



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

PARLIAMENT'S 75-YEAR JOURNEY

A Special Session of Parliament, scheduled from September 18 to 22, will begin with a discussion on Parliament's 75-year journey, starting from the Constituent Assembly in 1946.

11 SEP - 16 SEP 2023

WEEKLY CURRENT AFFAIRS

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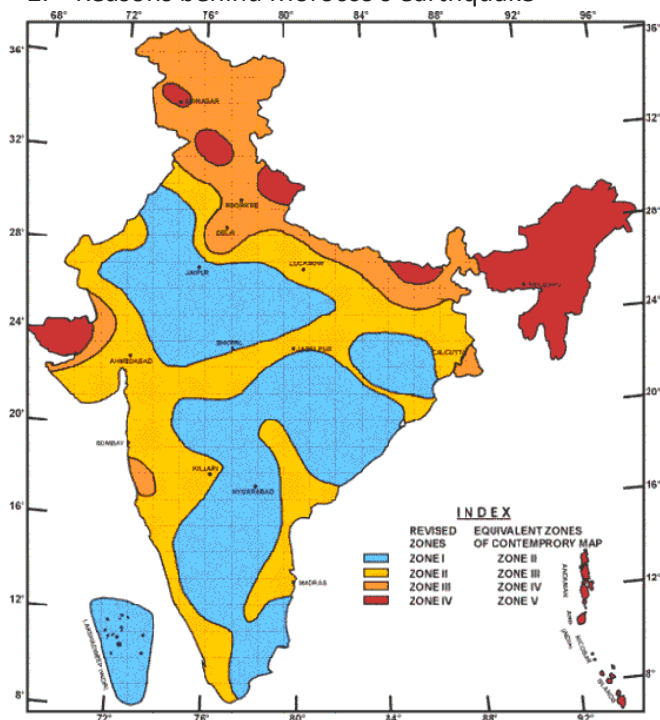
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GENERAL STUDIES – 1

Topics: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.

1. MARITIME TRADE ROUTE BETWEEN INDIA AND EUROPE

Context:

The article is related to the recently launched **India-Middle East-Europe Economic Corridor (IMEE-EC)**, from a historical point of view. Check the next article for IMEE-EC

What is the Red Sea Route?

The Red Sea route refers to an ancient maritime trade route that connected India with the Roman Empire through the Red Sea.

- This route facilitated the **exchange of various goods, including luxuries like spices, ivory, pearls, gemstones, and pepper** from India to the Roman Empire.



About the Red Sea Route:

About	Details
Indian Trade Contribution to the Roman Empire's Income	Custom taxes from Red Sea trade may have covered one-third of Roman income
Trade Goods Exchanged	Luxuries, spices, ivory, pearls, precious gemstones, pepper, wild animals, and more
Importance of Indian Pepper	Pepper was India's major export and was highly sought after in Rome

Importance of the route	
	Chinese silk reached Rome through India's ports, emphasizing India's historical importance
	Recent excavations in places like Muziris and Berenike have contributed to understanding the trade
	India's centrality in trade and the spread of ideas during the 1st and 2nd centuries CE is recognized

About Red Sea:

The Red Sea is an inlet of the Indian Ocean located between Africa and Asia. It is one of the most saline bodies of water globally. Bordering countries include **Egypt, Saudi Arabia, Yemen, Sudan, Eritrea, and Djibouti**. It connects to the Indian Ocean in the south through the Bab el Mandeb Strait and the Gulf of Aden. In the north, it is bordered by the Sinai Peninsula, the Gulf of Aqaba, and the Gulf of Suez, leading to the Suez Canal. The Red Sea occupies a part of the Great Rift Valley, known as the **Afro-Arabian Rift Valley**.

Why is it called "Red Sea"?

The Red Sea is not red in appearance; it typically has **blue-green water**. One theory suggests that a **cyanobacteria** called *Trichodesmium erythraeum*, a red-colored algae, may occasionally turn the **water reddish-brown** during seasonal algal blooms. Another theory links the name to **Asiatic languages** that use colours to denote cardinal directions, with "**red**" possibly representing "**south**."



Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

2. REASONS BEHIND MOROCCO'S EARTHQUAKE

Context:

A powerful [earthquake](#) with a **magnitude of 6.8 struck Morocco**, causing extensive damage and a death toll exceeding 2,400 people. The earthquake's epicentre was in the **Atlas Mountains near Marrakech**.

Reason for the Earthquake:

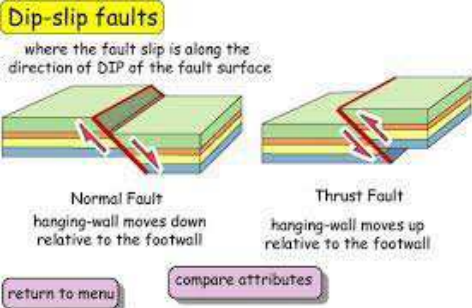
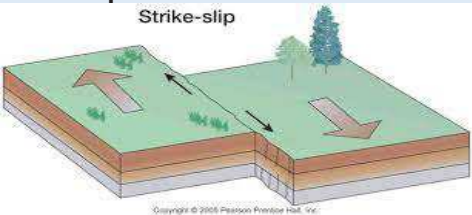
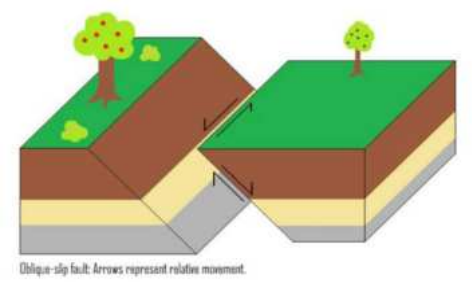
The earthquake in Morocco resulted from a **geological phenomenon known as a "reverse fault."**

- **Tectonic Plate Interaction:** Morocco is situated in an area **where the Eurasian and African tectonic plates converge**.
- **Plate Boundary Activity:** The Atlas Mountains, where the earthquake occurred, are actively rising due to the convergence of these two large tectonic plates
- **Seismic Stress Accumulation:** Although the region had not experienced major recorded earthquakes before, stress had been accumulating underground for an extended period due to the slow movement of tectonic plates.
- **Oblique-Reverse Fault:** This type of faulting is common in **areas of compression** along the convergent plate boundaries. The stress along these fault lines can induce earthquakes as rocks **abruptly shift to release accumulated stress**.

More about Oblique-Reverse Fault:

An oblique-reverse fault is a geological fault characterized by **both horizontal and vertical movements along the fault plane**. In this type of fault, rocks on one side of the fault plane move vertically upward while also sliding horizontally in a lateral direction. This movement occurs due to the **compression of tectonic plates**, where one plate is converging into another.

Various types of faults:

Type of Fault	Description
Dip-Slip Faults Dip-slip faults 	Movement along the direction of the dip plane.
	Vertical movement either up (reverse dip-slip) or down (normal dip-slip) along the fault plane.
	Common in regions experiencing crustal compression or extension.
	Examples: Reverse faults (upthrown block above the fault plane) and Normal faults (downthrown block above the fault plane).
Strike-Slip Faults 	Horizontal movement along the fault plane.
	Movement is parallel to the strike of the fault.
	Common in transform plate boundaries where tectonic plates slide past each other horizontally.
Oblique-Slip Faults 	Show characteristics of both dip-slip and strike-slip faults .
	Movement occurs in two directions: horizontal (strike-slip) and vertical (dip-slip) along the fault plane.

Why the earthquake in Morocco has caused so much damage?

Factor	Explanation
Epicentre Location	The earthquake's epicentre was in the High Atlas Mountains (close to the city of Marrakesh), causing it to affect populated areas and infrastructure.
Depth	The depth of the earthquake, estimated between 8km and 26km , was relatively shallow , making it more dangerous as shallow earthquakes transmit more energy to the surface.
Previous Earthquake Activity	The region had not experienced major recorded earthquakes before, suggesting that stress had been accumulating underground for an extended period before being released in this earthquake.
Lack of Preparedness	Earthquakes are relatively rare in North Africa , so Morocco was not well-prepared for such a calamity. Many buildings, especially in rural areas and older cities, were not constructed to withstand strong tremors .

Earthquake Prone areas in India:

The **Western Himalayas in India** are considered one of the most dangerous seismic zones globally, and the entire Himalayan region, spanning from the Hindu Kush mountains to Arunachal Pradesh, is at risk of a major earthquake with a magnitude **exceeding 8 on the Richter scale**. This heightened risk is attributed to the **substantial energy accumulation along faultlines** due to the ongoing interaction of various tectonic plates.

However, earthquakes **cannot be accurately predicted** because there is **currently no equipment or method** to detect precursory signals within the Earth that would indicate an **impending major earthquake**. Such signals would need to be specific to significant seismic events and not indicative of minor movements in the Earth's crust.

Insta Links:

[60% of India prone to earthquake](#)

GENERAL STUDIES – 2

Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

1. FRATERNITY IN THE INDIAN CONSTITUTION

Context:

The article discusses how the concept of [fraternity](#) in India, as enshrined in the Constitution, differs significantly from its historical and philosophical origins.

We published an article on a similar theme in April Daily CA: [The concept of fraternity](#)

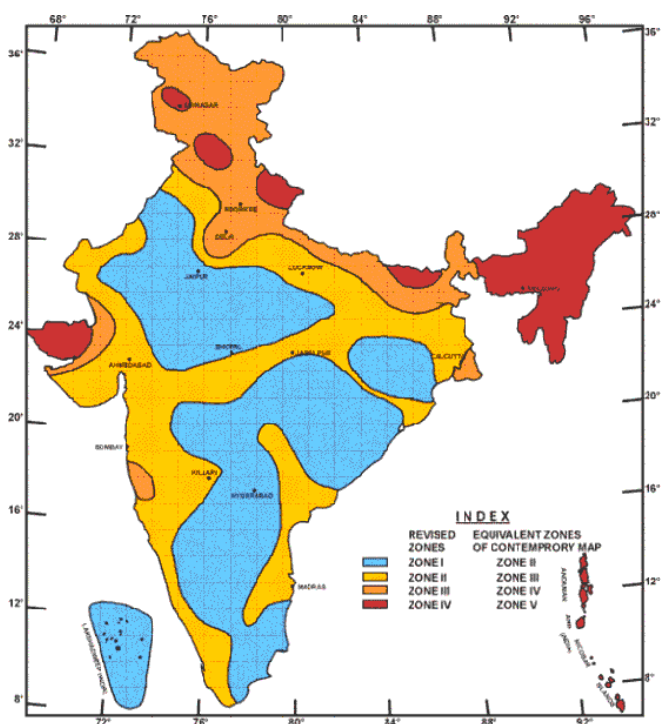
What is Fraternity?

According to **Dr. Ambedkar** "Fraternity means a **sense of common brotherhood of all Indians** — of Indians being one people. It is the **principle which gives unity and solidarity** to social life,".

No one should treat a fellow citizen as inferior. While the **morals of the Preamble** like- Justice, Equality, and **Liberty** have been explicitly and implicitly ensured through **Fundamental Rights, Directive Principles** and other constitutional provisions, this is **not the case with Fraternity**.

More about Fraternity:

Aspect	Description
Political Philosophy Roots	Fraternity is deeply embedded in political philosophy, emphasizing empowerment and emancipation in politics . It's a fundamental element of liberal political thought, alongside liberty and equality.
Ancient Origins	The concept traces back to Plato , who introduced it as " philia " (love) involving the sharing of knowledge , and deepening friendships. Aristotle later associated it with justice and friendship within the "polis" , marking its early political foundations.



Historical Evolution	Throughout the Middle Ages , fraternity found resonance within Christianity in Europe. It gained significant political prominence during the French Revolution , notably with the famous slogan “ liberté, égalité, fraternité. ”
Fraternity in India	Fraternity was underscored during India’s struggle for independence and is enshrined as a vital constitutional principle.

Fraternity’s Significance in India’s Independence:

- **Foundational Role:** Liberty, equality, and fraternity were pivotal ideals during India’s independence struggle and the establishment of its constitutional democracy. They provided guidance to a diverse society transitioning into an independent republic.
- **Ambedkar’s Emphasis:** Dr. Ambedkar emphasized the inseparability of liberty, equality, and fraternity. He recognized the **fraternity’s crucial role in India’s diverse** and divided society.
- **Demand:** It became an **official demand of the [Indian National Congress](#) in 1935** and was officially adopted in the **Lucknow session in April 1936** presided by Jawaharlal Nehru, who also drafted the Objectives Resolution.

Constitutional Provisions:

Constitutional Provision	Description
Preamble	The Preamble of the Indian Constitution mentions fraternity as one of its objectives. It ends with “...and to promote among them all fraternity assuring the dignity of the individual and the unity and integrity of the Nation.”
Directive Principles of State Policy	Article 38 : The state shall strive to promote the welfare of the people by securing and protecting a social order that fosters fraternity among the citizens.
Fundamental Duties	Article 51A(e) : The duty of every citizen to promote harmony and the spirit of common brotherhood among all the people of India transcending religious, linguistic, and regional diversities

Fraternity meaning in the constitution:

Meaning	Description
Signifies moral obligation	Fraternity in the Constitution implies a moral obligation to treat fellow human beings justly and respectfully, prioritizing social cohesion over individual identity.

	Acharya Kripalani pointed out that the contents of the Preamble were not only legal and political principles but also had moral, spiritual and mystical content.
Pillar of constitutional morality	It is one of the four pillars of constitutional morality as stated in the Preamble, alongside justice, liberty, and equality
Affirming the dignity of the individual	Fraternity in the Constitution affirms the dignity of the individual by recognizing moral equality and mutual respect among individuals despite differences in religious beliefs, caste, language, culture, ethnicity, class, and gender.

Challenges in Achieving Fraternity:

Challenges	Description
Social and Cultural Differences	Differences based on religion or caste may result in mistrust, discrimination, and violence.
Economic Disparities	Economic disparities can lead to a breakdown in social cohesion, a key aspect of fraternity
Political Differences	Polarization along political lines can foster hostility and intolerance, hindering common goals.
Lack of Trust	A lack of trust and mutual understanding undermines the spirit of brotherhood.
Failure of Constitutional Morality	Its failure can lead to a loss of confidence in institutions and the rule of law, creating instability.
Inadequate Moral Order	Failure in this area can erode fraternity, as unethical actions without consequences hinder trust.

Measures to Achieve Fraternity in the Indian Context:

Measures	Description
Promote Interfaith Dialogue	Encourage dialogue and understanding among diverse religious communities to build fraternity.
Celebrate Diversity	Embrace and celebrate India’s cultural and religious diversity to bring people closer.
Educate People About Constitutional Values	Educate citizens about the values enshrined in the Indian Constitution, including fraternity.
Encourage Volunteering	Engage people in volunteering for social causes to foster cooperation and a sense of fraternity.

Support Social Initiatives	Back social initiatives that promote inclusivity and equality, contributing to the fraternity.
Foster a Sense of National Pride	Promote patriotism and national pride to unite people, enhancing fraternity and unity.

Conclusion

Ambedkar dreamed of an India in which divisions of caste and religion would gradually fade away in the spirit of fraternity. Therefore, investing in concepts like fraternity would save society from fragmentation.

Insta links:
[Preamble](#)

Topics: Parliament and State Legislatures – structure, functioning, conduct of business, powers & privileges and issues arising out of these.

2. PARLIAMENT'S 75-YEAR JOURNEY

Context:

A Special Session of Parliament, scheduled from September 18 to 22, will begin with a discussion on **Parliament's 75-year journey**, starting from the Constituent Assembly in 1946.

The article is in continuation of the previous article [Significance and Legacy of Parliament in India's Democracy](#) published on 4th September in our Daily CA

Key events in the Indian Parliament's History are:

Year	Key Event/Act
1946	Constituent Assembly first met on December 9th.
1950	Adoption of the Indian Constitution on January 26th.
1952	First general elections were held, marking the start of democracy
1956	Adoption of the States Reorganization Act , reshaping state boundaries.
1957	Second general elections.
1961	Liberation of Goa, Daman, and Diu .
1966	Indira Gandhi became the Prime Minister.
1971	Passage of the 42nd Amendment Act , altering the Preamble.
1975-77	The Emergency period was marked by suspended democracy.

1984	Operation Blue Star in Golden Temple, Amritsar.
1986	Passage of the Muslim Women (Protection of Rights on Divorce) Act
1991	Economic liberalization under Prime Minister Narasimha Rao.
2005	Passage of the Right to Information Act , 2005.
2016	Implementation of the Goods and Services Tax (GST).
2019	The Jammu and Kashmir Reorganisation Act of 2019 passed. The act also repealed Article 370 , which gave the region its "special status"
2020	COVID-19 pandemic disrupts Parliament sessions.
2023	Inauguration of the new Parliament building
2023	Special Session to commemorate Parliament's 75-year journey.

The Indian Parliament has become disconnected from society and turned into a gated community:

- **Nepotism in Politics:** The presence of dynastic politics in Indian democracy is perpetuated not only by national parties but also by regional parties.
- **The increasing criminalisation of politics:** In a petition filed in Feb 2023, it was claimed that there has been an increase of 44% in the number of MPs with declared criminal cases since 2009 (ADR report).
- **Wealthy politicians but poor citizens:** The percentage of persons with a net worth above INR 1 crore has only been increasing over the 2 decades.
 - As per reports by the Association for Democratic Reforms, there are 315 members whose net worth exceeds INR 1 crore in a 543-member Lok Sabha.
- **The lower number of women parliamentarians:** The % of women in Lok Sabha is less than 15% and even lower in Rajya Sabha, which stands at around 13%.
- **Not inclusive:** The number of Muslim MPs in 2019 has only increased by 3. There has been **no representation of the transgender community** in the Indian Parliament so far.
- **Lack of Transparency:** E.g., very short time given to scrutinize many of the bills. Several bills have been passed as money bills to limit Rajya Sabha scrutiny
 - Parliament and parliamentarians are **generally not accessible** for ordinary citizens to interact or express grievances.

