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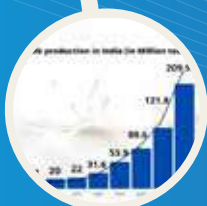
MARCH 2024



One Nation One Election



India-Mauritius Relations



Dairy Sector in India



Ethanol Blending



100 % FDI in Space Sector





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POLITY AND GOVERNANCE

1.1. ONE NATION ONE ELECTION

Context

Recently, the **High-level Committee (HLC) on One Nation, One Election (ONOE)** submitted its report to the President of India Droupadi Murmu.

MORE ON THE NEWS

- The High-level Committee (HLC) was chaired by **former President Ram Nath Kovind**.
- Other members of the Committee include **Amit Shah** (Union Home Minister), **Ghulam Nabi Azad** (former Leader of the Opposition in Rajya Sabha), **N K Singh** (former Chairman of the Finance Commission), **Subhash C Kashyap** (former Secretary General of Lok Sabha), senior advocate **Harish Salve**, and **Sanjay Kothari** (former Chief Vigilance Commissioner)
 - ✓ Union Minister of Law and Justice **Arjun Ram Meghwal** was a “special invitee”.
- The Report is an outcome of extensive consultations with stakeholders, experts and research work of 191 days, since its **constitution on 2 September, 2023**.
- It unanimously recommended **simultaneous elections for Lok Sabha and State Assemblies**, followed by synchronised local body polls within 100 days.

KEY RECOMMENDATIONS OF THE COMMITTEE

- **Restoring Simultaneous Elections:** The committee stressed the importance of bringing back simultaneous elections, which were disrupted within two decades of India gaining independence.
- **Two-Step Process:** The Constitution should be amended to enable simultaneous elections in two steps.
 - ✓ As the first step, simultaneous elections will be held for the House of the People and the State Legislative Assemblies. For this, **no ratification by the states** will be required for the constitutional amendment.
 - ✓ In the second step, elections to municipalities and the panchayats will be **synchronised with elections to Lok Sabha and state Assemblies** in such a way that local body elections are held **within 100 days** of the elections to Lok Sabha and state Assemblies. This will **require ratification by not less than one-half of the states**.
- **Truncation of State Assemblies’ Tenure:** The President of

History of Simultaneous Elections in India

01

After the enforcement of the Constitution on January 26, 1950, the **first general elections** to Lok Sabha and all State Assemblies were held **simultaneously in 1951-1952**. This practice continued for the next three Lok Sabha elections until 1967.

02

However, this practice was first disrupted in **1959** when the Union Government used **Article 356 (failure of constitutional machinery)** of the Constitution to **dismiss the then Communist government of Kerala headed by E M S Namboodiripad**.

03

Subsequently, rampant use of Article 356 and defections & counter-defections between parties led to premature dissolution of the Lok Sabha and Legislative Assemblies, thus leading to separate Lok Sabha and Assembly elections over the years.

04

At present, Assembly elections of **only four states** (Andhra Pradesh, Odisha, Arunachal Pradesh and Sikkim) are held together with the Lok Sabha elections.

Revival of the idea of ONOE



1983

The Election Commission of India (ECI) first proposed simultaneous elections.

2003

Prime Minister Atal Bihari Vajpayee discussed the idea with Congress President Sonia Gandhi, but no significant progress was made.

2010

Prime Minister Atal Bihari Vajpayee discussed the idea with Congress President Sonia Gandhi, but no significant progress was made.

2014

Prime Minister Narendra Modi advocated for simultaneous Lok Sabha and state assembly polls. BJP included the agenda of ONOE in its election manifesto for the 2014 Lok Sabha elections.

2018

Law Commission released a Draft Report on Simultaneous Election which examined the legal and constitutional aspects related to the proposal.

2019

The Prime Minister reiterated the need to hold simultaneous elections in his Independence Day speech in 2019.

India will issue a notification on the same date as the date of the first sitting of the Lok Sabha, designating it as the **“appointed date”** for the synchronisation of elections.

- ✓ Once such a date is fixed, the tenure of all State Legislative Assemblies constituted after the appointed date will end with the expiry of the 18th Lok Sabha’s tenure in 2029.
- ✓ Thus, in essence, all States with elections due during the transition period from June 2024 to May 2029 would have tenure of less than five years as a one-time measure to facilitate this synchronisation.
- **Handling Emergencies:** In cases of disruptions due to the premature dissolution of the Parliament or a state assembly due to a **Hung House or a No-Confidence Motion**, fresh elections should be held only for the remainder of the term, or the **“unexpired term”**, until the next cycle of simultaneous polls is due.
 - ✓ The German model of a constructive vote of no-confidence (**recommended by the Law Commission of India**) proposes that a no-confidence motion **must be accompanied by a proposal for an alternative government** with majority support.
 - ✓ However, the high-level committee report rejected this system, advocating instead for fresh elections for unexpired term in cases of hung assemblies or no-confidence motions.
- **Constitutional Amendments Required:**
 - ✓ **Insertion of Article 82A:** This new provision provides that all the Legislative Assemblies constituted in any general election held after the “appointed date” shall come to an end on the expiry of the full term of the Lok Sabha.
 - It further provides that if the ECI is unable to conduct such simultaneous polls, it will make a recommendation to the President, to declare by an Order, that the election to that Legislative Assembly may be conducted at a later date.
 - However, even in cases where the State Assembly election is deferred, the term of the Legislative Assembly will end on the same date as the end of the full term of the Lok Sabha constituted in the General Election.
 - ✓ **Amendment to Articles 83 & 172:** These provisions provide for a **“five-year term”** to the Lok Sabha and State Assemblies respectively. The Committee has recommended that this five-year term should be referred to as **“the full term”** and if the Lok Sabha or the State Assembly is dissolved prematurely, then the remaining period will be referred to as the **“unexpired term”**.
 - Thus, the new Lok Sabha or State Assembly will serve only for the remaining “unexpired term” before being dissolved again once the simultaneous polls are conducted as scheduled.

✓ **Insertion of Article 324A:** This new provision would empower the Parliament to make laws to ensure that elections to municipalities and panchayats are held simultaneously with the general elections.

- **Single Electoral Roll and Election ID:** The Committee also recommended amending **Article 325** to allow the Election Commission of India (ECI) to **prepare a single electoral roll and single Elector’s Photo Identity Card (EPIC)**, in consultation with State Election Commissions (SECs), to be used for election to all three tiers of the government. These amendments will require ratification by **at least one-half of the States**.
- **Logistical Planning:** The ECI in consultations with the SECs should prepare plans and estimates in advance for logistical arrangements, such as acquiring equipment like Electronic Voting Machines (EVMs) and Voter Verified Paper Audit Trail (VVPAT) machines, and deploying polling personnel and security forces.

ABOUT ONE NATION ONE ELECTION (ONOE)

- **Simultaneous elections**, popularly referred to as **“One Nation, One Election”**, means holding elections to Lok Sabha, all state Legislative Assemblies, and urban and rural local bodies (municipalities and panchayats) at the same time.
- Currently, all these elections are held independently of one another, following timelines dictated by the terms of every individual elected body.

ARGUMENTS IN FAVOUR OF ONOE

- **Cost Concerns:** Frequent elections lead to additional expenses for the government and political parties, straining the government’s finances.
- **Uncertainty and Instability:** Asynchronous elections create uncertainty and instability, disrupting supply chains, deterring business investments, and hindering economic growth.
- **Disruption to Government Machinery:** The disruption caused by asynchronous elections affects government operations, causing hardships for citizens.
- **Impact on Officials and Security Forces:** Frequent elections require the continuous deployment of government officials and security forces, impacting their ability to perform their duties effectively.
- **Model Code of Conduct (MCC):** Frequent imposition of the Model Code of Conduct (MCC) leads to policy paralysis and slows down the implementation of developmental programs.
- **Voter Fatigue:** Staggered elections lead to ‘voter fatigue’ and pose a challenge in ensuring high voter participation.
- **ARGUMENTS AGAINST ONOE**
- **Federalism Conflict:** ONOE contradicts the principle of federalism, which recognizes India as a **Union of States**. It undermines the autonomy of states by treating the entire nation as one entity.

- **Constitutional Hurdles:** Amending multiple articles of the Constitution and the Representation of People Act (1951) would be necessary, requiring unanimous agreement from all recognized state and national parties.
- **Accountability and Representation:** Recurrent elections allow voters to address different issues at the national and state levels separately, ensuring greater accountability. ONOE risks blending these issues and reducing voter representation.
- **Financial Misconceptions:** The notion that frequent elections incur massive costs is misleading, as the actual expenditure **per voter per year is relatively low**.
- **Feasibility Concerns:** The ONOE plan faces feasibility concerns due to constitutional provisions on fixed tenures for Lok Sabha and State Assemblies, raising questions about what would happen if a government collapses mid-term and the complexities of amending the Constitution for such a change.
- **Logistical Challenges:** Simultaneous election would require twice as many electronic voting machines and Voter Verifiable Paper Audit Trail machines as are used now.
- **Threat to multi-party democracy:** Simultaneous elections would largely benefit the national parties and would cost the regional parties, thus reducing the multi-party democracy to a few/two-party democracy.
 - ✓ A 2015 study by the independent think tank IDFC Institute revealed that between 1999 and 2014, there was a “77% chance that the winning political party or alliance will win both the Lok Sabha and Assembly elections” in that state when held simultaneously.

HURDLES IN THE IMPLEMENTATION OF ONOE

- **Constitutional Amendments:** The recommendations of the Committee require amending several provisions of the Constitution. It would also require amendments to the **Representation of the People Act (RPA), 1951**, which governs the timing of general elections and elections to state legislative assemblies.
- **Complex Process:** It would also be much more complex and

difficult to link general elections with local bodies elections because **local government is a State subject** and all the State Legislatures have passed separate Panchayati Raj Acts and Municipal Acts to fix the tenure of these bodies.

- **Consensus of Political Parties and State Governments:** Achieving consensus among all political parties and state governments is essential due to India’s federal structure.
- **Financial Implications:** Implementing simultaneous elections would incur significant costs, including the need for additional **EVMs/VVPATs**. This expense could run into thousands of crores, as machines would need replacement every 15 years.
- **Government Stability:** Handling scenarios where governments fall or legislatures dissolve prematurely during their terms **poses a democratic challenge**. Implementing ONOE may undermine democratic norms and local empowerment efforts.
- **Impact on Election Spending:** ONOE aims to reduce election spending, but it may not effectively tackle the issue of black money in elections.

WAY FORWARD

While the idea of ONOE is worthy of implementation, several other electoral reforms need to be undertaken to complement the ONOE. Some of these reforms include—

- Presently, under the RPA, 1951 and the Conduct of Election Rules, 1961, limits on election **expenditure exist only for candidates and not political parties**. The Election Commission has demanded amending the law to provide for such a ceiling.
- Bringing political parties under the **purview of the Right to Information (RTI) Act** for increased transparency and accountability.
- Additionally, **state funding of elections** (recommended by the Law Commission Report on Reform of the Electoral Laws-1999) and **strengthening intra-party democracy** could further enhance the integrity and fairness of the electoral process.

1.2. CRIMINALISATION OF POLITICS

Context

Recently, the Association for Democratic Reforms (ADR) and National Election Watch (NEW) released a report on the analysis of the Criminal, Financial and other Background details of sitting Rajya Sabha MPs in 2024.

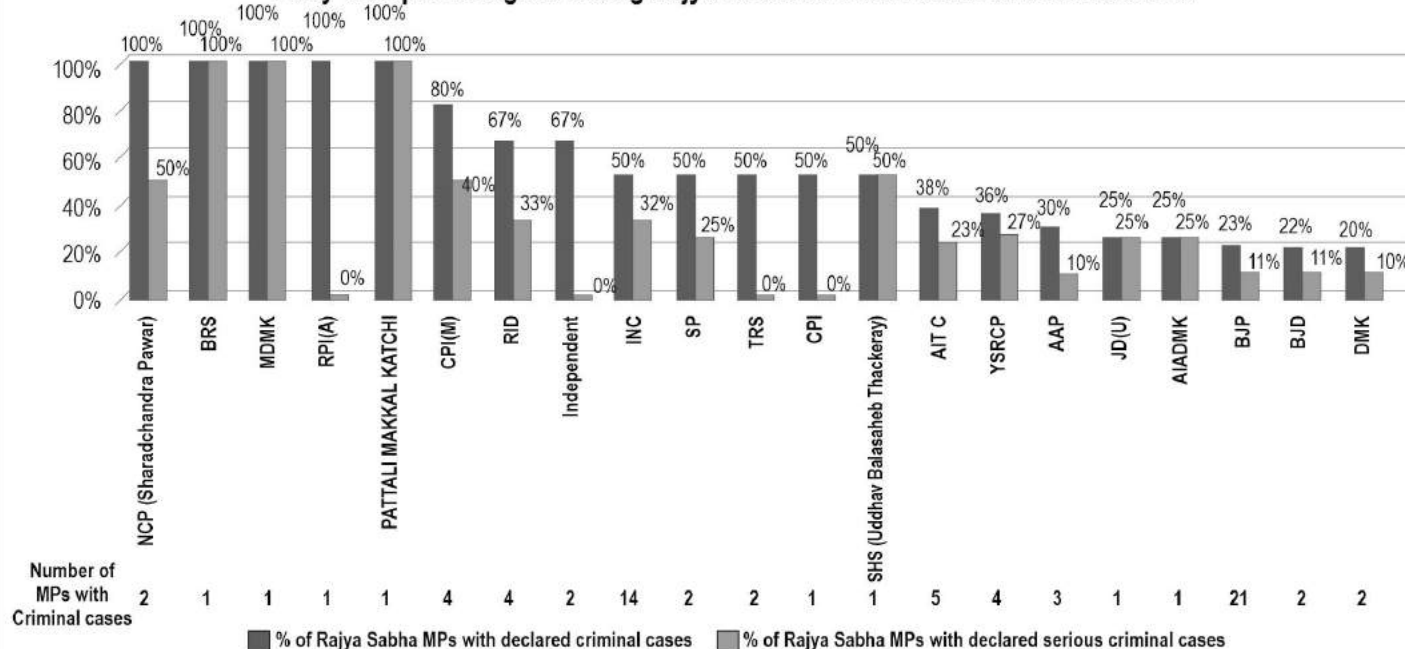
KEY HIGHLIGHTS OF THE REPORT

- Out of the 225 Rajya Sabha sitting MPs analysed –
 - ✓ **75 (33%)** Rajya Sabha Sitting MPs have declared **criminal cases** against themselves.
 - ✓ **40 (18%)** Rajya Sabha Sitting MPs have declared **serious criminal cases**.
 - ✓ **Two** Rajya Sabha Sitting MPs have declared cases related to **murder (IPC section 302)**.
- ✓ **Four** Rajya Sabha Sitting MPs have declared cases related to **attempt to murder (IPC Section 307)**.
- Out of the 225 sitting Rajya Sabha Sitting MPs analysed, **31 (14%) are Billionaires**.
- The total assets of 225 sitting MPs are **Rs. 19,602 Crores**, while the average assets of Rajya Sabha sitting MPs is **Rs. 87.12 crores**.

Criteria for serious criminal cases

- An offence for which the maximum punishment is 5 years or more.
- If an offence is non-bailable
- If it is an electoral offence (e.g. IPC 171E or bribery)
- Offence related to loss to the exchequer
- Offences that are assault, murder, kidnap, or Rape-related Offences that are mentioned in the Representation of the People Act (Section 8)
- Offences under the Prevention of Corruption Act
- Crimes against women.

Party wise percentage of Sitting Rajya Sabha MPs with declared criminal cases



WHAT IS CRIMINALISATION OF POLITICS?

- Criminalisation of Politics includes increasing involvement of criminals in parliament, legislatures and political parties, as well as the utilisation of criminal methods and tactics to influence government systems and procedures.

Recent Trends

According to ADR Reports–

- In 2004, approximately 24% of Lok Sabha MPs had pending criminal cases against them.
- In 2014, the percentage rose to 34%.
- In 2019, as many as 43% of Lok Sabha MPs had criminal cases pending against them.

CAUSES OF CRIMINALISATION

- **Prevalence of Poverty:** The government's failures to address poverty drive individuals towards influential figures with criminal backgrounds, seen as capable of fulfilling needs through wealth and influence.
- **Quid pro quo relation:** Criminals rely on political backing to sustain their illicit activities, while political parties rely on criminals for funding, muscle power, and electoral support.

- **Electoral Advantage:** Candidates with criminal backgrounds often possess substantial financial resources and are perceived as more likely to win elections.
- **Lack of Intra-Party Democracy:** Elite party leaders dictate candidate selection due to a lack of intra-party democracy. Due to a power worship culture, local party workers overlook politicians' criminal records.
- **Lengthy Legal Processes:** Few convictions and trial delays fail to deter parties from nominating candidates with criminal backgrounds.
- **Legal Loopholes:** Election Commission mandates lack effectiveness in addressing the nexus between crime and politics. It leaves loopholes to be exploited by the criminal candidates.

IMPACT OF CRIMINALISATION

- **Undermining Democracy:** Elected representatives with criminal backgrounds erode trust and credibility in the democratic system. It damages the foundation of democracy.
- **Governance Inefficiency:** Politicians with criminal histories

often lack the necessary skills and understanding for effective governance. They prioritise personal interests over those of their constituents.

- **Impact on Economic Development:** Corruption and mismanagement associated with criminal politicians deter investment. It hampering economic growth and exacerbating poverty and inequality.

Proposed Measures	
Vohra Committee (1993)	<ul style="list-style-type: none"> Warned about political leaders aligning with criminal gangs and eventually getting elected to various levels of government.
Law Commission's 170th Report	<ul style="list-style-type: none"> Recommended amending the Representation of People Act, 1951 to disqualify individuals with criminal backgrounds for five years or until acquitted. Proposed mandatory disclosure of pending criminal cases and assets by the election candidates.
2nd ARC (Administrative Reforms Commission) Recommendations	<ul style="list-style-type: none"> Suggested amending Section 8 of RPA to disqualify individuals facing charges related to grave offences and corruption framed six months before elections. Proposed increasing punishment for filing false affidavits and making it a ground for disqualification.
Law Commission's 244th Report	<ul style="list-style-type: none"> Advocated expediting trials against sitting MPs/MLAs and retroactive disqualification for individuals with criminal charges. Proposed increased punishment for false affidavits and making it a corrupt practice.
Election Commission Recommendations (2016)	<ul style="list-style-type: none"> Recommended disqualifying individuals charged with cognisable offences once charges are framed by a competent court, subject to certain conditions.

- **Social Development Hindrance:** Corruption-driven policymaking compromises social development initiatives. It hinders progress in areas such as health, education, and welfare.
- **Culture of Privilege:** The criminalisation of politics promotes a culture of immunity, where individuals believe they can commit crimes without consequences. It leads to increased crime rates and disrespect for the law.
- **Encouraging Corruption:** Politicians with criminal

backgrounds are more prone to corruption, engaging in practices like bribery and embezzlement. It undermines government legitimacy and public trust.

SUPREME COURT JUDGEMENTS

- **Union of India vs Association for Democratic Reforms (2002):** Candidates contesting elections must declare criminal records, financial records, and educational qualifications.
- **Lily Thomas vs Union of India (2013):** MPs or MLAs who have been convicted of a crime and sentenced to a prison term of two years or more are ineligible to hold office.
- **Public Interest Foundation vs Union of India (2018):** Political parties are directed to publish online the pending criminal cases of their candidates.
- In 2020, the Supreme Court reaffirmed that political parties must disclose details of candidates with pending criminal cases, including reasons for their selection.

WAY FORWARD

- **Strong Political Will:** Political parties need to demonstrate a strong commitment to curbing criminalisation in politics.
- **Ensuring Accountability:** Political parties must be held publicly accountable for their actions, necessitating the creation and enforcement of effective rules and regulations.
- **Fast-track Court System:** Cases involving politicians with criminal charges should be disposed of promptly through the implementation of a fast-track court system.
- **Public Awareness and Education:** Public awareness campaigns and political education are crucial in empowering citizens to oppose the nomination of criminals in politics.
- **Amendments to RPA, 1951:** The Act should define minimum qualifications for aspiring candidates, including thorough background checks before nomination papers are submitted.
- **Ensuring Fair Elections:** The Election Commission must ensure procedural fairness and orderly elections. The violations should lead to automatic reversal of election results.
- **Preventing Political Intervention:** The Election Commission should have administrative power over civil and political officials during elections to prevent political intervention and electoral mismanagement.

1.3. CITIZENSHIP (AMENDMENT) RULES 2024

Context

Recently, the Government has notified Citizenship (Amendment) Rules, 2024 under the Citizenship (Amendment) Act, 2019.

KEY PROVISIONS UNDER CAA RULES, 2024

- The rules will aid minorities persecuted on religious grounds in **Pakistan, Bangladesh, and Afghanistan** in acquiring Indian citizenship.
- Citizenship can now be granted to individuals from **Hindu,**

- Sikh, Jain, Christian, Buddhist, and Parsi** communities of **Pakistan, Bangladesh, and Afghanistan** through registration or naturalisation under **Section 6B of the Citizenship Act, 1955.**
- Eligible individuals must have **entered in India on or before December 31, 2014**, to qualify for citizenship under these rules.

- Indian citizenship can now be granted to immigrants who have resided in India continuously for twelve months before making an application and for a minimum of five years out of the last 14 years preceding the continuous twelve months of residence.
- ✓ It is a notable decrease from the previous requirement of 11 years out of 14 years for citizenship by naturalization.
- The relaxed rules have also done away with the requirement of a valid passport issued by these three countries or a valid Residential Permit issued by India.

Who Can Apply For Citizenship Under Section 6B?

01	A person of Indian origin	A person married to an Indian citizen	02
03	Minor child of Indian parents	A person whose parents are registered or naturalized as Citizens of India	04
05	A person who himself or either of his/her parents was earlier citizen of Independent India	A person who is registered as an Overseas Citizen of India Cardholder	06
07	A person of full age and capacity residing in India continuously for twelve months before making an application and for five years (in aggregate) during a period of fourteen years preceding the said period of twelve months before making applications.		

SPECIAL DOCUMENTS NEEDED

According to the qualifications outlined in the Third Schedule, an individual applying for citizenship by naturalization must submit Form VIII-A. The list of documents to be uploaded includes –

- A “birth or educational institution certificate”, “Identity Document of any kind”, “Any License or Certificate”, “Land or tenancy records”, or “Any other document” issued by these countries, that proves the applicant was their citizen, would serve as proof of citizenship of these countries.
- Any of the documents from a list of 20 documents to establish the proof of date of entry in India.
 - ✓ These documents include - a slip issued by census enumerators in India, a driving licence, Aadhaar, ration card, school leaving certificate or academic certificate, and marriage certificate among others.
- An affidavit verifying the correctness of the information provided in the application. It should be accompanied by an affidavit from an Indian citizen attesting to the applicant’s character.
- A declaration from the applicant stating their proficiency in one of the languages listed in the Eighth Schedule of the Constitution. The rules specify that individuals who can speak, read, or write the language will be deemed to have sufficient knowledge.
- Additionally, the applicant must provide a declaration stating that their citizenship of their current country will be irrevocably renounced upon approval of their application.

APPLICATION SUBMISSION PROCESS

- Submission of Application:** Applicants seeking registration or naturalisation under section 6B of the Citizenship Act, 1955, are required to electronically submit their applications to the Empowered Committee via the District Level Committee designated by the Central Government.
- Acknowledgment:** An acknowledgement in Form IX is automatically generated electronically following submission.
- Document Verification:** The District Level Committee will conduct verification of the submitted documents alongside the application.
- Oath of Allegiance:** The Designated Officer administers the oath of allegiance, as outlined in the Second Schedule to the Citizenship Act, 1955, to the applicant. Subsequently, the signed oath and confirmation of document verification are electronically forwarded to the Empowered Committee.
- Refusal Consideration:** In cases where an applicant fails to appear in person despite being provided with reasonable opportunities, the District Level Committee forwards the application to the Empowered Committee for consideration regarding refusal.

CITIZENSHIP AMENDMENT ACT (CAA), 2019

- The Citizenship Amendment Act (CAA) **provides citizenship based on religion** to specific non-Muslim communities from Pakistan, Afghanistan, and Bangladesh who entered

India on or before December 31, 2014. It exempts these communities from criminal cases under certain acts that penalise illegal entry and overstaying on expired visas and permits.

KEY FEATURES OF THE ACT

• Citizenship:

- ✓ The CAA grants citizenship based on religion for the first time, specifically to non-Muslim communities from **Afghanistan, Bangladesh, and Pakistan** who entered India on or before December 31, 2014.
- ✓ Eligible communities include **Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians** from the mentioned countries. Other communities are not covered under this provision.

