constitution", during the Emergency in 1976.

What Do These Terms Mean?

- Socialist:
 - **Western Perspective**: Advocates collective or government ownership of resources to achieve economic equality.
 - o **Indian Perspective**: Supports **democratic socialism**, encouraging fair resource distribution while allowing a **mixed economy** of public and private sectors.
- Secular:
 - Western Perspective: Emphasizes strict separation between religion and state.
 - o **Indian Perspective**: Advocates **religious harmony**, with the state treating all religions with **equal respect** rather than maintaining absolute separation.

Supreme Court Judgment: Key Highlights:

Legitimacy of the 42nd Amendment:

- The petitioners argued the amendment's legitimacy, citing its passage during the Emergency.
- The SC noted that the **Constitution Forty-Fourth Amendment Bill, 1978**, retained the terms after **parliamentary debate**, affirming their importance.

Parliament's Power to Amend the Preamble:

- The court ruled that **Article 368** empowers Parliament to amend the Preamble.
- Arguments against **retrospective amendments** were dismissed, as the power to amend is clearly granted by the Constitution.

Constitution as a Living Document:

• The SC highlighted that while the **Constituent Assembly** initially excluded these terms, their inclusion reflects **India's evolving democratic framework**.

Delay in Filing Petitions:

• The court criticized the **44-year delay** in challenging the amendment, emphasizing the widespread acceptance of these terms in Indian society.

Interpretation of Key Terms:

- **Secularism**: The state remains **neutral**, neither endorsing nor opposing any religion. This principle is enshrined in **Articles 14**, **15**, **and 16**.
- Socialism: Indicates the state's commitment to being a welfare state without restricting economic policies.

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Significance of Including 'Secular' and 'Socialist':

- **Reinforces Democracy**: Strengthens India's commitment to **inclusive governance** and **social justice**.
- **Guides Legislation**: Ensures that laws align with constitutional rights and the **basic structure doctrine**.
- **Dynamic Adaptation**: Reflects the Constitution's ability to evolve with India's **societal needs**.

Understanding the 44th Amendment:

The **44th Amendment Act of 1978** was introduced to safeguard citizens' **Fundamental Rights** against potential misuse by governments. It strengthened protections against arbitrary actions, ensuring the rights of the people remain

Conclusion:

The Supreme Court's judgment upholding the **42nd Amendment** underscores the **dynamic and adaptive nature** of the Indian Constitution. By reaffirming the inclusion of **'secular'** and **'socialist'**, the verdict highlights Parliament's authority to ensure the Constitution aligns with the nation's evolving **democratic and social ideals**.





24-30 Nov 2024





GS Paper 3 - Technology, Economic Development, Bio-diversity, Environment, Security

One Nation One Subscription Scheme, Benefits, Significance

Context: The One Nation One Subscription (ONOS) scheme, recently approved by the Indian Cabinet with a budget of 6,000 crore for 2025–27, aims to transform the research landscape in India. By granting seamless access to high-impact scholarly articles and journals, the initiative seeks to empower students, researchers, and faculty members across government-managed higher education institutions and R&D centers. It aligns with the vision of Viksit Bharat@2047, NEP 2020, and the Anusandhan National Research Foundation (ANRF) to foster a research-centric learning environment.



Key Objectives of One Nation One Subscription:

- 1. **Comprehensive Access to Research Material**: The scheme will offer **subscriptions to over 13,000 international e-journals** from around 30 leading publishers.
- 2. Boosting Interdisciplinary Research: It aims to encourage detailed and diverse research, especially benefitting institutions in Tier 2 and Tier 3 cities, which often lack access to premium resources.
- 3. **Simplified Digital Access**: A **unified portal** will streamline the process, ensuring faster and easier access for students, researchers, and faculty members.

Implementation and Oversight:

Implementation Authority

- The **Department of Higher Education**, along with associated ministries, will lead awareness campaigns to ensure **maximum adoption** by users.
- The campaigns will focus on educating stakeholders about the benefits and usage of the scheme.

Role of ANRE

- The Anusandhan National Research Foundation (ANRF) will oversee periodic reviews of the scheme.
- It will monitor resource utilization and assess Indian authorship contributions in global research output. Significance of the ONOS Scheme:
 - Alignment with NEP 2020: The scheme supports the National Education Policy's vision of creating a robust ecosystem for research and innovation, driving academic synergy.
 - 2. **Strengthening India's Research Position**: By providing high-quality resources, the initiative positions India as a potential **global research hub**, promoting **collaboration and innovation**.
 - 3. **Bridging the Knowledge Divide**: Access to premium journals will extend to **rural and underserved regions**, reducing the **information gap** and ensuring **inclusive growth** in the field of research.

Conclusion:

The **One Nation One Subscription Scheme** is a landmark step toward creating a **research-oriented academic environment** in India. It not only aligns with national policies like **NEP 2020** but also works toward fostering **inclusive education** by bridging regional disparities in access to knowledge. With its focus on empowering researchers and promoting interdisciplinary studies, ONOS is poised to significantly contribute to India's ambition of becoming a **global leader in research and innovation**.









ISRO gets government approval for Venus mission "Shukrayaan"

Context: The Indian Space Research Organisation (ISRO) has received government approval for its ambitious **Venus Orbiter Mission (VOM)**, also known as **Mission Shukrayaan**. Scheduled for launch in **2028**, this mission aims to explore Venus's atmosphere, surface, and its interactions with the Sun.



GS Paper 3 - Science & Technology

About Mission Shukrayaan:

Launch Timeline:

The mission is set to lift off in **2028** under the auspices of the **Department of Space**.

Mission Objectives

- The mission's goals include: **Exploring the Venusian Atmosphere**: Investigating dust particles, airglow phenomena, and atmospheric
 - Mapping Surface Topography: Studying Venus's surface features and solar X-ray spectrum.
 - Testing Advanced Technology: Demonstrating aerobraking and thermal management techniques in Venus's harsh environment.
 - **Aerobraking** uses a planet's atmosphere to reduce the spacecraft's speed and adjust its orbit efficiently.

Mission Payloads:

- **16 Indian Payloads**: Designed to perform diverse scientific tasks.
- **Collaborative Payloads:**
 - **VISWAS and RAVI** (Indian and international collaboration).
 - o **VIRAL** (an international payload).

Significance of Mission Shukrayaan:

Scientific Advancements

- Enhancing understanding of planetary evolution and the solar system's dynamics.
- Gaining deeper insights into Venus's **atmospheric composition** and its interaction with solar radiation.

Climate Change Insights:

Venus's atmosphere, composed primarily of **carbon dioxide**, can provide critical insights into the **greenhouse effect**, helping us better understand climate change on Earth.

Broader Impacts:

- Investigating the **evolution** of **Earth** and its atmosphere.
- Contributing to comparative planetary studies.

Challenges of the Mission:

- 1. Extreme Environmental Conditions: High Temperatures and Pressures: Venus's surface temperature can exceed **470°C**, posing risks to spacecraft systems.
- 2. Corrosive Atmosphere: Presence of sulfuric acid clouds, which can corrode components made of materials like steel and titanium.
- 3. Other Technological Hurdles
 - Navigating harsh terrain.
 - Limited **sunlight** availability for powering **solar panels**.
 - Developing systems to withstand Venus's **hostile environment**.

Why Mission Shukrayaan Matters:

Shukrayaan is a significant leap in **India's space exploration** journey, demonstrating technological prowess and fostering international collaborations. By unlocking the secrets of Earth's twin planet, this mission promises to deepen our understanding of planetary science and inspire future space endeavors.



24-30 Nov 2024





GS Paper 2 –International Relations

India-Mediterranean Relations: Strengthening Historical and Strategic Ties

Context: At the **10th MED Mediterranean Dialogue** in Rome, India's **External Affairs Minister S. Jaishankar** highlighted the growing importance of fostering deeper ties between **India** and the **Mediterranean region**, focusing on mutual benefits across multiple domains.