Despite these lacunas, the Indian parliament has made a substantial effort to be an inclusive institution:

Aspect	Examples
Representation	The percentage of women's representation in Lok Sabha has increased from 5% in 1951 to 14% in 2019 . In the early decades, the Parliament was a stronghold of lawyers but in the past two decades, people from diverse educational backgrounds have entered the Parliament .
Public Debates	Citizens can watch live debates on important issues, such as budget discussions and legislative debates.
Parliamentary Committees	Committees like the Standing Committee on Finance analyze budgets and address economic concerns. E.g., the Parliamentary panel asked the former RBI governor to present himself before it, so as to answer questions regarding demonetization.
Laws for Social Welfare	Legislation like the Food Security Act 2023 and increasing reservation has helped provide representation to Scheduled Castes and Scheduled Tribes in educational and public services
Amendments to Address Needs	Amendments to labour laws to protect workers' rights and accommodate changing employment dynamics.
Public Participation	e-Petitions allow citizens to raise concerns, and petitions are addressed in the Parliament. Many of the state assemblies have completely become paperless.

Conclusion

The Indian Parliament is a **symbol of the nation's democratic ethos**. And hence, efforts to strengthen representation, accessibility and inclusivity are essential for addressing the needs and aspirations of the diverse Indian population.

Insta Links:

[India's New Parliament: Need and Significance](#)

Topics: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

3. PROGRESS ON THE SUSTAINABLE DEVELOPMENT GOALS: THE GENDER SNAPSHOT 2023

Context:

The latest UN report titled **"Progress on the Sustainable De-**

velopment Goals: The gender snapshot 2023" reveals that despite global efforts, the world is failing to **achieve gender equality**.

What is Gender Equality?

Gender equality refers to the **equal rights, responsibilities, and opportunities of all individuals, regardless of their gender**. It involves ensuring that women and men have the **same access to resources, education, employment, and decision-making processes**. G

Key findings from the report include:

- **Social aspects:**
 - **SDG 1 (No Poverty):** If current trends continue, **over 340 million women and girls** (about 8% of the female population) will live in **extreme poverty by 2030**
 - **SDG 2 (Zero Hunger):** One in four experiencing food insecurity.
 - **Older women face higher rates** of poverty and violence than older men, with many lacking access to pensions.
 - **Violence:** No country is within reach of eradicating intimate partner violence
 - The number of women and girls in **conflict-affected contexts has risen** significantly
- **Political aspects:** Gender disparities **persist in power and leadership roles**
- **SDG 5 (Gender Equality):** Women spend **2.3 more hours per day on unpaid care** and domestic work than men.
- **SDG 13 (Climate Action):** Climate change may push about 158 million more women and girls into poverty by mid-century.
- **Progress on SDG:** Progress on **SDG 5 (gender equality) is significantly off track**, with only two indicators nearing the target.
- **Finance aspect:** An additional \$360 billion per year is needed to achieve gender equality and women's empowerment across global goals.
 - **Wage Gap:** The **labour and earnings gap remains persistently high**. For each dollar men earn in labour income globally, women earn only 51 cents.

Persistent Challenges:

Challenges include **food insecurity due to climate change, insufficient efforts** to combat intimate partner violence, rising conflict-affected contexts for women and girls, a significant number of girls and young women out of school, and persistent earnings gaps between men and women in the labour force.

For Underrepresentation of Women in Higher Education in India: [Click Here](#)

Recommendations:

The report calls for **greater collaboration, funding, and policy actions to address gender disparities and emphasizes** that failing to prioritize gender equality could jeopardize the entire 2030 Agenda for Sustainable Development. Addressing **gender gaps in agrifood systems** can reduce food insecurity and boost global GDP by nearly \$1 trillion.

Insta Links:

[Problems Faced by minority women in India](#)

4. JAL JEEVAN MISSION REMAINS A PIPE DREAM

Context:

The [Jal Jeevan Mission](#) (JJM), a central government initiative to provide piped water to every rural household by 2024, faces challenges and limitations.

About the mission:

Aspect	Jal Jeevan Mission
Objective	Provide 55 liters of water per person per day through Functional Household Tap Connections (FHTC) by 2024 to every Rural households
Ministry	Launched in 2019 under Ministry of Jal Shakti
Focus	It is a Demand-driven scheme with strong emphasis on Jan bhagidari (community engagement) as a crucial pillar of the project.
Objective	The mission is centered on easing the burden of water collection for rural residents, particularly women who often travel long distances for water.
Key Areas Covered	<ul style="list-style-type: none"> Ensuring functionality of existing water supply systems and connections Water quality monitoring, testing, and sustainable agriculture. Coordinated use of surface water and groundwater. Drinking water source augmentation, grey water and reuse
Additional Inclusions	<ul style="list-style-type: none"> Prioritizing FHTCs in areas with poor water quality, drought-prone villages, Sansad Adarsh Gram Yojana (SAGY) villages, etc. Providing FHTCs to schools, Anganwadi centers, Gram Panchayat buildings, health and wellness centers, and community buildings. Technological solutions for removing contaminants in areas with water quality concerns.
Paani Samitis	<ul style="list-style-type: none"> Role: Paani Samitis are responsible for planning, implementing, managing, operating, and maintaining village water supply systems. Composition: 10-15 members, 50% women, SHG reps, health workers, Anganwadi teachers, etc. It develops village plan with local resources and with Gram Sabha approval
Funding Pattern	The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.
Challenges	Rural regions face high water stress. While household connection progress is vital, sustaining water sources for the long term remains a challenge.
Partnership	The United Nations Office for Project Services (UNOPS) is collaborating with the Denmark government to support the mission in Uttar Pradesh.
Employment Impact	An average of over 29 million people employed annually during the mission's construction phase.

A fully functional tap water connection is defined as a **household getting at least 55 litres** of potable water per capita per day all through the year

Achievements of the mission:

- Over two-thirds (66%) of rural households** in India now have piped water connections, a significant leap from the 2019 baseline of 17%.
- States Achieving 100% Tap Connectivity:** Goa, Telangana, Haryana.
- Union Territories Achieving 100% Tap Connectivity:** Puducherry, Andaman and Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu.
- States with over 90% FHTC Coverage:** Punjab, Guja-

rat, Himachal Pradesh, Bihar

- States with Least FHTC Coverage:** Rajasthan, Chhattisgarh, Jharkhand, Uttar Pradesh

Present challenges with the mission:

Aspect	Details
State Disparities	Only a few states report high coverage rates. In contrast, populous states like Uttar Pradesh and Rajasthan have lower coverage.
Quality Concerns	Some households, despite having tap connections, use local groundwater due to inadequate tap water quality .
Reporting and Certification	Adoption numbers rely on self-reporting by villages and lack third-party certification .
Shortcomings in Reality	Despite official claims of 100% household tap connections (FHTC) , many households lack taps, and those with taps often receive limited water
Discrepancies in Reporting	Discrepancies exist between official reports and ground reality , where eligible FHTC households are not fully connected to running water supply.
Water Treatment Efforts	Water treatment plants have been commissioned to address water scarcity, but the challenge lies in commissioning pipes over difficult terrain .
Taps Get Stolen	In some areas, taps provided by the mission have been stolen , and households lack sufficient storage to maintain a continuous water supply.

Suggestions:

- Quality Over Quantity:** Prioritizing consistent, high-quality tap water adoption in rural India is crucial. States with lower adoption rates and larger populations should receive assistance to improve their numbers.
- Third-Party Assessment:** Implement third-party assessments to verify the accuracy of reported tap water connections, ensuring transparency and accountability.
- Focus on Lagging States:** Prioritize states with lower adoption rates and larger populations to accelerate progress toward universal tap water coverage.
- Public Awareness:** Conduct awareness campaigns to educate rural communities on the benefits of clean tap water and proper water usage.
- Make the [Right to Water Legal](#):** In India, the **right to water is not enshrined as a fundamental right** in the Constitution.

Other steps are taken for water management in Urban Areas:

- **Atal Bhujal Yojana:** For sustainable management of groundwater resources with community participation in selected water-stressed areas.
- **National Aquifer Management Program:** For mapping of aquifers, characterization, and development of aquifer management plans.
- **National Water Policy (2012):** Include provisions like rainwater harvesting, augmenting the availability of water through direct use of rainfall, etc.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** To provide tap connections to over 1 crore households in 500 cities.

Conclusion:

On 28 July 2010, through **Resolution 64/292**, the **United Nations General Assembly** explicitly recognized the **human right to water and sanitation** and **acknowledged that clean drinking water and sanitation are essential to the realization of all human rights**.

Insta Links:

- [Jal Jeevan Mission \(JJM\) has hit the 51% mark](#)
- [Jal Jeevan Mission](#)

Topics: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

1. JOINT STATEMENT FROM INDIA AND THE UNITED STATES

Context:

A Joint Statement between India and the United States was released on the sidelines of the 18th **G20** summit being held in New Delhi

Key aspects of the joint statement between [India and the United States](#):

Aspect	Summary
Partnership	Strategic partnership between India and the United States
Shared Values	Shared values such as freedom, democracy, human rights, inclusion, pluralism, and equal opportunities for all citizens, strengthen their relationship.
Quad Cooperation	The importance of the Quad in supporting a free, open, inclusive, and resilient Indo-Pacific was reaffirmed. India will host the next Quad Leaders' Summit in 2024

UN Security Council Reform	President Biden supported India's candidacy for a permanent seat on the UN Security Council and the need for UN reform.
Technology Collaboration	India-U.S. Initiative on Critical and Emerging Technology (iCET).
Space Exploration	Joint efforts to the International Space Station, NISAR Satellite and planetary defence. U.S. support for India's participation in asteroid detection and tracking via the Minor Planet Center
Semiconductor Supply Chains	Building resilient global semiconductor supply chains and investments by U.S. companies in India were noted. Microchip Technology initiative to invest \$300 million in expanding R&D presence in India. Advanced Micro Device's announcement to invest \$400 million over the next five years to expand R&D and engineering operations in India.
Digital Inclusion	A Memorandum of Understanding (MoU) between Bharat 6G Alliance and Next G Alliance was signed to deepen cooperation in telecommunications.
Quantum	Participation of SN Bose National Center for Basic Sciences as a member of Quantum Economic Development Consortium.
Education	MoU signed between Indian universities, and the Association of American Universities (AAU) to establish India-U.S. Global Challenges Institute
Defence Partnership	The leaders pledged to deepen cooperation in defence, including in space and AI and highlighted ongoing defence collaborations. Aerospace and Naval Cooperation: Agreements related to aerospace, naval agreements, and maintenance and repair of U.S. Navy assets in India Commencement of negotiations to manufacture GE F-414 jet engines in India. India-U.S. Defence Acceleration Ecosystem (INDUS-X), India to procure 31 General Atomics MQ-9B (16 Sky Guardian and 15 Sea Guardian) remotely piloted aircraft
Innovation and Trade Dialogue	An "Innovation Handshake" agenda under the India-U.S. Commercial Dialogue
WTO disputes	Mutually settled seventh and last outstanding WTO dispute over poultry products which was prohibited by India due to concerns over avian influenza.

Renewables	Inaugural meeting of the India-U.S. Renewable Energy Technologies Action Platform [RE-TAP] , in August 2023, under which the two countries will engage in lab-to-lab collaboration, piloting, and testing of innovative technologies
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To know more about the India-US Partnership: [Click Here](#)

To learn more about India-US Economic Relations: [Click Here](#)

To know about the India-US defence Agreement: [Click Here](#)

Indian Diaspora	Saudi Arabia hosts an over 2.6 million-strong Indian community , the largest expatriate community in the Kingdom, known for their expertise, discipline, and law-abiding nature.
Cultural Linkages	Haj pilgrimage holds significance in bilateral relations between India and Saudi Arabia.
Naval Exercise	Al-Mohed Al-Hindi Exercise

Mohammed bin Salman (MBS) Leadership and Vision 2030:

Crown Prince MBS has initiated reforms in Saudi Arabia, such as granting women the right to drive, opening cinemas, and welcoming foreign tourists. However, he faces criticism for his handling of dissent and alleged involvement in events like the **Khashoggi case**.

Recent Rapprochement between Saudi and Iran and its significance for India

The recent reconciliation between Saudi Arabia and Iran, brokered by China after years of hostility, indicates a shift towards peace and diplomatic engagement. This shift has the potential to reshape the regional landscape and impact various dimensions of global politics.

Significance of the Saudi-Iran Deal for India:

Significance	Description
Energy Security	<ul style="list-style-type: none"> Both Saudi Arabia and Iran are major oil producers. Improved relations may help stabilize global oil prices, benefiting India's energy security. Ensures a consistent supply of oil to India.
Trade Opportunities	<ul style="list-style-type: none"> Both nations are important trading partners for India. Normalized ties could open up new avenues for trade and investment, boosting economic opportunities for India. Enhanced economic engagement.
Regional Stability	<ul style="list-style-type: none"> India has strong economic and strategic interests in the Middle East, including the International North-South Transport Corridor (INSTC). Improved relations contribute to regional stability, reducing the risk of conflict and terrorism. Protects India's interests in the region.

5. THE IMPORTANCE OF SAUDI ARABIA TO INDIA

Context:

The article discusses the **growing importance of Saudi Arabia to India** in terms of their strategic partnership and cooperation.

Aspect	Details
Historical Ties	India and Saudi Arabia have enjoyed friendly relations dating back to 1947 , reflecting socio-cultural and economic connections. Saudi King Abdullah's visit to India in 2006, elevated their ties to a strategic partnership
Economic corridor	<u>India-Middle East-Europe Economic Corridor</u> : This project aims to connect India to Europe through West Asia, potentially rivalling China's Belt and Road Initiative
<u>Strategic Partnership Council</u>	Saudi Crown Prince Mohammed bin Salman co-chaired the first meeting of the India-Saudi Arabia Strategic Partnership Council with PM Modi, recently. Both countries are trying to expand their energy partnership , discussing the possibility of trading in local currencies , and negotiating a free trade agreement with the Gulf Cooperation Council .
Oil & Gas	Saudi Arabia is India's second-largest supplier of crude oil. Joint efforts to set up the world's largest greenfield refinery at Raigarh, Maharashtra.
	India is Saudi Arabia's second-largest trade partner and vice versa
	India has a trade deficit of about USD 25 billion with Saudi Arabia

Geopolitical Implications	<ul style="list-style-type: none"> India maintains cordial relations with both Saudi Arabia and Iran. Improved ties between these nations can aid India in its efforts to promote peace and security in the region. Aligns with India's regional diplomacy. Challenges posed by increasing Chinese mediation and influence.
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Conclusion:

India seeks to utilize its **friendly relations with Saudi Arabia** to influence Pakistan in controlling the Taliban in Afghanistan

About India-Saudi Arabia Strategic Partnership Council:

It was **established in October 2019** and consists of **two main committees**: one focusing on political, security, social, and cultural aspects, and the other on the **economy and investments**. This council reflects a significant strategic partnership, with India being the fourth country to establish such ties with Saudi Arabia, following the **UK, France, and China**.

Topics: Important International institutions, agencies and fora, their structure, mandate.

6. AFRICAN UNION IN G20

Context:

The **African Union (AU)** became a **new permanent member of the G20** during the **18th G20 Heads of State and Government Summit** in New Delhi, just three months after India proposed its inclusion.

About AU:

Aspects	Description
About	The African Union (AU) is a continental body consisting of 55 member states in Africa .
Formation	<p>In 1963, the Organization of African Unity (OAU) was founded to promote cooperation among African states.</p> <p>In 2002, the OAU was succeeded by the AU with a goal to accelerate economic integration of the continent.</p>
Objectives of the AU	The AU emphasizes greater unity and solidarity among African countries . It promotes political and socio-economic integration , peace, stability, security, and human rights.

Achievements of AU	<p>African Continental Free Trade Area (AfCFTA): Established in 2018, it seeks to create a single continental market for goods and services.</p> <p>Diplomatic Achievement: AU established a mission in Beijing, strengthening ties with China, Africa's largest trading partner. It played a key role in brokering a peace deal between the Ethiopian Government and the Tigray People's Liberation Front.</p> <p>Women's Economic Financial Inclusion: AU introduced a 10-year continental declaration for gender equality and women's empowerment.</p>
Challenges	<p>Unconstitutional Hold on Power: At least 32 military coups or coup attempts since 2013; five out of seven attempts since 2020 succeeded.</p> <p>Disregard for the Rule of Law: Democratically elected governments crackdown on civil society organizations and the media.</p>
Significance of AU's Inclusion in G20	The AU's membership in the G20 offers an opportunity to reshape global trade, finance, and investment structures. It provides African interests and perspectives with a voice and visibility in the G20, potentially influencing global policy decisions.
Indian-African Relations	<p>Social Infrastructure: India-Africa cooperation involves education, health, and skills enhancement at various levels. India-Africa Partnership (Achievements, Challenges and Roadmap 2030)</p> <p>Common Geo-Political Interests: India and Africa share interests in UN reforms, counter-terrorism, peacekeeping, and cybersecurity.</p> <p>Economic Cooperation: Trade amounted to USD 63.3 billion in 2018-19, contributing to economic ties. Asia-Africa Growth Corridor – an economic cooperation agreement between India, Japan and multiple African countries.</p>
Opportunities in India-Africa Relations	<p>Addressing Food Security: India and Africa can cooperate to ensure food and nutritional security, leveraging India's agricultural expertise.</p> <p>Combating Neo-Colonialism: Differentiating from neo-colonial approaches, India focuses on building local capacities and equal partnerships.</p> <p>Preventing Global Rivalries: As global players engage with Africa, India and Africa can prevent rival ambitions and maintain cooperation.</p>

To know about detailed India-Africa ties: [Click Here](#)

Conclusion:

Having become a member of G20, AU should use this opportunity to **address constitutional violations firmly and consistently**. Address **root causes of coups**, such as corruption and insecurity, to deter military interference. Utilize natural resources for economic growth and empower citizens.