• Citizenship by Naturalization:

- ✓ The Citizenship Act, 1955, mandates residency in India during the last 12 months and for 11 of the previous 14 years for naturalisation.
- ✓ The amendment reduces the residency requirement from 11 years to 5 years for applicants belonging to the specified six religions from the three mentioned countries.

• Cancellation of Overseas Citizen of India (OCI) Registration:

- ✓ The act grants the government authority to cancel Overseas Citizen of India registration for violations of the Citizenship Act or other laws.
- ✓ The Supreme Court has emphasised the need for guidelines regarding the nature of laws subject to OCI registration cancellation to prevent arbitrariness and limit the authority's powers.

AREAS EXEMPTED FROM CAA 2019

- The amendments introduced by CAA 2019 **do not apply to areas covered under the Sixth Schedule** of the Constitution.
- ✓ 6th Schedule areas are the autonomous districts/regions in 4 North-Eastern states of Assam, Meghalaya, Tripura, and Mizoram.
- CAA amendments also **do not apply to states with an inner-line permit (ILP) regime**.
- ✓ Presently, the ILP system is operational in the states of Arunachal Pradesh, Nagaland, Manipur, Mizoram, UT of Lakshadweep as well as some protected areas of Sikkim and Himachal Pradesh.

Reason for Criticism of New Rules under CAA



Violates Equality principle: The criticism may primarily be based on the contention that the law **violates Article 14** of the Constitution. Article 14 guarantees the right to equality before the law and equal protection of the law within the territory of India.



Entry Date Differentiation: Debate ensues over the differential treatment of migrants based on their entry date, particularly before or after December 31, 2014, as stipulated in the Act.



Assam Accord: The CAA dilutes the Assam Accord of 1985, which had fixed March 24, 1971, as the cut-off date for determining citizenship irrespective of religious affiliations.

Religious Exclusivity: The amendment leaves persecuted Muslim minority sects, such as Ahmadiyya, Hazaras and Rohingyas, as well as Sri Lankan Tamils from its ambit, thus raising concerns about its religious exclusivity. CAA also does not consider Jews and atheists.



Violates Secular principles: Critics argue that granting citizenship based on religion contradicts the secular principles enshrined in India's Constitution. Secularism is considered part of the basic structure of the Constitution.



GOVERNMENT'S RESPONSE

- The government has clarified that Pakistan, Afghanistan, and Bangladesh are Islamic republics. In these countries, Muslims constitute the majority and cannot be considered as a minority being persecuted.
- According to the government, the purpose of the Citizenship Amendment Act (CAA) is to grant citizenship to non-Indians, rather than revocation of Indian citizenship.
- The government has assured that applications from any other community will be examined on a case-by-case basis.
- The government also argued that India being a non-Muslim

majority country in the region has historical and moral responsibility towards persecuted non-Muslim ethnicities.

CONCLUSION

- While India, being a responsible power, has a duty to protect persecuted minorities in its neighbourhood. However, it must do so in accordance with constitutional principles.
- The Supreme Court, as the Guardian of the Constitution, is tasked with determining the constitutionality of the Citizenship Amendment Act (CAA) and Citizenship Rules, 2024, in the various ongoing cases by assessing whether its classification aligns with Article 14.

1.4. SUPREME COURT VERDICT ON IMMUNITY FOR LEGISLATORS

Context

Recently, a seven-judge bench of the Supreme Court has ruled that Members of Parliament (MPs) and Members of the Legislative Assembly (MLAs) cannot claim immunity from prosecution in cases of bribery for votes or speeches in the House.

KEY HIGHLIGHTS OF THE JUDGEMENT

- The unanimous verdict of the Supreme Court overturned its 25-year-old verdict in the **JMM bribery case of 1998** which had held that members of the legislature enjoy immunity under **Articles 105(2) and 194(2)** from being charged with bribery in relation to the way they vote or speak in the House.
 - ✓ Article 105(2) confers on MPs immunity from prosecution in respect of anything said or any vote given in Parliament or on any parliamentary committee. Similarly, Article 194(2) grants protection to MLAs.
- The SC reasoned that the freedom of speech and expression granted to legislators under Articles 105 and 194 did not extend to giving or taking bribes.
- The SC further held that the offence of bribery is not dependent on whether or not the legislature makes a speech or votes in favour of the bribe-giver, rather the offence of bribery was complete the moment the corruption money was accepted.
- The court highlighted the paradoxical outcome of the 1998 judgment. According to the 1998 judgement, a legislator who accepts a bribe and votes accordingly is shielded, whereas one who receives a bribe but votes independently faces prosecution.
- The SC in the present case held that the objective of parliamentary privileges is not to exclude the members of the legislature from the application of the general criminal law of the land.
- This ruling is crucial in tackling the issue of cash-for-votes and protecting the integrity of electoral processes.

JMM BRIBERY CASE

- In 1993, Jharkhand Mukti Morcha (JMM) leader Shibu Soren and some of his party MPs were allegedly bribed to vote against the no-confidence motion to ensure the survival of the then P.V. Narasimha Rao government.
- However, when the scandal broke, they claimed immunity from criminal prosecution because their act of voting had happened inside Parliament.
- In 1998, a five-judge bench of the SC in a majority verdict had quashed the case against the JMM MPs and held that bribed legislators were immune from prosecution under Article 105(2).

Other Bribery Related Instances

- 2008 Cash-for-Votes Scandal:** Alleged bribery by UPA (United Progressive Alliance) led by Congress to secure a confidence vote after Left Front withdrew support over the Indo-US nuclear deal.
- 2015 Cash-for-Votes Scandal:** TDP (Telugu Desam Party) leaders in Telangana bribed a legislator for votes in the 2015 elections, leading to arrests and allegations of political conspiracy.

Arguments in Favour of Legislative Immunity



Legislative Independence: Immunity allows lawmakers to fulfil their legislative duties independently, safeguarding against external pressures.



Independent Action: Immunity ensures that legislators can make decisions based on their conscience and constituent's interests rather than fearing legal repercussions.



Preserving Balance of Power: Immunity helps preserve the balance of power between the judiciary and the legislature. It prevents undue interference in parliamentary affairs and upholds democratic principles.

Arguments Against Legislative Immunity



Potential for Political Misuse: Legislative immunity may be exploited for political gain, allowing lawmakers to evade accountability for corrupt or unethical behaviour.



Lack of Accountability: Immunity can make lawmakers less accountable for their actions, leading to a perception of impunity and a disregard for ethical standards.



Delayed Justice: Legal proceedings involving legislators may be delayed or obstructed due to immunity. It results in a lack of timely justice for victims of legislative misconduct.



Inequality in the Law: Legislative immunity creates a perception of inequality in the application of the law, undermining the constitutional principle of equality before the law. Loss of Public Trust: Immunity making lawmakers seem above the law erodes trust in democracy. It weakens democracy's foundation and contributes to political instability.

WHAT ARE PARLIAMENTARY PRIVILEGES?

- Parliamentary privileges in India are the rights and immunities provided to MPs and MLAs. It ensures they can fulfil their duties and responsibilities without interference or coercion.

Types of Parliamentary Privileges

- Collectively enjoyed by the Members of Parliament:
- Courts are prohibited from investigating the proceedings of any parliamentary house or its committees.
- Parliament holds the authority to exclude guests or visitors from its meetings and to conduct confidential sessions when matters of national importance arise.
- Parliament has the power to penalise both its members and outsiders for breaching its privileges.
- Parliament has the right to publish its reports, debates, and proceedings.
- No person, whether a member or a stranger, can be arrested, and no legal proceedings can be initiated against him, either criminal or civil, within the premises of the House of Parliament and without the approval of the proceedings officer of that particular house.

Individually enjoyed by Members of Parliament

- During parliamentary sessions, members or individuals granted these rights and immunities may decline to appear in court or provide evidence.
- Members of Parliament cannot be arrested during parliamentary sessions and 40 days before and after the session.
- Members are immune from legal proceedings in any court for statements made or votes cast during parliamentary sessions or committee meetings.

Breach of Privilege

- Breach of privilege refers to the violation of the rights or

- immunities of members of Parliament or State Assemblies.
- When a member of the House or an outsider undermines the powers, privileges, and immunities granted to members and committees, it is said that they are committing an offence of breach of privilege.
- Parliament or State Assembly establishes regulations regarding the procedure for addressing privilege motions and the potential punishments for such offences.
- Breach of privileges is considered a punishable offence. The severity of the breach determines the form of punishment as per rules and regulations.

Source of Privileges

- Constitutional Provisions.
- Laws Enacted by Parliament.
- Rules of Procedures of both the Houses of Parliament.
- Parliamentary conventions as observed over time.
- Interpretations provided by the judiciary.

Constitutional Provisions Related to Privileges

- **Article 105:** Freedom of speech in Parliament; Provides immunity to MPs from legal proceedings for statements or votes in Parliament or its committees.
- **Article 122:** Protects the validity of parliamentary proceedings from being challenged in court due to procedural irregularities.
- **Article 194:** Provides freedom of speech in State Legislatures; Provides immunity to MLAs from legal actions for statements or votes in Legislature or its committees.
- **Article 212:** Similar to Article 122, it safeguards the validity of State Legislature proceedings from being challenged in court due to procedural irregularities.

1.5. CROSS VOTING IN RAJYA SABHA

Context

Recently, Rajya Sabha elections held across three states (Uttar Pradesh, Himachal Pradesh, and Karnataka) witnessed heavy cross-voting by MLAs belonging to different parties, thus raising concerns about the sanctity of the election process.

MORE ON THE NEWS

- The biennial elections for the total 56 Rajya Sabha seats were necessitated as 50 members will finish their term on April 2, and six will retire on April 3.
- The election to the 15 seats was held in these three states, while candidates in 41 seats were declared winners unopposed by the Election Commission.
- The election was marked by cross-voting in all three States, despite parties issuing whips.
- The BJP won 10 seats whereas the Congress managed three and the SP two seats.
- With this result, the BJP-led NDA's (National Democratic Alliance) tally moved up to 117 members thus taking it further closer to the majority mark in the Rajya Sabha.

- ✓ **Presently, the majority mark in Rajya Sabha is 121** as five seats are vacant (four in Jammu and Kashmir, which has been under the President's Rule, and one in the nominated member category) in the 245-member Rajya Sabha.

RAJYA SABHA VOTING PROCESS

- **As per Article 80 of the Constitution**, representatives of each State to the Rajya Sabha are elected indirectly **by the elected members of their Legislative Assembly** through a **single transferable vote (STV) system using an open ballot**.
- ✓ Polling for a Rajya Sabha election will be held only if the number of candidates exceeds the number of vacancies.

Evolution of voting system in Rajya Sabha

01

Before 1998, Rajya Sabha elections were often predictable with candidates being elected unopposed based on party strength in the Assembly.

03

To address this, the **Ethics Committee of the Rajya Sabha** in December 1998 suggested switching from **secret to open ballot voting** to check the use of money and muscle power in Rajya Sabha elections.

05

Subsequently, **Section 59 of the Representation of the People Act, 1951** was amended in 2003 to provide that the voting in elections to Rajya Sabha shall be through an open ballot.

07

Independent MLAs are **barred from showing their ballots** to anyone.

02

However, in June 1998, cross-voting in Maharashtra led to the unexpected loss of a Congress candidate.

04

The then NDA government led by Atal Bihari Vajpayee took action on this suggestion and proposed a bill in Parliament to amend Section 59 of RPA, 1951.

06

According to **Rule 39AA of Conduct of Election Rules, 1961**, MLAs must **show their ballot paper to their party's authorized agent** or showing it to anyone else will disqualify the vote.



- A single transferable vote means an MLA can vote once but for any number of candidates in order of their preference.
- Votes are counted, with each MLA's first preference carrying the most weight.
- A candidate must secure a certain number of votes, termed as the **"quota" or preference vote**, to be elected.
- If a candidate reaches the quota, **they are elected**; otherwise, the candidate with the **fewest votes is eliminated**, and their votes are redistributed based on subsequent preferences. This process continues until all seats are filled.
- Rajya Sabha polls use an **open ballot system instead of a secret ballot** used in Lok Sabha and Assembly elections.

legislature who voluntarily gives up the membership of their political party or votes against the instructions of their party in a House is liable for disqualification from such House.

WHAT IS CROSS VOTING?

- Cross voting occurs when a legislator, usually a member of a state legislative assembly (MLA), votes for a candidate who isn't from their own political party or alliance.
- In other words, when an MLA goes against their party's chosen candidate and votes for someone else.
- **Reasons for cross-voting** include legislators voting based on personal beliefs rather than party lines, complex political alliances or rivalries, personal agendas or local issues influencing decisions, and internal conflicts or dissatisfaction within a political party.

APPLICABILITY OF ANTI-DEFECTION LAW (ADL) IN RAJYA SABHA ELECTION

- The **52nd constitutional amendment in 1985** introduced the **ADL** through the **Tenth Schedule**.
✓ It states that a member of Parliament or a State

Supreme Court Judgements

Kuldip Nayar vs Union of India (2006)

- The SC **upheld the system of open ballot** for Rajya Sabha elections to enhance transparency and maintain the purity of elections.
- It also ruled that while cross-voting will not attract disqualification under the ADL, the party is free to take disciplinary action against the legislator concerned as it would know who voted against its own candidate.

Ravi S. Naik and Sanjay Bandekar vs Union of India (1994)

- The SC clarified that voluntarily giving up membership under the Tenth Schedule is not limited to formal resignation from the party. It can also include the member's conduct both inside and outside the legislative house.

- The **Election Commission (EC)** clarified in **July 2017**, based on Supreme Court (SC) judgments, that the **Tenth Schedule** provisions regarding voting against party instructions **do not apply to Rajya Sabha elections** and members are not bound by party whips in these elections.

None of the Above (NOTA) in Rajya Sabha election

- The Election Commission of India (ECI) issued two circulars in January 2014 and November 2015 to give electors the option to press the NOTA button in the Rajya Sabha polls.
- However, in 2018, the **SC in *Shailesh Manubhai Parmar vs Election Commission of India Case*** struck down the provision, holding that the NOTA option is only for general elections held on the basis of universal adult suffrage, and cannot be applied to indirect elections based on proportional representation.

WAY FORWARD

- To uphold the higher principle of free and fair elections and its purity, the SC can revisit its 2006 verdict regarding the applicability of ADL in Rajya Sabha elections.
- Additionally, interpreting voting against party lines as **voluntary relinquishment of party membership, leading to disqualification under the Tenth Schedule**, may serve as a deterrent against cross-voting in the future.
- Also, **increasing awareness among legislators** about the importance of upholding democratic principles and the **consequences of cross-voting** can foster a culture of accountability. Political parties should also **promote internal democracy and discourage unethical practices**.

1.6. LOKPAL OF INDIA

Context

Recently, the former Supreme Court judge **A.M. Khanwilkar** was appointed as the chairperson of the Lokpal.

MORE ON THE NEWS

- Justice Khanwilkar is only the **second chairperson of the Lokpal**.
 - ✓ The first chairperson was former Supreme Court judge **Pinaki Chandra Ghose**, who held the office from March 2019 to May 2022.
- The post of chairperson was vacant for nearly 2 years and

in the meanwhile judicial member Justice Pradip Kumar Mohanty was functioning as the acting chairman of the Lokpal.

- The Government also notified the appointment of three judicial members and three non-judicial members of Lokpal.
- With these appointments, the Lokpal of India is now at its full strength of nine members including the Chairperson.

A Long-Draw Debate

A short history of the Lokpal Bill from the 1960s to the present

State Level - To probe complaints against public functionaries, including MPs.



2005

The second ARC recommended that a Lokpal be established without delay.

2013

Lokpal Act, 2013, passed in Parliament

2016

Lok Sabha agreed to amend the 2013 Act.

1963

- The term Lokpal, which literally meant "people's protector" was coined by L.M. Singhvi in 1963.
- This institution was first created in Sweden in 1809.

1966

- First Administrative Reforms Commission (ARC) of India (1966-1970) recommended two independent authorities- one at the center (Lokpal) and one at the state level- to probe complaints against public functionaries, including MPs.

1968

- Lokpal Bill introduced in Parliament, but was not passed. Eight attempts were made till 2011 to pass the Bill, but all in vain.

2002

- The Constitution review commission headed by M. N. Venkatachaliah recommended appointment of the Lokpal and the Lokayuktas. It also recommended that the Prime Minister be kept out of the Lokpal's ambit.

2017

The SC on April 27 clarified that the Lokpal appointment process need not be stalled merely due to the absence of the Leader of the Opposition, who is a member of the Lokpal selection committee as per the 2013 Act.

THE LOKPAL AND LOKAYUKTA ACT, 2013

Salient features of The Lokpal

- **Composition:** A Chairperson and a maximum of eight members, out of which **50% shall be judicial members**. Also, at least **50% of the total members** should come from among the SCs, the STs, the OBCs, Minorities and Women.
- **Appointment:** The chairperson and members of the Lokpal are appointed by the President on the recommendations of a **Selection Committee** consisting of –
 - ✓ Prime Minister as the chairperson,
 - ✓ Speaker of the Lok Sabha,
 - ✓ Leader of the Opposition in the Lok Sabha,
 - ✓ Chief Justice of India or a sitting Judge of the Supreme Court nominated by him, and
 - ✓ An eminent jurist to be nominated by the President of India on the basis of recommendations of existing members of the selection committee.
- ✓ A **Search Committee** assists the Selection Committee in the process of selection. At least 50% of the members of the Search Committee shall also be from amongst the persons belonging to the SCs, the STs, the OBCs, Minorities and women.
- **Term of office of Chairperson and Members:** Term of 5 years from the date on which he enters his office or until he attains the age of 70 years, whichever is earlier.
- **Salary, allowances and other conditions of service of:**
 - ✓ The Chairperson shall be the same as those of the Chief Justice of India.
 - ✓ Other Members shall be the same as those of a Judge of the Supreme Court.
 - ✓ The administrative expenses, including all salaries, allowances and pensions of the Chairperson, Members or Secretary or other officers or staff of the Lokpal, will be charged upon the Consolidated Fund of India and any fees or other money taken by the Lokpal shall form part of that Fund.
- **Restriction on further employment:** On ceasing to hold office, the Chairperson and every Member shall be ineligible for–
 - ✓ reappointment to the position.
 - ✓ any diplomatic assignments, appointment as a Union territory administrator, or any other appointment which is required by law to be made by the President by warrant under his hand and seal.
 - ✓ any office of profit under the Government of India or a State government.
 - ✓ contesting elections for the President, Vice-President, Member of Parliament, State Legislature, Municipality, or Panchayat within five years after relinquishing the post.
- **Suspension, removal of Chairperson and member of Lokpal:**
 - ✓ If he is adjudged an insolvent; or
 - ✓ If he engages, during his term of office, in any paid employment outside the duties of his office; or
 - ✓ If he is, in the opinion of the President, unfit to continue in office by reason of infirmity of mind or body.
 - ✓ The Chairperson or any Member may **also be removed from his office by order of the President on grounds of misbehaviour** after the Supreme Court, on a reference being made to it by the President on a petition signed by **at least one hundred Members of Parliament** has, on an inquiry held in accordance with the procedure prescribed in that behalf, reported that the Chairperson or such Member, as the case may be, ought to be removed on such ground.
- **Jurisdiction:** The jurisdiction of Lokpal extends to
 - ✓ Anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under Groups A, B, C and D.
 - ✓ The chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Centre.
 - ✓ Any society or trust or body that receives any donation from any foreign source under the Foreign Contribution (Regulation) Act, 2010 in excess of ten lakh rupees in a year.
- **Exception for Prime Minister:**
 - ✓ It does not allow a Lokpal inquiry if the allegation against the PM relates to international relations, external and internal security, public order, atomic energy and space.
 - ✓ Complaints against the PM are not to be probed unless the full Lokpal bench considers the initiation of inquiry and at least 2/3rds of the members approve it.
 - ✓ Such an inquiry against the PM (if conducted) is to be held in camera and if the Lokpal comes to the conclusion that the complaint deserves to be dismissed, the records of the inquiry are not to be published or made available to anyone.

WAY FORWARD

- To strengthen the Lokpal in India, addressing its “toothless tiger” perception, the following measures can be taken –
- **Empower with Suo Motu Authority:** Grant the Lokpal the power to initiate investigations independently, strengthening its proactive ability to fight corruption.
- **Prioritize Substance over Form:** Reduce emphasis on the technicalities of complaints, focusing instead on the core allegations of corruption.
- **Balance Whistleblower Protection:** Implement secure mechanisms for anonymous reporting, while maintaining safeguards against false accusations.
- **Consider Constitutional Backing:** Explore the possibility of providing constitutional status to the Lokpal, fortifying its independence and authority.
- **Transparency in PM Cases:** Establish clear, transparent, and accountable procedures for handling complaints against the Prime Minister to ensure fairness.

1.7. TWO NEW ELECTION COMMISSIONERS APPOINTED

Context

Recently, the President appointed two new Election Commissioners (ECs) thus restoring the full strength of the Election Commission of India (ECI).

MORE ON THE NEWS

- Retired IAS officers **Gyanesh Kumar** and **Sukhbir Singh Sandhu** were appointed as new Election Commissioners after their selection by the three-member Selection Committee headed by the Prime Minister.
- ✓ The Selection Committee comprised of Prime Minister Narendra Modi, Union Home Minister Amit Shah and the Leader of single largest party in the Lok Sabha Adhir Ranjan Chowdhury.
- This is the first time that Election Commissioners have been appointed in accordance with the **Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023** brought in by the government in December last year.
- Before the appointment, the Chief Election Commissioner (CEC) Rajiv Kumar was the sole member of the 3-member ECI. Thus, the appointment restored the full strength of the ECI.

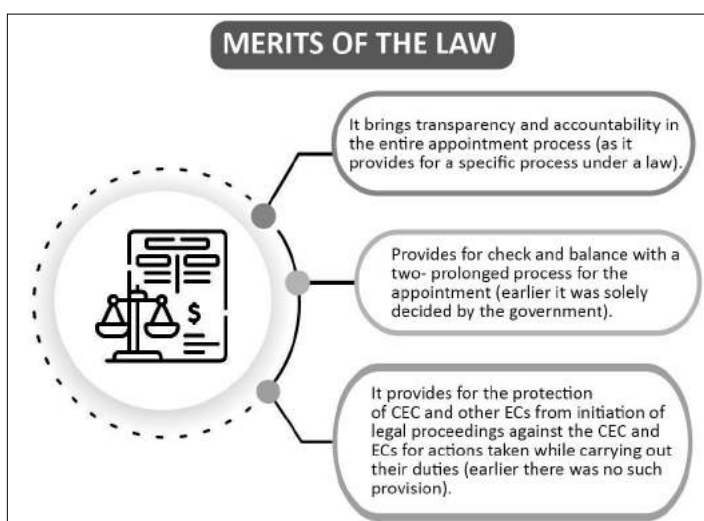
BACKGROUND

- The Constitution under **Article 324** vests the 'superintendence, direction and control of elections' in an **Election Commission** consisting of a CEC and such number of other ECs as the President may from time-to-time fix.
- However, the **Constitution does not lay down any specific process** for the appointment of the CEC and ECs. Also, till now there was no law that guided the appointment process.
- Prior to the passage of the current law, the President made the appointment on the recommendations of the Union Council of Ministers headed by the Prime Minister.
- However, in March 2023 in the **Anoop Baranwal vs Uoi Case**, the Supreme Court (SC) emphasised the critical role of an independent ECI in ensuring free and fair elections.
- The SC noted that both the **Dinesh Goswami Committee on Electoral Reforms (1990)** and the **Law Commission's 255th report on Electoral Reforms (2015)** had suggested a committee comprised of the Prime Minister (PM), the Chief Justice of India (CJI), and Leader of Opposition (LoP) in the Lok Sabha for appointment of CEC and ECs.
- The SC in this case used its extraordinary powers under **Article 142** (issuing directions for doing 'complete justice') and **laid down a specific committee** consisting of the PM, CJI, and LoP in the Lok Sabha (or leader of the single largest party in the Lok Sabha) to appoint the CEC and ECs.
- Following the directives of the SC in the Anoop Baranwal

Case, the Union government brought the new legislation - **Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023**

KEY PROVISIONS OF THE NEW LAW

- It replaced the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991.
- Appointment Process:** The CEC and ECs are appointed by the President on the recommendation of a three-member Selection Committee.
- The **Selection Committee** consists of the **Prime Minister as Chairperson**, the Leader of the Opposition in Lok Sabha (or leader of the single largest party in the Lok Sabha) as member, and a Union Cabinet Minister nominated by the Prime Minister as member.
 - ✓ Recommendations of the Selection Committee will be valid even when there is a vacancy in this Committee.
 - A **Search Committee** headed by the **Minister of Law and Justice** and comprising two other members not below the rank of Secretary to the Government of India shortlist names for the consideration of the Selection Committee.
- Qualifications:** The CEC and other ECs are appointed from amongst persons who are holding or have held a post **equivalent to the rank of Secretary to the Government of India** and shall be persons of integrity, who have knowledge of and experience in management and conduct of elections.
- Term of Office:** The CEC and other ECs hold office for a term of **six years** from the date on which they assume office or till they attain the age of **sixty-five years**, whichever is earlier.
 - ✓ The CEC and other ECs are **not eligible** for re-appointment.
- Salary, Allowances and Other Conditions of Service:** The salary, allowances, and other conditions of service of the CEC and other ECs will be **equivalent to that of the SC judge**.
- Removal Process:** The Act retains the manner of removal of CEC and ECs as specified in the Constitution under **Article 324 (5)** which provides that the CEC can be removed in the **same manner and on the same grounds as a Judge of the Supreme Court**, while the other ECs are to be removed by the President on the recommendation of the CEC.