About the Mediterranean Region

The **Mediterranean region** encompasses:

- **Southern Europe**: Spain, France, Monaco, Italy, Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania, Greece, Malta, and Cyprus.
- North Africa: Egypt, Libya, Tunisia, Algeria, and Morocco.
- **West Asia**: Turkey, Syria, Lebanon, Israel, and Palestine.

A historical hub for **global trade, culture, and geopolitics**, this region holds immense potential for deepening interactions with India.

India-Mediterranean Relations:

1. Historical Ties and Cultural Exchange:

- Ancient trade relations flourished with the Roman Empire and Greeks.
- The port city of Muziris on India's Malabar Coast was a key trading hub for spices, gold, and exotic goods.
- These connections laid a strong foundation for rich **cultural exchanges**, which continue to shape contemporary relations.

2. Strategic and Geopolitical Importance:

- The Mediterranean's strategic location links Asia, Africa, and Europe, aligning with India's vision for a free, open, and inclusive Indo-Pacific.
- It plays a pivotal role in India's connectivity and geopolitical outreach, fostering better ties across continents.

3. Political and Defense Cooperation:

- Strong political relations are evident through increased defense collaborations.
- India's participation in the **I2U2 grouping** (India, Israel, UAE, US) reflects its focus on **economic and security cooperation** in the region.
- Enhanced ties with Italy include agreements on maritime security, information sharing, and defense production.

4. Economic and Trade Partnerships:

- Bilateral trade with Mediterranean nations has reached USD 80 billion annually, with sectors like:
 - o Fertilizers, energy, water technology, defense, and cyber capabilities leading the charge.
- Indian companies are investing in infrastructure projects, including **airports**, **ports**, **railways**, and **green hydrogen** initiatives.

5. Enhanced Connectivity:

• The **India-Middle East-Europe Economic Corridor (IMEC)**, launched in 2023, aims to bolster **connectivity** between India, the **Middle East**, and **Europe**, involving nations like **UAE**, **Saudi Arabia**, **Jordan**, **and Israel**.

6. Cultural and Diaspora Links:

- The Mediterranean is home to a 460,000-strong Indian diaspora, with 40% residing in Italy.
- This diaspora strengthens **cultural ties** and fosters better understanding between India and Mediterranean countries.

Key Challenges in India-Mediterranean Relations:

1. Geopolitical Instability:

- Persistent conflicts, such as the Israel-Palestine issue and tensions in Syria and Libya, hinder diplomatic progress.
- The success of initiatives like IMEC depends on resolving these regional disputes.

2. Energy Security:

• The Mediterranean region is vital for **India's energy imports**, including **oil and gas** from **North Africa** and the **Middle East**.

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• Ensuring **stable energy supplies** amid regional volatility and advancing **renewable energy** partnerships are critical priorities.

3. Regional Security Concerns

- Challenges such as **piracy**, **illicit maritime activities**, and regional conflicts demand collaborative efforts to ensure **freedom of navigation**.
- India's balanced diplomacy, including its **call for a ceasefire** in West Asia and support for a **two-state solution** in the Israel-Palestine conflict, showcases its commitment to **peace and stability**.

Conclusion and Way Forward:

India's engagement with the Mediterranean region spans **economic**, **strategic**, **and cultural dimensions**, offering significant opportunities for mutual growth.

Priority Areas for Strengthening Relations:

- Enhancing **geopolitical stability**.
- Promoting **economic integration** and **infrastructure development**.
- Securing **energy supplies** and advancing **renewable energy partnerships**.
- Supporting the **Indian diaspora**.
- Proactively addressing **regional conflicts** through balanced diplomacy.

Through initiatives like **IMEC** and strengthened diplomatic efforts, India can enhance its role in fostering the **stability, prosperity**, and **integration** of the Mediterranean region while advancing its own global interests.









GS Paper 1- Indian Heritage and Culture, History

Sambhal Mosque Dispute: Legal Battle and Rising Communal Tensions

Context: The Sambhal Mosque Dispute has reignited debates around religious identity, historical claims, and legal protections in India. Violence erupted in Sambhal, Uttar Pradesh, following a district court's order to survey the **Shahi Jama** Masiid, leading to fatalities and raising concerns about communal harmony.

Why Is This in the News?

A district court in Sambhal ordered a survey of the Shahi Jama Masjid, triggering

violence that resulted in at least four deaths and several injuries. Allegations of **police excesses** and procedural lapses have intensified tensions in the region.

Understanding the Sambhal Mosque Dispute

Background of the Controversy:

- The dispute stems from a **petition** alleging that the **16th-century Jama Masjid** was constructed over an ancient Hari Har Mandir.
- Petitioners demanded a survey to determine the site's historical and religious character, akin to similar claims about sites in Varanasi, Mathura, and Dhar.
- The Shahi Jama Masjid, classified as a Monument of National Importance under the Ancient Monuments Preservation Act, 1904, is under the purview of the Archaeological Survey of India (ASI), making it a sensitive legal and cultural issue.

Court-Ordered Surveys and Unrest:

- A photographic and videographic survey was initially conducted without incident, with cooperation from authorities and mosque representatives.
- However, a subsequent survey led to violent clashes when a petitioner arrived with chanting crowds, sparking protests near the mosque.
- **Allegations of police violence** emerged, with reports of five deaths, including teenagers. Locals accused the police of using excessive force and damaging property, though the police denied these claims.

Local Concerns Over Legal Proceedings:

- Critics argue the survey order was issued without determining the admissibility of the claims.
- The survey began before higher courts could review the order, raising concerns about procedural fairness.

Historical Context of the Shahi Jama Masjid

Architectural and Historical Significance

- Built during **Babur's reign** (1526–1530) by his general **Mir Hindu Beg**, the mosque is an early example of Mughal architecture.
- Features include:
 - A **square prayer hall** with a dome.
 - Arches and stone masonry resembling structures in **Budaun**.
- The mosque underwent repairs during the reigns of Jahangir and Shah Jahan.

Debated Origins:

- Some scholars suggest it has **Tughlaq-era origins**, with **Babur adding modifications**.
- Local traditions claim the mosque incorporates remnants of a **Vishnu temple**, believed to be the site of the arrival of Kalki, the tenth avatar of Vishnu.

Legal Context of the Shahi Jama Masjid

Places of Worship Act, 1991

- The **1991** Act mandates maintaining the religious character of all sites as of August **15**, **1947**, except the Babri Masjid case.
- **Key Provision**: Section 3 bars the **conversion of places of worship** into sites for different religious
- **Objective**: To preserve India's **secular fabric** and prevent conflicts over religious sites.

Challenges to the Act

- The **Sambhal petition** challenges the Act by seeking a **change in the mosque's religious character**.
- Petitioners cite remarks by Chief Justice D.Y. Chandrachud, suggesting that ascertaining the religious **character** of a site may not necessarily violate the Act.
- The Act is under review in multiple cases, including disputes in **Varanasi**, **Mathura**, and now **Sambhal**.



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GS Paper 2 – Governance, Constitution, Polity, Social Justice

Supreme Court Seeks Report on Pennaiyar River Water Dispute

Context: The **Supreme Court** has directed the **Union Government** to submit a report prepared by the **Negotiation Committee** addressing the ongoing **water-sharing dispute** between **Tamil Nadu** and **Karnataka** over the **Pennaiyar River**. **Background of the Dispute:**



- The dispute is being addressed under the **Inter-State River Water Disputes Act**, **1956**.
- **Karnataka** initiated negotiations in **May 2023** after a new state government was formed, marking a shift toward dialogue and mediation.
- **Tamil Nadu** approached the Supreme Court in **2018** challenging Karnataka's construction of **check dams** and diversion structures, arguing:
 - o These actions harm water-dependent populations in Tamil Nadu.
 - They violate national water-sharing principles.
- Tamil Nadu cited an **1892 agreement**, asserting its **validity and binding nature**, and emphasized that the term **"river"** includes **tributaries**, **streams**, and other connected water sources.