Insta Links:

[India-Africa](#)

7. INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR (IMEE-EC)

Context:

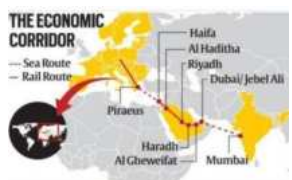
On the sidelines of the [G20 Summit](#) in New Delhi, an MoU was signed between India, the US, Saudi Arabia, the European Union, the UAE, France, Germany, and Italy to establish the **India-Middle East-Europe Economic Corridor (IMEE-EC)**.

What is IMEC?

The **India-Middle East-Europe Economic Corridor (IMEE-EC)** is an infrastructure development project that aims to **create connectivity through rail and shipping networks**, energy cables, and data links.

More about IMEC EC:

India-Middle East-Europe Economic Corridor (IMEE-EC)	
Participating Countries	India, Saudi Arabia, UAE, France, Germany, Italy, USA, EU
Objectives	IMEC seeks to boost trade, clean energy, and economic growth while providing an alternative to China's Belt and Road Initiative (BRI)
Part of	It is part of the Partnership for Rail and Shipping Corridors Global Infrastructure Investment (PGII) and focuses on enhancing global trade and cooperation through critical infrastructure development.
Corridor Components	Railway lines (make trade between India and Europe 40% faster).
	Electricity cable and a clean hydrogen pipeline to foster clean energy trade.
	High-speed data cable to link innovative digital ecosystems in the world and create business opportunities

Corridor Segments	Eastern Corridor connecting India to the Arabian Gulf , Northern Corridor connecting Arabian Gulf to Europe	
Benefits for India	Enhancing food security, regional supply chains, trade accessibility, environmental considerations, economic cohesion, job creation, and reduces greenhouse gas emissions.	
	Reliable cross-border ship-to-rail transit network connecting India, the UAE, Saudi Arabia, Jordan, Israel, and Europe.	
	It offers India a crucial role in global commerce, digital communication, and energy networks vis-à-vis China's BRI	
	Geographical Advantage: It firmly positions India along the trade route spanning South East Asia to the Gulf, West Asia, and Europe.	

What is the PGII initiative?

The PGII (Partnership for Global Infrastructure Investment) initiative (announced in **2021** during the **G7 summit in the UK**) is a **collaborative effort by G7 countries** to fund infrastructure projects in **developing nations**.

- It serves as an **alternative to China's Belt and Road Initiative (BRI)** and aims to mobilize funds for critical infrastructure development, focusing on transparency, sustainability, and gender equality.
- PGII emphasizes** loans over charity, benefiting both lending and receiving countries.

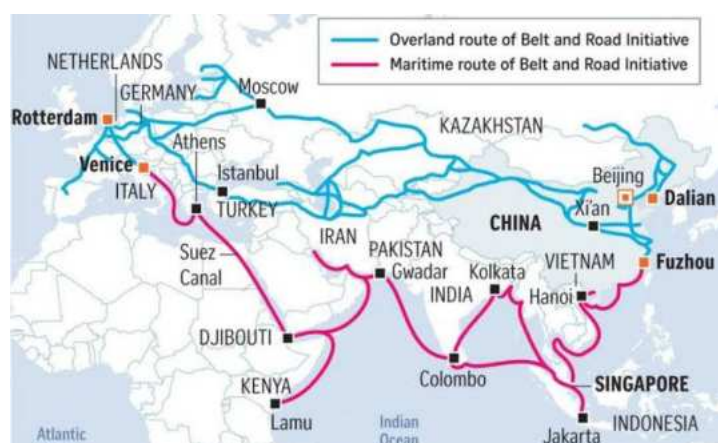
Other initiatives under PGII announced previously are:

PGII Initiatives	Description
Trans-African Corridor	It will connect the port of Lobito in Angola with Katanga province in Congo and the copper belt in Zambia
Clean Energy Projects in Indonesia	The PGII announced clean energy projects in Indonesia to support sustainable energy sources and infrastructure development.
Investments in India's Health Infrastructure	The US government's International Development Finance Corporation (DFC) pledged over \$15 million to invest in India's health infrastructure, including eye clinics and women's hygiene products .
EU's Global Gateway Program	The European Union (EU) committed to activating 300 billion USD in investments for critical connectivity projects , with a focus on Africa and various regions around the world.

About the BRI project:

China began the **Belt and Road Initiative** in **2013** under its President Xi Jinping. It aims to revive the ancient trade routes crossing to and from China—from Rome in Europe to East Asia. Under this, the Chinese government **helped in providing loans for infrastructure** projects to various countries, and in many cases, Chinese companies were awarded contracts for carrying out the work.

Issues with BRI	Description
Unsustainable Debts	According to a 2019 World Bank report, among the 43 corridors, 12 could face a situation where debts were not sustainable
Environmental Concerns	BRI projects have raised concerns about environmental degradation and their impact on ecosystems.
Corruption	There have been allegations of corruption in some BRI projects , affecting their credibility. Critics argue that the BRI lacks transparency in agreements and financing, making costs unclear.
Territorial Disputes	E.g., BRI included the China-Pakistan Economic Corridor, which connected Kashgar in China with the Gwadar port in Pakistan via Pakistan-occupied Kashmir
Varying Benefits	Different countries have varying opinions on the benefits of enhanced trade connectivity through BRI.
G7 Alternative	The G7's PGII initiative aims to provide a more transparent and sustainable alternative to the BRI.



8. G20 NEW DELHI LEADERS' DECLARATION

Context:

The 18th G20 Summit was hosted by India in New Delhi on September 9-10, 2023. The theme, "[Vasudhaiva Kutumbakam](#)," highlighted global unity.

The **G20 Leaders' New Delhi Declaration** achieved **unanimous consensus**, addressing issues like **Russia-Ukraine tensions**, sustainable development, and food security.

Key highlights of the G20 New Delhi Leaders' Declaration:

Key Areas	Highlights
Ukraine War	All states must act in line with the UN Charter. Refrain from threats or use of force.
Grain/Food/Energy Security	Call for unimpeded deliveries of grain, food, and fertilizers/inputs from Russia and Ukraine.
Gender Equality	Creation of a working group on women's empowerment to prioritize gender equality, women empowerment, and leadership.
Food Security	G20 leaders aim to eliminate hunger and malnutrition , address rising commodity prices, and promote transparent and fair trade in agriculture.
Economies & Markets	Commit to protecting the vulnerable through equitable growth. A Financial Inclusion Action Plan aimed at advancing financial inclusion for individuals and MSMEs. Global Value Chains: A generic framework for mapping global value chains to identify risks and build resilience. Reaffirmation of commitment to the twin pillars of the international tax package , including profit allocation and nexus and global minimum taxation . A roadmap for implementing the recommendations of the G20 Independent Review of MDBs' Capital Adequacy Frameworks .
Technology	Crypto-Assets: A joint roadmap to support a coordinated policy and regulatory framework for crypto-assets. Digital Public Infrastructure (DPI): Establishment of a Global DPI Repository to share best practices and experiences in DPI development and deployment.

Climate Change	Accelerate efforts to phase down unabated coal power
	Aim to triple renewable energy capacity by 2030
	Call for ambitious, transparent, and trackable climate finance goals from 2024
	Recognition of the need for about USD 6 trillion in the pre-2030 period for developing countries to implement their Nationally Determined Contributions (NDCs) for climate action.
Global Debt Vulnerabilities	Commit to addressing debt vulnerabilities in developing countries. Call for swift conclusion of debt treatment for Ethiopia .
Health	Commit to strengthening global health architecture .
	Emphasis on building a climate-resilient healthcare systems , integrating traditional medicine, and adopting a one-health approach.
Agricultural Transparency	Strengthening Agricultural Market Information System (AMIS) and Group on Earth Observations Global Agricultural Monitoring (GEOGLAM) to enhance transparency and avoid food price volatility.
	AMIS, launched in 2011 , enhances food market transparency and policy responses for food security, while GEOGLAM , with roots in the French G20 Presidency in 2011, offers global agricultural information for market transparency and food security.
Biofuels Initiatives	The Global Biofuels Alliance (GBA) is an India-led initiative promoting biofuels' adoption globally . It will support India's existing biofuels programs , including PM-JIVAN Yojna, SATAT, and GO-BAR-Dhan scheme.
UNSC Reforms	Agreement on UNGA 75/1 (UNSC reforms) for the first time in G20.

Other major outcomes of the G20 Summit:

Outcome	Description
Admittance of the African Union (G20 now G21)	The African Union became a permanent member of the G20, increasing the representation of developing countries.
Global Biofuels Alliance (GBA)	India-led initiative promoting biofuels globally, contributing to India's existing biofuels programs.

India – Middle East – Europe Economic Corridor (IMEE-EC)	A significant infrastructure project connecting India, the Middle East, and Europe, aiming to provide an alternative to China's Belt and Road Initiative.
India-Mercosur Preferential Trade Agreement (PTA)	Collaboration to expand economic ties through the India-Mercosur PTA.
Handover of G20 chairmanship from India to Brazil.	

India's Cultural Highlights:

Cultural Highlights	Description
Bharat Mandapam	An exhibition or showcase inspired by Anubhav Mandapam, a cultural platform in India.
Bronze statue of Lord Nataraja	A bronze sculpture of Lord Nataraja in the Chola artistic style, representing Lord Shiva's cosmic dance.
Konark Chakra and Image of Nalanda University	Displays of the Konark Chakra, a significant symbol from Odisha's Sun Temple, and images related to Nalanda University.
Thanjavur Paintings and Dhokra art	Exhibition of traditional Thanjavur paintings, known for intricate details and rich colours, and Dhokra art, a form of tribal metal casting.
A brass statue of Lord Buddha sitting under Bodhi tree A brass sculpture of Lord Buddha in a meditative posture beneath the Bodhi tree, symbolises his enlightenment .	

Insta Links:

- [As India takes G20 presidency, key takeaways from the summit in Bali](#)

GENERAL STUDIES – 3

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

1. INDIA'S FALLING COTTON PRODUCTION

Context:

The article highlights the current issues with India's [cotton production](#).

About Cotton:

Cotton is a versatile crop known for its **white fluffy fibre, oil-rich seeds, and protein-rich seed cake**. It has various uses, including textiles, cooking oil, and livestock feed.



Significance of Cotton in India:

- **Triple Role:** Cotton in India provides food, feed, and fibre, making it a crucial crop for agriculture and the textile sector.
- **Cotton Components:** After harvesting cotton (Kapas), the breakdown is approximately **36% fibre, 62% seeds, and 2% waste**.
 - **Cottonseed** is essential for vegetable oil and feed cake production.
- **Market Contribution:** Cottonseed oil is the **third-largest domestically produced** vegetable oil in India, following **mustard and soyabean**. It also ranks second in feed cake production, with soybeans leading.
- **Textile Dominance:** Cotton is the dominant fibre in **India's textile industry**, accounting for about two-thirds of the total consumption.

The impact of Bt technology on cotton production in India:

- **Introduction to Bt Technology (2002):** India adopted genetically modified (GM) cotton hybrids embedded with genes from *Bacillus thuringiensis* (Bt) bacterium, which were toxic to certain pests.
- **Significant Boost in Production and Yield:** Between 2000-01 and 2013-14, Bt cotton led to a **remarkable increase in cotton production**, from **140 lakh to 398 lakh bales**, and a doubling of lint yields per hectare from **278 kg to 566 kg**.
 - **Lint** is the fluffy, white fibre of cotton that is used for textiles and fabric production.

- **Subsequent Yield Decline:** However, post-2013-14, cotton production and yields started declining, reaching about 343 lakh bales and 447 kg/hectare by 2022-23.

Reasons for the decline of cotton Production in India:

Reason	Impact on Cotton Production in India
Development of Pink Bollworm (PBW) Resistance to Bt Cotton	Initially, Bt cotton protected against pests like the American bollworm and pink bollworm . But by 2014, pink bollworms developed resistance to Bt proteins, causing widespread infestations and yield reductions.
Shift from Non-Bt Cotton Cultivation	Decreased diversity in cotton varieties increased the scale of infestation.
Pest Infestation Discouraging Farmers	Farmers in some states, like Punjab, avoid cotton cultivation.
Ineffectiveness of Traditional Insecticides	Conventional insecticides had limited efficacy against PBW larvae, affecting lint quality and yields.

Solutions to control the Pink Bollworm (PBW):

- **Mating Disruption as a Solution:** "Mating disruption" uses synthetic versions of pheromones to confuse male PBW moths, preventing them from mating with females.
 - Products like **PBKnot** and **SPLAT** were approved for this purpose.

Government initiatives for the Cotton sector in India:

- [Amended Technology Upgradation Fund Scheme](#) (ATUFS)
- Market Access Initiative (MAI) Scheme
- [SAMARTH](#) (Scheme for Capacity Building in the Textile Sector)
- Mega Investment Textiles Parks ([MITRA](#))
- [Production Linked Incentive \(PLI\) Scheme](#) to promote the production of MMF Apparel, MMF Fabrics and Products of Technical Textiles

The textile sector in India:

India is one of the largest consumers and producers of cotton and jute in the world. 95% of the world's hand-woven fabric comes from India.

It is the **2nd largest employment provider** after agriculture. India is 2nd largest manufacturer of **PPE** and producer of **polyester, silk and fibre** in the world.



Insta Links:

- [Textile industry seeks govt support to stay competitive](#)
- [Sustainable Cotton Textiles](#)

Topics: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

2. 2023 WORLD TRADE REPORT: RE-GLOBALIZATION

Context:

The 2023 World Trade Report, published by the [WTO](#), explores the role of international trade in **building a more secure, inclusive, and sustainable world**.

Key findings of the report:

Key Themes	Major Highlights
Changing Narrative	The report addresses the shift in the narrative around globalization .
	It emphasizes policy goals beyond trade efficiency , including peace, security, poverty reduction, and sustainability.
	The report advocates for “ re-globalization ,” expanding trade integration to more economies, people, and issues.
Geopolitical Shifts	Geopolitical tensions, the Ukraine conflict, and the rise of China have impacted global trade dynamics.
	The COVID-19 pandemic highlighted the importance of resilient supply chains .

Reorientation of Trade	Trade is gradually aligning along geopolitical lines .
	Trade flows within hypothetical geopolitical “blocs” are growing faster than those between them, indicating a shift towards friend-shoring .
Resilience in Trade	Despite challenges, bilateral trade between China and the United States reached record highs.
Supply Chain	International supply chains played a vital role in responding to supply shortages during the COVID-19 pandemic.
Inclusiveness	Trade integration has lifted millions out of poverty .
Sustainability	Trade can contribute to sustainability by providing access to green technologies .

What is re-globalization?

Re-globalization is a concept that **advocates expanding and strengthening international trade and economic integration**, focusing on making [globalization](#) more inclusive, secure, and sustainable.

It emphasizes the **need to address contemporary global challenges**, such as geopolitical tensions, economic inequality, and climate change, through **greater cooperation and trade integration among nations**.

Re-globalization vs. de-globalisation:

Aspect	Re-globalization	De-globalization
Focus	Expand and strengthen international trade and economic integration.	Reduce international trade and economic interdependence.
Goals	Make globalization more inclusive, secure, and sustainable by addressing global challenges through cooperation.	Prioritize domestic industries and reduce reliance on foreign markets.
Key Principles	Maintain a strong multilateral trading system, and extend trade integration to more economies, people, and issues.	Advocate protectionist measures, trade barriers, and focus on national self-sufficiency.
Example	Promote trade as a solution to challenges like economic inequality and climate change.	Implement tariffs, trade restrictions, and reshoring of production to prioritize domestic interests.

The benefits of re-globalization:

- **Economic Growth:** Re-globalization, as seen in India during 1994-2005, can **stimulate economic growth**, leading to a decrease in the poverty rate.
- **Poverty Alleviation:** The decrease in the headcount poverty rate by around **1.5 points** indicates that **re-globalization can contribute to poverty alleviation** by expanding economic opportunities and income distribution.
- **Promoting Environmental Sustainability:** Re-globalization fosters international coordination on environmental policies.
- **Emission Reduction:** The reallocation of resources from less efficient to more efficient firms, as observed in India between 1990 and 2010, can lead to a significant drop in emission intensity.

Role of WTO in Fostering Re-globalization:

Role of WTO	Examples
Supporting Multilateral Trading Rules	Enforcing trade rules and agreements among member countries.
Addressing Global Challenges	Facilitating discussions on trade's role in peace and security. Promoting policies to reduce poverty and inequality through trade.
Promoting Economic Security	Highlighting the importance of resilient supply chains during crises.
Trade Facilitation	Implementing agreements like the Trade Facilitation Agreement and the Fisheries Subsidies Agreement
Addressing Trade Cost Disparities	Focusing on reducing trade costs for middle- and low-income countries.

Insta Links:

- [Restoring the WTO's dispute settlement system](#)
- [Reforming WTO](#)

Topics: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

3. NATIONAL STRATEGY FOR ROBOTICS (NSR)

Context:

The Ministry of Electronics and Information Technology (MeitY) in India has released a **draft "National Strategy for Robotics" (NSR)** aimed at strengthening the innovation cycle of robotic technology and **fostering India's leadership in robotics by 2030**.

What is Robotics?

Robotics deals with the design, construction, operation, and application of robots coupled with computer systems for their control, sensory feedback, and information processing.

Status:

According to the **World Robotics Report for the year 2022**, **India ranks 10th globally** in terms of annual industrial installations of robots.