KEY ISSUES WITH THE LAW

- The current law **has kept CJI out of the selection committee** (opposed to the directive given by the SC) and has included the Union Minister in its place, thus making the majority (2 out of 3) of the members from the Government of the day. This executive control may undermine the independence of the ECI.
- Allowing the recommendations of the committee even with a vacancy will effectively lead to a **monopoly of the government** in selecting CEC and ECs.

- CEC and ECs also perform quasi-judicial functions, thus limiting these posts to a position equivalent to the secretary to the government **may exclude other suitable candidates** and will also limit the diversity and expertise in the ECI.
- The new legislation failed to bring much-needed reform in terms of parity in the removal process of CEC and ECs.
 - ✓ The Election Commission itself and several other committees (**Dinesh Goswami Committee 1990**) have asked for bringing parity in terms of the removal process of CEC and ECs.

WAY FORWARD

- While the current law aims to bring transparency in the appointment process, several measures need to be brought in to make ECI truly independent and watchdog of electoral democracy in India in true letter and spirit.
- Some of the **suggested reforms** include –
 - ✓ Bringing parity in the removal process of CEC and ECs.
 - ✓ An **independent secretariat** for the ECI along the lines of Lok Sabha, Rajya Sabha, the Supreme Court, and High Courts.
 - ✓ Adopting **best global practices** in the appointment process to ensure the autonomy of ECI. (For example – in the USA, the president appoints the members of the electoral body but requires confirmation by the Senate)

1.8. MODEL CODE OF CONDUCT 2024

Context

Recently, the Election Commission of India (ECI) announced the schedule for the upcoming Lok Sabha elections and with this, the **Model Code of Conduct** has come into effect.

MORE ON THE NEWS

- The ECI announced that the elections to form the **18th Lok Sabha** will be held in **Seven Phases** from 19th April to 1st June and the results will be announced on 4th June.
 - ✓ This Lok Sabha election will be the second-longest polling exercise in India's electoral history.
 - ✓ The longest so far was the country's first general election, which was held over a five-month period between September 1951 and February 1952.
- Simultaneously, the **Assembly polls will also be held in four states**— Andhra Pradesh, Arunachal Pradesh, Odisha and Sikkim.
- The results for Arunachal Pradesh and Sikkim will be announced on 2nd June, while the results for Andhra Pradesh and Odisha which will be announced on 4th June.
- With the announcement of the schedule, the Model Code of Conduct came into effect immediately.

ABOUT MODEL CODE OF CONDUCT (MCC)

- It is a set of guidelines issued by the ECI to regulate political

parties and candidates prior to elections, to ensure free and fair elections.

- The MCC is operational from the date of announcement of the election schedule till the date that results are announced.
- It ensures fair elections by curbing malpractices, maintaining fairness, and creating a balanced electoral environment.
- Although **not legally binding**, the ECI enforces the MCC through monitoring and penalties for violations.

KEY PROVISIONS OF THE MCC

- The MCC contains its provisions in **8 parts** dealing with –
 - General Conduct:** Criticism of political parties limited to policies, programmes, and past records.
 - Prohibited activities include exploiting caste or communal feelings, spreading unverified reports about candidates, bribery, intimidation of voters, and organizing protests outside individuals' homes.
 - Meetings:** Parties must inform local police of meeting venue and time for security arrangements.

Evolution of Model Code of Conduct (MCC)

1960

Kerala was the first state to adopt a code of conduct for elections. In 1960, a draft code was introduced by the State administration before the Assembly elections in the state.

1962

The Election Commission emulated Kerala's example and circulated the draft code among all recognised parties and state governments for the Lok Sabha elections of 1962. It was mostly followed in the 1962 elections and continued in later general elections.

1968

The ECI formally issued the MCC under the title 'Minimum Code of Conduct' in September 1968 during the Mid-Term Elections 1968-69.

1979

Before the 1979 Lok Sabha elections, the ECI further consolidated the code and released a revised Model Code with seven parts, with one part devoted to regulating the 'party in power' and preventing it from gaining an unfair advantage at the time of elections.

2013

The Supreme Court directed the ECI to include guidelines regarding election manifestos, which the ECI included as the 8th part in the MCC for the 2014 general elections.

3. **Processions:** Organizers of processions by multiple candidates must coordinate to avoid clashes.
 - Prohibited activities include carrying and burning effigies of members of other political parties.
4. **Polling Day:** Authorized party workers at polling booths should have identity badges without party symbols or candidate names.
5. **Polling Booths:** Only voters and those with valid passes from the Election Commission are allowed to enter polling booths.
6. **Observers:** The Election Commission appoints observers to address any election conduct issues reported by candidates.
7. **Party in Power:** Incorporated in 1979, it provides do's and don'ts for parties in power.
 - Ministers must not mix official visits with election work or use official resources for election purposes.
 - Prohibited actions include using public funds for advertising or using official media for publicity.
 - Other parties must have equal access to public spaces and facilities.
8. **Election manifestos:** Added in 2013, these guidelines prohibit parties from making promises that exert an undue influence on voters, and suggest that manifestos also indicate the means to achieve promises.

- Ineffectiveness in curbing malpractices like hate speech and misuse of money power.
- New technological complexities in monitoring campaigns and regulating digital platforms.
- **Lack of legal enforceability**, relying on moral persuasion rather than binding laws.

LEGAL STATUS OF MCC

It is not legally binding in the sense that it is not enforceable through statutory law. However, it does have significant legal and constitutional backing, and its provisions are followed as a matter of convention and electoral ethics.



Constitutional Basis: ECI, which issues the MCC, derives its powers from Article 324 of the Constitution of India. It empowers the ECI to oversee elections to the Parliament, state legislatures, and offices of the President and Vice-President.

Statutory Support: While the MCC itself is not codified in any specific law, it can be enforced by invoking corresponding provisions in other statutes such as IPC 1860, CrPC 1973, and Representation of the People Act, 1951.

Enforcement Mechanism: The MCC is effectively enforced through the authority and discretion of the Election Commission. This can include issuing warnings, imposing fines, or recommending disqualification.

Voluntary Compliance: Political parties and candidates generally adhere to the MCC's guidelines out of a sense of electoral ethics, public perception, and the fear of adverse repercussions from the Election Commission. While violations may not result in criminal prosecution, they can lead to reputational damage, loss of public trust, and electoral consequences.

Judicial Scrutiny: The MCC enforcement and interpretation have been subject to judicial scrutiny. Courts have upheld the ECI's authority to enforce the MCC as part of its constitutional mandate to ensure free and fair elections.

CHALLENGES OF MCC

- AI can be leveraged to spread misinformation, manipulate public opinion, and target specific demographics with tailored messaging, all of which can undermine the fairness and integrity of the electoral process. However, the existing MCC may not explicitly address these emerging challenges posed by AI-driven tactics on social media platforms.

- Interference with governance, restricting policy decisions during election periods.
- **Limited awareness** among voters, candidates, and officials about MCC provisions.
- Inability to disqualify candidates or deregister parties for MCC violations.
- Complaints of unfairness and lack of objectivity in MCC enforcement.

WAY FORWARD

- **Providing Statutory Backing:** Experts suggest integrating the MCC into the Representation of the People Act, 1951, granting it legal authority to enhance its effectiveness and enforcement.
- In 2013, the Standing Committee on Personnel, Public Grievances, Law and Justice proposed the idea of legally binding to mitigate certain shortcomings associated with the MCC.
- **Establishment of Fast-Track Courts:** Specialized fast-track

courts should be established to expedite the resolution of MCC violation cases, ensuring swift justice and deterrence.

- **Collaboration with Internet Companies:** Stakeholders, including internet companies, should collaborate to develop a code of conduct for social media and the internet.
- Platforms like WhatsApp, Facebook, Twitter, Google, Instagram, and Telegram have already presented a voluntary code of ethics, emphasizing transparency in political advertisements.
- Encouraging the use of platforms like **cVIGIL** can help in reporting and reducing violations during polls.

CONCLUSION

- While the Model Code of Conduct lacks statutory backing, its strict enforcement by the Election Commission has improved its credibility. To further strengthen it, measures such as statutory support, fast-track courts, and collaboration with internet companies are necessary to ensure fair elections in India.

1.9. PM-SURYA GHAR: MUFT BIJLI YOJANA

Context

Recently, Union Cabinet approved a ₹75,021-crore package for the “PM-Surya Ghar: Muft Bijli Yojana” (PM Free Electricity scheme) to promote Rooftop Solar (RTS) installations in India.

KEY HIGHLIGHTS

- The scheme claims to provide 300 units of “free electricity” every month to one crore households.
- Scheme provides a central financial assistance of:
 - ✓ Rs 30,000 subsidy for 1 kW system
 - ✓ Rs 60,000 for 2 kW systems
 - ✓ Rs 78,000 for 3 kW systems or higher
 - ✓ Systems of higher wattage will not be eligible for Central subsidy.
- **Eligibility:** Indian citizens owning a suitable roofed house with a valid electricity connection and no prior solar panel subsidy.
- Households will apply for subsidy through national portal and can select suitable vendor for installing rooftop solar.
- Households can access collateral-free low-interest loan products of around 7% at present for installation.
- **Model Solar Village** will be developed in each district to act as role model for adoption of rooftop solar in rural areas.

SIGNIFICANCE OF THE SCHEME

- Households will be able to save electricity bills.
- Households can earn additional income through sale of surplus power to DISCOMs.
- Will result in addition of 30 GW of solar capacity through rooftop solar in the residential sector.

PM-Surya Ghar Muft Bijli Yojana

Cabinet approves scheme for installing rooftop solar and providing free electricity up to 300 units every month for One Crore households

Total outlay of ₹ 75,021 crore

Scheme provides a central financial assistance of

30,000 subsidy for 1 kW system

60,000 for 2 kW systems

78,000 for 3 kW systems or higher

01 Households will apply for subsidy through national portal and can select suitable vendor for installing rooftop solar

02 Households can access collateral-free low-interest loan products of around 7% at present for installation

03 Model Solar Village to be developed in each district to act as role model for adoption of rooftop solar in rural areas

- Guided by the **Panchamrit Policy**, as announced at **COP26**, Scheme helps to **reach net zero emissions by 2070** and

helps to meet **fifty percent of its electricity requirements from renewable energy sources by 2030.**

- Scheme will create around 17 lakh direct jobs in manufacturing, logistics, supply chain, sales, installation, O&M and other services.

Status of Solar energy in India

- India currently stands **5th globally in solar power capacity** (as per International Renewable Energy Agency - Renewable capacity statistics 2023).
- Share of non-fossil fuel in the total electricity production during the year 2022-23 was 25.44%.

OTHER INITIATIVES OF THE GOVERNMENT TO PROMOTE SOLAR ENERGY

- The Production Linked Incentive Scheme (PLI) for the

National Programme on High-Efficiency Solar PV Modules for achieving manufacturing capacity of Giga Watt (GW) scale in High-Efficiency Solar PV modules.

- **Solar Park Scheme:** Government have sanctioned 50 Solar Parks with aggregate capacity of 37,990 MW in 12 States across the country.
- **PM-KUSUM:** It aimed to promote the solarizing the agriculture sector by setting up decentralized solar power plants.
- **International Solar Alliance (ISA).** It was conceived as a joint effort by **India and France** to mobilize efforts against climate change through deployment of **solar energy solutions.**
 - ✓ Recently, **Malta became the 119th country** to join the International Solar Alliance.

INTERNATIONAL RELATION

2.1. INDIA-MAURITIUS RELATIONS

Context

Recently, the Prime Ministers of India and Mauritius jointly inaugurated an airstrip and a jetty that India has built on the Agalega islands.

MORE ON THE NEWS

- The projects aim to enhance **Mauritius' capacity and capabilities** in marine surveillance and security.
- It will enable **counter-piracy, counter-terrorism, counter-narcotics actions**, combat human trafficking, and address illegal fishing.
- The infrastructure is expected to generate significant **economic activities and employment opportunities**, improving the quality of life for the people of Agalega.
- Mauritius PM clarified that Mauritius has no agenda **to relinquish sovereignty** over the Agalega islands and refuted claims about transforming Agalega into a military base.
- Mauritius is a key partner of India's '**Neighbourhood First Policy**' and a **special partner under Vision SAGAR**.

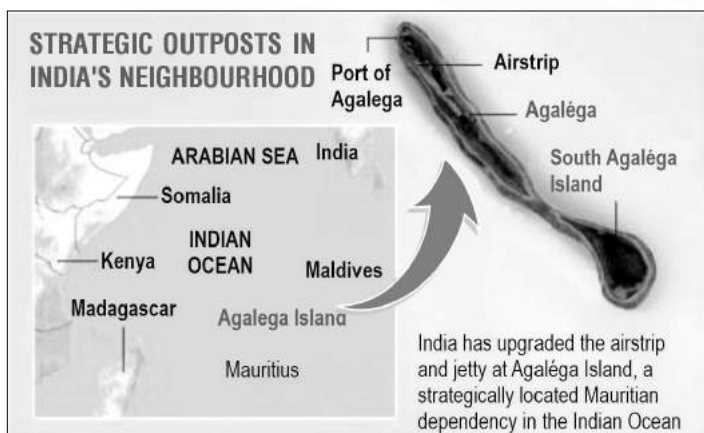
AGALEGA ISLANDS

- Agalega Islands is a two-island dependency of Mauritius in the western Indian Ocean. The main North Island and the smaller South Island are located 1,100 km north of Port Louis, the capital of Mauritius, and 2,500 km southwest of Malé, the capital of Maldives.
- **Strategic Significance of Agalega airstrip for India:**
 - ✓ It allows India to operate larger **P8I maritime reconnaissance aircraft**, significantly improving its surveillance range in the Indian Ocean.

- ✓ This bolsters India's ability to counter **China's growing influence in the region**, including countries like **Maldives**.
- ✓ The location of the airstrip allows India to monitor the **entire western and southern Indian Ocean** and the eastern and southern coast of Africa.
- ✓ Increased shipping traffic **due to rerouting in the Red Sea region** makes surveillance in this area even more important.

INDIA-MAURITIUS BILATERAL RELATION

Historical	<ul style="list-style-type: none"> • India and Mauritius share a history dating back to the 18th century. • Diplomatic relations were established in 1948 before Mauritius gained independence in 1968. • November 2 is observed as 'Aapravasi Day' in Mauritius, marking the arrival of the first batch of Indian indentured labourers on the ship 'Atlas' in 1834. • March 12 is celebrated as the National Day of Mauritius, commemorating the start date of the Salt Satyagraha March led by Mahatma Gandhi during the Indian freedom struggle.
Political	<ul style="list-style-type: none"> • Both countries signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA) 2021. The CECPA is the first trade Agreement signed by India with a country in Africa. • The PM of India and the PM of Mauritius jointly inaugurated the Social Housing Units Project in Mauritius in 2022. This project is part of the vibrant development partnership between India and Mauritius. • Deep connections facilitate exceptional cooperation in various domains, including maritime security, development partnerships, capacity building, international engagement, and technical assistance.



Economic	<ul style="list-style-type: none"> In 2023, India represented 10.2% of Mauritian total imports, ranking 3rd in their main countries of import. <ul style="list-style-type: none"> ✓ Top 5 exports to Mauritius: Pharmaceuticals, cotton, cereals, motor vehicles, and mineral fuels. Mauritian exports to India: USD 55 million in 2023. <ul style="list-style-type: none"> ✓ Key products include medical devices, scrap metal, fish meal etc. FDI worth USD 161 billion came from Mauritius to India in the two decades from 2000 - 2022 (26% of total FDI inflows into India). 64 Indian companies have invested in Mauritius across healthcare, education, ICT, Freeport, and financial services. Recently, UPI and RuPay Card services were launched in Mauritius.
Defence	<ul style="list-style-type: none"> Deputation of Indian defence officers to the Mauritian Defence Forces. India assisted in setting up a Coastal Surveillance Radar System in Mauritius In February 2021, India extended a Line of Credit (LoC) of USD 100 million to Mauritius for procuring defence products. The Government of Mauritius has utilised the LoC to source a Passenger Variant of Dornier aircraft and an Advanced Light Helicopter, Dhruv. Indian-built offshore patrol vessels (OPV) and fast attack craft (FAC) are in Mauritius service and facilitated through defence lines of credit.
Cultural	<ul style="list-style-type: none"> Indira Gandhi Centre for Indian Culture (IGCIC) is India's largest cultural centre abroad. Since 2004, youngsters from Mauritius have participated in 52 batches of the Know India Programme of the Ministry of External Affairs. In August 2022, the National Cadet Corps (NCC) invited a Mauritian youth delegation to India as part of 'Azadi Ka Amrit Mahotsav'. Mauritius has become the first nation to adopt the 'Jan Aushadhi Scheme' of India.
Diaspora	<ul style="list-style-type: none"> Indian-origin people comprise nearly 70% of the island's population, which is 1.2 million (28% Creole, 3% Sino-Mauritian, 1% Franco-Mauritian). 17,403 Indian nationals and 11,600 OCI card holders in Mauritius. Visa-free regime for Indian tourists visiting Mauritius for a month since 2004. Around 3,100 Indian students pursuing higher education and internships in various streams in Mauritius

Disaster management	<ul style="list-style-type: none"> India is traditionally the 'first responder' for Mauritius during crises. India became the first country to supply Covid-19 vaccines to Mauritius. Mauritius donated 200 oxygen concentrators to India during the second wave of Covid-19. India acted as the first responder after the oil spill from the Japanese vessel Wakashio.
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CHALLENGES BETWEEN INDIA AND MAURITIUS

- **Trade Imbalance:** Trade heavily Favors India. While India exports a wider variety of goods to Mauritius, Mauritius's exports to India are limited. This can create resentment in Mauritius.
- **Black Money:** Mauritius has been a destination for some Indian black money, raising concerns about financial transparency.
 - ✓ **For example,** The **Panama Papers leak in 2016** revealed that some wealthy Indians used Mauritius-based shell companies to hide the source of their assets.
- **China's Influence:** India is concerned about China's growing economic and military presence in the Indian Ocean region, including Mauritius. This can lead to competition for influence.
 - ✓ For example, China invested US\$20 million to build the island's Information and Communications Technology (ICT) infrastructure.
- **Small Island Developing States (SIDS) Concerns:** Mauritius, like other SIDS, prioritises existential threats from climate change and sea-level rise, which India doesn't fully consider.

WAY FORWARD

- **Shifting Focus:** India should move beyond security concerns and engage with Mauritius on its climate change and disaster management priorities.
- **Broadened Cooperation:** Collaboration can extend to areas like renewable energy, blue economy development, and knowledge sharing in areas of mutual interest.
- **Trade Rebalancing:** India can explore ways to increase imports from Mauritius and support its economic diversification.
- **Regional Integration:** Both countries can work together to strengthen regional institutions and promote economic integration within the Indian Ocean region.
- **People-to-People Connect:** Encouraging cultural exchange programs, student mobility, and joint research initiatives can foster deeper understanding.
- **Multi-Stakeholder Approach:** India can involve private businesses, NGOs, and academic institutions to create a broader base for cooperation with Mauritius.

2.2. INDIA-EFTA TRADE AND ECONOMIC PARTNERSHIP AGREEMENT (TEPA)

Context

India and the European Free Trade Association (EFTA) have recently signed a Trade and Economic Partnership Agreement (TEPA).

KEY HIGHLIGHTS

- **TEPA:** It is a modern and ambitious Trade Agreement. For the first time, India is signing an FTA with four developed nations - an important economic bloc in Europe.
- **Investment:**
 - ✓ EFTA has committed to increasing investments by \$100 billion (FDI) in India in the next 15 years and facilitating generating 1 million direct employment through such investments.
 - ✓ India can withdraw tariff concessions if this investment target isn't met.

European Free Trade Association (EFTA)

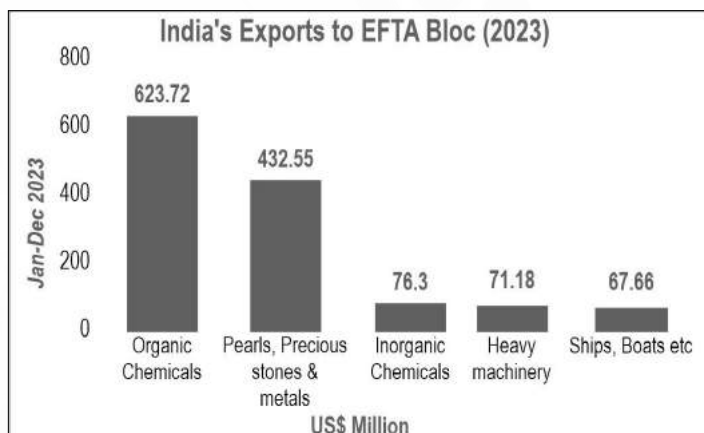
- It was established by the Stockholm Convention in 1960.
- It aims to benefit its four Member States, Iceland, Liechtenstein, Norway, and Switzerland, as well as their trading partners worldwide.
- They are committed to progressively liberalising through free trade agreements.

• Trade in Goods:

- ✓ EFTA is offering 92.2% of its tariff lines, which covers 99.6% of India's exports. The EFTA's market access offer covers 100% of non-agri products and tariff concession on Processed Agricultural Products (PAP).
- ✓ India is offering 82.7% of its tariff lines, which covers 95.3% of EFTA exports, of which more than 80% of imports is Gold.
- ✓ Sectors such as dairy, soya, coal and sensitive agricultural products are kept in exclusion list.

• Trade in Services:

- ✓ Both India and EFTA members commit to liberalisation across various sectors.
- ✓ Norway offers access to yoga instructors and traditional medicine practitioners from India.
- ✓ India offers access to its services sector, especially in IT, business, and education services.
- ✓ It includes provisions for mutual recognition of professional services like nursing, chartered accountants, architects, etc.



• Sustainable Development:

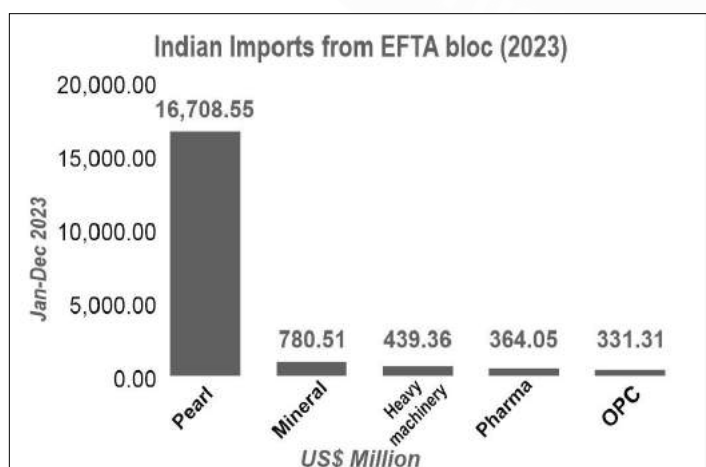
- ✓ TEPA includes a chapter on Trade and Sustainable Development (TSD), focusing on environmental and labour aspects, which is the first for India in any FTA.

• Intellectual Property Rights (IPR):

- ✓ Commitments related to Intellectual Property Rights in TEPA are at the TRIPS level. India's interests in generic medicines and concerns about the evergreening of patents have been fully addressed.

INDIA'S TRADING RELATION WITH THE EFTA BLOC

- In 2023, EFTA and India's merchandise trade surpassed \$22.33 billion. EFTA primarily imported organic chemicals (33.2%) while exporting natural pearls, precious metals (81.7%) and mineral fuels (3.8%) to India.
- India's exports to EFTA were \$1.9 billion, up from \$1.8 billion in 2022, while imports totalled \$20.45 billion, an increase from \$17.32 billion in 2022.