Supreme Court's Role:

- In January 2023, the Supreme Court directed the Union Government to form a Negotiation Committee under Section 4 of the Inter-State River Water Disputes Act, 1956.
- The committee's mandate was to find a mutually agreeable resolution.
- The Supreme Court has now sought the committee's **report**, which will detail progress and provide an in-depth analysis of the issue.

Understanding Inter-State River Water Disputes:

Constitutional Provisions:

- Article 262 of the Constitution provides for the adjudication of inter-state water disputes.
- Under this Article:
 - Parliament may legislate to address use, distribution, and control of inter-state rivers and their valleys.
 - o Par<mark>liament may restrict the jurisdiction of the **Supreme Court** or any other court in these disputes.</mark>

Key Laws:

1. River Boards Act, 1956:

- o Allows the establishment of **River Boards** by the Central Government for regulation and development of inter-state rivers.
- o Boards are created at the request of concerned states to advise on water management.

2. Inter-State Water Disputes Act, 1956:

- o Empowers the Central Government to establish **ad hoc tribunals** for adjudication of disputes.
- o The tribunal's decision is **final and binding**.
- Courts, including the Supreme Court, cannot intervene in matters referred to a tribunal.

Amendments to the Inter-State Water Disputes Act:

- A **2002 amendment** introduced significant changes:
 - o Tribunals must be constituted within **one year** of a state's request.
 - o Awards must be delivered within **three years**, extendable to **five years** in exceptional cases.
 - o Awards hold the same authority as a **Supreme Court order**.
 - States can still approach the Supreme Court under Article 136 (Special Leave Petition) or Article 21 (Right to Life) for private grievances.

About the Pennaiyar River:

- Also known as **Dakshina Pinakini** (Kannada) and **Thenpennai** or **Pennaiyar** (Tamil).
- Length: 497 km (second longest river in Tamil Nadu after the Kaveri).

Download Our Application -----Cities on Banks: Bangatore, Hosun, Thruvannanalai, and Cuddalore.



Freedom UPSC with Dhananjay Gautam 30







- **Origin**: Nandi Hills, Karnataka.
- **Destination**: Bay of Bengal.
- The river suffers from severe **pollution** due to industrial waste from Bangalore, Hosur, and Chengam.

Significance of the Issue:

The **Pennaiyar River** is a critical water source for both Tamil Nadu and Karnataka. Ensuring a fair and sustainable resolution is vital for the agricultural and industrial communities relying on its waters.





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India Signs the Final Act of the Riyadh Design Law Treaty

GS Paper 3 – Science and Technology

Context: India has reaffirmed its commitment to strengthening its **intellectual property (IP)** ecosystem by signing the **Riyadh Design Law Treaty (DLT)**. This move aligns with India's vision of promoting **inclusive growth** and fostering innovation across industries.



About the Riyadh Design Law Treaty

Background:

- The treaty, finalized after nearly **two decades of negotiations** under the **World Intellectual Property Organization (WIPO)**, aims to streamline and harmonize the procedural frameworks for **industrial design protection** globally.
- Its focus is on improving the **efficiency** and **accessibility** of design registration processes across multiple jurisdictions.

Objective:

- The treaty ensures that **streamlined design protection benefits** are available to all stakeholders, especially:
 - Small and Medium-sized Enterprises (SMEs)
 - Startups
 - Independent designers

Key Provisions of the Riyadh Design Law Treaty:

- 1. Relaxed Time Limits:
 - Flexible timelines for completing procedural requirements.
 - Provision for the reinstatement of lost rights.
- 2. Priority Claims:
 - Allows applicants to **correct or add priority claims** post-application.
- 3. Simplified Processes:
 - Streamlined procedures for recording assignments and licenses.
 - Enables the filing of **multiple designs** within a single application.
- 4. Encouragement for Digital Systems:
 - o Promotes the adoption of **electronic design systems**.
 - o Facilitates the **electronic exchange** of priority documents.

India's Initiatives for Safeguarding IPR

India has taken significant steps to establish a robust **intellectual property rights (IPR)** framework:

National IPR Policy, 2016:

- A comprehensive document encompassing all forms of IPRs.
- Establishes an **institutional mechanism** for implementation, monitoring, and periodic review.

Key Programs and Policies:

- 1. Cell for IPR Promotion and Management (CIPAM):
 - o Coordinates the execution of the National IPR Policy.
- 2. National Intellectual Property Awareness Mission (NIPAM):
 - A flagship initiative to impart **IP awareness and training** in educational institutions.
- 3. Startup Intellectual Property Protection (SIPP):
 - o Provides support to **startups** for protecting and managing their **IP assets**.
 - o Encourages innovation and entrepreneurship.

Why Intellectual Property Matters?

- **Definition**: Intellectual Property (IP) encompasses **creations of the mind**, such as inventions, artistic works, designs, and symbols used in commerce.
- **Purpose**: Protected under laws like **patents, copyrights, and trademarks**, IP allows innovators to earn recognition and financial benefits while fostering an environment for **creativity and innovation**.

Types of Intellectual Property:

- 1. **Patent**: Exclusive rights granted for **new inventions** offering technical solutions to problems.
- 2. Copyright: Protects the rights of creators over literary and artistic works.









- 3. **Trademark**: Distinguishes the goods or services of one entity from others using a **unique sign**.
- 4. **Industrial Design**: Protects the **ornamental or aesthetic aspects** of an article.
- 5. **Geographical Indications (GIs)**: Identifies products with specific **qualities or reputations** linked to their geographic origin.
- 6. **Trade Secrets**: Rights over **confidential information**, which can be sold or licensed.

Concluding Remarks:

India's signing of the **Riyadh Design Law Treaty** marks a significant step in strengthening its **IPR framework**. Combined with initiatives like the **Startup India program** and **SIPP scheme**, these measures will empower **startups** and **SMEs**, enhancing their competitiveness and supporting their growth in the global market.









GS Paper 1 - Indian History & Society

Women Pioneers of India's Constitution

Context: On Constitution Day (November 26), President Droupadi Murmu celebrated the contributions of women in the Constituent Assembly.

Out of 299 members, 15 women were part of the Assembly (two later resigned). These women represented diverse regions and perspectives, actively participating in debates on gender equality, caste, and reservations.



While prominent names like Sarojini Naidu, Sucheta Kripalani, and Vijaya Lakshmi Pandit are widely known, lesser-known women also made significant contributions.

This article highlights the remarkable contributions of **five pioneering women**.

Ammu Swaminathan: Champion of Gender Equality:

- Background: Hailing from Palakkad, Kerala, Ammu Swaminathan married Subbarama Swaminathan under conditions of personal independence. Her daughter was Captain Lakshmi Sahgal of the Indian National Army.
- **Journey into Politics**: Inspired by the restrictive widowhood practices her mother endured, she joined the freedom movement and contested elections on a Congress ticket.
- Role in the Constituent Assembly:
 - o Advocated for the **Hindu Code Bill** and **gender equality** in the face of resistance.
 - Promoted women's rights in a male-dominated Assembly.
- **Post-Independence Contributions:**
 - **Elected from Dindigul, Tamil Nadu.**
 - Served as India's goodwill ambassador to Russia, China, and the US.

Annie Mascar<mark>ene: Voic</mark>e for Universal Franchise

- **Early Life:** Born into a Latin Christian family in **Travancore**, she overcame caste barriers to excel academically, becoming a lawyer and educator.
- Political Career:
 - Joined the Travancore State Congress, championing universal adult franchise and enduring violence for her beliefs.
 - Advocated for a strong Centre while supporting local government autonomy.
- Achievements: As an independent candidate, she became the first woman MP from Thiruvananthapuram in 1952.