Potential of Robotics in India:

- **India's Strengths in Future of Work:** India's strengths in Future of Work (Tech Economy 4.0) include robotics, AI, IoT, cloud computing, supply chain 4.0, 3D printing, big data, digital payments, etc
- **Applications in Agriculture:** Robotics in agriculture: Autonomous precision seeding, Micro-spraying robots, Weed removal robots, Drones, Robot-assisted precision irrigation.
- **Human-Automation Balance:** Balancing human interface and automation, e.g., collaborative robots (**Cobots**) working alongside skilled workers.
 - Upskilling of **migrant workers** for greater efficiency.
- **Employment Scope:** Leading sectors: manufacturing, pharmaceuticals, packaging, FMCG, and inspection

Some key components of the draft NSR include:

Component	Description
Policy Framework	A framework for implementing robotics in sectors like manufacturing, agriculture, healthcare, and national security, aligning with the Make in India 2.0 Framework
Nodal Agency	The Ministry of Electronics and Information Technology (MeitY) will serve as the nodal agency for robotics, overseeing the NSR through the ' National Robotics Mission ' (NRM).
Classification	Industrial, Service and Medical Robots
Core Areas identified by NSR	Manufacturing: Logistics and Warehousing automation, Process Optimization etc.
	Healthcare: Surgical Robots, telemedicine area, etc.
	Agriculture: Crop scouting, spot Spraying, etc
	National Security: Combat robots, Mine Detection etc.
Interventions	Fiscal and non-fiscal interventions by the NRM to support innovation in robotics, including funding mechanisms for start-ups and export promotion.

Regulatory Framework	Establishment of a regulatory framework led by the Robotics Innovation Unit (RIU) for proper governance and regulation of robotics technology.
	Ensuring Regulatory Sandboxes and development of robotics industrial zones.
Centres of Excellence	Creation of Centres of Excellence (CoEs) in Robotics for foundational and applied research, with private sector involvement in application-based research.
Advisory Support	Plans for providing advisory support to start-ups , utilizing research potential in higher education institutions, and developing robotics industrial zones.
Public Procurement Policy	A proposed policy where the central government acts as a demand aggregator for domestically manufactured robotic systems, incentivizing domestic production.

Challenges in Adoption of Robotics in India:

Challenges	Description
Cost of Adoption	High cost due to imported hardware components and training expenses.
Skilled Talent	Acquiring and retaining quality talent in the multidisciplinary field of robotics.
Procurement of Hardware Components	Dependence on countries like China, the USA, and Europe for necessary components.
Academic Challenges	Lack of multidisciplinary knowledge in most students; Limited teaching of robotics in engineering institutes; Shortage of faculty.
Investment in IPR and R&D	India's investment in intellectual property rights (IPR) and research and development (R&D) lags behind developed countries.
Ethical considerations	E.g., such as privacy, absence of dedicated legislation for robotics, etc

For the application of Robotics: [Click Here](#)

Way forward:

- Embrace **4th Industrial Revolution** technologies.
- Invest in human capital for AI and robotics.
- Support the [National Mission on Cyber-Physical Systems](#).
- Promote educational initiatives like Atal Tinkering Labs.
- Encourage advanced technology companies for "Make in India."

Insta links:

- [Robotics](#)
- [Robots for SDGs](#)

Topics: [Conservation related issues, environmental pollution and degradation, environmental impact assessment.](#)

4. MANAGEMENT OF ELECTRONIC WASTE (E-WASTE) IN INDIA

Context:

The Indian Cellular and Electronics Association (ICEA) released a report on '**Pathways to Circular Economy in Indian Electronics Sector**' in collaboration with [NITI Aayog](#), aiming to explore **opportunities for managing electronic waste (e-waste) more effectively.**

What is E-waste?

E-waste refers to all items of electronic and electrical equipment (EEE) and its parts that have been discarded by their owner as waste without the intent of re-use.

Status of E-Wastes in India:

- India is the **third-largest e-waste generator** in the world after **China** and the **USA** ([Global E-waste Monitor 2020](#)).
- E-waste management in India is predominantly informal, **with roughly 90% of collection and 70% of recycling handled** by the informal sector.
- **The level of e-waste is expected to grow** due to cheaper phones and increased usage.

In November 2022, the **Ministry of Environment and Forests** notified the [E-Waste \(Management\) Rules, 2022](#), (which came into force on **April 1, 2023**) to digitize the e-waste management process and provide more transparency in handling e-waste.

Provisions of the [E-Waste \(Management\) Rules 2022](#):

- **Restricted the use of hazardous substances** (such as lead, mercury, and cadmium) in manufacturing electrical and electronic equipment that have an adverse impact on human health and the environment.
- **Increased coverage:** It has increased the range of electronic goods covered e.g., laptops, mobile, cameras etc.
- **Targets fixed:** Producers of electronic goods have to ensure at least 60% of their electronic waste is collected and recycled by 2023 with targets to increase them to **70% and 80% in 2024 and 2025**, respectively.
 - Companies will report these on an online portal.
- [Extended Producer Responsibility Certificates](#) (simi-

lar to carbon credit mechanism): This will allow the offsetting of e-waste responsibility to a third party.

- **'Environmental compensation'** to be provided by the companies that don't meet their target.
- **Role of State Governments:** They will earmark industrial space for e-waste dismantling and recycling facilities, undertaking **industrial skill development** and establishing measures for protecting the **health and safety of workers** engaged in the dismantling and recycling facilities for e-waste.
- **Role of manufacturers:**
 - Make the end product recyclable
 - A component made by different manufacturers be compatible with each other
- **Monitoring:** The Central Pollution Control Board shall conduct random sampling of electrical and electronic equipment placed on the market to monitor and verify the compliance of reduction of hazardous substances provisions.

Recommendations of the Report:

Recommendation	Examples
Encourage manufacturers to reuse old components	China targets 5% of secondary raw material in new products by 2019 and aims for 35% by 2030.
Establish public-private partnerships for a reverse supply chain	Collect devices from users, wipe personal data, and recycle them.
Create an auditable database of collected materials	Maintain a transparent record of materials collected for accountability.
Develop geographical clusters for processing devices	Concentrate devices in specific areas for efficient dismantling and recycling.
Incentivize high-yield recycling centres	Promote facilities capable of extracting maximum value from e-waste, such as rare earth metals in semiconductors.
Support the right to repair by users	Encourage product repair and longevity to reduce electronic waste.

Case study:

The Bhopal e-waste clinic, a pilot project, exemplifies this approach. It enables door-to-door collection or direct deposit at the clinic, offering a fee-based exchange. Its success warrants further study.

Best practice:

'Karo Sambhav', a Delhi-based PRO, has integrated informal aggregators in its collection mechanism → e-waste entered a safe and structured system → informal sector has an advantage in terms of financial and legal security.

IIT Hyderabad launched M.Tech courses in e-waste Resources.

Conclusion:

Efforts to **create a circular economy for e-waste** are crucial, given the unpredictable supply chains for electronic components, and the need to extract the full value of electronics in a formalized and reliable manner.

Insta Links:

- [The government notified E-waste \(management\) rules 2022](#)
- [Unpacking the new set of e-waste rules](#)

5. PARIS AGENDA FOR PEOPLE AND THE PLANET

Context:

The article discusses the Paris Agenda for People and the Planet and the need for international solidarity to address poverty, climate change, and other global challenges.

- African leaders amplified this dynamic by adopting the **Nairobi Declaration** during the first Africa Climate Summit in Kenya.

What is the Paris Agenda for People and the Planet?

The **Paris Agenda for People and the Planet** (held in June this year) is a global initiative aimed at eliminating poverty, preserving the environment, and enhancing the resilience of vulnerable countries to climate change and conflicts.

The focus of the Summit:

It focuses on **leveraging various sources of finance**, including official development assistance, domestic resources, and private investment, to achieve these goals.

Key points of the Summit are:

Aspect	Description
Goal	To eliminate poverty , preserve the planet , and empower vulnerable countries to address crises.
Strategy	Leverage all sources of finance , including official development assistance, domestic resources, and private investment.
Unity and Governance Transformation	Transform the international financial architecture to be more efficient, equitable, and relevant to today's world. Emphasize unity among nations.

Guiding Principles	Four principles guiding the agenda:
	1. No country should choose between poverty and the planet.
	2. Recognize diverse transition paths for countries while working together to meet Paris Agreement goals.
	3. Call for a financial stimulus to support vulnerable economies.
Concrete Measures and Targets	4. Scale up private capital flows to address global challenges and reduce inequalities.
	Achieve \$100 billion in Special Drawing Rights (SDRs) for vulnerable countries. (This target has already been achieved)
	Monitor and ensure access to \$100 billion of climate finance.
	Leverage private finance, aiming for \$100 billion annually in developing and emerging economies.
Further Work and Commitments	Increase MDBs' lending capacity by \$200 billion over the next decade.
	Accelerate debt suspension and support climate resilience.
	Explore international taxation for climate commitments and address financial flows escaping legitimate tax systems.
	Promote fair partnerships for local value addition and strengthen healthcare and food infrastructure.
	Replenish the International Development Association (IDA) expansion of the IMF's Poverty Reduction and Growth Facility
	Include climate vulnerability in debt sustainability assessments.
	Mitigate foreign exchange and other risks.
	Establish an international finance facility for forests.

For major provisions of the New Global Financing Pact: [Click Here](#)

What more is needed:

- Governments capable of providing additional SDR rechanneling mechanisms should contribute more.
- Enhance **G20's Common Framework for Debt Treatments**

- Accelerating debt suspension in countries experiencing debt distress

Insta Links

[Editorial: Behind the smokescreen around private climate finance](#)

GENERAL STUDIES – 4

1. G20/OECD PRINCIPLES OF CORPORATE GOVERNANCE 2023

Context:

On September 11th (2023), the OECD launched the **revised G20/OECD Principles of Corporate Governance**, a set of international standards aimed at promoting corporate sustainability, market confidence, and financial stability.

What is Corporate Governance?

Corporate governance essentially involves **balancing the interests of a company's many stakeholders, such as shareholders, senior management executives, customers, suppliers, financiers, the government, and the community.**

Ethical Issues with Corporate Governance in India:

- **Conflict of Interest:** The challenge of managers potentially enriching themselves at the cost of shareholders
- **Weak Board:** Lack of diversity of experience and background represents a major area of weakness for these boards.
- **Separation of ownership and management:** In the case of family-run companies, the separation of ownership and management remains a key challenge
- **Independent directors**

About G20/OECD Principles of Corporate Governance

The G20/OECD Principles of Corporate Governance are the international standard for corporate governance. It was first issued in 1999 and the revised Principles were endorsed by **G20 Leaders in 2023.**

Key points of G20/OECD Principles of Corporate Governance 2023

Principle	Key Points
Objective	The principles aim to evaluate and enhance the legal, regulatory, and institutional framework for corporate governance to support economic efficiency, sustainable growth, and financial stability.

Scope of Corporate Governance	Corporate governance encompasses relationships among a company's management, board, shareholders, and stakeholders, providing the structure for achieving objectives and monitoring performance.
Non-Binding Nature	The principles are non-binding and don't replace national law
Applicability	The principles primarily focus on publicly traded companies but can benefit smaller and unlisted companies, taking into account their diversity.
Monitoring	The principles are used as benchmarks globally and monitored through various mechanisms, such as the OECD Corporate Governance Factbook.
Structure of the Principles	The principles are organized into six chapters.
Chapter I	Ensuring the basis for an effective corporate governance framework: <ul style="list-style-type: none"> Legal and regulatory requirements should be consistent with the rule of law. Due attention to the associated risks of Digital technologies
Chapter II	The rights and equitable treatment of shareholders and key ownership functions: Address conflicts of interest inherent in related transactions.
Chapter III	Institutional investors, stock markets, and other intermediaries: Prohibition of insider trading and market manipulation
Chapter IV	Disclosure and transparency: Include Capital structures , group structures, voting rights, etc. Annual external audit by an independent agency
Chapter V	The responsibilities of the board: Treat all shareholders fairly, and ensure a formal and transparent board nomination and election process, etc.
Chapter VI	Sustainability and resilience: Corporate governance policies addressing sustainability contribute to a company's long-term success; Sustainability-related disclosure frameworks should be consistent with internationally recognized standards.

Suggestions to improve Corporate Governance in India:

Recommendations of Uday Kotak Panel:

- **Diverse board members:** Minimum 6 directors to be on the board of listed entities; every listed entity to have at least 1 independent woman director
- **Transparency:** More transparency on the appointment of independent directors
- **The audit Committee** must review the use of loans.
- **Robust risk** management policies
- Effective governance infrastructure
- Evaluation of the **Board's performance**
- **Communication:** Facilitating shareholder communication with the board is key.

Good Examples by corporates in India: TATA Groups

Tata companies continually aspire to better ethics, just as they are committed to better business practices. Philanthropic trusts control over **66% of Tata holdings**. While the Tata family has a very small shareholding.

Insta Link:
[Corporate Governance](#)

2. EXAMPLES OF ETHICS

Example 1:

Context:

The reports on the death of **Indian student Jaahnavi Kandula in Seattle**, who was struck by a speeding **police patrol car** and then her death was laughed at by the officers as having **"limited Value"**

The incident highlights several ethical issues:

Ethical Issues	Description
Insensitive Behaviour	Officer Daniel Auderer's lack of empathy and dismissive attitude toward a tragic incident reflects a lack of compassion.
Accountability	Delay in addressing the incident and ensuring accountability raises concerns about transparency, fairness, and justice.
Community Trust	The incident threatens to erode trust between the community and law enforcement, raising ethical concerns.
Diversity and Respect	Comments about the value of an individual's life based on background and her age, raise ethical concerns about bias and discrimination.

Example 2:

Context:

Resignation of **Luis Rubiales**, the chief of **Spain's football federation** in the wake of a scandal involving allegations of sexual assault for kissing a female player, **Jenni Hermoso**, during the Women's World Cup medals ceremony.

Ethical Issue	Description
Sexual Assault	Rubiales faced allegations of sexual assault for kissing a female player, Jenni Hermoso, without her consent during a public event.
Abuse of Power	Accusations were made that Rubiales abused his position as the chief of Spain's football federation to engage in inappropriate conduct with a player.
Lack of Consent	The incident raised ethical concerns regarding consent , as Hermoso stated that she was kissed against her will
Gender Equality	Rubiales' actions sparked discussions about gender equality and respect for women in football , highlighting issues of gender discrimination and machismo .

Similar accusations have been made **against the former chief of the Wrestling federation in India**. These incidents highlight the issues of lack of ethics in sports.

Example 3: China Xi's Purges

Context:

Chinese Defence Minister Li Shangfu has **reportedly been detained** as part of ongoing corruption investigations. This follows the **disappearance of Foreign Minister Qin Gang earlier**, with no explanation provided for his removal from office.

- These developments raise questions about **Xi's control over the military and ongoing political purges** in China.

Ethical Issues with the Purges:

Ethical Issues	Description
Lack of Transparency	The sudden disappearance of officials without clear explanations raises concerns about transparency
Political Purges	Removal of high-ranking officials may indicate an attempt to consolidate power and eliminate rivals .
Rule of Law	Detaining officials in corruption investigations should adhere to the rule of law .
Lack of Due Process	Detentions without clear legal processes raise concerns about due process and human rights .

Secrecy	Providing vague explanations like "health reasons" contributes to a lack of trust .
"Chilling Effect" on Bureaucracy	This may create fear in the minds of government officials while making a decision and lead to policy paralysis

Example 4: "Corporate Greed is the Problem"

Context:

Over **13,000 workers from major US automakers** (General Motors, Ford, and Stellantis) going on strike due to issues with contract negotiations. The United Auto Workers (UAW) union is seeking **higher wages, better benefits**, and the reversal of concessions made during the companies' financial difficulties.

Ethical Issue	Example
Income Inequality	CEOs earn millions while workers struggle for fair wages .
Worker Exploitation	For automakers, worker's compensation makes up just 4 to 5% of their total cost . Despite this, companies underpay workers, provide poor working conditions, or foster job insecurity to cut labour costs.
Unfair Labor Practices	Despite the three companies making over USD 164 billion in profit last year, they are resisting fair wage increases and better benefits.
Environmental Impact	Companies prioritise profits over sustainability.
Social Responsibility	Companies neglect their role in society and their impact on workers.

CONTENT FOR MAINS ENRICHMENT

GS-1

1. TRIBES INDIA PAVILION (G20)

Context:

[TRIFED](#), under the **Ministry of Tribal Affairs**, is displaying **traditional tribal art**, artefacts, and paintings at the ‘**Tribes India**’ pavilion as part of the G-20 Leaders’ Summit in New Delhi’s Crafts Bazaar.

The **Tribes India pavilion** at the G-20 Leaders’ Summit in New Delhi showcases a diverse range of tribal arts and crafts, including:

Tribes India pavilion (G20)		
Tribal Art	Description	Tribal Origin
Pithora Art	Ritualistic paintings with animated figures and vibrant colors. These paintings depict social, cultural, and mythological aspects of tribal life and are used for propitiation, thanksgiving, and commemorating auspicious occasions. Notably, Padma Shri awardee Shri Paresh Rathwa is a renowned artist of Pithora art.	Rathwa, Bhilala, Naik, and Bhil tribes (Gujarat and Madhya Pradesh)
Gond Painting	Intricate and colorful designs.	Artisans from Madhya Pradesh
Saura Painting	Known for its distinct style.	Artisans from Odisha
Angora and Pashmina Shawls	High-quality shawls.	Leh-Ladakh and Himachal Pradesh
Colorful Jewelry	Crafted by the Konyak tribes of Nagaland .	Konyak tribes (Nagaland)
Maheshwari Silk Sarees	Traditional silk sarees worn during religious ceremonies and auspicious events.	Madhya Pradesh
Dhokra Jewelry	Handcrafted from molten metals, beads, colorful glass pieces , and wooden balls.	West Bengal, Odisha, Chhattisgarh, and Madhya Pradesh

To know more Visit [Insights IAS Daily Current Affairs](#)

2. INITIATIVES FOR PROMOTING DISABILITY RIGHTS AND PROMOTING INCLUSIVITY

The **Department of Empowerment of Persons with Disabilities (DEPwD)** in India has introduced **five transformative initiatives** aimed at **reshaping the disability rights landscape** and promoting inclusivity.