Switzerland	<ul style="list-style-type: none"> It is India's largest trading partner, followed by Norway in EFTA Bloc. The bilateral trade between India and Switzerland stood at USD 17.14 billion (USD 1.34 billion exports and USD 15.79 billion imports) in the last fiscal year. In 2022-23, India's trade deficit with Switzerland was USD 14.45 billion. India's main imports from Switzerland include gold, machinery, pharmaceuticals, coking and steam coal etc. Major exports from India include chemicals, gems, jewellery, etc. India is its fourth-largest trading partner in Asia and the largest in South Asia.
Norway	<ul style="list-style-type: none"> Total trade between India and Norway was USD 1.5 billion in 2022-23. The Norwegian Sovereign Wealth Fund is likely one of India's largest single foreign investors (around \$17.6 billion). The FDI inflow - USD 721.52 million from Norway. The New Climate Investment Fund has invested ₹ 700 crore (974 million NOK) in renewables in India.
Iceland	<ul style="list-style-type: none"> During the last 27 years, the exports of Iceland to India have increased at an annualised rate of 6.38%, from \$891k in 1995 to \$4.74M in 2022. The FDI inflow - USD 29.26 million from Iceland.
Liechtenstein	<ul style="list-style-type: none"> India's exports are glass and glassware, stone articles, plaster etc. India's imports are mechanical appliances and parts thereof, electrical machinery and equipment, etc The FDI inflow - USD 105.22 million from Liechtenstein.

WHY THE INDIA-EFTA TRADE AGREEMENT IS IMPORTANT

- For the first time in the history of FTAs, a binding commitment is being made to promote target-oriented investment and the creation of jobs.

- Iceland, Liechtenstein, Norway and Switzerland** have a combined population of less than 14 million. But they have significant weight in terms of trade figures.
 - ✓ In 2021, EFTA was the **tenth-largest** trader in the world in merchandise trade and the **eighth-largest** in trade in services.
- Alignment with "China Plus One" Strategy:**
 - ✓ The agreement supports India's strategy to diversify trade partners beyond China.
 - ✓ EFTA nations also benefit by restructuring supply chains away from China and utilising India's investment opportunities.
- Boost to FDI in India:**
 - ✓ The TEPA is expected to attract significant investments from EFTA nations, including from esteemed investors like the Norwegian Sovereign Wealth Fund and Swiss entities.
- Enhancing Import Diversification from China:**
 - ✓ Despite efforts to boost local production, India seeks further import diversification, particularly from China.
 - ✓ EFTA's interest in joint ventures offers India opportunities to reduce reliance on Chinese imports, especially in sectors like medical devices and pharmaceuticals.
- It will give impetus to "Make in India" and Atmanirbhar Bharat by encouraging domestic manufacturing across various sectors.
- It allows Indian companies to expand into EU markets through Switzerland.

CHALLENGES IN INDIA-EFTA FREE TRADE AGREEMENT

- Low scope for increasing market access:** The tariffs in the EFTA bloc are already zero or very low; thus, the TEPA can have minimal impact on India's goods exported to the bloc.
- Huge trade deficit:** India had a trade deficit of \$18.58 billion with the EFTA in the Calendar Year 2023 (CY23), which can increase further due to increased market access for the bloc in India.
- Economic Disparities:** India is concerned about the large gap

in per capita income between India and EFTA countries. This could disadvantage Indian industries, especially fisheries, where India has many small-scale fishermen compared to EFTA's well-funded industry.

- **Intellectual Property Rights:** A major sticking point is data exclusivity for pharmaceuticals. EFTA wants to prevent Indian generic drug companies from using data from the original inventors for a certain period. This would make it harder for India to produce affordable generic medicines.

WAY FORWARD

- **Address Market Access Issues:** Despite low tariffs, focus on enhancing market access by removing non-tariff barriers

and regulatory harmonisation to boost India's exports to EFTA nations.

- **Mitigate Trade Deficit:** Implement measures to balance trade by promoting Indian exports and encouraging investments from EFTA countries in sectors where India holds a competitive advantage.
- **Bridge Economic Disparities:** Develop targeted policies to support vulnerable sectors like fisheries, ensuring they can compete with EFTA's well-funded industries while fostering inclusive growth.
- **Negotiate Intellectual Property Rights:** Engage in constructive dialogues with EFTA to find a balanced approach to intellectual property rights, ensuring India's ability to produce affordable generic medicines is not compromised.

2.3. INDIA-MALDIVES RELATIONS

Context

Recently, the Maldives signed a "military assistance" deal with China after ordering Indian troops to leave the nation.

MORE ON THE NEWS

- Under the deal, the Maldives will get free "non-lethal" military equipment and training for Maldives' military from China's military.
- This is the first time Maldives has signed a deal with China for military cooperation as previously, China had been exclusively known for its assistance towards urban and economic development of the Maldives.
- This stepping up of military relations between the Maldives and China comes in the backdrop of strained relations between India and Maldives after the new Maldivian President ordered the Indian troops to leave Maldives by 10th May.
- Recently, the first batch of Indian military personnel manning a helicopter gifted by India departed from the island nation after handing over the operations of the chopper to an Indian civilian crew.

HISTORICAL BACKGROUND OF INDIA-MALDIVES RELATIONS

01

India and Maldives share ethnic, linguistic, cultural, religious and commercial links. India was among the first nations to recognise Maldives after its independence in 1965 and to establish diplomatic relations with the country.



02

The importance of India's strategic role in Maldives is well-recognized, with India being seen as a net security provider. Also, 'India First' has been a stated policy of the Government of Maldives.



03

The one-time claim of Maldives to Minicoy Island was resolved by the **Maritime Boundary Treaty of 1976** between the two countries, whereby Maldives recognized Minicoy as an integral part of India.

04

India's prompt assistance (**Operation Cactus**) during the 1988 coup attempt led to the development of trust and long-term and friendly bilateral relations with the Maldives.

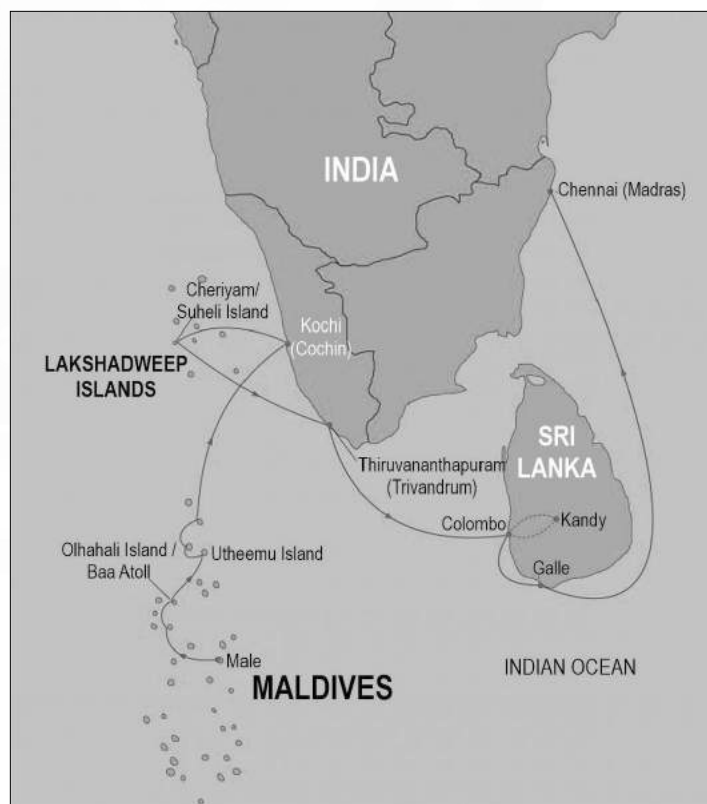
AREAS OF COOPERATION

Economic & Trade Relations	<ul style="list-style-type: none"> Tourism is the backbone of the Maldivian economy (75% of GDP). Indians were the largest group of tourists to Maldives in 2023. India and Maldives signed a trade agreement in 1981, which provides for the export of essential commodities. India became Maldives' 3rd largest trade partner in 2021, with the bilateral trade crossing USD 300 million for the first time in 2021. A Bilateral USD Currency Swap Agreement was inked between the Reserve Bank of India (RBI) and the Maldives Monetary Authority in 2019.
Security & Defence Cooperation	<ul style="list-style-type: none"> A comprehensive Action Plan for Defence was signed in 2016 to consolidate defence partnerships. India meets around 70% of the Maldivian National Defence Force's (MNDF) training needs. Defence cooperation between India and Maldives extends to joint exercises such as "Ekuverin", "Dosti", "Ekatha", and "Operation Shield". Annual Defence Cooperation Dialogue (DCD) at the level of Defence Secretary was initiated in July 2016 with the 3rd edition of DCD conducted at Male on 14 Feb 2022. Recently, in May 2023, the foundation stone for the construction of a naval dockyard called "Ekatha Harbour" was laid by the Defence Minister of India at Sifavaru in Uthuru Thila Falhu (UTF) atoll. The project is among the biggest Indian grant-in-aid projects in the Maldives.
Development Cooperation	<ul style="list-style-type: none"> Under an Indian credit line, the Hanimaadhoo International Airport Development project is underway. It aims to construct a new terminal to accommodate 1.3 million passengers annually. India's External Affairs Minister inaugurated the National College for Policing and Law Enforcement (NCPL) in 2022. The Greater Male Connectivity Project involves the construction of a 6.74 km-long bridge and causeway link between Male and neighbouring islands, utilising renewable energy sources. Funded by a USD 100 million grant and a USD 400 million Line of Credit (LOC) from India, this project is the largest project in Maldives. Assistance in the Gulhifalhu Port project to relocate the congested Malé Commercial Harbour and warehousing from Malé to Gulhifalhu Island (which is in the Greater Malé region).

Humanitarian Cooperation	<ul style="list-style-type: none"> India was the first to assist Maldives during the 2004 Tsunami and the water crisis in Malé in 2014. India acted swiftly to dispatch 30,000 doses of measles vaccine in Jan 2020 to prevent an outbreak in the Maldives. India's rapid and comprehensive assistance to the Maldives during the COVID-19 pandemic has further reinforced India's credentials of being the first responder.
Community and Culture	<ul style="list-style-type: none"> Indians are the second largest expatriate community in the Maldives, with an approximate strength of around 26,000. Of the country's approximately 400 doctors, over 125 are Indians. Similarly, around 25% of teachers in Maldives are Indians. Three historical mosques (Friday Mosque and Dharumavantha Rasgefaanu Mosque - Male', Fenfushi Mosque-South Ari Atoll) were successfully restored by Indian experts. Hindi commercial films, TV serials and music are immensely popular in Maldives.

STRATEGIC IMPORTANCE OF MALDIVES

- Geographically, Maldives is located approximately **70 nautical miles from Minicoy** and **300 nautical miles from India's West coast**, strategically positioning it at the centre of crucial commercial sea lanes in the Indian Ocean.



- Maldives is a key element in **India's IOR strategy**, which includes strengthening its **"Diamond Necklace Strategy"** to counter **China's "String of Pearls"**.
- India's interests in Maldives align on multiple fronts, including securing sea lanes of communication, combating piracy and sea-based terrorism, maintaining the Indian Ocean as a conflict-free zone, and promoting the blue economy and trade.

CHALLENGES TO INDIA-MALDIVES BILATERAL RELATIONS

- **Growing Chinese Influence:**
 - ✓ India-Maldives relations have become tense since Dr Mohammed Muizzu assumed power in November 2023. Perceived as pro-China, the Maldivian president had committed to removing Indian military personnel from the country.
 - ✓ The India-Maldives relationship faced a setback following Maldives' decision to enter into a **Free-Trade Agreement (FTA) with China in 2017**.
 - ✓ Maldives has attracted significant Chinese investment and has joined China's Belt and Road Initiative (BRI). China has financed several key projects (eg- Sinamalé Bridge) in Maldives as part of its "String of Pearls" strategy.
 - The two countries recently elevated their relations to a comprehensive strategic cooperative partnership.
- **India Out Campaign:**
 - ✓ The campaign is spearheaded by Maldives' opposition leader, Abdulla Yameen, and supported by the newly elected president Muizzu.
 - ✓ It aims to generate scepticism towards India's investments, defence partnerships, and its role as a security provider in the Maldives.
 - ✓ It accused the previous Maldivian government of

compromising the nation's sovereignty by allowing Indian military presence on its soil.

- **Increasing Radicalization:**

- ✓ Increasing Radicalization has resulted in a rise in the number of Maldivians joining terrorist groups like the Islamic State (IS). It poses a significant internal security threat to India.
- ✓ Political instability and socio-economic uncertainty contribute to the growth of radicalism in the Maldives. It raises concerns about the potential for remote Maldivian islands to be used as bases for terror attacks against India.

WAY FORWARD

- **Enhanced Engagement:** India can strengthen its political and economic engagement in Maldives by providing economic and developmental assistance without expecting immediate reciprocity (Gujral doctrine), thus deepening mutual ties.
- **Trust Building:** Efforts should be made to alleviate any trust deficit by withdrawing military presence while continuing to offer vital humanitarian aid during crises and natural disasters to promote goodwill and understanding.
- **Respect for Sovereignty:** Recognize the Maldives' right to conduct its own foreign policy. Focus on building trust and mutual respect for a long-term partnership.
- **Countering China's Influence:** India must proactively counter China's growing influence in Maldives by expediting the completion of ongoing developmental projects
- Take confidence-building measures to re-establish the "India-first" policy in Maldives.
- **Countering Radicalisation:** India's High Impact Community Development Projects (HICPs) in Maldives should prioritise initiatives promoting youth employability and entrepreneurship to mitigate radicalisation risk.

2.4. CONSTITUTIONAL GUARANTEE FOR ABORTION RIGHTS

Context

Recently, France became the only country to explicitly guarantee abortion as a constitutional right.

MORE ON THE NEWS

- The French parliament overwhelmingly approved a Bill to enshrine abortion rights in France's constitution, thus making it the only country to explicitly guarantee a woman's right to voluntarily terminate a pregnancy.
- Despite being legal in France since 1975, abortion will now be ensured as a guaranteed freedom for women.
- The historic move was proposed by French President Emmanuel Macron as a way to prevent the kind of rollback of abortion rights seen in the United States in recent years.
 - ✓ In June 2022, the U.S. Supreme Court, in the **Dobbs**

v. Jackson Women's Health Organization judgement, overturned the ruling of the 50-year-old **Roe v. Wade (1973)** which had given abortion rights to women in America.

- The amendment to **Article 34 of the French constitution** explicitly addresses the freedom of women to terminate pregnancies voluntarily. It ensures that future governments cannot significantly alter existing laws allowing termination within the first 14 weeks of pregnancy.
- With the right to an abortion added to the constitution, it will be much harder to prevent women from voluntarily

terminating a pregnancy in France as the French Constitution is relatively rigid.

- ✓ It has been amended only 17 times since its adoption in 1958.

- A tribute was also paid to **Simone Veil**, a prominent legislator and feminist who, in 1975, championed the bill that decriminalised abortion in France.

ABORTION STATUS IN OTHER EUROPEAN COUNTRIES



The **United Kingdom** permits abortion to 24 weeks of pregnancy if it is approved by two doctors. Delayed abortions are allowed only if there exists a danger to the mother's life. However, women who undergo abortions after 24 weeks can be prosecuted under the Offences Against the Person Act, 1861.



Poland, which has some of the most stringent abortion laws in Europe, allows termination only in the event of rape, incest or a threat to the mother's health or life.

In September 2022, **Hungary** made it obligatory for women to listen to the pulse of the foetus, sometimes called the "foetal heartbeat," before they can access a safe abortion.



ABORTION LAWS IN INDIA

Medical Termination of Pregnancy (MTP), 1971:

- Abortion became legal in India with the introduction of the MTP Act in 1971.
- Originally, a single doctor's approval was needed for medical abortion for up to 12 weeks and two doctors if it is done between 12 and 20 weeks.

Key Provisions of the MTP Amendment Act, 2021:

- **Increased Gestational Limit:** Raised the upper limit for medical abortion from 20 weeks to 24 weeks under specific circumstances.
- **Approval Process:**
 - ✓ Up to 20 weeks: The **opinion of one qualified medical professional** is sufficient.
 - ✓ From 20 to 24 weeks: The **opinion of two registered medical practitioners** is required. However, the termination of pregnancies between 20 to 24 weeks will only apply to special categories of women –
 - Risk to a woman's life from continuing pregnancy
 - Serious physical or mental health risks to women from continuing pregnancy
 - The woman being:
 - A survivor of sexual assault, rape, or incest
 - A minor
 - Married and widowed or divorced during pregnancy
 - Suffering from major physical disabilities or mental illness
- **Termination Beyond 24 Weeks:** It is permissible in cases of severe foetal abnormalities on the recommendation of

a **four-member Medical Board** established in each state under the MTP Act.

- **Unmarried Women and Abortion:** The 2021 Act allows unmarried women to seek abortion in the case of failure of contraceptive methods or devices (earlier applicable only to married women). However, parental consent is needed for minors.
- **Privacy Rights:** The MTP Act protects the privacy of women seeking abortions. Medical providers cannot disclose a woman's details without legal authorisation. Violators face imprisonment and/or fines.

PRE-CONCEPTION AND PRE-NATAL DIAGNOSTIC TECHNIQUES (PCPNDT) ACT, 1994

- It was enacted to stop female foeticides and arrest the declining sex ratio in India.
- It bans the use of sex selection techniques before or after conception and prevents the misuse of prenatal diagnostic techniques for sex-selective abortion.

INDIAN PENAL CODE (IPC) SECTIONS

- **Section 312:** This Section criminalizes 'causing miscarriage' if such miscarriage is not caused in good faith to save the woman's life. It is punishable by up to 3 years in jail or a fine.
- **Section 313:** Prohibits from committing a miscarriage without a woman's consent, with harsher penalties (life imprisonment or up to 10 years)
- **Section 316:** It states that if an individual does any act that causes the death of a pregnant woman would be guilty of culpable homicide.

CONCERNS RELATED TO UNSAFE ABORTIONS IN INDIA

- **Causes behind Unsafe abortions:**
 - ✓ As per the **State of the World Population Report 2022**, Unsafe abortion remains the **third leading cause of maternal mortality** in India and close to 8 women die each day due to causes related to unsafe abortion.
 - ✓ **Low contraception adoption:** According to NFHS-5, the unavailability and use of safe and modern methods of contraception results in teenage and unwanted pregnancies, often leading to unplanned and unsafe abortions.
 - ✓ **Limited availability of safe and affordable abortion care:** Lack of access to quality maternal healthcare services especially in rural areas forces women to undergo abortions at the hands of untrained personnel and quacks.
- **Strong Preference for male child:**
 - ✓ Patriarchal society has a strong preference for male children, leading to sex-selective abortions. This has contributed to skewed sex ratios in certain parts of the country, leading to long-term social and demographic consequences.
- **Lack of Comprehensive Sexual Education:**
 - ✓ There is a need for comprehensive sexual education in schools and communities to address misconceptions about contraception, reproductive health, and abortion. Lack of awareness often leads to unwanted pregnancies and unsafe abortion practices.

- **Shortage of Healthcare professionals:**

- ✓ Despite having the largest number of medical colleges globally, India faces a severe shortage of healthcare workers.
- ✓ According to the **Rural Health Statistics 2021-22**, India is facing a shortfall of 83.2% of surgeons, 74.2% of obstetricians & gynaecologists, 79.1% of physicians and 81.6% of paediatricians.

REMEDIAL MEASURES

- **Better implementation of MTP Act 2021:** The amendments to the Medical Termination of Pregnancy (MTP) Act need to be implemented properly to ensure respect for women's rights over their body as provided under **Article 21** of the Constitution.
- **Comprehensive Sexual Education:** Integrate comprehensive sexual education into school curricula to promote responsible sexual behaviour, contraception use, and understanding of reproductive rights in order to ensure women have accurate information regarding safe abortion.
- **Access to Services:** Increased access to safe and affordable abortion services, particularly in rural and underserved areas can be achieved by expanding the number of trained healthcare providers, establishing more abortion clinics and facilities, and providing subsidies or financial assistance for low-income individuals.

2.5. INDIA – BHUTAN

Context

Bhutan's Prime Minister Tshering Tobgay recently arrived in Delhi for a five-day visit, his first overseas visit after assuming office in January.

MORE ON THE NEWS

- Both sides welcomed the **signing of the MoU** on the Concessionary Financing of INR 1500 crores to the **Royal Government of Bhutan for GyalSung-** Bhutan's National Service Program for skilling and leadership development of the youth of Bhutan.

- India pledged continued support for Bhutan's development plans, including the **13th Five-Year Plan**.
- The Prime Minister of India appreciated His Majesty's vision of the **Gelephu Mindfulness City**.

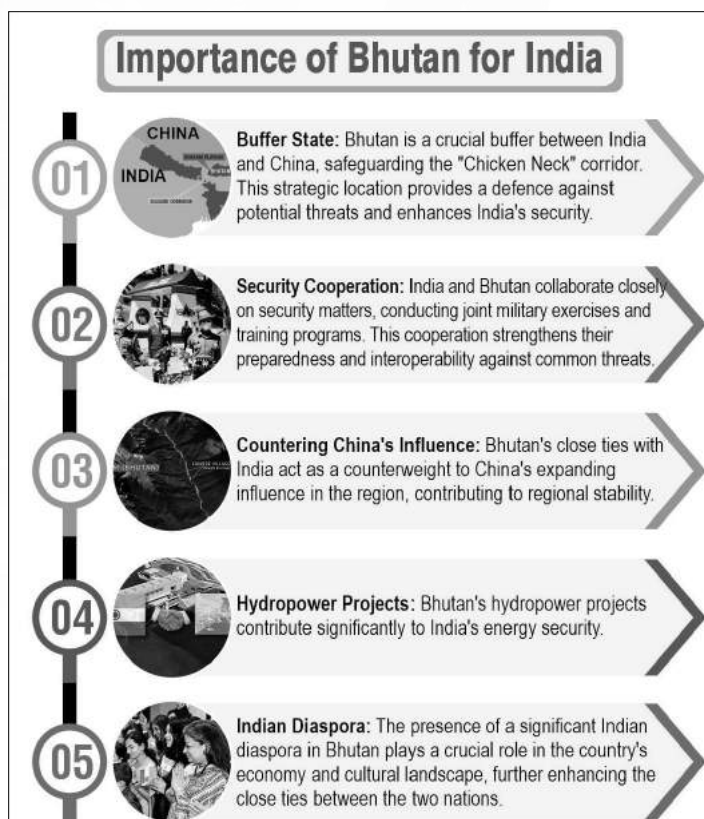
INDIA – BHUTAN BILATERAL RELATIONS

Historical	<ul style="list-style-type: none"> • Diplomatic relations between India and Bhutan began in 1968 with the appointment of a resident representative in Thimphu. • Before 1968, relations were managed by the Political Officer in Sikkim. • The cornerstone of India-Bhutan relations is the treaty of friendship and cooperation signed in 1949, further renewed in February 2007.
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Political	<ul style="list-style-type: none"> His Majesty the King of Bhutan visited India, staying as the first foreign guest at Rashtrapati Bhawan in twenty years. In August 2019, PM Narendra Modi's visit to Bhutan initiated four significant bilateral projects. It included the launch of the 720 MW Mangdechhu Hydro project, the establishment of the Ground Earth Station of ISRO for utilising the South Asian Satellite, the introduction of the RuPay Card, and the extension of interconnection between India's National Knowledge Network and Bhutan's Research and Education Network. The 4th India-Bhutan Development Cooperation talks were held in January 2023 in Thimphu to oversee the progress of various projects.
Economic	<ul style="list-style-type: none"> The India-Bhutan Agreement on Trade, Commerce, and Transit, first signed in 1972 and revised in 2016, establishes a free trade regime. Since 2014, India's merchandise trade with Bhutan has nearly tripled, reaching USD 1606 million in 2022-23, accounting for about 73% of Bhutan's overall trade. India constitutes 50% of Bhutan's total FDI, making it the country's leading source of investments. Bhutan actively participates in various regional trade initiatives led by India, such as the South Asian Free Trade Area (SAFTA) and the Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC). India will construct a rail link from Kokrajhar to Gelephu and Banarhat to Samtse and build a new airport to service the area.
Defence	<ul style="list-style-type: none"> India participates in a joint military exercise called 'Shantir Ogroshena (front runner of peace),' along with Bangladesh, Sri Lanka, and Bhutan, which is the first such multi-nation venture with neighbouring countries. A 2000-strong Indian Military Training Team (IMTRAT) is stationed in western Bhutan, providing continuous training support to the Royal Bhutan Army. India supported Bhutan on the Doklam Border issue with China
Hydropower Cooperation	<ul style="list-style-type: none"> Bhutan generates significant revenue from hydropower exports to India. Four operational projects supply 2136 MW of electricity to India. Two HEPs, namely, 1200 MW Punatsangchhu-I and 1020 MW Punatsangchhu-II, are under various stages of implementation.