Begum Qudsia Aizaz Rasul: Advocate for Unity

- **Early Life**: Born into Punjab's **royal family**, she pursued education despite opposition, even facing a **fatwa** for attending a convent school.
- **Political Journey**:
 - o Entered politics after marriage, discarding the **purdah**.
 - Won a non-reserved seat in 1936, despite societal criticism.
- **Role in the Constituent Assembly:**
 - Opposed **separate electorates** based on religion, arguing for national unity.
 - Opted to stay in India post-Partition, advocating for the rights of **poor Muslims**.
- **Later Contributions:**
 - o Joined the **Congress** and served in the **Rajya Sabha**.
 - Played a key role in promoting women's hockey.

Dakshayani Velayudhan: A Pioneer for Dalit Rights

- Background: Born into the Pulaya community in Cochin, she became the first Dalit woman to graduate in science.
- **Breaking Barriers:**
 - Endured discrimination in college, where she was excluded from practical experiments.
 - Married a social worker in a simple wedding attended by **Mahatma Gandhi** and **Kasturba**.

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- **Constituent Assembly Role:**
 - Opposed **separate electorates** for Dalits, advocating for national integration.
 - Championed equality and **Dalit rights**.
- Later Life:
 - Financial constraints limited her political career, but she remained active in the **Dalit movement**.

Renuka Ray: Advocate for Women's Empowerment:

- Early Life: Born in Pabna (now in Bangladesh), she joined the freedom movement under Mahatma Gandhi's inspiration.
- **Education and Activism:**
 - Studied at the **London School of Economics**, where she met her husband.
 - Focused on divorce and inheritance laws, representing women's organizations in the Central Legislative Assembly.
- **Contributions in the Constituent Assembly:**
 - Supported the Hindu Code Bill.
 - Opposed reserved seats for women, believing they hindered progress.
- **Later Career:**
 - Won the **1957 general election** from **Hooghly**.
 - Contributed to governance in Bengal and social justice initiatives.

Conclusion:

These remarkable women brought unique perspectives to the **Constituent Assembly**, shaping modern India's constitutional framework. Their contributions—rooted in advocacy for equality, unity, and justice continue to inspire generations.









GS Paper 2 – Environment and Ecology

Earth's Desertification Crisis: UNCCD COP16 to Address Global Land Challenges

Context: The **16th Session of the Conference of Parties (COP16)** to the United Nations Convention to Combat Desertification (UNCCD) will take place from December 2-13, 2024, in Rivadh, Saudi Arabia. Marking the **30th anniversary of the UNCCD**, this pivotal event will focus on urgent global challenges such as **desertification**, land degradation, and **drought**.



Key Highlights of COP16

Theme: "Our Land and Our Future"

This year's theme underscores the vital role of land restoration and resilience-building in achieving sustainable development and tackling climate change.

A Historic Venue

Holding COP16 in **Saudi Arabia**, a region severely impacted by **desertification** and **drought**, emphasizes the immediate need for solutions tailored to regions facing such extreme conditions.

Largest UN Land Conference to Date With participation from 197 parties across the globe, COP16 is set to be the **largest-ever UN land conference**, bringing together policymakers, experts, and stakeholders.

A Dual Approach

- 1. Negotiation Track: Focuses on political declarations and decisions to guide global efforts on land degradation and drought resilience.
- 2. Action Agenda: Highlights voluntary commitments, multi-stakeholder dialogues, and practical implementation strategies.

Key Objectives of COP16

- Accelerating Land Restoration: Aimed at achieving a land-degradation-neutral world by 2030.
- **Enhancing Resilience**: Tackling **droughts**, **dust storms**, and other land-related crises.
- **Promoting Soil Health**: Improving **land rights** and ensuring **sustainable livelihoods**.
- **Unlocking Economic Opportunities**: Using **land restoration** to generate **jobs**, alleviate **poverty**, and boost climate resilience.

The Riyadh Action Agenda

A flagship outcome of COP16, the Riyadh Action Agenda will focus on scaling up solutions through thematic days dedicated to:

- Land conservation and restoration.
- Building drought resilience.
- Strengthening partnerships for actionable results.

The Global Context: A Growing Crisis

- **3.2 billion people** are affected by **desertification** worldwide.
- **Droughts** have increased by **29% since 2000**, exacerbated by **climate change** and **unsustainable land use**.
- **Land degradation** has led to economic losses of \$11 trillion globally.

Projected Impacts by 2050

- Over 216 million people could face internal displacement due to climate-induced land degradation and
- To meet global targets, 1.5 billion hectares of degraded land must be restored by 2030.

Root Causes of the Crisis

- **Erratic Rainfall**: Unpredictable weather patterns limit natural water resources.
- **Over-reliance on Groundwater**: Depleting reserves due to unsustainable extraction.
- **Decline in Recharge Systems**: Loss of natural groundwater replenishment sources like **ponds** and **lakes**.
- **Unsustainable Practices**: Poor agricultural and land management practices exacerbate degradation.

Why COP16 Matters

A Call to Action

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COP16 is expected to declare a **global emergency** on **land degradation** and **desertification**, urging nations to prioritize action over dialogue.

Economic and Social Benefits

- Land restoration offers opportunities for job creation, poverty reduction, and improved climate resilience.
- Investment in **sustainable land management** can drive economic growth.

Global Cooperation

The summit emphasizes **collaborative action** among countries, **non-state actors**, and the **private sector** to tackle **land degradation** on a **war footing**.

COP16 in Riyadh represents a crucial step in addressing one of the most pressing challenges of our time. Through ambitious objectives and actionable strategies, it aims to ensure a sustainable future for both people and the planet.





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GS Paper 2 – Governance and Electoral Reforms

Strengthening the Election Commission of India: Challenges and Reforms

Context: The **Election Commission of India (ECI)** has faced increasing calls for strengthening its **independence** and enhancing its **role in electoral integrity**. These demands aim to bolster **voter trust** in the democratic process.

Constitutional Framework of the Election Commission:

A Constitutional Body

The **Election Commission of India (ECI)** was established on **January 25, 1950**, as a constitutional body to ensure **free and fair elections**.

Nationwide Jurisdiction

The ECI operates as a **common authority** for both the **Central** and **State Governments**, overseeing elections across the country.

Functions and Powers

The ECI supervises, directs, and controls elections for:

- Parliament
- State Legislatures
- President and Vice-President

Composition of the ECI

- The Chief Election Commissioner (CEC) heads the commission.
- Up to two Election Commissioners can be appointed (a provision added in 1989).
- All members have equal powers and responsibilities.

Appointment Process

The **President of India** appoints the CEC and Election Commissioners based on a **committee's recommendation**, comprising:

- The Prime Minister
- The Leader of the Opposition in Lok Sabha
- A Union Minister nominated by the Prime Minister

Tenure and Removal

- Members serve for **six years** or until they turn **65**, whichever comes first.
- The **CEC** can only be removed in a manner akin to a Supreme Court judge, while other commissioners can be removed upon the **CEC's recommendation**.

Relevant Constitutional Articles

- **Article 324**: Grants the ECI the authority to supervise and control elections.
- Article 325: Prohibits discrimination based on religion, race, caste, or sex in electoral rolls.
- Article 326: Mandates adult suffrage for Lok Sabha and state legislature elections.
- **Article 329**: Prevents courts from intervening in electoral matters, except through election petitions.

Challenges in India's Electoral System

- 1. Declining Voter Turnout: Caused by lack of awareness, logistical barriers, and political disillusionment.
- **2.** Electoral Violence:Threats and violence disrupt the electoral process, particularly in rural and conflict-prone areas.
- **3.** Media Manipulation and Misinformation: **Social media** and **deepfake videos** have been exploited to influence voter opinions.
- **4.** Gender Disparity: Women remain **underrepresented**, with only **13.6% of Lok Sabha members** being women in 2024.
- **5.** Influence of Black Money:Unregulated funding channels allow the use of **black money**, undermining electoral accountability.
- **6.** Criminalization of Politics: **46% of elected members** in 2024 faced **criminal charges**, highlighting a lack of transparency.