Initiatives:

Initiative	Description
MOU with the Council of Architecture	For inclusion of universal accessibility courses in Bachelor of Architecture programs and develop certified courses for accessibility audits.
Releasing of Anonymous Data of UDID	Release of anonymous data via the UDID portal for research, enabling data-driven decision-making in the disability sector.
PM Daksh Portal	Introduction of the PM Daksh Portal , a digital platform offering registration, skill training options, job listings, and streamlined administrative processes for persons with disabilities.
Courts on Disability Rights	Compilation of significant disability rights judgments from India’s Supreme Court and High Courts into a booklet for reference.
Online Case Monitoring Portal by CCPD	Adoption of a paperless and efficient online case monitoring portal by the Chief Commissioner for Persons with Disabilities for handling grievances.

Usage:

These examples can be used in Questions related to disability, inclusivity, disability rights, and leveraging technology to enhance the lives of persons with disabilities in India.

3. “STUDENT CELL”: FOR SUICIDE PREVENTION

The Kota Police in India has established a “**Student Cell**” to **address stress** and suicides among coaching students. This initiative comes in response to a rising number of [student suicides](#) in Kota, a city where about 3lakh students annually prepare for competitive exams like JEE and NEET.

The “**Student Cell**” comprises **police personnel** who interact with students, provide counselling, and detect signs of stress or depression. Their efforts include visiting hostels, sharing a dedicated helpline, and offering support.

This move aims to address the challenges faced by students in this highly competitive environment, where **academic pressure and parental expectations** often lead to stress and mental health issues.

The year 2023 has witnessed a spike in student suicides in Kota, emphasizing the need for such interventions.

Usage: The initiative can be used as an example in Governance/ Social Justice/ Indian Society Questions on Mental health

4. MUTHULAKSHMI REDDY'S EFFORTS TO ABOLISH THE DEVADASI SYSTEM

The [Devadasi system](#) was a traditional practice in India where young girls were dedicated or married to deities or temples. However, over time, it degenerated into a system where some Devadasis were forced into a life of prostitution.

Muthulakshmi Reddy was a prominent figure in the **Madras presidency** and had achieved several milestones in her career, including being the **first Indian woman medical graduate** in Madras in 1912 and holding various legislative positions.

The Trigger for Her Campaign: Her campaign against the Devadasi system began in 1927 after she received a poignant letter from a **13-year-old girl, Shanpakvalli**. Shanpakvalli came from a family of Devadasis and wanted to avoid her fate as Devadasi.

Influential Women and Movements: Muthulakshmi was influenced by her mother, who was also from the Devadasi community and had revolted against the system.

Empowering Women: Muthulakshmi advocated for education as a means to liberate women from the system and proposed **granting lands to those women entitled to economic benefits** from the temples.

Despite opposition, including **within the Congress party**, Muthulakshmi persisted. The Devadasi system was **eventually abolished in 1947 by the Madras Legislative Assembly**.

Her Legacy: Muthulakshmi Reddy's campaign against the Devadasi system remains an enduring and **inspiring example of social reform**.

Usage: The example can be used as a story in an **Essay/ Ethics** (to show values of **Social Justice, Empowerment, Persistence, Leadership etc.**)/ Indian History/ Indian Society

5. KALAINAR MAGALIR URIMAI THITTAM

Context:

Kalaignar Magalir Urimai Thittam is a women's rights grant scheme just rolled out in Tamil Nadu aimed at providing financial support to eligible women recognized as heads of families.

Under this scheme, **eligible women are entitled to receive a monthly rights grant or basic income of ₹1,000 each**. This amounts to an annual **grant of ₹12,000 per beneficiary**. The intention is to improve the livelihood of women, enhance their standard of living, and promote self-respect in society.

Beneficiary families should meet the following economic criteria:

- Annual income below **₹2.5 lakh**.
- Ownership of less than five acres of wetland or less than ten acres of dryland.
- Consumption of less than 3,600 units of electricity per year for domestic use.

A similar scheme has been launched by the Karnataka Government:

Karnataka Gruha Lakshmi Scheme supports women heads of families by providing **eligible women will receive financial assistance of ₹2000 per month**.

Usage: The examples can be used in Indian Society/ Social Justice/Women-related Questions in UPSC Mains Paper.

6. TAMIL NADU: WOMEN TEMPLE PRIEST



Usage:

The example can be used in Ethics (to show values of inclusivity)/ Indian Society/ Social Justice/Women-related Questions in UPSC Mains Paper.

GS-2**1. AGRA: DECENTRALIZED GARBAGE PROCESSING SYSTEM**

Agra has initiated decentralized garbage **processing plants to manage organic waste from bulk waste generators (BWGs)**, effectively utilizing **waste from vegetable markets** and temples. Three units, including one on a [public-private partnership \(PPP\) model](#), process organic waste into compost.

The compost produced is **used in city parks and sold on e-commerce platforms**. These plants represent best practices in Agra and can be **expanded city-wide to manage biodegradable waste efficiently**, reducing transportation costs.

Usage:

The example can be used in Questions related to Waste Management/ Governance of urban areas.

GS-3**1. BUSINESS RESPONSIBILITY AND SUSTAINABILITY REPORTING (BRSR)****Context:**

The **Indian Institute of Corporate Affairs (IICA)** and **UNICEF** jointly organized a workshop on [Business Responsibility and Sustainability Reporting](#) (BRSR) in collaboration with the National Stock Exchange (NSE).

What is BRSR?

Business Responsibility and Sustainability Reporting is a framework introduced by SEBI (Securities and Exchange Board of India) in 2021. It **mandates the top 1000 listed companies** in India to report their performance on various environmental, social, and governance (ESG) aspects. This framework is based on the nine principles of the **National Guidelines for Responsible Business Conduct (NGRBC)**.

What is ESG?

Environmental, Social, and Governance (ESG) goals are **standards for ethical, sustainable business practices**. They cover environmental stewardship, social responsibility towards employees and communities, and effective corporate governance, including leadership and shareholder rights.

Usage:

The framework can be used in corporate governance Questions/ Environment/ Society Questions to highlight the responsibility of businesses towards society and the environment.

GS-4**1. COCO GAUFF**

Coco Gauff, a rising tennis star, fulfilled her potential by **winning the recent US Open title**. At just 19 years old, she became the **fourth American teenager** to achieve this feat.

Throughout her short career, Coco Gauff has demonstrated several ethical values through her actions and words:

- **Honesty:** Gauff openly talked about her emotions, including her father's tears of joy, and addressed the doubts people had about her.
- **Inclusivity:** She highlighted the **significance of pioneers like Billie Jean King and the Williams sisters** in advocating for **gender equality in tennis**, demonstrating her commitment to inclusivity and equality.
- **Self-belief:** Despite criticism and setbacks, Gauff maintained belief in herself and her abilities.
- **Advocacy:** She used her platform to **speak out against racial injustice and gun violence** in the United States.

FACTS FOR PRELIMS

GS-1

1. SALEM SAGO

Context:

The **Geographical Indication (GI) tag** has been granted to **Salem Sago** (Javvarisi), which is expected to facilitate its entry into the international market.

About Salem Sago:

- **Sago** (also called **Sabu dana**) is a **pearl-white product** made from **raw tapiocas**, appearing as small **hard globules or pearls**.
- Tapioca cultivation is **significant in Tamil Nadu**.
- Sago production **originated in Salem district**, which serves as **the primary hub for sago production in India**, initially on a cottage-scale basis.
- It is produced from **wet starch powder obtained from crushed tapioca roots**. The wet starch powder is used to **manufacture sago**, while the dry powder is **utilized as a raw material in various industrial applications**.
- Salem Sago has historical significance as it was **used as a food source during severe droughts in the Travancore Kingdom**.

Benefits of getting GI Tag:

- The GI tag is a **form of legal protection for the intellectual property** associated with **Salem Sago**.
- Additionally, products with GI tags receive **special attention** from the Indian government, such as **free exhibition space at events organized by the Railways and Airport Authority**, allowances for **participation in international exhibitions**, and **financial support from NABARD** for marketing and exporting.



2. MOKSHAGUNDAM VISVESVARAYA



Mokshagundam Visvesvaraya



Details	
About	Mokshagundam Visvesvaraya (1861-1962) , a pioneering civil engineer and administrator in colonial India celebrates his birthday on September 15 th . This day is marked as Engineer's Day . 
Education	Bachelor of Arts from the University of Madras; Diploma in civil engineering
Career	Assistant Engineer in the Government of Bombay; 19th Dewan of Mysore
Contributions	Introduction of the block system of irrigation in the Deccan canals in 1899; Solved the problem of the "muddy and discoloured" water in the city of Sukkur (now in Pakistan) located on the banks of the Indus River ; Inventing automatic gates meant to regulate the flow of water in reservoirs; He was the architect of the Krishnaraja Sagara dam in Mysore
Emphasis on Education	Advocated for quality education in India; Played a role in establishing the University of Mysore ; Established Bangalore Agricultural University , University Visvesvaraya College of Engineering etc.
Literary Works	" Reconstructing India " (1920); Unemployment in India; Its Causes and cure (1932), " Planned Economy of India " (1934); Memories of my working life (1951),
Legacy	Left a lasting impact on India's infrastructure and education; Emphasized modernization for material prosperity; Awards: Bharat Ratna award, 1955
Ethical Values	Dedication to Public Service, Integrity, Technological Innovation, and Perseverance

To know more Visit [Insights IAS Daily Current Affairs](#)

GS-2

1. VIDYA SAMIKSHA KENDRAS

Context:

The **Ministry of Education** is urging states to establish **Vidya Samiksha Kendras (VSKs)**, which are **data repositories** under the **National Digital Education Architecture**.

- These centres will collect data from various educational schemes **run by the Ministry of Education**, including **mid-day meal programs**, **teacher training**, **textbook content**, **school attendance**, **students' learning outcomes**, and **performance grading**.

Currently, a central **VSK centre** is managed by **Ernst and Young**, and it **operates on open-source C-Qube software**. **Data is manually input** and accessible in downloadable Excel format, but the plan is to shift to **automatic data integration using Application Programming Interface (API) integration**. This aligns with the **National Education Policy of 2020**, aiming to make data open source.

Significance:

- The goal is to analyse data from various sources for correlations and insights. For example, **attendance patterns can be correlated with student drop-out rates or linked to the effectiveness of mid-day meal programs**.
- VSKs are also **intended to map school locations and population data** to assess the **Gross Access Ratio**, aiding in the **planning of new schools, industry clus-**

ters, skilling requirements, and higher education institutions based on demand and future scenarios.

This initiative aims to **improve educational data analytics and enhance decision-making in the education sector.**

2. CBI DOES NOT REQUIRE PERMISSION TO PROBE PRE-2014 CASES TOO: SC

Context:

The Supreme Court of India has ruled that a 2014 judgment declaring a legal provision requiring prior permission for the [Central Bureau of Investigation \(CBI\)](#) to investigate corruption cases against senior government officials is retrospective.

- This means that the provision, **Section 6A of the Delhi Special Police Establishment (DSPE) Act**, has been considered void from the day of its insertion on **September 11, 2003**.
 - CBI powers are derived from the DSPE Act
- The Court stated that **Section 6A violated fundamental rights** and that once a law is declared unconstitutional, it is void from its inception.

Consequently, senior government officials involved in corruption cases before the 2014 judgment can no longer seek protection through prior approval for investigations.

Note: Article 20(1) has no bearing in the context of the declaration of Section 6A as unconstitutional as **Article 20 (1) doesn't bar retrospective application of procedural changes** in criminal trial.

3. CRIMINALISATION OF POLITICS

Context:

A study conducted by the [Association for Democratic Reforms \(ADR\)](#) and [National Election Watch \(NEW\)](#) reveals that **approximately 40% of sitting Members of Parliament (MPs)** in India have criminal cases registered against them, **with 25% facing serious criminal charges such as murder, attempt to murder, kidnapping, and crimes against women.**

- The analysis is based on **self-sworn affidavits of 763 sitting MPs** from both the **Lok Sabha and Rajya Sabha**.
- The study also highlights **variations in the prevalence of criminal cases** and average assets among different states and political parties, **with Telangana having the highest average assets per MP and Lakshadweep having the lowest.**

4. STRATEGIC PARTNERSHIP COUNCIL

Context:

Prime Minister Narendra Modi and Saudi Arabia's Crown Prince Mohammed bin Salman (MBS) recently **chaired the first meeting of the [India-Saudi Arabia Strategic Partnership Council \(SPC\)](#).**

About Strategic Partnership Council:

- This council, **established in 2019**, aims to **enhance the relationship between the two countries** and has two main pillars: the **Committee on Political, Security, Social, and Cultural Cooperation** and the **Committee on Economy and Investments**.
- These committees **have four levels of engagement**, including **summit-level meetings, ministerial-level discussions, senior officials' meetings, and joint working groups.**

During their recent meeting, India and Saudi Arabia agreed to **expedite the \$50-billion West Coast refinery project and identified areas such as energy, defence, semiconductor, and space for intensified cooperation.**

West Coast Refinery Project aims to set up **Asia's largest refinery** in Ratnagiri, Maharashtra. It is a **trilateral project between ARAMCO (Saudi), ADNOC (UAE) and Indian companies.**

5. ILO AND OECD TO MEASURE AND MONITOR THE GLOBAL SKILLS GAP

Context:

Under India's Union Education and Skills Development Minister's leadership, the G20 nations have adopted indicators from the [ILO](#) and [OECD](#) to track the global skills gap.

What is a Skills Gap?

A skills gap refers to the **mismatch between the skills and qualifications that job seekers possess and those that employers require for available positions.** It means that there are often **unfilled job openings** because potential employees lack the necessary skills and knowledge for these roles.

- Types of skill mismatches** include skill shortages, qualification mismatch, skill gaps, skill obsolescence, and over/under skilling.

India's Skill Gap:

- Only 49% of Indian youth** is employable, points out the [India Skills Report](#)

- According to the **National Employability Report for Engineering**, **80% of Indian engineers** don't possess the required skills.

Key points of ILO and OECD indicators:

Key Points	Details
Agreement on Global Skill Gap Indicators	G20 countries have agreed to use 12 basic and 14 extended indicators proposed by the ILO and OECD to monitor and measure the global skills gap.
Implementation	ILO and OECD will be responsible for implementing the intervention to monitor
Migration Pathways	G20 leaders have pledged to establish well-managed, regular, and skills-based migration pathways that benefit both origin and destination countries.
Global Skills Taxonomy	Develop a global skills taxonomy broad enough to be applied across different countries.
International Reference Classification	Plans to create an International Reference Classification of occupations based on skill and qualification requirements for better cross-country comparability and mutual recognition of qualifications.
Educational Priorities	Emphasis on investing in human capital development to transform education systems, enhance enrollments and student retention, and ensure all learners acquire foundational skills by 2030 .
Global Collaborations	Exploring university-level collaborations with countries like Australia, UAE, Taiwan, UK , and others in critical areas, with active research collaborations with several countries.

For ILO Monitor on "world of work": [Click here](#)

6. EASTERN MARITIME CORRIDOR (EMC)

Context:

Union Minister Sarbananda Sonowal has extended an invitation for an Indo-Russian Workshop on the **Eastern Maritime Corridor (EMC)** in Vladivostok, Russia.

What is the [Eastern Maritime Corridor \(EMC\)](#)?

The Eastern Maritime Corridor is a proposed sea route between Chennai, India, and Vladivostok, Russia, passing

through the **Sea of Japan, the South China Sea, and the Malacca Strait**.

Benefits for India include:

- Significant time reduction:** It shortens the **transportation time by up to 16 days**, making it more efficient.
- Presence in Southeast Asia:** Chennai Port's strategic location opens trade opportunities with Southeast Asian nations like Thailand, Vietnam, and Indonesia.
- Access to Russia's Far East:** Vladivostok Port provides access to resource-rich regions, offering opportunities in sectors like energy, mining, and technology for Indian businesses.



This initiative follows a **Memorandum of Intent** on the development of maritime communications exchanged between **Vladivostok and Chennai** in 2019.

7. VVPAT

Context:

A petition by the **Association for Democratic Reforms (ADR)** has called for the **100% counting of Voter Verifiable Paper Audit Trail (VVPAT)** slips during elections as the **current system fails to guarantee that votes are counted as cast**.

- Currently, the **Election Commission of India (ECI)** mandates **counting VVPAT slips** in five randomly selected polling stations per Assembly constituency or segment.
- The **ECI responded** by stating that **counting all VVPAT slips** in every election would revert to **manual polling methods via indirect means**.
- Initially, **one polling station's VVPAT slips** per Assembly constituency were counted, later increased to **five stations** after a Supreme Court judgment in 2019.

About VVPATs:

VVPATs are devices attached to **Electronic Voting Machines (EVMs)** that print a paper slip with the **voter's choice**, allowing **voters to verify their vote**.

The VVPAT concept **emerged in 2010**, and it was **gradually introduced in elections, with 100% coverage starting in June 2017**.

8. IGOT KARMAYOGI PLATFORM

Context:

The **iGOT Karmayogi Bharat platform**, in **partnership with NITI Aayog**, has introduced a new collection dedicated to the **Aspirational Blocks Programme (ABP)**.

- This initiative aims to **enhance the competencies of 5,000 Block-level officials in 500 identified Blocks**, helping them perform their duties effectively in **under-served areas**.
- The curated module includes ten courses covering topics such as **time management, communication, leadership, sustainable development goals, problem-solving, stress management, and team building**.