Educational	<ul style="list-style-type: none"> Over 950 annual scholarships are provided by the government of India for Bhutanese students in diverse fields like medicine and engineering. Around 4,000 Bhutanese students self-finance their undergraduate studies in Indian universities. Nehru Wangchuck Scholarship Scheme (2010): Allocates 8 lots annually for Bhutanese students and scholars. Five annual scholarship slots for Bhutanese students to study at Nalanda University. Reserves two seats annually for Bhutanese students at St. Stephens College.
Cultural and Buddhist links	<ul style="list-style-type: none"> Bhutanese pilgrims frequently visit Buddhist sites in India, including Bodh Gaya, Rajgir, Nalanda, Sikkim, and Udayagiri. In honour of the 50th anniversary of diplomatic relations, the Government of India facilitated a sponsored visit for 18 Lam Neetens (Buddhist monks) and representatives from the central Monastic Body of Bhutan to India.
Indian Diaspora	<ul style="list-style-type: none"> Estimates suggest around 50,000 Indian citizens reside in Bhutan, primarily concentrated in urban areas like Thimphu, Phuntsholing, and Gelephu.



CHALLENGES BETWEEN INDIA AND BHUTAN

- **China's Growing Influence:** India is increasingly concerned about China's expanding economic and political footprint in Bhutan. Ongoing border disputes and potential shifts in Bhutan's diplomatic stance could pose challenges to India's strategic influence in the region.
- **Infrastructure Development Challenges:** Bhutan's mountainous terrain and environmental considerations present obstacles to large-scale infrastructure projects, impacting economic development timelines.
- **Perception:** There have been concerns in Bhutan regarding certain project terms perceived as overly advantageous to India, sparking public opposition to Indian involvement in the sector.
- **Cultural and Social Differences:** Despite shared cultural heritage, differences in language, traditions, and political systems may lead to misunderstandings and communication gaps between India and Bhutan.
- **Environmental Priorities:** Bhutan's commitment to

environmental conservation, being a **carbon-negative nation**, may sometimes clash with India's development priorities.

WAY FORWARD

- Strengthening strategic cooperation will enable both nations to address common security concerns and collaborate **against terrorism, drug trafficking, and transnational crimes**.
- **Further strengthening economic cooperation** through joint ventures, renewable energy projects, and infrastructure development that considers Bhutan's environment.
- **Resolving boundary issues** peacefully through dialogue to ensure regional stability.
- **Enhancing defence cooperation** with joint military exercises and knowledge sharing to address common security threats.
- **Promoting people-to-people** contact through educational exchanges, cultural events, and tourism to foster deeper understanding and mutual respect.

2.6. INDIA – BRAZIL RELATIONS

Context

Recently, India and Brazil held their first-ever '2+2' Defence and Foreign Ministerial Dialogue in New Delhi.

MORE ON THE NEWS

- It was co-chaired by the **Additional Secretary of the External Affairs Ministry** and the **Joint Secretary of the Defence Ministry**.
- The Brazilian delegation was led by the Director of the Brazilian Foreign Ministry and the Rear Admiral in the Brazilian Defence Ministry.
- The talk focussed on the expansion of cooperation between India and Brazil.
 - ✓ **Focus areas:** Defence, space, energy, critical minerals, technology, counter-terrorism, regional issues, multilateral cooperation, and other mutual interests.

2+2 Dialogue

- It is a format of dialogue where the **defence and foreign ministers or secretaries** meet with their counterparts from another country.
- **2+2 Ministerial** is the highest-level institutional mechanism between two countries.
- Currently, India holds 2+2 Ministerial level Dialogues with all three countries of QUAD (USA, Japan, and Australia) as well as Russia.
- Recently, in October 2023, **India and the UK** held their inaugural "2+2" Foreign and Defence Dialogue at the Joint Secretary level.

BILATERAL RELATIONS

Historical Background	<ul style="list-style-type: none"> • Diplomatic relations were established in 1948, with both countries opening the embassies in the same year. • India has a Consulate General in Sao Paulo, while Brazil has a Consulate General in Mumbai. • India opened its Embassy in Rio de Janeiro, which was later moved to Brasilia in 1971.
Political Relations	<ul style="list-style-type: none"> • The two countries have been Strategic Partners since 2006. • Adoption of an Action Plan to Strengthen the Strategic Partnership, focusing on various sectors. • Signing of 15 MoUs/Agreements covering areas like Investment, Cyber Security, and Health. • Brazil held a Special Session commemorating India's 75 years of independence in November 2022, addressed by the Indian MoS for External and Parliamentary Affairs.

Economic Cooperation	<ul style="list-style-type: none"> India is the 5th largest trading partner of Brazil. During the last 27 years, India's exports to Brazil have increased at an annual rate of 16.8%, from \$147M in 1995 to \$9.78B in 2022. During the last 27 years, Brazil's exports to India have increased at an annual rate of 11.2%, from \$366M in 1995 to \$6.43B in 2022. Total Indian investment in Brazil is estimated at over US\$ 6 billion. Brazilian investments in India are around US\$ 1 billion.
Defence Cooperation	<ul style="list-style-type: none"> An agreement for defense cooperation was signed in 2003. A Joint Defence Committee (JDC) meets regularly to discuss collaboration. Brazil has shown strong interest in acquiring India's state-of-the-art Akash surface-to-air missile systems. Indian companies like Bharat Forge are contenders to fulfil Brazil's request for 155mm Howitzer guns.
Security Cooperation	<ul style="list-style-type: none"> A Strategic Dialogue mechanism established in 2006 addresses regional and global security concerns. An MoU on cooperation in the area of Cyber Security between CERT-In and its counterpart agency was signed in 2020. India and Brazil also cooperate in cyber issues at BRICS and IBSA.
Space Cooperation	<ul style="list-style-type: none"> Both countries have been collaborating in Data sharing and satellite tracking of Indian satellites. Launch of Brazilian satellite Amazonia-1 at Satish Dhawan Space Centre, Sriharikota.
Cooperation in Bio-fuels, Oil & Gas	<ul style="list-style-type: none"> India and Brazil cooperate in the bio-energy sector through multilateral forums like Bio platforms. The 'National Biofuel Policy' of India and the 'Renova Bio' Programme of Brazil have some common objectives related to an increase in the current blending percentage of biofuel with Petrol and Diesel. Brazil signed the India-led International Solar Alliance (ISA) Agreement in 2019
Cultural Cooperation	<ul style="list-style-type: none"> The first classical Indian art form to come to Brazil was Bharatanatyam, followed by Odissi, Kathak and Kuchipudi. A Cultural Exchange Programme (CEP) for the years 2020-2024 was signed in 2020. Prof. Dilip Loundo was awarded the Pravasi Bharatiya Samman Awards in 2023 for his contribution to promoting Indian philosophy and traditions.

Diaspora	<ul style="list-style-type: none"> Estimated to be around 4,000 people, with the majority of them living in Sao Paulo, Rio de Janeiro and Manaus. An Indian Association exists in Sao Paulo, likely organising cultural events and celebrations.
Multilateral Cooperation	<ul style="list-style-type: none"> Their collaboration includes BRICS, BASIC, G-20, G-4, IBSA, and the International Solar Alliance etc. Additionally, they cooperate extensively with larger multilateral bodies such as the UN, WTO, UNESCO, and WIPO. In June 2003, the Foreign Ministers of India, Brazil and South Africa launched the India-Brazil South Africa (IBSA) Dialogue Forum, popularly known as G-3.

IMPORTANCE OF BRAZIL FOR INDIA

- **Critical Mineral Reserves:** Brazil is a major repository of critical minerals essential for India's growing technological and industrial sectors. These include Lithium, Niobium, etc.
✓ India relies heavily on imports for its **rare earth elements (REEs) needs**. A stronger partnership with Brazil can secure a reliable and long-term supply of these critical minerals
- **Countering China's Influence:** By strengthening ties with Brazil, India can build a strategic partnership to counter China's dominance in areas like trade and infrastructure development.
- **Shared Interests and Alliances:** Both countries are members of various multilateral forums. These platforms allow them to collaborate on issues like climate change, global trade, sustainable development, and reform of international institutions.
- Brazilian President at the **18th G20 Leaders' Summit in New Delhi** in September expressed support for India's candidacy for a **non-permanent seat on the United Nations Security Council for the 2028-29 term**.

CHALLENGES BETWEEN INDIA AND BRAZIL RELATIONS

- Despite significant growth, India's trade with Brazil is still a **small portion of its total trade** with Latin America, which itself is a minor player compared to **China's dominance** in the region.
- Both India and Brazil face similar issues like **public sector inefficiency, governance concerns, and balancing economic growth with environmental protection**.
- As emerging economies, **India and Brazil may sometimes compete for resources** and influence in global forums, leading to diplomatic tensions.
- Brazil complained to the WTO about India's sugar-related practices because they felt it gave Indian sugarcane producers an unfair advantage.

- ✓ Brazil is the **largest producer of sugarcane and ethanol** in the world. It is a leader in technology used for ethanol production.

WAY FORWARD

- **Priority Sector Focus:** India and Brazil should identify and prioritise key sectors such as pharmaceuticals, information technology, biofuels, and agriculture for enhanced trade and investment.
- **Facilitating Market Access:** Both nations should collaborate to streamline regulations and reduce trade barriers, facilitating easier market access and boosting bilateral trade.
- **Deepening Defence Collaboration:** Technology transfer agreements and information sharing on cyber security can strengthen defence and security cooperation between India and Brazil.
- **Addressing Critical Issues Together:** Collaboration on securing critical minerals and joint leadership in global forums like BRICS and IBSA can address shared challenges such as climate change and resource security.

SOCIAL ISSUES

3.1. WOMEN, BUSINESS AND THE LAW 2024 REPORT

Context

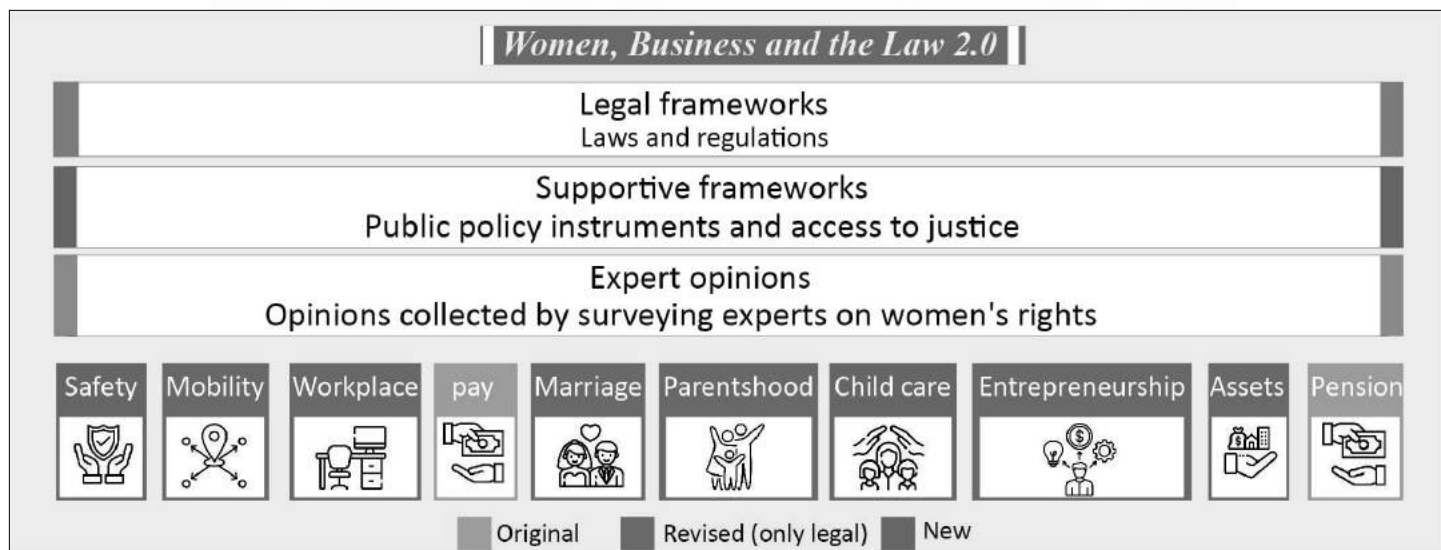
Recently, the **Women, Business and the Law 2024** report was released by the World Bank.

KEY HIGHLIGHTS OF THE REPORT

- This report by the World Bank annually analyses **laws and regulations affecting women's economic opportunities** across 190 economies.
- The report provides an in-depth analysis of challenges obstructing women's entry into the global workforce,

limiting their ability to contribute to prosperity for themselves, their families, and their communities.

- It introduces a new index measuring performance on legal frameworks, **consisting of 10 indicators as given in the figure below:**



- The report highlights a global disparity, with women having access to only 64% of the legal protections afforded to men.
- The report emphasises that eliminating discriminatory laws and practices against women in the workforce and business could lead to **a more than 20% increase in global gross domestic product (GDP)**.
- According to the World Bank, this potential economic boost can double the global growth rate in the upcoming decade.

counterparts, where women have only 45.9% of the legal protections enjoyed by men.

- India received a full score in constraints on freedom of movement and constraints related to marriage, indicating relatively positive conditions in these aspects.
- India received one of its lowest scores in the indicator evaluating laws impacting women's pay.
- Only 54.2% of the supportive frameworks needed were established in the country, although the global weightage in this regard was much lower at 39.5%.

INDIA'S SITUATION

- The latest report indicates that no country, including affluent economies, ensures equal opportunities for women.
- India's rank has **marginally improved to 113**, with a **score of 74.4%**, but its ranking declined from **122 in 2021 to 125 in 2022 and further to 126 in the 2023 index**.
- Indian women have **60% of the legal rights** compared to men, which is slightly below the **global average of 64.2%**.
- Despite the challenges, India outperformed its South Asian

THE REASON BEHIND WOMEN ENJOYING LESS LEGAL RIGHTS

- **Personal laws:** Different religions in India have their own inheritance and property laws. For example, Hindu Undivided Family (HUF) property is generally inherited by sons, limiting daughters' rights.
- **Patriarchal system:** Traditional societal structures often prioritise men, limiting women's access to education, property, and decision-making power.

- **Weak enforcement:** Laws protecting women's rights might not be effectively enforced, leading to continued discrimination.
- **Loopholes in Legal Frameworks:** Existing legal frameworks may have gaps or loopholes that contribute to disparities. For example, the Prohibition of Child Marriage Act doesn't make child marriages void, impacting girls' rights.
- **Lack of legislative representation:** The absence of adequate representation can result in a lack of women's perspective in law-making; for example, women parliamentarians have never crossed the 15% mark in India's 70-year-old electoral history.

INITIATIVES

- **Nari Shakti Vandan Adhiniyam, 2023:** To reserve one-third of all seats for women in the Lok Sabha and the state legislative assemblies.
- **Sustainable Development Goal (SDG) target 5.5:** Aims to ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life.
- **Women-targeted schemes:** Including Pradhan Mantri Janani Suraksha Yojana, Beti Bachao Beti Padhao, Ujjawala, SwadharGreh, and Pradhan Mantri Matru Vandana Yojana.
- The Indian Constitution treats women at par with men through various articles (e.g., Articles 14, 15, 42) and provides for affirmative action to end discrimination.
- Constitutional amendments (73rd and 74th) provide reservations for women in local bodies to enhance political empowerment.
- **Several laws** have been enacted to protect women's rights,

including the Protection of Women from Domestic Violence Act, the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, and the Prohibition of Child Marriage Act etc.

WAY FORWARD

- **Harmonize Personal Laws and Strengthen Existing Legislation:** Review and revise personal laws across religions to ensure equal inheritance rights, property ownership, and minimum age of marriage for girls
- **Pay Parity:** For providing pay parity to women, the country could explore measures such as mandating equal pay for equivalent work, permitting women to work at night on par with men and enabling women to engage in industrial jobs on an equal footing with men
- **Strengthen Legislation:** Strengthen existing legislation like the Protection of Women from Domestic Violence Act to ensure effective implementation and harsher offender penalties.
- **National Campaign:** Launch a nationwide campaign to educate citizens about women's legal rights.
- **Community Outreach:** Organize workshops and awareness programs in rural and urban areas to educate communities about gender equality and empower women to claim their rights.
- **Fast-Track Courts:** Establish dedicated fast-track courts for cases related to gender-based violence and discrimination, ensuring swift justice for women.
- By implementing these steps with a multi-pronged approach, India can work towards achieving greater legal parity for women and build a society where women's rights are protected and respected.

3.2. SBI REPORT ON EMPOWERING WOMEN THROUGH SHGS

Context

The State Bank of India (SBI) recently released a report highlighting the role of Self-Help Groups (SHGs) in Women's Empowerment.

KEY HIGHLIGHTS OF THE REPORT

Empowering Women

- **Transformative Revolution Led by SHGs:** With approximately 8.5 million SHGs and 92.1 million members, SHGs in India are driving a significant social and economic transformation.
- **Growing Contribution to Economic Output:** The rise of **Lakshpati Didis** underscores the increasing contribution of women to Gross Value Added (GVA) and overall economic output.

Financial Inclusion and Credit Access

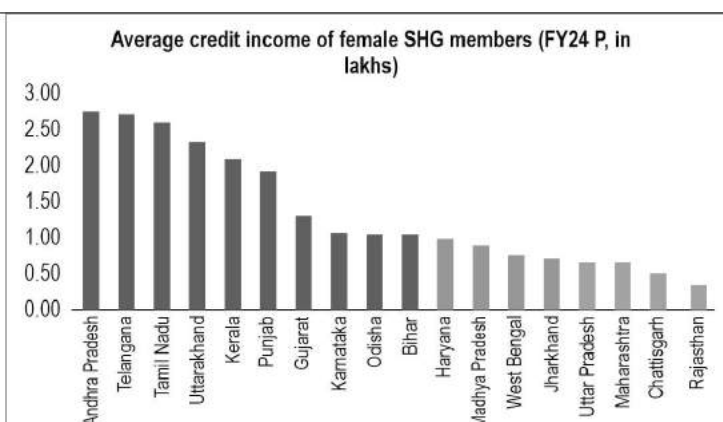
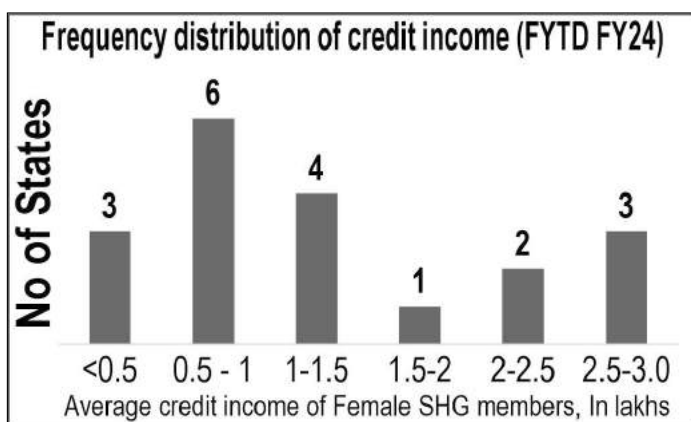
- **SHG Bank Linkage Programme (SHG-BLP):** Approximately

97.5% of SHGs now hold bank accounts, facilitating timely credit access crucial for economic value addition.

- **Robust Banking Relationship:** With a SHG portfolio nearing Rs 2 trillion in Scheduled Commercial Banks (SCBs), optimal funds at reduced interest rates enable SHGs to unlock their full marketing potential.

Credit Utilisation and Financial Stability

- **Increased Credit Limits:** The average limit sanctioned to SHGs has increased by 2.2 times in FY24 compared to FY19, promoting economic expansion.
- **Improved Repayment:** Average repayment has increased by 3.9 times in FY24 compared to FY19, showcasing judicious and timely repayment practices.



Digital Inclusion

- **Bank Mitras and Digital Didis:** Initiatives like Bank Mitras and Digital Didis are facilitating financialization at an unprecedented scale.
- **Leveraging Digital Platforms:** SARAS Melas and other initiatives can further benefit from onboarding onto digital platforms like Open Network for Digital Commerce (ONDC), enhancing accessibility and convenience.
- Expenditure through **Aadhar Enabled payment system** increased by at least 3 times in FY24 from FY23 in all regions.

Lakhpati Didi Initiative

Announcement and Objective:

- Announced by the Prime Minister in 2023.
- **Objective:** Encourage women to establish micro-enterprises within their villages.

Training and Target:

- Train two crore women under the initiative.
- Focus on women in self-help groups (SHGs) to achieve a sustainable annual income of at least Rs 1 lakh per household.

Implementation Approach:

- Managed by DAY-NRLM (Deendayal Antyodaya Yojana-National Rural Livelihoods Mission).
- Women in SHGs are trained in various skills, including plumbing, LED bulb making, drone operation and repair, tailoring, and weaving.
- Trained women provided with opportunities to earn income using acquired skills.

lead in SHGs, while states like Tamil Nadu, Uttarakhand, Kerala, Punjab, and Gujarat have also witnessed significant increases in female SHG incomes.

- **Future Outlook:** By FY27, India is expected to have millions of Lakhpati Didis in almost every state, reflecting sustained efforts towards women's economic empowerment.

SELF-HELP GROUPS (SHGS) IN INDIA

Concept

- Self-Help Groups (SHGs) are informal associations of people of typically similar socio-economic backgrounds who come together for self-help and collective action.
- Focus on self-improvement and overcoming common challenges like poverty, lack of access to credit, and social issues.
- This concept drew inspiration from the pioneering work of Professor Muhammad Yunus and the Grameen Bank in Bangladesh.

Functions

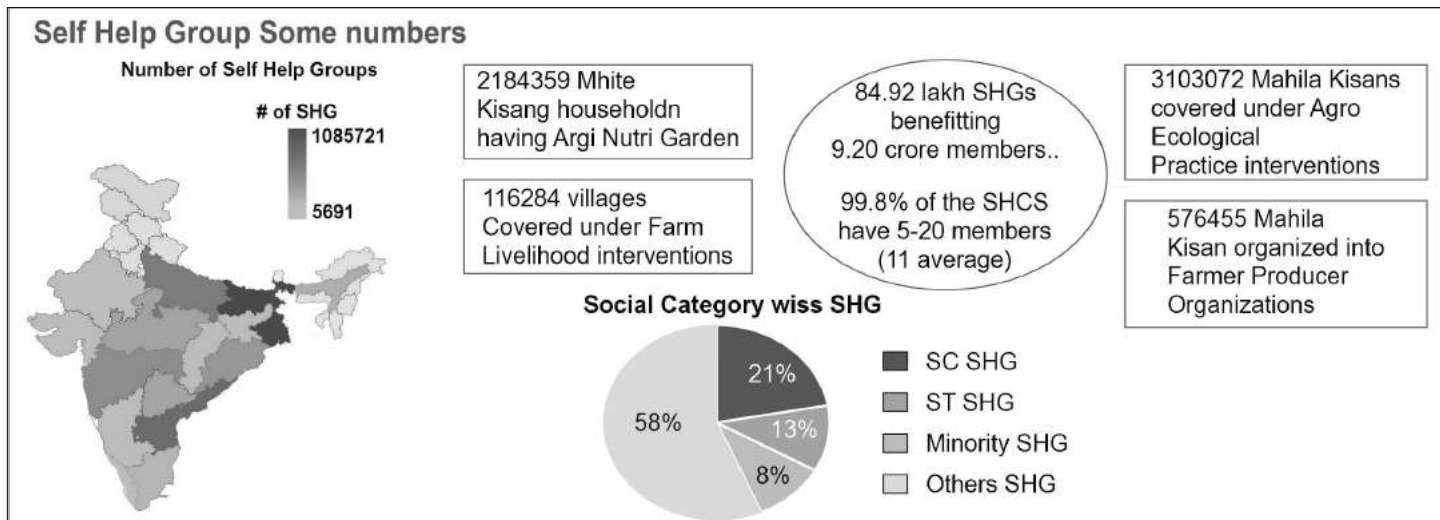
- **Savings & Microfinance:** Members pool their savings and provide small loans to each other for various needs.
- **Income Generation:** SHGs may engage in income-generating activities like handicraft production, animal husbandry, or small businesses.
- **Social Empowerment:** Groups discuss and address social issues like health, education, and domestic violence.