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- **7.** Political Defections: Despite the **Anti-Defection Law**, defections and **horse trading** continue to destabilize governments.
- **8.** Wealth Disparity Among Candidates: **93% of Lok Sabha members** in 2024 were crorepatis, making it hard for others to compete.

Reforms Needed for a Stronger ECI

- 1. Enhancing Funding Transparency
 - Introduce **state funding** for political parties, subject to independent audits.
 - Create a **National Election Fund** to ensure equitable distribution of donations.
- 2. Ensuring Impartial Appointments: Strengthen the independence of Election Commissioners to **maintain electoral integrity.**
- 3. Addressing Criminalization
 - Ban candidates facing **serious criminal charges** from contesting elections.
 - Improve **voter education** to ensure informed decision-making.
- 4. Reducing Wealth Disparities
 - Enforce stricter caps on candidate expenditure.
 - Mandate audits of **political party spending**.
- 5. Reforming the Anti-Defection Law
 - Amend the **Tenth Schedule** to curb defections effectively.
 - Impose **stricter penalties** for violations.
- 6. Increasing Voter Turnout: Conduct **awareness campaigns** to encourage participation and highlight the importance of voting.

The Way Forward

- Enact **comprehensive laws** to address funding, criminalization, and defection issues.
- Learn from **global electoral systems** for greater transparency and efficiency.
- Strengthen collaboration between the **executive**, **legislature**, **judiciary**, and ECI.
- Promote **voter education** on clean politics and democracy's value.

A robust and independent Election Commission is vital for upholding the **integrity of India's democracy** and ensuring elections remain free, fair, and transparent. By addressing these challenges and implementing reforms, India can strengthen public trust and fortify its democratic foundations.











GS Paper 3– Disaster Management and Preparedness

High-Altitude Sickness: A Hidden Danger for Trekkers

Context: The recent death of a trekker from Kerala due to High-Altitude Sickness (HAS) or Acute Mountain Sickness (AMS) while scaling a peak in Uttarakhand has highlighted the risks of trekking in mountainous regions.

Understanding High-Altitude Sickness:

What is High-Altitude Sickness?

High-Altitude Sickness occurs when people ascend rapidly to elevations

above 2,400 meters, without proper acclimatisation. It is triggered by reduced air pressure and low **oxygen levels** at higher altitudes, leading to **hypoxia**, or insufficient oxygen in the body's tissues.

- Key Factors That Increase the Risk
 - **Popular trekking routes** often exceed **3,000 meters**, where the risk of AMS is significantly higher.
 - Insufficient time for **acclimatisation** leaves trekkers vulnerable to the effects of altitude.

Recognising Symptoms

Early Signs of AMS:

- Headaches
- Nausea
- **Fatigue**
- **Shortness of breath**

Severe Cases Can Lead To:

- **High Altitude Pulmonary Edema (HAPE):** Fluid buildup in the lungs causing breathlessness and potentially fatal respiratory issues.
- **High Altitude Cerebral Edema (HACE):** Swelling in the brain, leading to **confusion**, hallucinations, and even

How Does the Body React at High Altitudes?

- The body compensates for low oxygen by increasing breathing rates, which may cause hyperventilation.
- To enhance oxygen transport, the body produces more **red blood cells**, thickening the blood and straining the heart.

Treatment and Prevention Strategies:

Immediate Actions for AMS:

- 1. **Descent:** The fastest and most effective treatment is moving to a lower altitude.
- 2. **Oxygen Support:** Supplemental oxygen or a portable hyperbaric chamber can help alleviate symptoms.

Medical Interventions:

- **Acetazolamide**: Aids acclimatisation and reduces symptoms of AMS.
- **Dexamethasone**: Helps manage swelling in severe cases like HACE.

Precautions for Trekkers:

- Ascend gradually, allowing the body sufficient time to **acclimatise**.
- Stay hydrated and avoid alcohol, which can exacerbate symptoms.
- Recognise early signs of AMS and avoid pushing further if symptoms worsen.

High-Altitude Sickness is preventable and treatable with proper preparation and awareness. Trekkers must prioritise **safety over ambition** when exploring mountainous terrains.





To the Point Weekly Current Affairs $\sqrt{24-30}$





High Seas Treaty: A Milestone for Ocean Conservation

GS Paper 3 – Environment and Ecology

Context: India has recently signed the **Biodiversity Beyond National Jurisdiction (BBNI) Agreement**, also known as the **High Seas Treaty**. during the **United Nations General Assembly 2024** in New York.

What Are the High Seas?

Defining the High Seas

The **high seas** refer to **international waters** that lie beyond the jurisdiction of any nation. These are areas:

- Beyond 12 nautical miles of territorial waters.
- Beyond **200 nautical miles** of Exclusive Economic Zones (EEZ).

Global Importance

- High seas cover 65% of the ocean's surface and make up 43% of the Earth's total area.
- They are part of the global commons, belonging to no nation but shared by all, requiring collective responsibility for their conservation.

Significance of the High Seas

- 1. **Food Security**: The ocean is the primary source of protein for 3 billion people worldwide.
- 2. Economic Vitality:
 - Accounts for 90% of global freight transport.
 - Supports industries like fishing and submarine communications.
- 3. **Renewable Energy**: Potential for clean energy generation from waves and currents.
- 4. Biodiversity Hotspot: Home to between 500,000 and 100 million species, with only 250,000 species recorded.
- 5. Climate Regulation:
 - o **Produces** over **50% of the Earth's oxygen**.
 - Absorbs 25% of carbon dioxide emissions and stores over 90% of excess heat from global warming.

About the High Seas Treaty

Overview

The **High Seas Treaty** is a **legally binding agreement** aimed at regulating human activities in international waters to ensure **sustainable resource use** and **biodiversity protection**.

Key Features

- **Adoption**: Agreement on **biodiversity beyond national jurisdiction** (BBN]).
- **Signatories**: 105 countries, with 14 having ratified it as of now.
- **Legality**: Comes into effect **120 days after 60 countries ratify it**.
- **India's Role**: Signed but not yet ratified.

Objectives of the Treaty

- 1. **Marine Protected Areas (MPAs)**: Establish and regulate MPAs to protect fragile ecosystems.
- 2. **Sustainable Resource Use**: Ensure equitable sharing of benefits from **marine genetic resources (MGRs)**.
- 3. **Environmental Impact Assessments (EIAs)**: Mandate EIAs for major activities affecting the oceans.
- 4. Capacity Building: Support technology transfer and skill development in developing nations.

Why Is the High Seas Treaty Essential?

Urgent Need for Protection

Only 1.44% of high seas are currently protected, while the UN COP15 Biodiversity Conference has set a target of protecting 30% of the planet's lands and oceans by 2030.

Global Challenges

- **Overexploitation and Pollution:**
 - Overfishing and the dumping of 17 million tonnes of plastic annually are threatening marine ecosystems.
- **Climate Impact**:
 - Addressing ocean acidification, habitat destruction, and biodiversity loss.

How Does It Align with India's Interests?



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Maritime Policies

• Promotes **Environmental Impact Assessments (EIAs)** and aligns with India's **Blue Economy** initiatives. **Strategic Benefits:** Strengthens India's position in the Indo-Pacific under the **SAGAR (Security and Growth for All in the Region)** initiative.

Challenges Ahead

Marine Protected Areas: Weak enforcement mechanisms and low protection levels make achieving the **30% restoration target** by 2030 difficult.

Marine Genetic Resources

- Risk of **monopolization** by technologically advanced nations.
- Intellectual property disputes over benefit-sharing.