About iGOT Karmayogi Platform:

iGOT Karmayogi (<https://igotkarmayogi.gov.in/>) is a **comprehensive online portal to guide government officials in their capacity-building journey**. The portal combines 6 functional hubs for online learning, competency management, career management, discussions, events and networking.

9. AYUSHMAN BHAV CAMPAIGN

Context:

The President of India, **virtually launched the Ayushman Bhav Campaign**, emphasizing its goal of **ultimately achieving Universal Health Coverage**.

Features:

- Successful gram panchayats will be **declared as Ayushman Gram Panchayats**.
- The campaign aims to **facilitate access to Ayushman cards**, generate **ABHA IDs**, and raise awareness about **health schemes and diseases, with a focus on non-communicable diseases, tuberculosis, and sickle cell disease**.
- It comprises **three components: Ayushman - Apke Dwar 3.0, Ayushman Melas at Health and Wellness Centres, and Ayushman Sabhas** in every village and panchayat.

10. PRADHAN MANTRI UJJWALA YOJANA (PMUY)

Context:

The government has extended the Pradhan Mantri Ujjwala Yojana (PMUY), a scheme providing **LPG connections to households**, to an additional 75 lakh consumers over **three years from 2023-24 to 2025-26**.

- The scheme's total beneficiaries will now reach **10.35 crore**.

Pradhan Mantri Ujjwala Yojana (PMUY)	
The government expanded PMUY, offering LPG connections to 75 lakh more consumers from 2023-24 to 2025-26	
Aspect	Description
About	The Pradhan Mantri Ujjwala Yojana (PMUY) is a government program in India that aims to provide clean cooking fuel (LPG) to rural and deprived households .
Objective	It empowers women, protects health, reduces deaths from unclean cooking fuel, and prevents respiratory illnesses in children.
Nodal Ministry	Ministry of Petroleum and Natural Gas (MoPNG)
Benefits	Financial Support: Rs 1600 for each LPG connection to BPL households. Deposit-free LPG connection , free first refill, and a free hotplate Subsidies: Beneficiaries receive subsidies on the first six refills of 14.2 kg cylinders or eight refills of 5 kg cylinders. EMI Facility: To cover the stove and initial refill costs.
PAHAL	Beneficiaries can join the PAHAL scheme to receive subsidies directly in their bank accounts.
Phases	Phase I: Launched on May 1, 2016, with a target of providing 8 crore LPG connections by March 2020. LPG coverage increased significantly. Ujjwala 2.0: Announced in the FY 21-22 Union budget, to release an additional 1 crore LPG connections by March 31, 2022. Initial targets have been achieved.
Achievements	In the first phase of PMUY, 8 crore poor families , including Dalit and tribal communities, received free cooking gas connections. Opening of over 11,000 new LPG distribution centres nationwide (past 6 years) The scheme's total beneficiaries will now reach 10.35 crore .
Challenges	Limited Refill Consumption: Average PMUY beneficiary refilled fewer than four LPG cylinders in 2022-23 Rising LPG Cylinder Prices: Steep price hikes in LPG cylinders, even with subsidies, have reduced affordability for rural and deprived households Subsidy Expenditure: Subsidised LPG cylinder rates increased by 82% between January 2018 and March 2023 International Factors Impacting LPG Prices: LPG prices are influenced by various factors, including import charges, bottling costs, freight, delivery fees, GST, and distributor commissions.

11. ACHIEVEMENTS OF PRADHAN MANTRI MATSYA SAMPAADA YOJANA (PMMSY)

Context:

The PMMSY has been instrumental in addressing critical gaps in the fisheries value chain in India.

About PMMSY:

Pradhan Mantri Matsya Sampada Yojana (PMMSY)


Dimension	Information
About	PMMSY (Under the Ministry of Commerce and Industry) aimed at the sustainable development of the fisheries sector and to bring about the 'Blue Revolution'.
Origin	Launched in response to the COVID-19 pandemic, it allocated a substantial investment of ₹20,050 crore, the largest in the history of Indian fisheries.
Implementation	It is being implemented in all States and Union Territories for 5 years from FY 2020-21 to FY 2024-25. It provides insurance coverage and financial assistance to fishermen.
Aim	Rural development and boosting the rural economy; "Reform, Perform, and Transform" motto; Core and trunk infrastructure development and Modernization of Indian fisheries.
Type of Scheme	Umbrella scheme with Central Sector Scheme and Centrally Sponsored Scheme components—meaning that the Central government bears project cost and States/UTs share the cost of sub-components/activities.
Targets	Enhanced fish production of 22 million metric tons; Increase fisheries sector GVA in agriculture GVA to 9%; Double export earnings to about Rs. 1 lakh crore; Reduction of post-harvest losses to about 10% and doubling of incomes of fish farmers.
Achievements	The fisheries sector has achieved growth rate of over 14%. All-time high fish production and exports. Shrimp production growth has increased by 267% from 2013-14 to 2022-23. Seafood exports have also doubled during this period. Empowering Youth: E.g., young women in Kashmir are rearing cold water rainbow trout, while aquapreneurs in Nellore are exporting biofloc-cultivated shrimps. Expansion to Non-Traditional Areas: Expansion of scheme to 20,000 hectares of fresh pond; ornamental fisheries, pearl culture, and seaweed cultivation (e.g., Seaweed Park in Tamil Nadu). Infrastructure Development: PMMSY has supported the establishment of 900 fish feed plants and 755 hatcheries.
Other Initiatives	Fisheries & Aquaculture Infrastructure Development Fund (FIDF); Kisan Credit Cards for Fishermen.
Fishery Sector	India is the 3rd largest fish producing and 2nd largest aquaculture nation in the world.

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12. ALL REPORTED BIRTHS, AND DEATHS TO BE DIGITALLY REGISTERED

Context:

Starting from October 1, all reported births and deaths in India will be digitally registered on the Centre's portal.

- This initiative is through the [Registration of Births and Deaths](#) (Amendment) Act, 2023, which introduces digital birth certificates.

Features:

- These digital certificates will serve as a single document for various purposes, including admission to educational institutions, applying for a driver's license, government job applications, obtaining passports or Aadhaar cards, enrolling as a voter, registering marriages, and more.
- States will be mandated to register births and deaths on the Centre's Civil Registration System (CRS) portal and share this data with the Registrar-General of India (RGI), which operates under the Union Home Ministry.

13. SKILL INDIA DIGITAL

Context:

The Union Minister for Education and Skill Development and Entrepreneurship, has launched Skill India Digital (SID), a comprehensive digital platform designed to transform the

skills, education, employment, and entrepreneurship landscape in India.

- This platform aims to offer industry-relevant skill courses, job opportunities, and entrepreneurship support to enable access to quality skill development and better opportunities for every Indian citizen.

About Skill India Digital:

- Skill India Digital, functioning as the Digital Public Infrastructure (DPI) for skilling, education, employment, and entrepreneurship in India, focuses on leveraging digital technology and Industry 4.0 skills.
- It is designed to accelerate the hiring of skilled talent, facilitate lifelong learning, and promote career advancement.
- The platform aligns with the G20 framework for building DPI and the digital economy, emphasizing digital skills and literacy.

Key highlights of Skill India Digital include:

- Use of Aadhaar/AI-based facial authentication.
- Introduction of Digital Verifiable Credentials (DVC).
- Integration of Artificial Intelligence (AI) and Machine Learning (ML) recommendations.
- Aadhaar-based eKYC for secure access.
- Mobile-first approach for accessibility.
- Emphasis on security measures and interoperability.
- Integration of a WhatsApp chatbot.
- Efforts to enhance the ease of doing business.

A significant innovation is the introduction of Digitally Verified Credentials, which empowers users to confidently present their qualifications in a secure, tamper-proof, and verifiable digital format.

Skill India Digital also integrates government training programs, creating a centralized hub for skill development initiatives initiated by Central and State governments and various departments.

14. NATIONAL JUDICIAL DATA GRID

Context:

Chief Justice of India D Y Chandrachud has announced that the Supreme Court of India has now joined the National Judicial Data Grid (NJDG) portal, which serves as a national repository of case-related data from courts across the country.

About National Judicial Data Grid:

- The National Judicial Data Grid (NJDG) is an online platform created under the [eCourts Project](#) in India.

- It serves as a comprehensive database that contains **information about orders, judgments, and case details from District and subordinate Courts and High Courts across the country.**
- The NJDG is managed as **part of the e-Courts project**, which is a **Centrally Sponsored Scheme**. It has been developed by the **National Informatics Centre (NIC)** in collaboration with the in-house software development team of the **Computer Cell, Registry of the Supreme Court.**

Significance:

- **Easy access to case-related information, statistics, and year-wise breakdowns of Supreme Court cases.**
- **Enhancing transparency, accountability, efficiency, coordination, informed decision-making, and optimal resource deployment.**

15. OIML (INTERNATIONAL ORGANIZATION OF LEGAL METROLOGY)

Context:

India has achieved the **distinction of becoming the 13th country in the world authorized to issue Internationally Accepted OIML (International Organization of Legal Metrology) Certificates.**

- This accomplishment allows **domestic manufacturers in India to have their weighing and measuring instruments tested within the country and then sell them in the international market.**

About OIML:

- The OIML is an **intergovernmental organization established in 1955**, with India becoming a **member in 1956**. It has **63 Member States and 64 Corresponding Members.**

Significance:

- Benefits **indigenous manufacturers** as they can **export their weighing and measuring instruments worldwide** without incurring additional testing fees, resulting in cost savings.
- India can support **foreign manufacturers by issuing OIML pattern approval certificates** through its certified RRLs, **generating foreign exchange through fees and services.**
- Influence **OIML policies and provide input to the OIML Strategy.**

India now joins an exclusive group of nations, including **Australia, Switzerland, China, Czech Republic, Germany, Denmark, France, United Kingdom, Japan, Netherlands, Sweden, and Slovakia**, as the **13th country worldwide authorized to issue OIML approval certificates.**

GS-3

1. WORLD FOOD PRICE INDEX

Context:

The **United Nations Food and Agriculture Organization (FAO)** reported that the **world food price index fell to a new two-year low recently.**

- This decline reversed a **previous month's rebound**, with **most food commodities experiencing decreases**, although **rice and sugar prices increased.**

FPI, released by the **Food and Agriculture Organization (FAO)** is a **measure of the monthly change in international prices of a basket of food commodities.**

It consists of the **average of five commodity group price indices - cereals, oilseeds, dairy products, meat and sugar**, weighted with the **average export shares of each of the groups.**

2. CRUDE OIL BENCHMARK

Context:

Brent crude and West Texas Intermediate crude (WTI) futures fell due to a stronger dollar.

Benchmark	Region/Source	Characteristics
Brent Crude	Europe, Africa, Middle East (North Sea)	Light oil; International benchmark; Used by OPEC
WTI	United States (US oil fields)	Light and sweeter than Brent; <i>Benchmark for the US market</i>
Dubai/Oman		The third major benchmark crude;

3. SELF-REGULATORY ORGANISATION (SRO) FOR FINTECH ENTITIES

Context:

The Reserve Bank of India (RBI) has proposed the **establishment of a Self-Regulatory Organisation (SRO) for fintech entities.**

What are [fintech entities](#)?

Fintech entities are **financial technology companies** that leverage technology to provide innovative **financial services**

and solutions. They often operate in areas such as **digital payments, lending, investing, insurance, and wealth management**. Examples of fintech entities include Paytm, PhonePe, PolicyBazaar, Zerodha, CRED etc.

What is an SRO?

An SRO is a **non-governmental organization** that sets and enforces industry rules to protect customers, and promote ethics, equality, and professionalism. They ensure compliance through **impartial mechanisms, maintaining discipline and enforcing penalties**.

- SRO regulations complement existing laws and regulations.

tech

RBI's SRO push

WHAT WILL THE SRO DO?

- Set ground rules and enforce them on members
- Develop surveillance methods for effective monitoring
- Create standardised processes for handling disputes
- Liaison between the industry and the regulator



WHAT'S THE ELIGIBILITY

- Not for profit company
- Only regulated entities to be members of SRO
- RBI approval might be needed before appointment of board of directors of the SRO



Source: RBI

The need for SROs in fintech:

- **Promoting Responsibility:** SROs promote responsible practices and ethics in fintech to prevent unethical behaviours like excessive interest rates and borrower harassment.
- **Building Trust:** They address issues like market integrity, data privacy, and cybersecurity, building trust among consumers, investors, and regulators.

Functions of SROs:

- **Communication:** Serve as a link between members and regulatory bodies like the RBI.
- **Standards:** Set industry benchmarks and encourage professional conduct.
- **Training:** Provide member training and awareness programs.
- **Dispute Resolution:** Establish a uniform grievance resolution framework.

Advantages of SROs:

- **Expertise:** SROs offer industry expertise and insights to members.
- **Ethical Standards:** They enforce ethical standards, enhancing industry trust.
- **Oversight:** Act as watchdogs, preventing unprofessional practices.

4. MANDATORY HALLMARKING

Context:

The third phase of **mandatory hallmarking in India**, starting from September 8, 2023, will include an **additional 55 districts**, bringing the total number of districts covered under this system to 343.

What is Hallmarking?

Hallmarking is like a quality stamp for jewellery and precious metal items. It tells you how pure or good the metal is.

The principal **objectives of the Hallmarking Scheme** are to protect the public against adulteration and to obligate manufacturers to **maintain legal standards of fineness**.

Hallmarking in India:

- At present two precious metals **namely gold and silver** have been brought under the purview of Hallmarking.
- Mandatory hallmarking order is applicable on **14, 18 and 22 carats of gold jewellery/artefacts only**.
- BIS assigns a **unique HUID (Hallmarking Unique ID) number** to all hallmarked items
- Consumers can verify the authenticity of hallmarked items using the **'verify HUID' feature** in the BIS Care app.

What is the Hallmarking scheme?

Under the Hallmarking scheme of the **Bureau of Indian Standards(BIS)**, Jewellers are registered for **selling hallmarked jewellery** and recognised testing and hallmarking centres.

Mandatory Hallmarking of Gold Jewellery:

Mandatory Hallmarking of Gold Jewellery has come into force from June 2021. In the first phase, mandatory hallmarking was implemented in **256 districts of the country** with effect from 23 June 2021 and in the second phase additional 32 districts were covered.

Aim of the scheme:

- To **protect consumers against victimization** due to irregular gold or silver quality
- **Develop India as a leading gold market** centre in the World and develop export competitiveness

5. FUJIANVENATOR

Context:

Scientists in China have uncovered fossils of a peculiar, bird-like dinosaur named **Fujianvenator prodigiosus**, which lived around **148 to 150 million years ago** in **southeast China**.

- This dinosaur had **long legs and arms** resembling wings, with an **unusual anatomy** suggesting it may **have been a fast runner or lived like a modern wading bird**.
- Researchers believe that **Fujianvenator sheds light on a critical evolutionary stage in the origin of birds**.

Features:

- It is **described as a “bizarre” animal with bird-like features** but significant differences, such as three claws on its wing-like forelimb.
- **Fujianvenator’s discovery contributes to our understanding of the evolutionary history of birds**, which evolved from **two-legged, feathered dinosaurs** known as theropods during the late Jurassic period.
- The fossils are **relatively complete but lack the skull and parts of the feet**, making it challenging to determine their **exact lifestyle and diet**.
- Notably, its **lower leg bone (tibia) was unusually long compared to its thigh bone (femur)**, a feature distinct from other theropods like Tyrannosaurus.

6. WHITE SAMBAR DEER

Context:

Researchers have made a **rare discovery of a “white” sambar deer** with a condition called **leucism**, resulting in **white or pale skin**, in the **Cauvery Wildlife Sanctuary in Karnataka, India**.

- Leucism is a **genetic condition** that affects the **pigmentation of an animal’s skin, feathers, scales, or fur**. Unlike albinism, which causes a complete absence of pigment, **leucism results in a partial loss of pigment, leading to white or pale colouration in affected areas**.

About Cauvery Wildlife Sanctuary:

This sanctuary spans **three districts** and serves as a crucial connection between **Bannerghatta National Park in the north** and **Biligiri Rangaswamy Temple Tiger Reserve and Male Mahadeshwara Hills Wildlife Sanctuary in the south**.

7. NUCLEAR-ARMED SUBMARINE

Context:

North Korea has introduced its first operational “**tactical nuclear attack submarine**,” known as **Submarine No. 841**, which has been **assigned to patrol the waters between the Korean peninsula and Japan**.

- This submarine, named **Hero Kim Kun Ok**, is deemed a key component of North Korea’s naval force and is likely a modified version of a **Soviet-era Romeo-class submarine acquired from China in the 1970s**.
- It is equipped with **10 launch tube hatches**, suggesting it may **carry ballistic missiles and cruise missiles**.

TNWs typically refer to **short-range weapons** that have not been classified as “**strategic**” under the **Strategic Arms Reduction Treaty (START)**.

8. VARUNA-23

Context:

The 21st edition of the **India-France bilateral naval exercise ‘Varuna-23’** took place in the Arabian Sea. This exercise involved **guided missile frigates, a tanker, Maritime Patrol Aircraft, and helicopters** from both the Indian and French Navies.

His exercise has a long history, **dating back to 1993**, and has evolved into a symbol of the strong India-France strategic relationship, providing a platform for learning and cooperation in maritime security.

Other defence Exercises between India and France:

- **Varuna** – Naval exercise
- **Desert Knight-21** and **Garuda** (Air exercise)
- **Shakti** – Army exercise

9. SHANTI SWARUP BHATNAGAR PRIZE (SSB) 2022

Context:

Twelve male scientists were awarded **India’s top [Shanti Swarup Bhatnagar Prize \(SSB\)](#)** for Science and Technology in 2022. The awards were announced at the inaugural session of the **CSIR-NIScPR’s One Week One Lab Programme**.