Impact

- India boasts the world's largest microfinance program through SHGs. SHGs have been a powerful tool for poverty alleviation and women's empowerment in India.
- Promote financial inclusion by providing credit access to the underbanked population. SHG-Bank Linkage Project has linked millions of families to the banking system.
- Create a supportive network for members, fostering social change and collective action.
- Over 12 million SHGs exist in India, with a majority being women-led [Economic Survey 2022-23].

Income Growth and State-wise Progress

- **Tripled Income Growth:** Female SHG member incomes have tripled during FY19-FY24, with urban members seeing a 4.6 times increase, promoting economic empowerment.
- **Rural Prosperity:** Around 65% of rural SHG members have experienced upward mobility in relative income in FY24 compared to FY19, indicating widespread economic progress.
- **State-wise Success:** Andhra Pradesh and Telangana



GOVERNMENT INITIATIVES TO PROMOTE SHGS

- **Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM):**
 - ✓ Supports the formation and nurturing of SHGs for women's empowerment and income generation.
 - ✓ **Start-up Village Entrepreneurship Programme (SVEP):** Assists SHGs in setting up village-level non-farm enterprises.
 - ✓ **Mahila Kisan Sashaktikaran Pariyojana (MKSP):** Empowers women farmers associated with SHGs.
- **SHG-Bank Linkage Programme:** Initiated by NABARD in 1992, it links SHGs to the formal banking system for access to savings accounts and loans.
- **Priority Sector Lending:** Classifies SHGs as a priority sector for banks, mandating greater focus on lending to them.
- **SHG-run Grain Banks:** Allows SHGs to manage grain storage for food security in vulnerable regions.
- **Priyadarshini Scheme (by NABARD):** Promotes women's empowerment and livelihood generation through SHGs.
- **Need-based Skill Development Programmes (MEDPs):** Provide skill training to SHGs with existing bank linkages (supported by NABARD since 2006).
- **Scheme for Promotion of Women SHGs in Backward & LWE Districts:** Aims to establish sustainable women's SHGs, facilitate bank linkages, and support livelihoods in these areas.

CHALLENGES AND LIMITATIONS OF SHGS IN INDIA

- **Limited Skills & Training:** Many SHG members lack adequate training in business management, marketing, or new income-generating activities.
- **Group Dynamics:** Internal conflicts, unequal participation, or obstructive behaviour within SHGs can hinder progress.
- **Financial Literacy:** Limited financial literacy can lead to poor financial management within the SHG.

- **Market Access:** Difficulty in finding markets for SHG products due to competition or lack of marketing networks.
- **Bureaucracy:** Complexities in accessing government schemes or loans due to paperwork and delays.
- **Sustainability:** Ensuring long-term financial viability and income generation for the SHG.
- **Social Pressures:** Social norms and patriarchal attitudes can limit women's participation or mobility.
- **Lack of Qualified Trainers:** Shortage of skilled trainers in rural areas to provide capacity building for SHGs.

WAY FORWARD

- **Skill Development Programs:** Expand government and NGO-led skill development programs tailored to local market demands and income generation activities suited to SHGs.
- **Mentorship & Business Training:** Provide mentorship and training in business management, marketing, and financial literacy to strengthen SHG leadership and decision-making.
- **Market Access Initiatives:** Government and private initiatives can help SHGs connect with larger markets through trade fairs, online platforms, or collaborations with established businesses.
- **Value Addition & Branding:** Support programs focusing on product design, quality control, and branding to enhance the marketability of SHG products.
- **Diversification of Livelihood Activities:** Encourage SHGs to explore diverse income-generating activities to mitigate risk and adapt to market fluctuations.
- **Digital Literacy Training:** Equipping SHGs with digital skills can facilitate online marketing, financial transactions, and access to government services.
- **Micro-credit Schemes:** Targeted micro-credit schemes can empower women from marginalized communities to participate in SHGs and gain financial independence.

3.3. MAHARASHTRA EXEMPTS RTE QUOTA ADMISSIONS

Context

Recently, the Maharashtra government notified to exempt private unaided schools within a one-kilometre radius of government or aided schools from the 25% RTE quota admissions requirement.

MORE ON THE NEWS

- The school education department of the Maharashtra government issued a gazette notification to amend the Maharashtra Right of Children to Free and Compulsory Education Rules, 2013
- The notification stated that the local authority will exempt private unaided schools for the purposes of 25% admission as mandated under RTE where government schools and aided schools are situated within one-kilometre radius of that school.
- This exemption would also apply to private schools established in the future, as long as they are built within a 1 km radius of a government or aided school.
- The notification also clarifies that in case of no aided school in the area, private schools will be identified to give RTE admissions and will be eligible for reimbursement for the fees.
- With this new rule, Maharashtra has joined Karnataka (2018) and Kerala (2011) in exempting private schools from providing RTE quota admissions.

Section 12(1)(C) of the RTE Act

- It mandates unaided private schools to reserve 25% of their entry-level (nursery to Class 1) seats for children belonging to the economically weaker section and disadvantaged groups.
- This provision focuses on the inclusion of children from marginalised communities in private schools and providing educational opportunities to the less privileged.
- The government provides reimbursement of the fee/cost incurred by the schools.

IMPACT OF THE DECISION

- This amendment means that private unaided schools within a 1 km radius of a government or government-aided school (which receives money from the government) will no longer have to observe the 25% requirement under the RTE Act.
- Instead, students in these neighbourhoods will first be considered for admission into government or aided schools first before diverting them to private schools.
- The amendment may affect the balance between private and government schools, with implications for access to quality education for economically disadvantaged students.
- Concerns have been raised about disadvantaged students being forced to attend government schools, potentially depriving them of better facilities provided by private schools under RTE.

REASONS GIVEN

- The provision has resulted in the enrolment ratio dropping drastically in government schools.
- Private schools and teachers' organisations have highlighted that state governments have often failed to reimburse the fees for students admitted through this quota.
 - ✓ According to Section 12(2) of the RTE Act, the state governments are obligated to reimburse expenses incurred by the school per child or the fee amount, whichever is less.
- Private schools face financial strain due to the lack of reimbursement from state governments for expenses incurred per child.

RIGHT TO EDUCATION (RTE)

- The RTE Act, enacted in 2009, ensures free and compulsory education for children aged 6 to 14.
- The **86th amendment to the Constitution** of India in 2002 provided the right to education as a fundamental right under **Article 21 A** (Part III).
- The RTE Act, 2009 was enacted to give effect to the fundamental right enshrined in Article 21-A.

CONSTITUTIONAL BACKGROUND

- Originated from part IV, Article 45, and Article 39(f) of DPSP, which included provisions for state-funded education that aimed to ensure equitable and accessible education.
- Ramamurti Committee Report (1990), Tapas Majumdar Committee (1999), and the Supreme Court's verdict in the **Unnikrishnan JP case** (1993) were pivotal in recognising education as a fundamental right.

ACHIEVEMENTS OF RTE

- **Increased Enrolment & Inclusivity:** One of the primary achievements of the RTE Act is the significant increase in enrolment rates across the country, especially among marginalized and disadvantaged communities.
- **Improved Infrastructure:** The act stipulates that all schools must adhere to certain infrastructure norms, such as having adequate classrooms, playgrounds, libraries, and toilets.
- The Government has launched an integrated school education scheme called **Samagra Shiksha Abhiyan (SSA)**, which replaces three previous schemes.

- ✓ Sarva Shiksha Abhiyan (SSA)
- ✓ Centrally Sponsored Scheme on Teacher Education (CSSTE)
- ✓ Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
- More than 3.3 million admissions under the 25% quota norm.
- Removal of “no detention policy” for enhanced accountability.

LIMITATIONS

- Age group covered (6-14 years) limits inclusivity.
- Lack of focus on learning outcomes, as shown by **ASER (Annual Status of Education Report)**.
- Non-compliance in some states and teacher shortages.
 - ✓ According to UNESCO’s State of the Education Report for India, India has nearly 1.2 lakh schools with just one teacher each.
- **Infrastructure Deficiencies:** Despite the mandate for schools to adhere to certain infrastructure norms, many schools still lack basic facilities such as classrooms, libraries, toilets, and clean drinking water, particularly in rural and remote areas.
- **Funding Constraints:** Adequate funding is essential for the effective implementation of the RTE Act. However,

budgetary allocations for education have often been inadequate, leading to resource shortages and compromises in the quality of education provided.

WAY FORWARD

- **Emphasis on Quality Education:** Implement measures to enhance the quality of education, including curriculum reforms, development of standardized teaching materials, and adoption of innovative teaching methodologies.
- **Teacher Training Programs:** Offer training programs, workshops, and professional development opportunities to ensure that educators are equipped with the necessary skills and knowledge to deliver quality education.
- **Community Engagement:** Foster collaboration between schools, communities, and local authorities to promote ownership and accountability in the education system.
- **Better Funding:** While adequate funding is essential for the effective implementation of the RTE Act, the education expenditure has **remained constant at 2.9% of GDP**. Thus, there is an urgent need to **increase the education outlay to 6% of GDP** as recommended by the National Education Policy (NEP) 2020.

3.4. NATIONAL BIRTH DEFECT AWARENESS MONTH 2024

Context

NITI Aayog launches National Birth Defect Awareness Month 2024.

BACKGROUND

- This campaign is an effort for observing Birth defect day, which is observed on **3rd of March every year** and it is an initiative in raising awareness for all birth defects.

About Congenital Disorder (CD)

- It also known as a birth defect that occur while the baby is still in the womb.
- In India, congenital malformations and genetic disorders are the third most common cause of mortality in newborns in urban areas.
- Types of Congenital Disorders:
 - ✓ Chromosomal Birth Defects (CBD): Eg. Down’s syndrome
 - ✓ Biochemical Birth Defects (BBD)
 - ✓ Anatomical Birth Defects (ABD): The common types of ABDs are heart defects, cleft palate, clubfoot and congenital dislocated hip.
- Treatment:
 - ✓ Gene Therapy
 - ✓ Surgery
 - ✓ Enzyme replacement therapy
 - ✓ Prenatal treatment

Six percent of children are born with Birth Defects every year worldwide.

THEME

- “**Breaking Barriers: inclusive support for children with birth defects**”.

DATA

- Birth Defect **contributes to 4.9% defects of neonatal mortality**.
- India has witnessed a significant reduction in the child mortality since inception of **National Health Mission**.
- Presently the Neonatal mortality rate is **20 per 1000 live births**, Infant mortality rate is **28 per 1000 live births** and Under 5 mortality rate is **32 per 1000 live births** as per Sample Registration System 2020 Report released on 22nd September 2022 by Registrar General of India (RGI).

OTHER HELPING BODIES FOR CAMPAIGN

- **Mobile Health teams**
- **District Early Interventions teams**
 - ✓ These bodies ensures child health and work for successful implementation of **Rashtriya Bal Swasthya Karyakram (RBSK)**.

PREVENTION

- A woman can make many alterations in her lifestyle for lowering down her chances of having a child with a birth defect. Some steps one can take throughout pregnancy include:
 - ✓ Quit smoking
 - ✓ Maintain a healthy weight
 - ✓ Keep **folic acid** in check
 - ✓ Avoid exposure to alcohol and drugs during pregnancy

- ✓ Avoid harmful substances like lead, pesticides and radiation

RASHTRIYA BAL SWASTHYA KARYAKRAM (RBSK)

- This program involves screening of children from **birth to 18 years of age for four Ds- Defects at birth, Diseases, Deficiencies and Development delays**, spanning 32 common health conditions for early detection and free treatment and management, including surgeries at tertiary level.

3.5. INTERNATIONAL WOMEN’S DAY

Context

International Women’s Day (IWD), celebrated annually on March 8, to acknowledge the social, economic, cultural, and political achievements of women.

INTERNATIONAL WOMENS’S DAY 2024

- The event will bring together the **United Nations system, Member States**, civil society organisations, youth groups and others to emphasize the critical actions required to **bridge gender gaps**.
- The **United Nations** has designated **theme** for International Women’s Day 2024 is **Investing in women: Accelerate progress**.

Women’s Rights and World Peace.

WHY MARCH 8?

- **Russian women** protested the possibility of a World War (1914 to 1918) on **February 23, 1913**, as per the **Julian calendar** that was then in use in Russia. According to the **Gregorian calendar** that **date translated as March 8** and set a global benchmark and rallies began to be held on the day in many countries.

BACKGROUND

Colour of International Women Day	Significance
Purple	Justice and Dignity
Green	Hope
White	Purity

SIGNIFICANCE

- It serves as a platform to promote gender equality by **advocating for equal participation** in social, economic, cultural, and political spheres, ensuring that all members of society have equal rights.
- IWD nurtures a sense of **global solidarity** among women and girls, transcending their diverse cultural and background differences.
- International Women’s Day (IWD) serves as both a **mirror reflecting our progress and a declaration of commitment** to the ongoing voyage toward women’s empowerment and gender equality.

International Women’s Day (IWD) is not only a celebration of the remarkable contributions and sacrifices made by women but also a poignant reminder of the persistent battle for gender equality. On this day, we pause to contemplate the strides we’ve taken toward women’s empowerment, while also reaffirming our dedication to tackling the challenges that women continue to encounter worldwide

- The **first National Women’s Day** was observed in the **United States on February 28, 1909**, which was organized by the **Socialist Party of America** to commemorate the 1908 garment workers’ strike in New York.
- In **1910, Clara Zetkin** proposed International Women’s Day at the **International Women’s Conference in Copenhagen** which arose from the **labour movements** in North America and Europe.
- As a result of the decision taken at Copenhagen the previous year, International Women’s Day was marked for the **first time (19 March) in several European countries**.
- The **United Nations** began celebrating the **day in 1975**, and two years later, in 1977, the UN General Assembly invited member states to proclaim **March 8 as the UN Day for**

3.6. MAHTARI VANDAN YOJANA

Context

Recently, Prime Minister launched Mahtari Vandan Yojana scheme in Chhattisgarh.

ABOUT MAHTARI VANDAN YOJANA

- It is a financial assistance scheme **for married women**.
- Eligible beneficiaries will receive an annual sum of ₹12,000, disbursed in monthly instalments of ₹1,000 directly to their bank accounts.
- **Eligibility:**
 - ✓ Must be a female resident of Chhattisgarh.
 - ✓ Must be married, widowed, divorced, or abandoned.
 - ✓ Must be 21 years of age or older as of January 1, 2024.
- Women receiving less than ₹1,000 per month from other pension schemes will get additional funds to bring their total monthly pension to ₹1,000.

OBJECTIVES

- To maintain the self-reliance of women and continuous improvement in the health and nutritional status of their dependent children.
- Makes women more financially independent and promotes gender equality.

- To encourage effective role of women in decision making at family level.

CHALLENGES

- **Strain on Exchequer:** The scheme may require a significant amount of government funding, which could put a strain on the national budget. This could lead to cutbacks in other important areas.
- **Illiteracy and Patriarchal Society:** If beneficiaries are unaware of the scheme or lack the ability to navigate the application process, they may miss out. In patriarchal societies, women, who might be the intended beneficiaries, may be restricted from accessing the scheme's resources.
- **Inefficiency and Corruption:** Bureaucracy and lack of transparency can lead to delays, misuse of funds, and the scheme not reaching those who truly need it.
- **Other initiatives for women's well-being:** Pradhan Mantri Matru Vandana Yojana, Lakhpati Didi, Jan Dhan Accounts, Mudra Loans, Beti Bachao Beti Padhao and Ujjwala.

3.7. FOUNDATIONAL LITERACY AND NUMERACY ASSESSMENT TEST (FLNAT)

Context

The Ministry of Education conducted the Foundational Literacy and Numeracy Assessment Test (FLNAT) as part of the ULLAS - Nav Bharat Saksharta Karyakram across 23 states.

KEY HIGHLIGHTS OF FLNAT

- The FLNAT was held on **17 March 2024** in all districts of each participating State/UT, with the **District Institutes of Education and Training (DIETs)** and Government/aided schools serving as test centres.
- It was held under the **Department of School Education and Literacy (DoSEL)**, Ministry of Education, Government of India.

About DIET

Based on the recommendations of the National Policy of Education (NPE, 1986), the District Institute of Educational Training (DIET) were established across the country to impart training to all concerned officials and it is the only institute of its nature at the district level. The assessment test comprises three subjects - Reading, Writing, and Numeracy.

- This test is developed to evaluate the foundational literacy and numeracy skills of registered **non-literate learners**.

- The test was conducted in **the regional language** of the learners, in line with **NEP 2020's** focus on promoting **multilingualism** and using the mother tongue as the medium of instruction.

NAV BHARAT SAKSHARTA KARYAKRAM (ULLAS)

- Under the **National Education Policy 2020**, the Government of India launched a centrally sponsored scheme called the **New India Literacy Program (Nav Bharat Saksharta Karyakram)**, popularly known as **ULLAS (Understanding of Lifelong Learning for All in Society)**.

DIKSHA Portal (Digital Infrastructure for Knowledge Sharing)

- It was launched in 2017, as a national platform for school education, under **National Council for Educational Research and Training (NCERT)**.
- Its vision is to transform the way education by leveraging technology and innovation.

- This scheme is launched for a period of **five years, from 2022- 2027**.
- The objective of the scheme is to impart basic education, digital and financial literacy and critical life skills to **citizens aged 15 and above** who have not had the opportunity to educate themselves and to enable them to contribute to the growth of the country.
- The learners are encouraged to access the content in **regional languages** on Education for All on the **DIKSHA Portal** as well as through the **ULLAS mobile app**.
- Scheme emphasis on the vision of '**Viksit Bharat**' and '**Jan Jan Saakshar Bharat**'.
- Viksit Bharat envisions transforming India into a **developed nation by 2047**.

3.8. CENTER HOUSING PROGRAM FOR PVTGS

Context

The center housing program for tribal groups is facing difficulties since there is little data on the membership of particularly vulnerable tribal groups.

KEY HIGHLIGHTS OF THE NEWS

- Trying to collect the data on possible beneficiaries while simultaneously implementing the project, is slowing down the housing component of **PM Janjati Adivasi Nyay Maha Abhiyaan (PM-JANMAN)**.
- The government had set a target of sanctioning 2.5 lakh by February 15. But only 1.59 lakh houses could be **sanctioned**.

ABOUT PM-JANMAN:

- **Announced in:** Budget 2023-24
- **Launched in:** 2023 (The scheme has been launched on the occasion of Jan Jatiya Gaurav Diwas on November 15, 2023).
- **Nodal Department:** Ministry of Tribal Affairs

OBJECTIVE



ABOUT PARTICULARLY VULNERABLE TRIBAL GROUPS (PVTG)

- In India, Tribal societies can be distinguished by primitive features, distinct culture, geographical isolation, shyness, and backwardness.
- The Government of India initiated to identify the most vulnerable tribal groups as a separate category
- **In 1973**, the **Dhebar Commission** established Primitive Tribal Groups (PTGs), which are more vulnerable and less developed among the tribal groups.
- One the basis of commission **such 52 such Primitive Tribal Groups was listed**, while in 1993 an additional 23 groups were added to the category.
- **In 2006**, the Government of India renamed PTGs to Particularly Vulnerable Tribal Groups (PVTGs).
- According to Census 2011, there are 75 PVTGs among 705 Scheduled Tribes distributed across 18 states and one **Union Territory (UT)**.
- **Odisha (13)** has the highest number of PVTGs, followed by Andhra Pradesh (12).
- The PVTG of **Sahariyas** has the highest population whereas the PVTGs of **Sentineles (only 20)** and **Andamanese** has a very small population.

Criteria for identification of PVTGs:

According to the Debar commission recommendation PVTGs can be identified on the basis of:

- Pre-agricultural level of technology
- Low level of literacy
- Economic backwardness
- A declining or stagnant population accordingly.

3.9. POSHAN PAKHWADA 2024

Context

Sixth Poshan Pakhwada 2024 is going to be organized **9th March till 23rd March, 2024**.

WHAT IS POSHAN PAKHWADA?

- It aims to raise awareness about the importance of nutrition and promote healthy eating habits through **Jan Andolan** and **Jan Bhagidari**.
- To inculcate healthy eating habits and mass sensitization towards the same, Jan Andolans are being celebrated annually in the form of **Poshan Pakhwada** and **Poshan Maah** since the launch of **POSHAN Abhiyaan in 2018**.
- It is celebrated annually by **Ministry of women and Child Development**.

THEMES OF THE POSHAN PAKHWADA 2024

- The focus of **mass sensitization** and community activities would be around the following main themes:
 - ✓ **Poshan Bhi Padhai Bhi** (PBPB) - towards better Early

Childhood Care and Education (ECCE)

- ✓ Tribal, Traditional, Regional and Local dietary practices focused on sensitization around nutrition
- ✓ Health of **pregnant women & Infant and Young Child Feeding** (IYCF) practices.
- States, Union Territories and partner ministries/ departments will conduct following initiative:
 - ✓ Sensitisation activities covering other vital areas such as improving nutrition through **Mission LiFE**.
 - ✓ Promoting sustainable food systems by **advocating for millets**.
 - ✓ Encouraging the adoption of healthy lifestyles through **Ayush practices**.
 - ✓ Focused activities around Water, Sanitation and Hygiene (**WaSH**) and Diarrhoea management.

4.1. DAIRY SECTOR IN INDIA

Context

Recently, the Prime Minister participated in the Golden Jubilee celebration of the Gujarat Cooperative Milk Marketing Federation (GCMMF). GCMMF owns the AMUL dairy brand.

MORE ON THE NEWS

- The Prime Minister set the target for Amul to become the world's largest dairy sector brand from currently eighth.
 - ✓ According to the International Farm Comparison Network (IFCN), Amul is presently the 8th largest milk processor in the world.
- GCMMF has emerged as the country's most prominent FMCG (fast-moving consumer goods) organisation, with the Amul brand set to achieve a turnover of Rs 80,000 crore.

HISTORY OF AMUL & GCMMF

- In 1946, angered by the exploitation of the middlemen, the Kaira District Co-operative Milk Producers' Union Limited was formed in the town of Anand (Khaira district) under the leadership of **Tribhuvandas Patel** and with the support of **Morarji Desai** and **Sardar Vallabhbhai Patel**.
- In 1955, **Amul (Anand Milk Union Limited)** was formed as a brand name to market the dairy products produced by the cooperative.
- The success of the dairy co-operative movement spread rapidly in Gujarat and within a short span five other district unions – Mehsana, Banaskantha, Baroda, Sabarkantha and Surat were organized.
- In order to combine forces and avoid competition against each other, an **apex marketing body of dairy cooperative unions** – GCMMF was formed in **1973** with the assistance of **Dr. Verghese Kurien** and **Shri H.M. Dalaya** and the brand name AMUL was transferred to GCMMF.
- Currently, the GCMMF has 18 District Co-operative Milk Producers' Union as its members, covering more than 3.6 million farmers across 18,600 village milk cooperative societies in Gujarat.

WHITE REVOLUTION (OPERATION FLOOD)

- Impressed with the success of AMUL model of dairy cooperatives, then Prime Minister Shri Lal Bahadur Shastri visited Anand in 1964, and asked Dr. Verghese Kurien to replicate the Amul-type dairy cooperatives all over India.
- Thus, the **National Dairy Developed Board (NDDB)** was formed in 1965 under the chairmanship of Dr. Kurian and

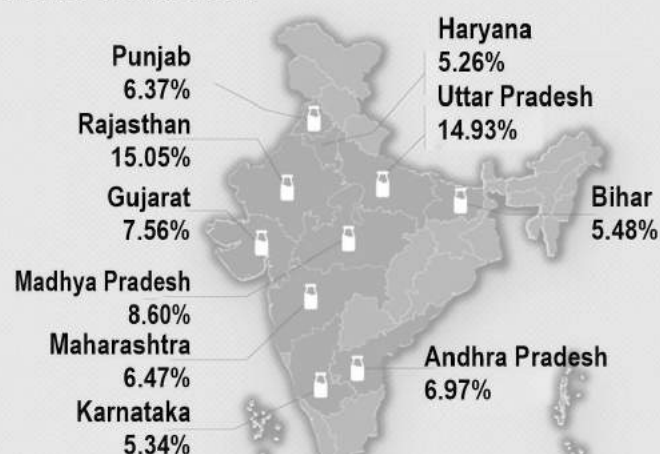
Operation Flood Programme was launched for replication of the Amul Model all over India.