Implementation Barriers

- High costs of **EIAs**.
- Limited resources and expertise in **Small Island Developing States (SIDS)** and **landlocked countries**.
- Geopolitical tensions hindering global cooperation.

What Lies Ahead?

Path to Implementation

- 1. **Ratification**: At least **60 countries must ratify the treaty** for it to come into effect.
- 2. Institutional Mechanisms:
 - Establish monitoring, compliance, and enforcement frameworks.
- 3. Support for Developing Nations:
 - o Provide resources, financial aid, and technology transfer to facilitate treaty compliance.

Global Collaboration

• Enhanced cooperation is essential to protect the 64% of the ocean categorized as global commons, ensuring sustainable use for future generations.

The **High Seas Treaty** represents a landmark moment in ocean conservation. By bridging global cooperation and sustainability, it offers hope for protecting one of Earth's most vital and vulnerable ecosystems.

Bottom of Form





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Understanding AUKUS: The Trilateral Security Pact

GS Paper 2 – International Relations

Context: China's ambassador to New Zealand has cautioned that **New Zealand joining AUKUS** could negatively impact its relationship with China.

What Is AUKUS?

Introduction:

AUKUS is a **trilateral security partnership** involving the **United States, United Kingdom, and Australia**, established in **2021**. It

focuses on **technology sharing** to bolster security in the **Indo-Pacific region**.

The partnership is widely regarded as a **strategic response to China's growing influence** and activities in this geopolitically crucial area.

Purpose and Goals:

- **Strengthening Defense Interests**: AUKUS builds upon the longstanding bilateral relationships among the three countries to **enhance their collective defense capabilities**.
- **Deterring Aggression**: A key goal is to act as a **deterrent against Chinese assertiveness** in the Indo-Pacific region.

Key Pillars of AUKUS:

Pillar 1: Nuclear Submarine Fleet for Australia

- Supports Australia in acquiring its first conventionally armed, nuclear-powered submarines (SSNs).
- These submarines are not armed with nuclear weapons, adhering to Australia's commitments under the Nuclear Non-Proliferation Treaty (NPT).
- The initiative will make **Australia the seventh country globally** to possess nuclear-powered submarines.

Pillar 2: Advanced Military Capabilities:

Focuses on collaboration in eight critical defense areas:

- 1. Artificial Intelligence (AI)
- 2. Quantum Technologies
- 3. Cybersecurity
- 4. Innovation and Information Sharing
- 5. Undersea Warfare
- 6. Hypersonic and Counter-Hypersonic Systems
- 7. Electronic Warfare

Submarine Component: A Key Highlight

Development and Design:

- Australia will acquire eight nuclear-powered attack submarines, known as SSN-AUKUS.
- These submarines will feature a **British design** with **American technology** and combat systems.

Strategic Advantages:

Nuclear-powered submarines provide:

- Extended Range: Greater operational distance without refueling.
- **Endurance**: Ability to remain submerged for extended periods.
- **Stealth**: Enhanced ability to evade detection.

Global Impact:

- This partnership makes **Australia the second country, after the UK**, to receive U.S. nuclear submarine technology.
- AUKUS significantly bolsters Australia's **undersea capabilities** in the Indo-Pacific.

AUKUS and Nuclear Non-Proliferation:

The alliance has emphasized that the **new submarines will not carry nuclear weapons**, ensuring compliance with the **NPT**, which prohibits Australia from acquiring or deploying nuclear weapons.

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Why Is AUKUS Significant?

- **Indo-Pacific Security**: Strengthens regional stability and counters **geopolitical challenges**, particularly those posed by China's growing assertiveness.
- **Technology Sharing**: Enhances innovation and defense capabilities through collaboration in advanced technologies.
- **Strategic Partnerships**: Reinforces the defense ties among the U.S., UK, and Australia, strengthening alliances in the region.

Controversy and Global Implications:

- **China's Concerns**: Beijing views AUKUS as a threat to its interests and has expressed strong opposition.
- **Geopolitical Shifts**: The pact signals a growing emphasis on multilateral alliances to maintain **regional balance of power** in the Indo-Pacific.

The **AUKUS agreement** represents a critical step toward reinforcing security and technological innovation in the Indo-Pacific. While it offers strategic advantages to its members, it also reshapes the global defense landscape, making it a focal point in international relations.





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GS Paper 2 – Governance and E-Governance Initiatives

Eklavya Digital Platform: A New Era in Military Education

Context: The Indian Army recently launched the **Eklavya Digital Platform**, an **online learning initiative** designed to modernize training and education for its officers.

What Is the Eklavya Digital Platform?

Development and Hosting

- Created under the guidance of the Army Training Command with the Army War College as the sponsoring agency.
- **BISAG-N** (Bhaskaracharya National Institute of Space Applications and Geoinformatics), Gandhinagar, developed the platform, supported by the **Directorate General of Information Systems**.
- Hosted on the **Army Data Network** with a **scalable architecture** that allows seamless integration of multiple Indian Army training establishments and a vast range of courses.

Significance:

The platform supports the Indian Army's vision of a "**Decade of Transformation**" and aligns with the **2024** theme: "Year of Technology Absorption."

Features of the Eklavya Platform

Course Categories:

- 1. Pre-Course Preparatory Capsules:
 - Offers study material for all offline courses conducted at Category 'A' training establishments.
 - Focuses on basic concepts, allowing physical courses to concentrate on advanced and applicationbased content.
- 2. Assignment-Specific Courses:
 - Tailored for **specific roles or appointments**, enabling officers to gain **domain specialization** in their chosen fields.
- 3. Professional Development Suite:
 - Includes courses on Strategy, Operational Art, Leadership, Organisational Behaviour, Finance, Emerging Technology, and more.

Knowledge Highway

A searchable repository of journals, research papers, and articles, offering a single-window resource for indepth knowledge.

Flexibility in Learning

• Officers can **register for multiple courses simultaneously**, encouraging continuous professional growth.

Impact of Eklavya:

Modernizing Military Education

- Facilitates **continuous professional military education** by offering diverse and specialized courses.
- Enhances the **quality of physical training** by shifting foundational learning online.

Specialization and Skill Development

• Prepares officers for **specialist appointments** and aids in **domain specialization**, improving operational efficiency.

Resource Optimization:

• Reduces the load on physical training infrastructure while enriching course content.

Conclusion

The **Eklavya Digital Platform** is a milestone in the Indian Army's journey toward **digital transformation** and **modern military education**. By integrating technology with learning, the platform equips officers with the skills and knowledge to address the **dynamic challenges of modern warfare** effectively.

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Union Government Notifies Second Phase of PM E-DRIVE Scheme

Context: The Union Ministry of Heavy Industries has introduced modifications to the PM Electric Drive Revolution in Innovative Vehicle Enhancement (PM E-DRIVE) Scheme, extending subsidy benefits to L5 category electric 3-wheelers.

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Key Highlights of the Notification:

Incentives for Electric Vehicles:

- April 1, 2024 November 7, 2024: 5,000/kWh, capped at 50,000 per vehicle.
- November 8, 2024 March 31, 2026: 2,500/kWh, capped at 25,000 per vehicle.
- **Maximum ex-factory price** to avail incentive: **5 lakh**.

Fund Allocation

• A total of **715 crore** allocated for the scheme.

About the PM E-DRIVE Scheme:

Objective:

• To accelerate EV adoption by offering upfront incentives for purchases and enabling the establishment of a robust charging infrastructure.

Duration:

• The scheme spans from **2024 to 2026**.

Primary Goals:

- Support for electric 2-wheelers (e-2Ws), 3-wheelers (e-3Ws), and buses (e-buses).
- Deployment of fast chargers for electric 4-wheelers (e-4Ws), e-buses, and e-2Ws/3Ws.