- However, **no female scientists** have been chosen for this year
- The awards were **last announced in 2021**

About the award and CSIR:

Shanti Swarup Bhatnagar (SSB) Prize	Shanti Swarup Bhatnagar (SSB) annual Prize for Science and Technology, established in 1957. Named after Dr. Shanti Swarup Bhatnagar , the founder-director of CSIR. Since its inception, only 19 women scientists have been the recipients of the SSB award
About CSIR	<p>Council of Scientific and Industrial Research was established by the Government of India in 1942 (HQ: New Delhi) as an autonomous body that has emerged as the largest research and development organisation in India and also among the world's largest publicly funded R&D organisations</p> <p>Comprises 37 national laboratories, 39 outreach centers, 3 Innovation Complexes, and 5 units.</p> <p>The Ministry of Science and Technology operates autonomously under the Societies Registration Act, 1860.</p>
Scope	Encompasses various fields including physics, genomics, nanotechnology, mining, aeronautics, and more; Conduct scientific and industrial/applied research of national importance
Structure	President: Prime Minister of India (Ex-officio); Vice President: Union Minister of Science and Technology (Ex-officio)
Initiatives	<p>Addressing COVID-19 through technology verticals including diagnostics, drug repurposing, and more.</p> <p>Developing indigenous technologies like Head-Up-Display for aircraft, solar trees for clean power, and lithium-ion battery fabrication.</p> <p>Agriculture initiatives such as Bacterial Blight blight-resistant rice, white-fly resistant cotton variety, and more.</p> <p>Healthcare projects like Genomics and other omics technologies for medical decision support and Ksheer-scanner for milk adulteration detection.</p> <p>Food and nutrition efforts including Double-Fortified Salt to address anemia.</p>

10. GOA ROADMAP AND 'TRAVEL FOR LIFE' PROGRAM

Context:

During the G20 Leaders' Summit in Delhi, the leaders endorsed the **"Goa Roadmap"** and the **"Travel for Life"** program, both aimed at boosting the tourism sector.

Initiative	Description
Goa Roadmap	Aligned with India's G20 Presidency theme - Emphasizes the pivotal role of tourism in sustainable socio-economic development and environmental stewardship - Focuses on five priorities: Green Tourism, Digitalization, Skills, Tourism MSMEs (Micro, Small, and Medium-sized Enterprises), and Destination Management
G20 Tourism and SDG Dashboard	Launched by the Ministry of Tourism in collaboration with the UNWTO (United Nations World Tourism Organization) - Serves as a global repository showcasing best practices and case studies on sustainable tourism from G20 nations
Tourism for Tomorrow Competition	To be launched by the Ministry of Tourism - A national competition aimed at identifying and recognizing best practices aligned with the priorities of the Goa Roadmap
Travel for LiFE Program	Inspired by the concept of "Lifestyle for Environment" (LiFE) promoted by India's Prime Minister - Encourages tourists and tourist businesses to take simple actions benefiting the environment and climate - Promotes responsible and sustainable tourism - Recognizes both tourists and tourism businesses for their sustainable practices

1. GLOBAL REGULATION OF CRYPTOCURRENCIES

Context:

The article highlights the differences in cryptocurrency regulations worldwide.

What is cryptocurrency and how it is different from Central bank currencies?

Cryptocurrency is a **digital or virtual form of currency that uses cryptography** for security. It operates on **decentralized technology called blockchain**, which records all transactions transparently.

Unlike [central bank currencies](#) (fiat currencies), cryptocurrencies are **not issued or regulated by a central authority like a government or central bank**. They are **decentralized, borderless**, and typically have limited supply, making them immune to government manipulation and often subject to price volatility.

The current regulatory framework for cryptocurrencies in India:

- In 2018, the Reserve Bank of India (RBI) banned Indian banks from engaging in cryptocurrency transactions.
- In 2020, the Supreme Court of India overturned the RBI’s ban on cryptocurrency transactions.
- In the 2022-23 Union budget, India proposed a 30% tax on income generated from digital asset transfers and a 1% Tax Deducted at Source (TDS) on cryptocurrency transactions.

The major view of the IMF and the Financial Stability Board (FSB) paper on cryptocurrencies:

- **Difficulty in Banning Cryptocurrencies:** Banning cryptocurrencies may not be an effective option as it could lead to activities shifting to **more crypto-friendly jurisdictions and push transactions** outside a country’s oversight, raising financial risks.
- **Regulation Over Ban:** The paper suggests that supervising **licensed crypto-asset issuers and service providers** can help fill information gaps and facilitate the monitoring of cross-border crypto activities.
- **Anti-money Laundering Standards:** It recommends implementing the **Financial Action Task Force’s standards** to combat money laundering and terrorist financing related to cryptocurrencies.

The G20 Leaders Declaration **endorsed the FSB’s recommendations** and welcomed the paper’s roadmap for a **coordinated and comprehensive policy** and regulatory framework.

About FSB:

The [Financial Stability Board](#) (founded in 2009; HQ: Basel, Switzerland) is an international body that **monitors and makes recommendations** about the global financial system. It was established after the G20 London summit (2009) as a successor to the **Financial Stability Forum**.

11. PROJECT SAMUDRAYAAN

Context:

Indian scientists are gearing up for an ambitious project called [Samudrayaan](#), which involves **sending three people 6,000 meters underwater in a domestically developed submersible named Matsya 6000**.

- This mission aims to **explore the ocean depths of**

precious metals and minerals such as cobalt, nickel, and manganese.

About Matsya 6000:

Matsya 6000 has been in **development for nearly two years and will undergo its first sea trials in the Bay of Bengal** off the Chennai coast in early 2024. The submersible’s design has been reviewed carefully, **taking into account materials, testing, certification, redundancy, and standard operating procedures**.

The submersible’s **design includes a 2.1-meter diameter sphere made of 80mm-thick titanium alloy**, capable of **withstanding the immense pressure at 6,000 meters depth**, which is 600 times greater than sea level pressure. **The vehicle is designed to operate continuously for 12 to 16 hours, with a 96-hour oxygen supply**.

About Mission Samudrayaan:

- The **Samudrayaan mission is part of the Deep Ocean Mission**, and sea trials at a **depth of 500 meters are planned for the first quarter of 2024**. The mission’s full realization is **expected by 2026**.
- It’s **worth noting that only a few countries, including the US, Russia, Japan, France, and China**, have developed manned submersibles.
- In addition to searching for valuable minerals like nickel, cobalt, and manganese, Matsya 6000 will investigate the **chemosynthetic biodiversity in hydrothermal vents and low-temperature methane seeps in the ocean**.

DEEP OCEAN MISSION

<div><div>➤ Deep Sea Mining through ‘Underwater Vehicles’ and ‘Underwater Robotics’</div><div>➤ Asserting exclusive rights to explore polymetallic nodules from seabed over 75,000 sq km of areas in international water</div><div>➤ Estimated polymetallic nodules resource potential: 380 million tonnes (MT)</div></div>	<div><div>THESE POLYMETALLIC NODULES CONTAIN</div><div>Manganese 92.6 MT</div><div>Nickel 4.7</div><div>Copper 4.3</div><div>Cobalt 1</div><div>(*figures are rounded off)</div></div>
<div><div>➤ Development of ocean climate change advisory services</div><div>➤ Technology for sustainable utilisation of marine bio-resources</div></div>	<div><div>➤ Deep ocean survey and exploration</div><div>➤ Energy from the ocean and offshore-based desalination</div><div>➤ Krill fishery from southern ocean</div></div>

12. GENETIC ENGINEERING TO CONTROL MOSQUITOES

Context:

[Genetic engineering](#) is being used to upgrade mosquito control efforts due to the ongoing threat of mosquito-borne diseases.

- Recent advancements in **genome sequencing technology** have provided researchers with access to mosquito genomes, particularly *Anopheles stephensi*, a major malaria vector mosquito.
- Genetic manipulation, including **gene-drive technology**, is employed to control mosquito populations by interfering with their reproduction.

Gene-drive technology, originally conceived by Austin Burt in 2003, alters mosquito DNA to reduce their reproductive capabilities or make them sterile, preventing the transmission of diseases like malaria. Some approaches involve enhancing genes in mosquitoes to produce antimicrobial substances, disrupting disease transmission.

Genetically modified mosquitoes, such as **OX5034**, have been released in certain areas to reduce mosquito populations, showing promising results in decreasing disease incidence. However, these technologies come with potential risks, such as **ecological disruptions** and **unintended consequences** in the ecosystem.

13. NEW CENTRAL EMPOWERED COMMITTEE (CEC) FOR ENVIRONMENTAL ISSUES

Context:

The Union Environment Ministry has established a new **Central Empowered Committee (CEC)** to replace an ad hoc expert panel with the same name that has been assisting the Supreme Court on forest and environmental issues since 2002.

- This move has raised concerns about the committee's independence under government control.

Under the new structure, the CEC will consist of a chairperson, a member secretary, and three expert members, all appointed by the Union government. The chairperson must have at least 25 years of experience in environmental, forestry, or wildlife fields or substantial administrative expertise in government, serving a maximum term of three years.

Need for restructuring:

- The restructuring of the CEC comes following the passage of the [Forest Conservation \(Amendment\) Bill, 2023](#), which some critics believe weakens existing safeguards in Indian forest law, potentially facilitating construction projects in ecologically sensitive regions.
- This change in the committee's composition has raised questions about its **ability to function independently and issue impartial judgments**, given that its members will now all be civil servants appointed by the government.

14. UNITED NATIONS' GLOBAL STOCKTAKE REPORT

Context:

The United Nations' Global Stocktake report was released just ahead of the G-20 meeting.

About the report:

The United Nations' Global Stocktake report serves as a **blueprint for discussions during the Conference of Parties** and aims to assess countries' progress in curbing greenhouse gas emissions since 2015.

Key takeaways from the report:

Takeaways	Details
Positive takeaways	
Paris Agreement's Impact:	The Paris Agreement has encouraged widespread climate action worldwide.
Temperature Projection Improvement	Global temperature rise is now expected to be between 2.4-2.6°C , a significant improvement from the earlier projection of 3.7-4.8°C in 2010.
Negative Takeaways	
Emission Rate Exceeds Limits	Despite some progress, global emissions are to exceed the limits set in the Paris Agreement
Ambitious Action Needed	Achieving net-zero CO2 emissions requires an 84% reduction in global greenhouse gas (GHG) emissions below 2019 levels by 2050
Deficits in Climate Action	There are shortfalls in various aspects of climate action , including mitigation, adaptation, and finance, indicating the need for more comprehensive efforts.
Key recommendations of the Report	

On Mitigation	Inclusive and equitable system transformation for transitioning from fossil fuel-based energy systems to renewable energy sources like solar and wind
Adaptation	Integrate climate change risks into all aspects of planning and implementation. Ensure transparent reporting on adaptation efforts.
Finance Flows	Enhance access to climate finance in developing countries .

About the [Paris Agreement](#):

It is a **legally binding international treaty** on climate change that was adopted by **196 countries**. Its primary goal is to **limit the increase in the global average temperature** to well below **2°C above pre-industrial levels**. It includes a mechanism known as the **Global Stocktake (GST)**, which aims to assess the **global response to the climate crisis every five years**.

15. GRESHAM'S LAW

Gresham's Law, named after Thomas Gresham, states that “**bad money drives out good**” when the government **fixes the exchange rate** between two currencies at a level different from the market rate.

Impact:

- This leads to the **undervalued currency going out of circulation**, while the overvalued currency remains but **lacks buyers**.
- The law can **result in a currency shortage** when demand exceeds supply due to the fixed price.

Gresham's law applies not only to **paper currencies but also to commodities**. It can cause goods to disappear from the formal market when their prices are forcibly undervalued by governments.

Explanation using example:

Imagine a country where both **gold coins and copper coins** are used as currency. The government sets an exchange rate, **saying that 10 copper coins are equal in value to 1 gold coin**, even though the market values them differently.

In this scenario, people will **start hoarding and using gold coins** because they are more valuable. They will spend copper coins, which are **considered “bad money,”** in everyday transactions, keeping the **“good money” (gold coins) for themselves**.

Eventually, the **circulation of copper coins increases**, while gold coins become scarce in daily transactions. This demonstrates Gresham's Law in action, where the **undervalued (copper) currency** pushes out the more **valuable (gold) currency** from everyday use.

The alternative:

Thiers' law, on the other hand, states that “**good money drives out bad**” when people have the freedom to choose between currencies, and they prefer higher-quality currencies.

16. DOLLY THE SHEEP

Context:

Ian Wilmut, the **British embryologist** renowned for **leading the team that created Dolly the Sheep**, the **world's first cloned mammal** from an adult cell, has passed away recently.

About Dolly:

- Dolly the Sheep, **born in 1996**, marked a **significant scientific breakthrough in the 20th century**. Wilmut, along with his team, accomplished the unprecedented feat of making **an adult cell behave like a cell from a newly fertilized embryo**, resulting in the **creation of an animal genetically identical to the donor**.
- They achieved this by **taking a cell from the mammary gland** of a deceased adult sheep, stimulating it with **electricity and chemicals to transform its DNA into an embryo**, and then **implanting it into an empty sheep's egg, which was later placed into a surrogate sheep**.
- Dolly's birth **raised ethical debates about cloning research**, and it prompted then-U.S. President Bill Clinton to announce a ban on human cloning experiments about a year later.
- **Dolly's life was tragically short-lived**, as she developed an **incurable lung tumour** and **was euthanized by scientists about six years after her birth**.

Following the success of the Dolly experiment, Wilmut shifted his focus to using cloning technology to **create stem cells for potential use in regenerative medicine**. His research played a crucial role in **advancing treatments for genetic and degenerative diseases by aiding in tissue repair within the human body**.



2. A NOVEL APPROACH TO DETECT AND KILL CANCER CELLS

Context:

Scientists at the **Indian Institute of Science (IISc)** have developed a **novel approach to detect and potentially kill [cancer cells](#)**, especially those **forming solid tumour masses**.

- They created **hybrid nanoparticles** consisting of **gold and copper sulphide**, which can both kill cancer cells using **heat** and **facilitate their detection using sound waves**.
- These hybrid nanoparticles possess **photothermal, oxidative stress, and photoacoustic properties**. When exposed to light, they absorb it and generate heat, which can be **lethal to cancer cells**.
- Additionally, these **nanoparticles produce singlet oxygen atoms that are toxic to cells, providing a dual mechanism for cell destruction**.
- Moreover, these nanoparticles **have the potential to aid in cancer diagnosis**. Their photoacoustic property allows them to **absorb light and generate ultrasound waves**, which can be used to **detect cancer cells with high contrast once the particles reach them**.
- The **small size of these hybrid nanoparticles** (less than 8 nm) makes them suitable for travelling within tissues and reaching tumours.

17. ARXIV

Context:

Recently, critique sparked a **debate about the quality and impact of research shared on the arXiv platform**.

- The article discusses the **role and controversies surrounding arXiv, a widely used preprint server for scientific research papers**.

About ArXiv:

ArXiv was created to enable researchers in various fields, including physics, computer science, mathematics, and astronomy, to share **early research findings with their peers**. It has gained immense popularity **due to its speed and accessibility**, as papers are shared without a lengthy peer-review process.

Issues:

- Rising, **debate about the quality and impact of research on arXiv**.
- Researchers were **using arXiv to stake claims in research areas, leading to a culture of rushing to publish rather than asking original and meaningful questions**.

Benefits:

- **arXiv provides open access to research papers, making them easily accessible to students and independent researchers**.

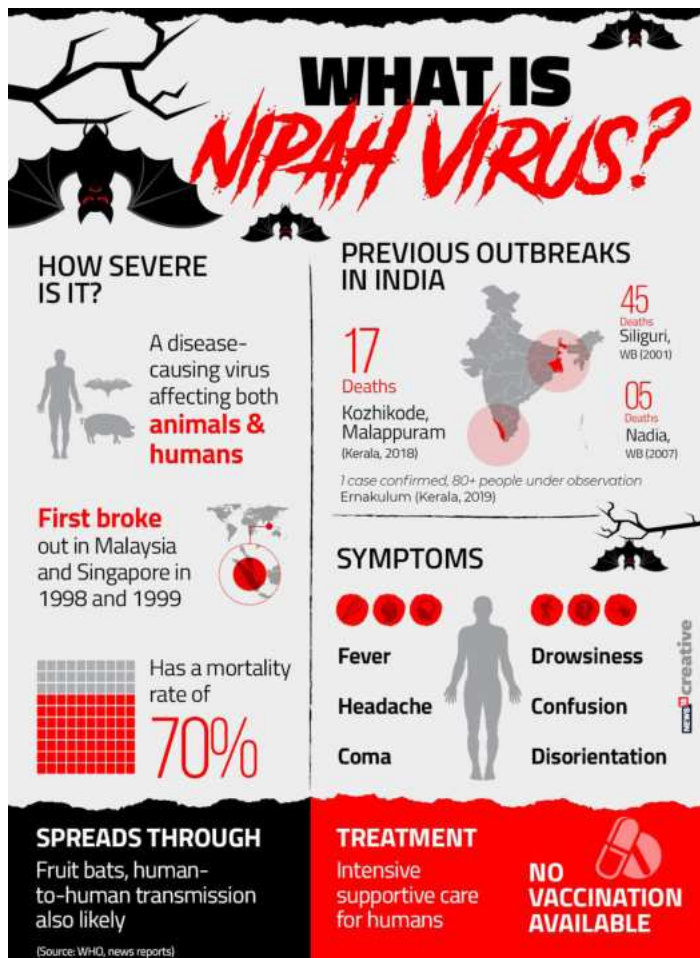
18. NIPAH VIRUS

Context:

[Nipah virus](#) infection has re-emerged in Kerala, with two reported deaths and two individuals under treatment.

About Nipah:

- Nipah is a **zoonotic disease**, primarily **transmitted to humans through infected animals particularly bats or contaminated food**, and it can also **spread from person to person** through close contact.
- Symptoms include **fever, headache, cough, sore throat, difficulty in breathing, and vomiting**, with severe cases potentially leading to **encephalitis, coma, and death**.
- The virus is primarily **transmitted through consumption of contaminated food or direct contact with infected animals, particularly fruit bats**.
- It is **highly lethal**, with **mortality rates ranging from 40% to 75%**.