- Operation Flood, launched in 1970 by NDDB, was the **world's largest dairy development program**.
- It created a **national milk grid** linking milk producers throughout India with consumers in towns and cities. It resulted in making India the largest producer of milk and milk products in the world.
- **Objectives of Operation Flood** included –
 - ✓ Increasing milk production
 - ✓ Augmenting rural incomes
 - ✓ Ensuring fair prices for consumers
- **Operation Flood was implemented in three phases:**
 - ✓ Phase I (1970–1980); Phase II (1981–1985); Phase III (1985–1996)

OVERVIEW OF THE DAIRY SECTOR IN INDIA

- India is the **largest producer of milk globally**, contributing **24.64% of the world's total milk output** in the year 2021-22.
- The industry contributes **5% to the national economy**. With nearly 300 million cattle, it directly supports over **8 crore farmers**.

Milk Production



Source: India Today

- The top 5 milk-producing states are **Rajasthan (15.05%)**, Uttar Pradesh (14.93%), Madhya Pradesh (8.6%), Gujarat (7.56%)

and Andhra Pradesh (6.97%). Together, they contribute 53.11% of the total milk production in the country.

- Over the past nine years (from 2014-15 to 2022-23), India's milk production has increased by 58%, reaching 230.58 million tonnes in 2022-23.

GOVERNMENT INITIATIVES TO SUPPORT THE DAIRY SECTOR

- **Rashtriya Gokul Mission (RGM):**
 - ✓ The RGM aims to conserve and develop indigenous cattle breeds, enhance their productivity, and promote sustainable breeding practices.
 - ✓ It focuses on establishing Gokul Grams (cattle villages) and strengthening existing infrastructure for cattle rearing.
- **National Programme for Dairy Development (NPDD):**
 - ✓ The NPDD supports dairy development through various interventions, including breed improvement, feed management, and capacity building.
 - ✓ It aims to enhance milk production, improve milk quality, and empower dairy farmers to promote **White Revolution 2.0**.
- **Dairy Processing and Infrastructure Development Fund (DIDF):**
 - ✓ DIDF provides financial assistance to modernize and expand dairy processing infrastructure.
 - ✓ It encourages private investment in dairy processing plants, cold chains, and value-added product manufacturing.
- **Supporting Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activities (SDCFPO):**
 - ✓ This initiative promotes cooperative models and strengthens farmer-producer organizations (FPOs) engaged in dairy activities.
 - ✓ It facilitates collective marketing, procurement, and value addition.
- **National Livestock Mission (NLM):**
 - ✓ NLM focuses on livestock development, including cattle, buffaloes, sheep, goats, and poultry.
 - ✓ It aims to improve livestock productivity, health, and overall livelihoods of livestock-dependent communities.
- **Lumpi-ProVacind:**
 - ✓ It is an indigenously developed vaccine used for the prophylactic immunization of animals against Lumpy Skin Disease. It will provide protection for about one year.
- **Animal Husbandry Infrastructure Development Fund (AHIDF):**
 - ✓ AHIDF provides financial support for infrastructure development in animal husbandry.
 - ✓ It includes projects related to cattle sheds, fodder storage, veterinary hospitals, and breeding centres.
- **Livestock Health and Disease Control Programme (LH&DCP):**

- ✓ LH&DCP combines the erstwhile Livestock Health and Disease Control Scheme with the National Animal Disease Control Programme.
- ✓ It focuses on preventing and controlling livestock diseases, enhancing vaccination coverage, and improving animal health.

CHALLENGES FOR DAIRY SECTOR

- **High Cost of Milk Production:** Indian cattle have lower milk yield compared to other countries. Factors like improper feed, water management, and housing contribute to lower yields.
- **High Cost in Milk Handling and Marketing:** Limited dairy penetration in India leads to multiple intermediaries in the milk supply chain. It leads to an increase in the cost of Handling and Marketing.
- **Poor Quality Milk:** Unhygienic conditions in animal farms and dairies lead to poor milk quality. Foreign export potential is hindered due to high microbial counts in milk.
- **Limited Penetration of High-Yielding Animals:** Limited penetration of crossbreeds and high-yielding animals contributes to lower milk production.
- **High Disease Burden:** Recent disease outbreaks such as Lumpy skin disease (LSD) affect cattle health and productivity. It causes economic losses due to reduced milk production, hide damage, and mortality.
- **Infrastructure Challenges:** Lack of road connectivity and poor infrastructure hinders raw milk supply to processing facilities.
- **Lack of Knowledge and Modern Techniques:** Integrated supply chain knowledge is lacking among dairy farm owners. Dairy farms lack awareness about modern scientific farming techniques and clean milk production.
- **Low Returns on Investment:** Low growth rate, lack of reliable milk production data, and insufficient research deter investors from investing in the dairy sector.

WAY FORWARD

- **Focus on High-Yielding Breeds:** Encourage the adoption of high-yielding breeds like Holstein-Friesian or Jersey.
- **Strengthen Cooperatives:** Empower farmers through cooperatives like the successful Amul model in Gujarat.
- **Empower Farmers:** Provide education and resources through initiatives like the Dairy Entrepreneurship Development Scheme (DEDS).
- **Streamline Milk Handling:** Reduce intermediaries, and implement technology solutions such as chiller units for efficient milk collection.
- **Invest in Research:** Support R&D for new breeds and farming technologies.
- **Strengthen Regulations:** Enforce hygiene standards to ensure milk quality, and consumer safety and to boost exports.

4.2. NATIONAL URBAN COOPERATIVE FINANCE AND DEVELOPMENT CORPORATION LIMITED

Context

The Minister of Cooperation recently inaugurated the National Urban Cooperative Finance and Development Corporation Limited (NUCFDC). It will serve as an umbrella organisation for urban cooperative banks.

MORE ON THE NEWS

- The Minister of Cooperation said that setting up of the umbrella organization is another milestone in achieving the goal of 'Sahakar se Samridhi' to make 'Aatma Nirbhar' Bharat.
- This initiative aims to modernize and strengthen India's Urban Cooperative Banking Sector, thus ultimately benefiting both the banks and their customers.
- A major role of the NUCFDC is to prepare small banks for compliance with the Banking Regulation Act.

ABOUT NUCFDC

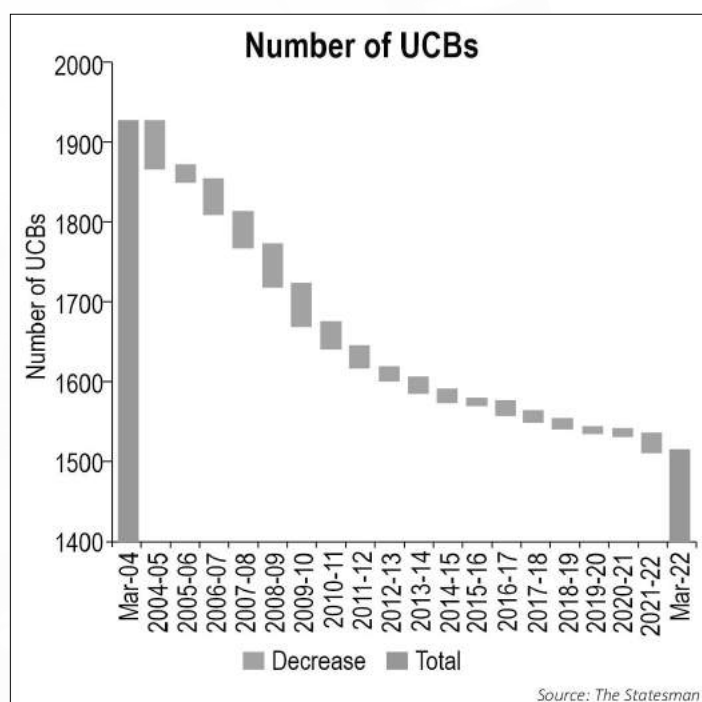
- The NUCFDC has obtained a Certificate of Registration (CoR) from the Reserve Bank of India. It will function as a **Non-Banking Finance Company (NBFC)** and act as the overarching body for the urban cooperative banking sector.
- It has been authorised to operate as a Self-Regulatory Organization (SRO) for the sector. It will facilitate improved communication between banks and regulatory bodies.
- It will ensure specialised functions and services to cooperative banks, addressing challenges such as technology constraints and issues regarding range of services.
- The NUCFDC plans to raise capital of Rs. 300 crores. It intends to utilize this capital to support Urban Cooperative Banks and develop a technology platform that can be shared by all UCBs, enabling them to widen their range of services at a relatively lower cost.
- Additional services to be offered by NUCFDC include fund management and consultancy services.

ABOUT URBAN COOPERATIVE BANKS (UCBS)

- The urban cooperative banking movement in India originated in the late 19th century. It was mainly inspired by **British and German** cooperative movements
- Urban Co-operative Banks (UCBs) refers to primary cooperative banks in urban and semi-urban areas.
- They are registered as cooperative societies under the provisions of either the **State Cooperative Societies Act** of the State concerned or the **Multi-State Cooperative Societies Act of 2002** if the area of operation of the bank extends beyond the boundaries of one state.
- UCBs are under the dual control of RBI and the State/Central Registrar of Societies.
 - ✓ The RBI exercises control over their banking-related functions under the provisions of the Banking Regulation

Act of 1949, whereas the management-related functions are regulated and supervised by the Registrar of Cooperative Societies (RCS) of the State concerned or by the Central Registrar of Cooperative Societies (CRCS), as the case may be.

- ✓ The RBI has been vested powers to issue licences to UCBs under Sections 22 and 23 of the Banking Regulation Act, 1949 to carry on banking business and to open new places of business.
- In 1968, UCBs were extended the benefits of Deposit Insurance under the Deposit Insurance and Credit Guarantee Corporation (DICGC).



- These banks were allowed to lend money only for **non-agricultural** purposes till 1996. However, this distinction doesn't hold today.

STRUCTURE OF UCBS

- The RBI-appointed **N. S. Vishwanathan** committee (2021) suggested categorisation of Urban Cooperative Banks (UCBs) into four tiers for regulatory purposes:
 - ✓ Tier 1: UCBs with deposits up to Rs 100 crore.
 - ✓ Tier 2: UCBs with deposits between Rs 100 crore and Rs 1,000 crore.

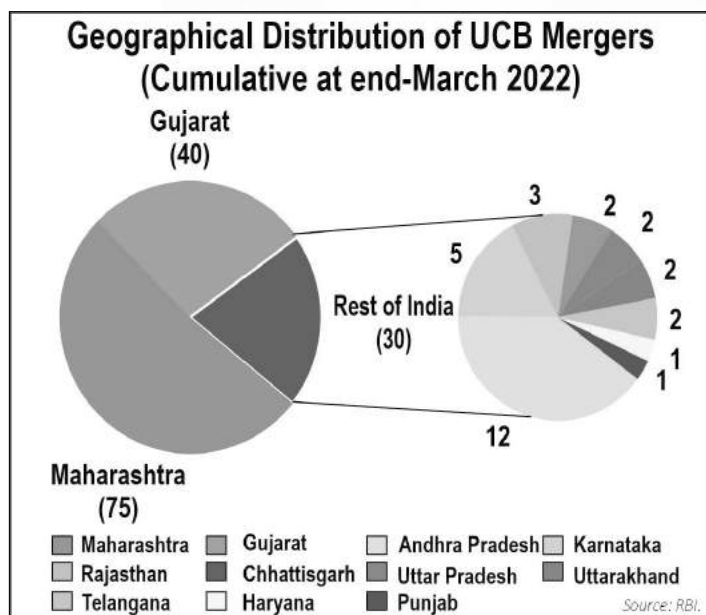
- ✓ Tier 3: UCBs with deposits between Rs 1,000 crore and Rs 10,000 crore.
- ✓ Tier 4: UCBs with deposits exceeding Rs 10,000 crore.
- Additionally, the minimum capital-to-risk-weighted Assets Ratio (CRAR) for UCBs can vary from 9% to 12%.

KEY FEATURES OF COOPERATIVE BANKS

- **Customer Ownership:** Cooperative banks operate under the ownership of their customers, who are also members of the bank.
- **Democratic Governance:** Members democratically elect a board of directors to oversee the bank's operations. Each member typically has equal voting rights, following the principle of "one person, one vote."
- **Profit Distribution:** Cooperative banks allocate a portion of their profits to maintain a reserve and may distribute a share of profits among their members.
- **Financial Inclusion:** Cooperative banks play a crucial role in providing financial services to unbanked populations, contributing significantly to financial inclusion efforts.

CHALLENGES

- **Financial Struggles:** Cooperative banks have struggled financially, causing distress among depositors. For example, Punjab and Maharashtra Co-operative Bank (PMC) crisis.



- **Evolving Financial Sector:** The rise of FinTech and other integrated financial services providers poses a threat to the smaller, less diversified UCBs.
- **Declining Loans and Deposits:** Cooperative banks are experiencing a rapid decline in both loans and deposits, indicating a weakening financial position.
- **Uneven Geographic Distribution:** Urban Cooperative Banks (UCBs) are heavily concentrated in states like Maharashtra, Gujarat, Karnataka, Andhra Pradesh, and Tamil Nadu, comprising over 80% of their presence.
- **Lack of Investment Policies:** Many UCBs operate without formal investment policies, relying on self-experience and RBI guidelines. However, instances of non-compliance, such as investing with fake brokers, have led to significant losses.
- **Regulatory Multiplicity:** UCBs are subject to regulation by both the RBI and Registrar of Cooperative Societies, hindering efficient operations.
- **Absence of Clear Loan Policies:** Many UCBs lack clear loan policies and pre-credit appraisals. It results in mismanagement and increased risk of non-recovery of loans, leading to high non-performing assets (NPA).

WAY FORWARD

- UCBs should adopt modern methods like Internet banking, mobile banking, and ATMs while innovating to attract and retain customers.
- Licensing of new Urban Cooperative Banks (UCBs) should be impartial, without favouring any specific class or community.
- Recommendations of the **N. S. Vishwanathan** committee (2021) on regulation and consolidation of UCBs must be implemented
- Regular nominations of new board directors to inject fresh perspectives and aid innovation.
- UCBs should increase women's membership and offer opportunities to marginalised communities as borrowers or depositors.
- Banks should provide low-interest loans to benefit low-income groups and prioritise customer remittances.
- Urban banks should be allowed to distribute higher dividends and issue more shares to new members due to increased profitability.
- Review of loan recovery processes under the Multi-State Cooperative Societies Act, 2002, is essential to address loan recovery issues faced by UCBs.

4.3. HOUSEHOLD CONSUMPTION EXPENDITURE SURVEY 2022-23

Context

Recently, Household Consumption Expenditure Survey (HCES), 2022-23, has been released by the National Sample Survey Office (NSSO).

KEY HIGHLIGHTS OF THE SURVEY

- HCES 2022-23 is the first major survey-based data released since 2011-12 that captures ground realities at the household level.
- According to it, the average estimated **Monthly Per Capita Consumption Expenditure (MPCE)** in 2022-23 has been Rs. 3,773 in rural India and Rs. 6,459 in urban India.

About HCES

- HCES is usually conducted quinquennially, i.e. every five years. However, the results of the last such consumption survey in 2017-18, along with a similar employment survey, were abandoned with the government citing "quality issues" with the data.
- It is conducted by the **National Sample Survey Office (NSSO)**, which falls under the National Statistical Office and is part of the Ministry of Statistics and Programme Implementation.
- The survey covers the whole of India except for a few inaccessible villages in the Andaman and Nicobar Islands.

- The bottom 5% of India's rural population, ranked by MPCE, has an average MPCE of Rs. 1,373, while it is Rs. 2,001 for the same category of population in the urban areas.
- The top 5% of India's rural and urban population, ranked by MPCE, has an average MPCE of Rs. 10,501 and Rs. 20,824, respectively.
- Among the states, MPCE is the **highest in Sikkim** for both rural and urban areas (Rural – Rs. 7,731 and Urban – Rs. 12,105). It is the **lowest in Chhattisgarh** (Rural – Rs. 2,466 and Urban – Rs. 4,483).
- The rural-urban difference in average MPCE among the states is the highest in **Meghalaya** (83%) followed by **Chhattisgarh** (82%).
- Among the UTs, MPCE is the **highest in Chandigarh** (Rural – Rs. 7,467 and Urban – Rs. 12,575), whereas it is the lowest in **Ladakh** (Rs. 4,035) and **Lakshadweep** (Rs. 5,475) for rural and urban areas respectively.

Trend in level of Consumption since 1999-00: All-India

Sector	Average MPCE (Rs.) over different period				
	1999-'00 NSS (55 th round)	2004-05 NSS (61 st round)	2009-10 NSS (66 th round)	2011- 12 NSS (68 th round)	2022- 23
Rural	486	579	1,054	1,430	3,773
Urban	855	1,105	1,984	2,630	6,459
Difference as % of Rural MPCE	75.9	90.8	88.2	83.9	71.2

Note: For the years 1999-00 & 2004-05, estimates are based on Mixed Reference Period (MRP) and for the years 2009-10, 2011-12 and 2022-23, these are based on Modified MRP (MMRP).

- **Food Spending Trends:** Between 1999-2000 (National Sample Survey 55th round) and 2022-23, the share of expenditure on food has gradually declined for both urban and rural households.
 - ✓ In 2022-23, the share of expenditure on food items in rural India declined to 46.38% from 52.90% in 2011-12. In urban India, the share declined to 39.17% in 2022-23 from 42.62% in 2011-12.

Year	Rural % share of food in MPCE	Urban % share of food in MPCE
1990-2000	59-46	48.06
2004-05	53.11	42.51
2011-12	52.9	42.62
2022-23	46.38	39.17

SURVEY METHOD

- The consumption basket of items has been divided into three broad categories, namely, **(i) Food items, (ii) Consumables and Services items, and (iii) Durable goods** in HCES 2022-23
- A multistage stratified sampling design, considering villages/urban blocks as the first stage units, was used in the survey. The households are the ultimate stage units.
- A simple random sampling without replacement (SRSWOR) method is used to select the samples.
- In order to ensure proper representation of households of different economic categories, all the households of a selected village/urban block are classified into three groups depending on a criterion based on (i) land possessed in rural areas and (ii) possession of a car in urban areas as on the date of the survey.

SIGNIFICANCE OF THE SURVEY

- **Policy Formulation Support:** It helps collect essential data for designing targeted subsidies, social welfare programs, and tax adjustments.
- **Living Standards Assessment:** It helps assess living standards and quality of life through household expenditure analysis.
- **Economic Assessment:** It generates Key data for economists to analyse consumption patterns, indicating economic stability, growth, and wealth distribution.
- **Poverty and Inequality Measurement:** It provides Vital information for measuring poverty levels, identifying vulnerable groups, and understanding income inequality.
- **Inflation and Cost Tracking:** It contributes to inflation rate calculation and cost of living indexes for effective monetary policy formulation.

CHALLENGES IN SURVEYING

- **Data Quality Concerns:** The discontinuation of the 2017–18 Survey due to issues regarding data quality raised significant concerns.
- **Dismissal of Findings:** In 2019, reports indicating a decline in consumer spending in the 2017–18 Survey were dismissed by the government.
- **Divergence with Administrative Data:** Notable disparities were observed in consumption patterns compared to other administrative data sources, such as actual production data.
- **Inadequate Capture of Social Services:** Concerns were raised regarding the survey's capability to accurately capture household consumption of social services, particularly in health and education.
- **Underreporting** Challenges persist in ensuring accurate reporting of consumption expenditure, often resulting in underestimation or recall bias.
- **Sampling Issues:** Ensuring that the survey sample adequately represents India's diverse population with

varying socio-economic and cultural backgrounds remains a complex task.

- **Variability:** The survey faces difficulties in capturing seasonal expenditure variations and addressing regional disparities effectively.

WAY FORWARD

- **Enhance Data Quality:** Implement robust quality control measures to ensure reliable and accurate survey data.
- **Refine Survey Methodology:** Continuously improve survey methods, especially in capturing social service consumption.
- **Capacity Building:** Provide training to surveyors to address underreporting and recall bias in expenditure reporting.
- **Enhance Sampling Strategies:** Improve sampling techniques to better represent India's diverse population.
- **Integrate Data Sources:** Explore integrating survey data with administrative sources for validation.
- **Adapt to Variability:** Develop strategies to address seasonal expenditure variations and regional disparities.

4.4. WTO AND INDIA'S FOODGRAIN SUBSIDY

Context

Recently, Thailand's ambassador to the World Trade Organisation (WTO) targeted the Public Stockholding (PSH) programme of India at the 13th Ministerial Conference (MC) of the WTO held in Abu Dhabi (UAE).

MORE ON THE NEWS

- During the **13th MC of WTO**, Thailand's ambassador argued that India's Public Distribution System (PDS), under which the government procures essential food items from producers and sells them to the public at low rates, is not for the people but for "capturing" the export market.
- Thailand has consistently held India's PSH programme as highly subsidized, thus distorting global food prices and undermining the food security of other nations.
 - ✓ Trade distortion is a situation where prices and production are higher or lower than levels that would usually exist in a competitive market.
 - ✓ As per WTO, nearly all domestic support measures are considered to distort such trade, but they are permitted to a certain limit called the '**de minimis**' limit.
- After India, Thailand ranks as the world's **second-largest rice exporter**.
 - ✓ Thailand is a member of the Cairns Group (20 Member Countries), which includes rice-exporting countries such as Vietnam, Australia, Brazil, Canada etc.
 - ✓ This coalition advocates for the liberalisation of global agricultural trade by abolishing **export subsidies** and trade-distorting ("**amber box**") domestic support for agricultural products.

- India's export of non-basmati rice grew about 360% from 1.38MMT in FY2020 to about 6.40MMT in FY2023.
- At the same time, India became the top rice exporter, including basmati and non-basmati varieties, accounting for about 40% of the global rice trade in 2022.

ABOUT WTO & ITS SUBSIDIES

- **Establishment:**
 - ✓ The WTO was established on January 1, 1995. It succeeded the General Agreement on Tariffs and Trade (GATT), which was formed in 1948.
 - ✓ **Headquarters:** Geneva, Switzerland.
- **Objectives:**
 - ✓ Facilitate international trade by promoting fair and transparent trade practices.
 - ✓ Create a conducive environment for economic growth and development.
 - ✓ Ensure that member countries respect and adhere to trade agreements.
- **Membership:**
 - ✓ It currently has 164 members, including the European Union.
 - ✓ Membership is open to any state or customs territory that agrees to adhere to WTO rules and regulations.
- **Subsidies Under WTO:**

Green Box	Amber Box	Blue Box
Subsidies that do not distort trade, or cause minimal disruption. No limit.	Broad range of subsidies. Limited to 5% of agricultural production (10% for developing countries)*.	Broad range of subsidies allowed but must be designed to minimise trade distortion No limit.

CHALLENGES TO INDIA'S SUBSIDIES AT WTO

- As per the WTO's **Agreement on Agriculture (AoA)**, product-specific support **should not exceed 5%** of the total production value of the agricultural product.
 - ✓ However, for developing nations like India, the '**de minimis**' ceiling is **10%**.
- India notified the WTO that its rice production value in 2019-20 stood at \$46.07 billion. However, the subsidies provided amounted to \$6.31 billion, accounting for 13.7%, exceeding the permitted 10%.
- This breach of de minimis limit in the case of rice has angered other exporters such as Thailand, as they are finding it difficult to compete with Indian rice and losing the global export market share to India.
- However, India has questioned the way subsidies are calculated at the WTO, saying it is calculated at a fixed and outdated 1986-88 price, which overestimates the subsidy.
- India has consistently emphasised that developed countries like the US and EU (European Union) provide more subsidies to their farmers than India.
 - ✓ The Indian government provides a subsidy of \$300 per farmer, whereas in the US, the subsidy amounts to \$40,000 per farmer.

Understanding the Peace Clause

- Definition:**
 - ✓ Article 13 of the Agreement on Agriculture includes the Peace Clause.
 - ✓ It validates export subsidies and support measures offered to their producers by WTO members.
- Legal Validity:**
 - ✓ Subsidies and support measures covered under the Peace Clause cannot be legally challenged as illegal under other WTO agreements.
- Protection for Developing Countries:**
 - ✓ It was put in place in 2013 under the **Bali Agreement** to protect developing countries from being challenged for breach of subsidy levels.
 - ✓ If a developing country exceeds prescribed subsidy ceilings, other WTO members are barred from initiating action against it at the WTO's dispute settlement forum.

PURPOSE OF INDIA'S PROCUREMENT

- India's foodgrain procurement aims to fulfil commitments under the **National Food Security Act** and other welfare schemes.
- The objective is to ensure food security for a significant portion of the population, not to distort global food trade.
- India has cited the rising number of farmer suicides, crop failures, financial distress and food security as grounds for providing MSP to farmers for public procurement and stockholding.