Nodal Ministry:

• Implemented by the Union Ministry of Heavy Industries.

Three Core Components of the Scheme:

1. Subsidies:

 Demand incentives for e-2Ws, e-3Ws, e-ambulances, e-trucks, and other emerging EV categories.

2. Grants for Infrastructure Development:

o Support for e-buses, creation of a charging network, and upgradation of testing facilities under the ministry.

3. Administrative Support:

Includes **Information**, **Education & Communication** (**IEC**) activities and management by a Project Management Agency (PMA).

Significance:

The second phase of the PM E-DRIVE Scheme reflects India's commitment to fostering sustainable **mobility** by bridging the gap between **EV adoption** and **infrastructure development**. This initiative is a vital step towards achieving a greener, energy-efficient future.









GS Paper 2 –Governance and Policies & Social Justice

'Bal Vivah Mukt Bharat' Campaign: A Step Towards Eradicating Child Marriage

Context: The **Union Minister for Women and Child Development** has launched the **'Bal Vivah Mukt Bharat' Campaign**, aimed at eliminating the practice of child marriage across India.

Key Features of the Campaign

Objective:

• To **unite stakeholders** in a nationwide effort to **eradicate child marriage** and promote awareness.

बाल विवाह मुक्त भारत SMI ANIPURIA DEV

Target Regions:

- Focus on seven high-burden states: West Bengal, Bihar, Jharkhand, Rajasthan, Tripura, Assam, and Andhra Pradesh.
- Nearly **300 districts** with **child marriage rates higher** than the national average are prioritized.

Action Plan:

- All **States and Union Territories** will create an **action plan** to reduce child marriage rates to **below 5% by 2029**
- A significant drop in child marriage rates has already been observed, declining from 47.4% in 2006 to 23.3% in 2019-21.

Child Marriage Free Bharat Portal:

A Digital Solution:

- Child Marriage Free Bharat Portal introduced as part of the campaign.
 - A platform to:
 - Raise awareness.
 - Report child marriage cases.
 - Monitor progress.

Enhanced Monitoring:

- The portal ensures efficient tracking of Child Marriage Prohibition Officers (CMPOs) through:
 - Real-time case monitoring.
 - Supervision and evaluation mechanisms.

Complaint Registration:

• Public can **file complaints** about child marriage, which are automatically directed to the concerned **CMPOs**.

Central Oversight:

Nodal officers will oversee the portal's operations at the national level, ensuring effective monitoring.
 Call to Action:

The 'Bal Vivah Mukt Bharat' Campaign urges citizens, organizations, and government bodies to:

- Work collectively to ensure a brighter, child marriage-free future.
- Enhance public access to information, enabling seamless communication and support.

This campaign underscores India's commitment to creating a society where every child can **live free of exploitation** and **achieve their full potential**.









GS Paper 2– Governance and Social Sector Initiatives

ICA Global Cooperative Conference 2024: Advancing Cooperation for Prosperity

Context: For the first time in its **130-year history**, India hosted the **ICA Global** Cooperative Conference in New Delhi, marking a significant milestone for the global cooperative movement.

At the event, the **United Nations International Year of Cooperatives 2025** was officially launched, showcasing India's leadership in promoting cooperative initiatives worldwide.



Key Highlights of the ICA Global Cooperative Conference 2024:

About the Conference

- The conference serves as a **platform for dialogue** among leaders, policymakers, and stakeholders to address challenges, share best practices, and shape strategies for strengthening the **cooperative movement**.
- Organized by: The International Cooperative Alliance (ICA), a body established in 1895 to advance the cooperative model globally.

Theme:

"Cooperatives Build Prosperity for All" This aligns with India's vision of "Sahkar Se Samriddhi" (Prosperity through Cooperation), emphasizing the transformative power of cooperatives in achieving inclusive growth.

Collaborating Organizations:

- The event was organized by Indian Farmers Fertiliser Cooperative Limited (IFFCO) in partnership with:
 - **International Cooperative Alliance (ICA)**
 - **AMUL**
 - **KRIBHCO** 0
 - **Government of India**

Launch of UN International Year of Cooperatives 2025:

India's **Prime Minister** officially launched the **UN International Year of Cooperatives 2025** with the theme: "Cooperatives Build a Better World", reflecting the global commitment to sustainable and equitable development.

Commemorative Postal Stamp:

- A special **postal stamp** featuring a **lotus** was unveiled.
 - The **five petals** of the lotus symbolize the **Panchatatva** (earth, water, fire, air, and space), emphasizing cooperatives' dedication to environmental, social, and economic sustainability.

The Role of Cooperatives in India:

Constitutional Provisions:

- 97th Constitutional Amendment, 2011:
 - Granted **constitutional status** and protection to cooperatives.
 - Added Part IX B (Articles 243-ZH to 243-ZT), addressing the functioning and governance of cooperative
 - Recognized the **right to form cooperatives** as a **fundamental right** under **Article 19(1)**.
 - Introduced Article 43-B as a Directive Principle of State Policy, encouraging the promotion of cooperatives.

Promotion and Development:

- **Ministry of Cooperation:**
 - Established in **2021** to **strengthen the cooperative movement** and extend its reach to grassroots
- **Future Plans:**
 - Establishing a **cooperative university**.
 - Launching a **new cooperative policy** to guide and expand the sector.

Contributions of Cooperatives:

- India has over 8 lakh cooperatives, covering 98% of rural areas.
- Approximately 300 million people are associated with cooperatives in India, showcasing their critical role in socioeconomic development.

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The **ICA Global Cooperative Conference 2024** highlighted the transformative potential of cooperatives to **build prosperity, ensure inclusivity, and create a sustainable future** for all. With India's leadership, the cooperative movement is poised to achieve new milestones on the global stage.







24-30 Nov 2024





GS Paper 3 – Security and Defence Technology

India Successfully Tests K-4 Missile from INS Arighaat

Context: India has achieved a significant milestone in its strategic defence capabilities with the successful test of the **nuclear-capable K-4 submarine-launched ballistic missile (SLBM)** from the recently commissioned **INS Arighaat**, a nuclear-powered submarine. The test was conducted off the coast of **Visakhapatnam** in the **Bay of Bengal**.

Key Highlights of the K-4 Missile Test (2024):

Significance of the Test:

- The **K-4 missile** was tested as part of an operational exercise, marking its first launch from a functioning **nuclear-powered submarine**.
- Previously, the missile was tested using **submersible pontoons**, making this test a crucial step in enhancing India's **naval strike capabilities**.
- The test followed public area warnings and a **Notice to Airmen (NOTAM)** issued for an intermediate-range missile test scheduled between **November 27 and 30**.

Test Analysis:

- Results from the test will be thoroughly analyzed to determine whether the missile met its **intended performance parameters**.
- This development highlights India's continuous efforts to enhance its **strategic deterrence** in the Indo-Pacific region.

K-4 Missile: An Overview:

The **K-4 SLBM** is an advanced missile developed by India's **Defence Research and Development Organisation (DRDO)**, designed to enhance the **submarine-launched nuclear deterrent**.

Key Specifications:

- Range: 3,500 km, capable of reaching targets across Pakistan and parts of China.
- Size: 10 meters in length, weighing 20 tonnes, with a diameter of 1.3 meters.
- Payload: Carries a 2-tonne payload for delivering nuclear warheads.
- Guidance System: Equipped with an inertial navigation system, supplemented by GPS/NavIC satellite guidance for mid-course and terrain contour matching for terminal guidance.
- Propulsion: Powered by a two-stage solid rocket motor using solid rocket propellant.

Strategic Importance of INS Arighaat:

India's Second Nuclear-Powered Submarine

- **INS Arighaat** strengthens India's **nuclear triad** by providing a formidable sea-based nuclear deterrent.
- It represents an upgrade over INS Arihant, India's first nuclear-powered submarine.