The primary objective of the NGT is to provide **effective and expeditious solutions to environmental disputes and violations.**

About the Bhoj Wetland

It is located in Bhopal, Madhya Pradesh, and earned its Ramsar site designation in 2002. It encompasses two man-made reservoirs, the **Upper Lake (Bhojtal)** and the **Lower Lake**.

20. DATA-DRIVEN INNOVATIONS IN AGRICULTURE

Context:

The National Bank for Agriculture and Rural Development (Nabard) has entered into a partnership with the United Nations Development Programme (UNDP) in India to co-create **data-driven innovations in agriculture and food systems** to benefit smallholder farmers.

- This collaboration aims to **enhance the lives and livelihoods of smallholder farmers** by sharing open-source data for **product development, technology transfer, and policy framing**.
- The partnership's focus is on **improving climate resilience in agriculture**, and it involves the dissemination of **collaborative digital public goods** such as **DiCRA (Data in Climate Resilient Agriculture)**.
- DiCRA provides **open access to key geospatial datasets relevant to climate-resilient agriculture** and is **curated by UNDP and partner organizations**.

The collaboration is seen as a significant opportunity to leverage data and present it as a digital public infrastructure for India's rural farming community. **Open data innovations like this can promote best practices, optimize agricultural investments, and enhance the resilience of smallholders, especially women, against various risks.**

19. NATIONAL GREEN TRIBUNAL

Context:

The [National Green Tribunal \(NGT\)](#) central bench has issued a **ban on the operation of cruise boats in the Upper Lake (Bhoj Wetland) and other wetland sites in Madhya Pradesh**

- Additionally, the NGT has **prohibited any construction within the "no development zone" or "buffer zone"** as defined in the **Wetland Rules of 2017**.

Reasons for ban:

- They **operate as part of the travel, entertainment, or leisure industry and are run for profit**.
- These vessels have the potential to **discharge sewage and trade effluents into the water**.
- The proximity of the **cruise's path to Van Vihar National Park, which falls under a "silent zone," yet noise pollution was observed**.

About National Green Tribunal:

The National Green Tribunal (NGT) is a **specialized judicial body in India** established to handle cases **related to environmental protection and conservation**. It is established under the **National Green Tribunal Act, of 2010**.

21. NEW DISCOVERIES BY WEBB TELESCOPE

Context:

Scientists using the [James Webb Space Telescope](#) have discovered **methane and carbon dioxide on the exoplanet K2-18 b**.

- K2-18 b** is located in the **"Goldilocks zone"** around the **cool dwarf star K2-18**, where it receives just enough starlight to **maintain liquid water**.
- It's considered a **"Hycean planet,"** a hypothetical type of **water-covered planet with a hydrogen-rich atmosphere** that some scientists believe is a good candidate for the search for signs of life.

- The presence of **methane and carbon dioxide**, along with a **shortage of ammonia**, supports the hypothesis that **K2-18 b** may have a **water ocean beneath its hydrogen-rich atmosphere**.
- The study also suggests the possible detection of a molecule called **dimethyl sulphide**, which on Earth is **primarily produced by life**, particularly **phytoplankton in the oceans**.

22. PLANET MERCURY

Context:

NASA recently shared a **captivating image of Mercury**, the solar system's **smallest planet**, on Instagram.

- The picture, taken by **MESSENGER**, the first spacecraft to **orbit Mercury**, showcases the **planet's tan and blue hues, along with its cratered surface**.

About Mercury:

- **NASA provided intriguing details about Mercury**, emphasizing its **diminutive size, its proximity to the Sun** (about 36 million miles or 58 million km away), and its **incredible speed, travelling at nearly 29 miles (47 km) per second, resulting in a year on Mercury being just 88 Earth days**.
- The post also **highlighted Mercury's unique characteristics**, such as its **thin exosphere consisting of elements like oxygen, sodium, hydrogen, helium, and potassium**.
- Due to its **lack of atmosphere and proximity to the Sun**, the planet experiences **extreme temperature fluctuations, ranging from a scorching 800°F (430°C) during the day to a frigid -290 °F (-180 °C) at night**.
- Additionally, Mercury possesses a **relatively weak magnetic field, only 1% as strong as Earth's**, which interacts with solar winds to create **magnetic tornadoes across the planet's surface**.

23. ONE HEALTH APPROACH FOR PANDEMIC PREPAREDNESS

Context:

The Government of India, in **collaboration with the World Organization for Animal Health (WOAH)**, organized a multi-sectoral workshop titled **"Risk-based management of spillover events in wildlife in India"** in Hyderabad.

- The workshop aimed to **strengthen the One Health approach** for pandemic preparedness and featured experts from various fields.
- The workshop's efforts align with the global need

to **enhance preparedness for future pandemics**, especially **highlighted by the COVID-19 pandemic**. WOAH is actively collaborating with partners in the Quadripartite, including **FAO, WHO, and UNEP**, to **address these critical issues**.

Key highlights of the workshop included:

- **Objectives:** The workshop focused on **four main objectives**: enhancing **stakeholder knowledge** about wildlife-origin disease risk analysis, conducting a **comprehensive gap analysis of India's risk assessment and management**, simulating **disease spillover scenarios**, and promoting **communication and awareness among relevant stakeholders**.
- **One Health Approach:** The workshop exemplified the commitment of WOAH and the Government of India to the **"One Health" approach**, which emphasizes collaboration and coordination among stakeholders in addressing the **interconnected health of wildlife, domestic animals, and humans**.

24. CYBERCRIME INVESTIGATION TOOL

Context:

A new **cybercrime** investigation tool has been developed to track cyberattacks that target humans, such as **insurance fraud and online matrimonial fraud**.

- This tool, known as the **TTP (tactics, techniques, and procedures)-based cybercrime investigation framework**, **aids in tracking and categorizing cybercrimes**.
- It identifies the **chain of evidence required to solve a case and maps evidence onto the framework to convict criminals**.
- The technology **can create an approximate crime execution path**, suggest a crime path based on **user-derived keywords**, compare the **modus operandi** used in different crimes, manage user roles, and track activity for crime paths.
- By relying on **criminals' tactics, techniques, and procedures (TTPs)**, the **TTPs-based investigation framework is expected to be highly effective in convicting cybercriminals quickly and precisely**.

The developed cybercrime investigation framework and tool are now ready for deployment with law enforcement agencies. This advancement is expected to make it easier to track and convict cybercriminals, ultimately reducing cybercrime activities in the country.

25. CRITICAL RAW MATERIALS ACT

Context:

The European Parliament has approved the Critical Raw Materials Act.

- The legislation aims to reduce the European Union's (EU) reliance on China for critical minerals, essential for green technologies like solar panels, wind-mills, and electric car batteries.

The EU currently depends on China for 99% of [rare earth metals](#). The regulation sets the framework for ensuring a secure and sustainable supply of these raw materials, diversifying imports, and increasing processing capacity along the value chain

About [Critical Raw Materials](#):

Critical raw materials are natural resources that are of strategic importance to a country or region due to their economic, industrial, and geopolitical significance.

These materials are essential for various industries, including technology, manufacturing, energy, and defence, and their availability can impact a nation's economic security and competitiveness.

Examples of critical raw materials may include rare earth elements, lithium, cobalt, graphite, platinum group metals, and certain minerals and metals that are essential for advanced technologies and clean energy solutions.

26. NAVIC

Context:

The Indian government has announced its intention to make it mandatory for smartphones to integrate with India's homegrown navigation system, [NavIC](#)

- The devices must either provide support for NavIC-powered chips or use NavIC chipsets.
- For 5G phones, mandatory NavIC support is required by January 1, 2025, while all other phones operating in the L1 band, currently using the Global Positioning System (GPS), must provide mandatory NavIC support by December 2025

This move comes after Apple agreed to support NavIC in some of its newly launched iPhone 15 models. While NavIC will be encouraged for use in mobile devices, it won't be the sole mandated navigation system, as cost and performance competitiveness will also be considered.

NavIC is India's indigenous alternative to GPS and currently has seven satellites in orbit, with plans to expand to 12 in the future.

27. BANNING GLUE PADS FOR RODENT CONTROL

Context:

The Delhi government has banned the manufacture, sale, and use of glue pads for rodent control, joining several Indian states in taking this step.

- The ban follows an advisory by the Animal Welfare Board of India (AWBI) in 2011 and a subsequent one in 2021

About Glue Pads:

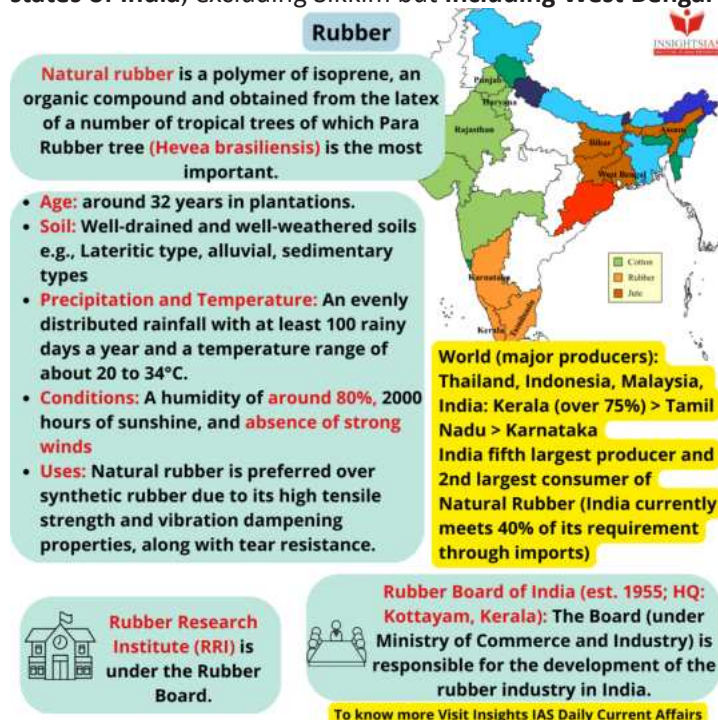
- Glue pads are considered a cruel method of killing rodents as animals that get trapped in the strong glue die slowly from starvation and extreme pain.

Rat poison, often used as an alternative to glue pads, is also considered inhumane and poses risks to the ecosystem, animals that feed on poisoned rats, such as cats, snakes, mongoose, and predatory birds, can be harmed by the toxins.

28. RUBBER

Context:

The Rubber Board, is undertaking a project to increase the area under natural [rubber](#) cultivation in the northeastern states of India, excluding Sikkim but including West Bengal



29. RED FIRE ANTS

Context:

Red fire ants, known scientifically as *Solenopsis invicta* and originating from South America, have invaded Europe.

- These invasive ants are ranked as the world's fifth-costliest species to combat.
- Their painful stings can cause pustules, allergies, and even fatal anaphylactic shock. The researchers believe that climate change may facilitate their further spread in Europe.
- **Invasive species:** drive plant and animal extinctions, threaten food security and exacerbate environmental catastrophes.



30. C295 AIRCRAFT

Context:

The Indian Air Force (IAF) has taken delivery of the first of 56 C295 aircraft in a significant move to replace its ageing Avro-748 fleet.

- The C295, a versatile tactical transport aircraft, is set to revolutionize India's military aircraft manufacturing under the 'Make in India' initiative.

C295 Aircraft Features:

- The C295 aircraft, designed by Airbus, is a versatile tactical transport capable of various missions, including troop and cargo transport, maritime patrol, surveillance, reconnaissance, close air support, medical evacuation, VIP transport, and firefighting.
- It can carry up to nine tonnes of payload or 71 personnel at a maximum cruise speed of 260 knots. The aircraft can operate from unpaved, soft, and sandy/grassy airstrips and has a cruising altitude of up to 30,000 feet.

Indigenous Production:

While major components such as engines and avionics are sourced from the US, Airbus will transfer manufacturing technology to TASL for most other components.

- This is intended to achieve 95% indigenous production within a few years. The aircraft will feature indigenous radar warning receivers, missile approach warning systems developed by Bharat Electronics Limited, and a countermeasure dispensing system provided by Bharat Dynamics Limited.

MAPPING

1. TIMOR-LESTE

India's Prime Minister Narendra Modi has announced the opening of an Indian embassy in Dili, the capital city of Timor-Leste, during the 20th ASEAN-India Summit in Jakarta.

Timor-Leste is a Southeast Asian nation occupying half the island of Timor and is ringed by coral reefs teeming with marine life. It comprises the eastern half of the island of Timor, of which the western half is administered by Indonesia, the exclave of Oecusse on the island's north-western half, and the minor islands of Atauro and Jaco. Australia is the country's southern neighbour, separated by the Timor Sea.

Timor-Leste was a Portuguese colony until 1975, followed by Indonesian rule after the conflict. In 1999, it gained independence through a UN-sponsored act and became the 1st sovereign state of the 21st century (in 2002)



2. MOODBIDRI (DAKSHINA KANNADA, KARNATAKA)

In recent archaeological explorations near Moodbidri, Dakshina Kannada, unique terracotta figurines were discovered (related to the Megalithic Dolmen site). These figurines provide valuable insights into the study of the Bhoota cult or

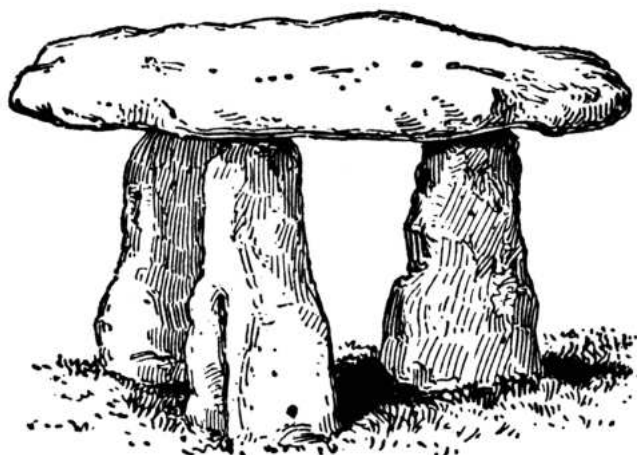
Daiva Aradhane. They are datable to the period of **800-700 B.C.** The discovery includes various figurines, such as **cow bovines, a mother goddess, peacocks, a horse, and more.**

Mudbidri is a town and taluk in Dakshina Kannada district. It lies 34 km northeast of the **district headquarters, Mangalore**, in Karnataka. Because of the widely grown bamboo in ancient days, this place was named Moodabidri.



What is a [megalithic dolmen](#)?

It is a **type of ancient burial structure** consisting of large stone slabs. These stones are arranged to **create a chamber or tomb, often with a capstone on top.**



3. LIBYA

Devastating floods in **Derna, eastern Libya**, have resulted in **over 5,000 feared dead** and thousands missing due to breached dams and flash floods caused by the **Mediterranean storm named Daniel.**

What is a [Mediterranean storm](#)?

A Mediterranean storm, also known as a Mediterranean cyclone or a Mediterranean low, is a type of weather system that forms over the Mediterranean Sea. Mediterranean storms can vary in intensity and impact, but they often lead to heavy precipitation, which can result in flooding, landslides, and other weather-related hazards.

Libya is a country in the **Maghreb region of North Africa**. It is bordered by the **Mediterranean Sea to the north, Egypt to the east**, Sudan to the southeast, Chad to the south, Niger to the southwest, Algeria to the west, and Tunisia to the northwest.



4. HARAMI NALA (SIR CREEK, GUJARAT)

Recently, Union Home Minister visited "**Harami Nala**" in the **[Sir Creek area of Kutch](#)**, Gujarat, along the India-Pakistan international border.

Harami Nala is a 22-kilometer tidal channel that serves as a natural boundary between India and Pakistan. The channel

carries water and mud and is inhabited by protected marine species. Vast marshy mudflats surround it, with temperatures reaching above 50° Celsius in summer.

Sir Creek, originally Ban Ganga, is a 96-km tidal estuary in the uninhabited marshlands of the [Indus River Delta](#) on the border between India and Pakistan. The creek flows into the [Arabian Sea](#) and separates Gujarat state in India from Sindh province in Pakistan.



5. NYOMA AIRFIELD (EASTERN LADAKH)

The **Border Roads Organisation (BRO)** will construct India's **highest fighter airfield** in Nyoma, a village in Ladakh. The Nyoma village is **located close to the south Bank of Pangong Tso** at an altitude of about 13,700 feet. Nyoma is around 46 kilometres from the Line of Actual Control with China.

Also, the Construction of the **Shinkun La Tunnel**, the world's **highest tunnel at an altitude of 15,855 feet** is set to start. The tunnel will connect **Lahaul-Spiti in Himachal to the Zaskar Valley in Ladakh** and provide all-weather connectivity



6. MEGA OIL REFINERY AND PETROCHEMICALS PROJECT (RATNAGIRI, MAHARASTRA)

The project was initially **proposed in 2015 as a joint effort by India's public sector refiners**, including Indian Oil Corporation (IOC), Bharat Petroleum Corporation (BPCL), and Hindustan Petroleum Corporation (HPCL), in partnership with Saudi Arabian Oil Company (Aramco) and later joined by Abu Dhabi National Oil Company (ADNOC).

The refinery project in **Maharashtra's Konkan belt (Ratnagiri district)** has faced challenges and delays but remains significant for India's long-term energy strategy.

About the Konkan belt:

It is a coastal plain in western India that extends along the western coasts of **Maharashtra, Goa, and Karnataka**. The Konkan is a narrow lowland that's only **about 50 km wide**. It's bounded by the Western Ghats mountain range to the east, the Arabian Sea to the west, the **Daman Ganga River** to the north, and the **River Aghanashini** to the south.