Advanced Capabilities:

- While **INS Arihant** is equipped with **K-15 missiles** (range: 750 km), **INS Arighaat** can deploy the **K-4 SLBM**, allowing it to strike targets up to **3,500 km away**.
- Designed to carry **nuclear-tipped ballistic missiles**, INS Arighaat enhances India's ability to maintain a credible **second-strike capability**.

Why It Matters:

The successful test of the K-4 missile underscores India's growing focus on **self-reliance in defence technology** and its commitment to maintaining **strategic stability** in the region. The operational readiness of INS Arighaat and its integration with advanced missiles like the K-4 solidifies India's position as a key player in global defence.





24-30 Nov 2024





GS Paper 2 – International Relations

Israel-Hezbollah Ceasefire: Key Developments and UNSC Resolution 1701

Context: Israel and Lebanon have reached a **ceasefire agreement** after a 13-month-long conflict that escalated in September. This truce follows Israel's **security cabinet approval** of a US-backed proposal to end hostilities. The agreement builds on the framework of **UN Security Council (UNSC) Resolution 1701**, originally crafted to end the 2006 Israel-Hezbollah conflict.

What is UNSC Resolution 1701?

Overview:

Adopted on August 11, 2006, UNSC Resolution 1701 aims to:

- End hostilities between Israel and Hezbollah.
- Establish a buffer zone.
- Pave the way for a permanent ceasefire.

Historical Context:

- The resolution followed Israel's **partial withdrawal** from southern Lebanon in 2000 along the **Blue Line** and **Golan Heights**.
- Triggered by a **Hezbollah attack** in July 2006, the conflict resulted in over **1,000 Lebanese** and **170 Israeli** casualties.

Key Provisions:

- 1. Disarmament and Sovereignty:
 - o Disarm all **non-state armed groups** in Lebanon.
 - Ensure **exclusive control** of weapons by the Lebanese government.
- **2. Arms Control**: Ban unauthorized arms transfers to Lebanon.
- **3. Landmine Maps**: Require Israel to hand over **landmine maps** to the UN.
- 4. Buffer Zone:
 - Create a demilitarized zone between the Blue Line and Litani River.
 - Exclude armed groups except for **Lebanese forces** and **UNIFIL**.

UNIFIL's Role

- Strengthened Mandate: Deploy up to 15,000 UN peacekeepers.
- **Responsibilities**: Monitor hostilities, secure the buffer zone, and ensure displaced populations return safely.

Key Takeaways from the Israel-Lebanon Ceasefire

- 1. Temporary Cessation of Hostilities
 - A **60-day ceasefire** is set to lay the groundwork for a **long-term peace** between Israel and Hezbollah.

2. Withdrawal of Forces

- **Hezbollah**: Retreat **40 kilometers** (25 miles) from the Israel-Lebanon border.
- **Israel**: Withdraw ground troops from Lebanese territory.

3. Enhanced Monitoring Mechanisms

- **Lebanon** will intensify its oversight of Hezbollah's activities south of the Litani River.
- Supervision will involve:
 - United Nations Peacekeepers.
 - Lebanese Military.
 - o A **multinational committee** including the **U.S., France**, Lebanon, Israel, and UNIFIL.

4. Israel's Conditions

- Military Action Warning: Israel reserves the right to resume operations if the ceasefire terms are violated.
- **Hezbollah's Disarmament**: The agreement does not enforce full disarmament of Hezbollah in northern Lebanon.

Why Did Israel Agree to a Ceasefire?

- 1. Strategic Focus on Iran: Israel aims to shift its attention to counter Iran, a key supporter of Hezbollah.
- 2. Military Resource Management: The ceasefire provides an opportunity for replenishing Israeli forces and



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- **3. Separation of Fronts:** By ending the conflict with Hezbollah, Israel can focus on its military operations against **Hamas**.
- 4. Challenges in Lebanon
 - **Prolonged Presence**: Remaining in Lebanon could deplete the **IDF** and bolster Hezbollah's domestic support.
 - **Hezbollah's Resilience**: Despite heavy losses, Hezbollah retained its capability to strike, launching **250 rockets** just two days before the ceasefire.

Key Factors Behind the Decision:

Civil-Military Dynamics in Israel

• Former Defence Minister and IDF Chief of Staff questioned the **government's military strategy**, advocating for a truce.

Strategic Limitations:

• Although Israel achieved a **symbolic advance to the Litani River**, continuing the conflict risked escalating costs without decisive gains.

This ceasefire serves as a **critical step** in addressing one of the most volatile conflicts in the region, while also reflecting the broader geopolitical considerations driving both nations' strategies.





24-30 Nov 2024





GS Paper 2 – Governance, Polity, and Social Justice & International Relations

Norway Issues Apology for Historical "Norwegianisation" Assimilation Policies

Context: On November 11, 2023, Norway's Parliament issued an unreserved apology for its century-long assimilation policies targeting the Sami, Kven, and Forest Finn communities. This apology follows the recommendations outlined in the Truth and Reconciliation Commission's 2023 report and marks a significant step towards acknowledging and addressing past wrongs committed against these indigenous and minority groups.



Who Are the Sami, Kvens, and Forest Finns?

The Sami People:

The **Sami** are the **indigenous people** of northern Europe, with a significant presence in **Norway**, **Sweden**, **Finland**, and **Russia**. With an estimated population of **100,000**, **Norway** is home to the largest Sami community.

- Cultural Practices: Known for their reindeer herding, a practice protected as an exclusive Sami right in Norway.
- Languages: The Sami speak three languages—North Sami, East Sami, and South Sami—which belong to the Uralic language family.

The Kvens:

The **Kvens** are descendants of **Finnish migrants** who came from the **Torne River Valley**.

- Traditional Practices: Historically, they engaged in slash-and-burn farming, fishing, and blacksmithing.
- Kven Language: The Kven language, a Finnic tongue, was officially recognized as an independent language in Norway in 2005.

The Forest Finns:

The **Forest Finns** are descendants of **Finnish immigrants** who settled in **Norway** in the **1600s**, migrating through **Sweden**.

• **Cultural Heritage**: They practiced **slash-and-burn agriculture** and maintained distinct cultural practices passed down through generations.

The Truth and Reconciliation Commission:

Launched in **2018**, the **Truth and Reconciliation Commission** was established to investigate the historical injustices faced by the **Sami**, **Kven**, and **Forest Finn** communities under Norway's **Norwegianisation** policies.

The Commission's objectives were to:

- Investigate the impact of assimilation policies on **indigenous and minority communities**.
- Propose measures to address **socio-economic disparities**, **cultural suppression**, and the **loss of language**.
- Recommend ways to preserve cultural heritage and promote inclusivity.

Key Findings and Recommendations:

The **Truth and Reconciliation Commission's 2023 report** identified the devastating consequences of **Norwegianisation**, including the **suppression of language** and **cultural identity** within the targeted communities. To rectify this, the Commission made several key recommendations:

- Create a Centre for Reconciliation Work to foster dialogue and healing.
- **Preserve Indigenous Languages**: Initiate language training programs and integrate indigenous languages into **education**.
- **Combat Prejudice and Harassment**: Implement measures to prevent ongoing discrimination and ensure equal rights for these communities.

Steps Toward Reconciliation:

In response to the findings, Norway's **Parliament** adopted **17 resolutions** to address the long-standing challenges faced by the **Sami**, **Kven**, and **Forest Finn** communities. These measures aim to:

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- Ensure **cultural preservation** and **socio-economic inclusion** for these marginalized groups.
- **Foster a more inclusive** society that recognizes and celebrates the diverse cultural heritage of all its citizens. **International Context:**

The **Truth and Reconciliation Commission's** work is part of a broader effort across the **Nordic countries**, with similar commissions underway in **Sweden** and **Finland**. These countries are also investigating the historical experiences of the **Sami people**, with reports expected soon.