NEED FOR REEVALUATION OF SUBSIDY NORMS

- Inequitable Representation:** Since its inception, the WTO has faced criticism for unequal treatment in trade discussions, often sidelining the Global South and emerging markets.
- Food Subsidy Limitation:** The WTO imposes a restriction wherein a member's food subsidy bill must not exceed 10% of the production value, referencing a price from 1986-88. This disproportionately affects subsidies for agriculture and poor farmers in developing nations.
- Disparity in Food Security:** Unbalanced trade agreements have led to developed nations benefiting more, resulting in stronger food security compared to developing countries.
- Escalating Food Insecurity:** Recent global events such as the COVID-19 pandemic and the Russia-Ukraine conflict have underscored the urgency to reevaluate subsidy norms. Ensuring food and fertilizer security has become increasingly critical.

INDIA'S PROPOSAL

- India insists on a "permanent solution" for the public stockholding issue. It proposes updating the ERP (External Reference Price) period or including inflation in subsidy calculations.
- ERP is the export/import price during the base period (1986-1988). India's MSP is compared to the 1986-1988 average international price of \$262/tonne, despite current prices being higher.
- Post-2013 programs should be included under the **Peace Clause** to address food security concerns effectively.
- However, the 13th Ministerial Conference of WTO ended without any decision on a permanent solution for public stockholding of food.

WAY FORWARD

- Building Alliances:** India can form alliances with other developing countries or regional blocs that share concerns related to agricultural subsidies. This will strengthen its negotiating position and increase the chances of its demands being accepted.

- **Provide Compelling Evidence:** India should provide compelling evidence and data to support its demands, demonstrating the importance and validity of its position.
- **Pushing for Reforms in WTO:** While Indian farmers during their protest demanded India's withdrawal from WTO, India can't afford this as it could pose problems

and restrict India and other developing nations from disciplining the subsidies being given by the developed world.

- **Policy Reform and Rationalization:** Simultaneously, India also needs to reform and rationalize its subsidy programs to ensure they are targeted, effective, and compliant with WTO rules.

4.5. NITI AAYOG'S REPORT ON MSME EXPORT PROMOTION

Context

Recently, the NITI Aayog released a report on boosting exports from Micro, Small and Medium Enterprises (MSMEs).

OVERVIEW OF THE MSME SECTOR IN INDIA

- MSMEs are often referred to as the powerhouse of the Indian economy. They are crucial for employment creation, exports, and overall economic development.
- These enterprises account for more than 11 crore jobs and contribute around 27.0% of India's GDP.
- Approximately 6.4 crore MSMEs operate in India, with 1.5 crore registered on the **Udyam portal**.
- They employ around 23.0% of the Indian labour force, making them the second-largest employer after agriculture.
- MSMEs contribute 38.4% of the total manufacturing output and are responsible for 45.03% of the country's total exports.
- Despite the opportunity for MSMEs to pursue exports, only 0.95% of MSMEs engage in exports
- According to the **2020-21 Annual Report of the Ministry of MSMEs**, the top five states with the highest concentration of manufacturing MSMEs are **Uttar Pradesh, Maharashtra, Tamil Nadu, Karnataka, and Gujarat**.

Udyam Portal

- It is a free online platform launched by the Ministry of MSMEs for registering MSMEs.
- After the adoption of the revised definition of MSMEs in June 2020, the Udyam Registration Portal was launched on 1st July 2020.
- It is fully online, does not require any documentation, and is a step towards Ease of Doing Business for MSMEs.
- Further, it is linked with databases of the Central Board of Direct Taxes (CBDT) and Goods and Services Tax Network (GSTN).

DEFINITION OF MSMEs

- In June 2020, the Finance Ministry revised the definition of Micro, Small, and Medium Enterprises (MSMEs) which is based on investment in plant & machinery or equipment. Additionally, turnover was introduced as another criterion to define an MSME.
- The revised definition also did away with the distinction between manufacturing and services enterprises.

Revised Definition of micro, Small and Medium Enterprises

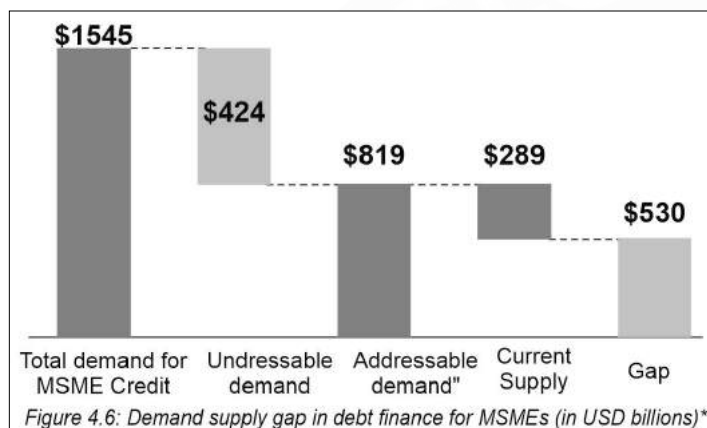
Parameters	Micro	Small	Medium
Investment in Plant and Machinery	< 1 Crore INR	< 10 Crore INR	< 50 Crore INR
Annual Turnover	< 5 Crore INR	< 50 Crore INR	< 250 Crore INR
No. of MSMEs (Based on NSS data)	6.3 Crore	3.3 Lake	5 thousand
No. of MSMEs (Based of Udyam data as on 31 st March 2023)	1.5 Crore	4.6 Lakh	41 thousand

OPPORTUNITIES FOR MSMEs

- **Low-skilled and labour-intensive:** India's comparative advantage lies in low-skilled exports
 - ✓ Indian manufacturing characteristics, such as resources and scale, are better suited for producing low-skilled products that require customisation and labour-intensive methods.
 - ✓ Exporting low-skilled products not only increases the share of merchandise exports but also allows MSMEs to leverage their strengths. It facilitates their growth from micro/small/medium categories to higher ones.
- **Traditional Advantage:** There are two additional reasons to promote the export of Ayurveda, herbal supplements, handloom textiles, and handicrafts.
 - ✓ **Cultural Appeal:** These products are deeply ingrained in Indian culture. This cultural significance gives Indian manufacturers a competitive edge over products from other countries.
 - ✓ **Growing Demand for Natural and Sustainable Products:** An increasing global demand for natural and sustainable products aligns with India's production tradition.

CHALLENGES FOR MSMEs

- **Lack of information:** The biggest challenge Indian MSME exporters face is accessing timely and relevant information regarding merchandise exports and conducting market research.
- **Compliance:** China exported goods worth \$200 billion through e-commerce in 2022, while India's exports through the same channel stood at only \$2 billion. The report attributes this disparity primarily to India's cumbersome export compliance processes.



- **Access to Capital:** Prohibitive capital costs and limited financing options hinder investment and expansion. Out of 6.34 crore MSME units, only 14% have access to credit compared to 30+% in the developed nations.
- **Complex Regulations:** MSMEs face various non-tariff barriers, such as technical regulations standards and certification requirements, making it difficult to access foreign markets.
- **Skill Gap:** Shortage of trained workforce in specialised areas obstructs achieving high-quality production standards.
- **Technological Limitations:** Limited access to advanced technologies and research and development support hamper innovation and progress.
- **Lack of Social Security:** Out of the total 6.34 crore MSMEs, nearly 6.3 crore are microenterprises that have less than 20 workers and hence don't provide social security benefits like provident fund, medical insurance, etc.
- **Rigid Labour laws:** The current policy landscape in India incentivizes MSMEs to remain dwarfed, hindering their ability to reap the benefits of economies of scale. Eg- the Industrial Disputes Act (IDA), 1947 mandates companies with more than 100 employees to get permission from the Government before retrenchment of employees.

GOVERNMENT INITIATIVES TO BOOST MSME EXPORT

- **Support and Guidance:**
 - ✓ **Export Facilitation Centers (EFCs):** A network of 52 EFCs

across India provides MSMEs with crucial mentoring and hand-holding support to navigate the export process.

- ✓ **Enterprise Development Centers (EDCs):** These 102 centres offer professional guidance and support services to existing and aspiring MSMEs, focusing on rural enterprises, to help them become export-ready.
- **Financial Assistance:**
 - ✓ **Remission of Duties and Taxes on Exported Products (RoDTEP):** This scheme reimburses duties and taxes on exported goods, enhancing their price competitiveness in the global market.
 - ✓ **Market Access Initiatives (MAI) Scheme:** This program provides financial assistance for activities such as market research, participation in international trade fairs, and overseas publicity campaigns.
 - ✓ **MSME-MDA (Market Development Assistance) Scheme:** Financial support is offered to MSME export associations for travel expenses, market studies, and participation in anti-dumping cases.
- **Simplifying Procedures:**
 - ✓ **Liberalized Authorized Economic Operator (AEO) Program for MSMEs:** This program provides faster customs clearance for AEO-certified MSMEs, streamlining the export process.

RECOMMENDATIONS IN THE REPORT

- **Establish a One-Stop Information Channel:** Develop a comprehensive AI-based portal under the Ministry of Commerce to provide exporters with all necessary market-related information, including tariffs, paperwork requirements, financing sources, service providers, incentives, and potential customers.
- **Create a National Trade Network (NTN):** Formulate a comprehensive trade portal to streamline the export process, from obtaining licenses to receiving payments, reducing paperwork burdens and delays. A task force under the Ministry of Commerce can oversee the implementation.
- **Promote E-Commerce Exports:** Address hurdles hindering MSME e-commerce exports by differentiating between Exporter on Record (EOR) and Seller on Record (SOR), allowing flexible invoice values, introducing annual financial reconciliation for e-commerce exporters, and facilitating green channel clearance.
- **Facilitate Merchandise Exports:** Extend Ease of Doing Business reforms to export processes, offering MSMEs relaxation from compliance requirements and timely disbursement of incentives.
- **Improve Access to Export Finance:** Encourage uptake of Export Credit Guarantee schemes to enhance working capital availability for MSMEs. The current uptake of ECGC (Export Credit Guarantee Corporation) schemes is only

10%, and the government must create an incentive package to increase it to 50% or more

- **Ensure Accurate Measurement:** Integrate DGFT (Directorate General of Foreign Trade) trade data with GST and income

tax data using PAN numbers to accurately depict MSME exports. Form a committee comprising representatives from relevant ministries to facilitate data sharing while safeguarding confidentiality.

4.6. WORLD POVERTY CLOCK DATA ON POVERTY

Context

According to the World Poverty Clock latest data, India has reduced its population living in 'extreme poverty' to less than 3%.

KEY HIGHLIGHTS OF DATA

- **World:**
 - ✓ **7.8% of the world's population** lives in extreme poverty, i.e. 628 million people.
- **India:**
 - ✓ The clock has taken \$2.15 a day income in Purchasing Power Parity (PPP) terms to present the finding. Accordingly, nearly 3.44 crore people live in extreme poverty in 2024, against 4.69 crore in 2022.
 - ✓ As a share of total population, number of people living in extreme poverty has come down to 2.4 per cent from 3.3 per cent in 2022.
 - ✓ PPP terms allow for global comparisons of economic data, revealing that **94% of those in extreme poverty reside in rural areas**, with the remaining 6% in urban areas.
 - ✓ The Consumer Experience Survey highlights a sharp drop in poverty levels in India in 2022-23, with **urban poverty at 4.6% and rural poverty at 7.2%**.
 - ✓ Real per capita consumption growth has averaged **2.9% per annum since 2011-12**, with rural growth outpacing urban growth at **3.1% compared to 2.6%**.

World Poverty Clock

- It provides a real-time platform to monitor poverty reduction across countries.
- It monitors progress against Ending Extreme Poverty, which is the UN's first Sustainable Development Goal (SDG).
- Funded by the International Fund for Agricultural Development (IFAD) and the Federal Ministry for Economic Cooperation and Development of Germany.
- It shows the number of people living in extreme poverty worldwide, disaggregated by age, gender and rural/urban location.

WHAT IS POVERTY?

- It is the monetary income that one must have to afford the basic amenities of life.
- The **World Bank** defines poverty using the International Poverty Line. It designates extreme poverty as an income below \$2.15 per person per day.
- The poverty line is based on **the income level required to meet basic needs such as water, sanitation, electricity, and drainage, which are essential for a secure, dignified, and healthy human life.**

- In India, the poverty line is set at 1,286 rupees per month for urban areas and 1,059.42 rupees per month for rural areas.

POVERTY LINE ESTIMATION OVER THE YEARS

- **Alagh Committee (1979):** Chaired by YK Alagh, constructed a poverty line for rural and urban areas on the basis of nutritional requirements.
 - ✓ The minimum consumption expenditure per capita per month in rural areas is 49.1 rupees, with a minimum calorie requirement of 2400, while in urban areas, it is 56.7 rupees with a minimum calorie requirement of 2100.

Growth in poverty control

	Total population (in crore)	Number of people living in extreme poverty (in crore)	%
2016	132.37	7.59	5.7
2018	135.29	6.26	4.6
2020	138.21	6.73	4.9
2022	140.85	4.69	3.3
2024	143.48	3.44	2.4

Source: www.worldpoverty.io

- **Lakdawala Committee (1993):** chaired by DT Lakdawala
 - ✓ Consumption expenditure based on calorie intake.
 - ✓ State-specific poverty lines and these should be Updated using Consumer Price Index (CPI).
 - ✓ discontinuation of 'scaling' of poverty estimates based on National Accounts Statistics.
- **Tendulkar Committee (2005):** chaired by Suresh Tendulkar,
 - ✓ **Addressed three key issues:** outdated consumption patterns, inadequate inflation adjustments, and assumptions about state-provided health and education.
 - ✓ **It recommended** shifting away from calorie-based poverty estimation, adopting a uniform poverty line basket for rural and urban areas, improving price adjustment procedures, and incorporating private expenditure on health and education in poverty estimates.
- **Rangarajan Committee (2012):** chaired by C Rangarajan,
 - ✓ It recommended separate poverty line baskets for rural and urban areas.

- ✓ It suggested deriving the food component of the poverty line basket by considering simultaneous satisfaction of calorie, protein, and fat norms, recognising the importance of nutrition outcomes and the need for a comprehensive approach to child nutrition support.
- ✓ The report preferred using consumption expenditure estimates from the National Sample Survey Organisation (NSSO) over those from the National Accounts Statistics (NAS).

REASONS FOR POVERTY IN INDIA

- **Large population:**
 - ✓ A rapidly growing population can strain resources and make it harder to create jobs for everyone.
 - ✓ **According to the World Population Review**, India is the largest country in the world by population.
- **Income inequality:**
 - ✓ The gap between rich and poor can limit opportunities for the poor.
 - ✓ As per the '**World Inequality Report 2022**', India is among the most unequal countries in the world, with rising poverty and an 'affluent elite.' It highlights that the top 10% and top 1% in India hold 57% and 22% of the total national income, respectively, while the bottom 50% share has decreased to 13%.
- **Lack of access to water, sanitation, and nutrition:**
 - ✓ Poor health and malnutrition can limit people's ability to work and be productive.
 - ✓ India has been ranked 111 among 125 countries in the **Global Hunger Index report** released in 2023
- **Lack of education:**
 - ✓ Though literacy rates are rising, millions still lack basic education.
 - ✓ **According to the National Statistical Office (NSO)**, India's average literacy rate as of 2021 is around 77%
- **Unemployment:**
 - ✓ High unemployment rates, especially after the pandemic, leave many without income to afford basic necessities.
 - ✓ According to the Centre for Monitoring the Indian Economy, the Unemployment rate in India, among persons aged 15 years and above, fell to 8.7 per cent in December 2023 from 8.9 per cent in the previous month.
- **Natural disasters and climate change:**
 - ✓ These events can destroy crops, homes, and infrastructure, pushing people into poverty. Over the years, India has faced different types of natural calamities ranging from floods in Kerala (2018), Uttarakhand and Kashmir (2013) to Tsunami (2004) and Gujarat Earthquake (2001).
- **Social conflicts:**
 - ✓ The caste system, blind beliefs, dowry, and inheritance law can result in an increase in poverty.

GOVERNMENT INITIATIVES TO ERADICATE POVERTY

- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):** To provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.
- **Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAYNRLM):** It aims to reduce poverty by enabling poor households to access gainful self-employment and skilled wage employment opportunities, resulting in sustainable and diversified livelihood options for the poor.
- **Pradhan Mantri Awaas Yojana-Gramin (PMAY-G):** It aims at providing a pucca house with basic amenities to all houseless households and those households living in kutcha and dilapidated houses.
- **Pradhan Mantri Ujjwala Yojana:** It is a scheme of the Ministry of Petroleum & Natural Gas to provide LPG connections to women from the below poverty line (BPL) households.
- **Sampoorna Grameen Rozgar Yojana (SGRY):** To provide additional wage employment in the rural areas as well as food security, alongside the creation of durable community, social and economic infrastructure in the rural areas.
- **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY):** To provide free food grains to about 81.35 crore beneficiaries (i.e. Antyodaya Anna Yojana (AAY) households and Priority Households (PHH) beneficiaries) for a period of next five years.
- **National Food Security Act, 2013 (NFSA):** It provides for coverage of up to 75% of the rural and up to 50% of the urban population for receiving highly subsidised foodgrains under Targeted Public Distribution System (TPDS).

WAY FORWARD

- **NITI Aayog's Occasional Paper on "Eliminating Poverty"** recommended to:
 - ✓ **Focus on Agriculture:** Given the prevalence of poverty in rural areas, emphasis is placed on boosting agricultural productivity, ensuring remunerative prices for farmers, and promoting a 'second green revolution'.
 - ✓ **Diversification of Employment:** While agriculture remains crucial, growth in the industrial and service sectors is needed to create more equal opportunities. Sectors like apparel, footwear, food processing, and retail trade are highlighted for expansion.
 - ✓ **Enhancing Effectiveness of Anti-Poverty Programs:** Recommendations include offering cash or in-kind transfers under PDS, allowing skill development within MGNREGA, and leveraging the JAM (Jan Dhan Yojana, Aadhaar, Mobile) trinity for efficient delivery of benefits.
 - ✓ **Utilizing Technology:** Aadhar accounts and mobile

connectivity can streamline benefit distribution, reduce leakages, and provide the government with accurate data for targeted interventions.

- ✓ **Community Involvement:** Gram Panchayats are

encouraged to identify and support the five poorest families in each village, aiming to lift them out of poverty through targeted assistance and empowerment initiatives.

4.7. GIG ECONOMY

Context

Recently, a survey conducted on Gig Economy revealed the working condition of Gig Workers.

KEY HIGHLIGHTS OF THE SURVEY

- 85% of gig and platform workers surveyed work more than eight hours a day, with 21% putting in over 12 hours daily.
- A significant portion (65%) of women gig workers reported feeling unsafe in their jobs.
- Among the 5,220 respondents, 57% have been drivers or riders for two to five years and 16% for more than five years.
- Even among young adults (22-30), who are expected to treat it as a temporary job, nearly half (47%) have been gig workers for over two years.
- The survey report emphasises defining regular work hours, beyond which the platform must compensate for overtime due to the physically demanding nature of the job.

WHAT IS THE GIG ECONOMY?

- The gig economy in India reflects a free-market system where organisations engage in short-term hiring or contracting of workers to address specific company needs.
- Positions within the gig economy are inherently temporary, designed to cater to the immediate requirements of companies through short-term engagements.
- Ola, Uber, Zomato, and Swiggy, among others, have become pivotal players in India's gig economy.

Gig Worker

- According to the Code on Social Security, 2020 (India), "A gig worker is a person who performs work or participates in work arrangements and earns from such activities, outside of the traditional employer-employee relationship."
- They are independent contractors, online platform workers, contract firm workers, on-call workers and temporary workers.

CURRENT SITUATION OF GIG ECONOMY IN INDIA

- According to ASSOCHAM, India's gig economy is growing at a Compound Annual Growth Rate (CAGR) of 17 per cent.
 - ✓ The Indian gig economy has the potential to add 1.25% to the Indian Gross Domestic Product (GDP) and provide over 90 million jobs in the non-farm sectors of India.
 - ✓ Nearly 60 per cent of tech industry organisations are now investing in gig workers, and 97 per cent of these

companies want to keep gig workers at their current level or hire more gig workers.

- According to a NITI Aayog 2022 report on the gig economy, the gig workforce can increase to 2.35 crore by 2030.
- According to the Boston Consulting Group's report, over 15 million workers in India are employed as gig workers across industries. The number is projected to rise by over 24 million in the near-medium term and to 90 million in the long term.

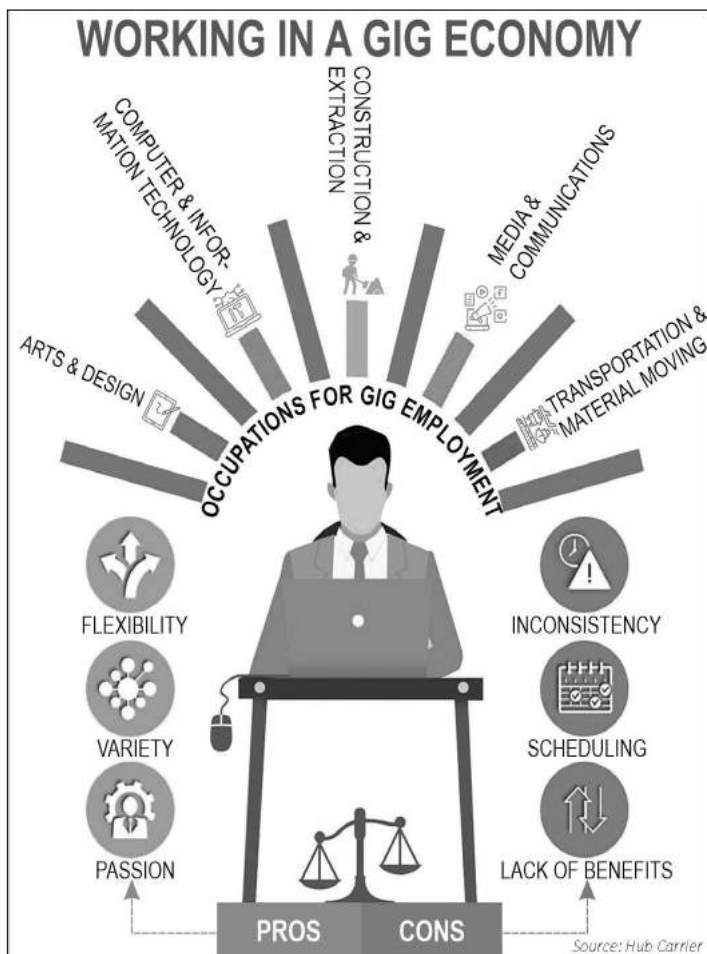
IMPORTANCE OF THE GIG ECONOMY

- **Increased Flexibility:** Gig work allows individuals to control their schedules and work-life balance, perfect for juggling childcare, education, or pursuing other interests.
- **Earning Potential:** Skilled workers in high-demand areas can command competitive rates, potentially exceeding traditional salaries by working across multiple gigs.
- **Career Exploration:** It provides diverse opportunities, allowing individuals to explore different fields and find work that aligns with their passions.
- **Access to Talent:** Companies gain access to a vast pool of skilled professionals, allowing them to hire for specific projects without long-term commitments.
- **Cost-Effectiveness:** Hiring gig workers eliminates the need for benefits and overhead costs associated with full-time staff, making it a budget-friendly option.
- **Scalability:** Businesses can easily scale their workforce up or down based on project needs, ensuring optimal resource allocation.

KEY CHALLENGES OF THE GIG ECONOMY IN INDIA

- A Niti Aayog 2022 report highlights challenges faced by gig workers in India:
 - ✓ **Digital Divide:** Limited access to the internet and technology restricts participation in the gig and platform sector.
 - ✓ **Job Insecurity & Income Instability:** Lack of job security, irregular wages, and unpredictable work availability lead to stress and financial pressure for workers. For example, the average monthly income for gig workers in India is Rs 18,000, which may not be enough to support a family.

- ✓ **Lack of Worker Protections:** Contractual agreements classify platform workers as independent contractors, denying them access to workplace benefits and protections.



- **Fairness and Transparency:**
 - ✓ Unfair treatment by employers, including potential wage withholding and denied benefits.
 - ✓ Lack of transparent payment structures, making workers vulnerable to underpayment.
 - ✓ Platforms have the power to block worker IDs indefinitely, jeopardising their livelihood.
- **Work-Life Balance:**
 - ✓ Flexibility disrupts work-life balance and affects sleep and daily routines.
 - ✓ Pressure to be constantly available for gigs hinders personal activities.
- **Career Growth:**
 - ✓ Increased gig work hindering career development for full-time employees.

- ✓ Traditional career paths with stability and security are becoming less available.

- **Overwork and Exploitation:**

- ✓ Overwork without overtime pay, despite the physically demanding nature of some jobs.
- ✓ Platforms do not offer separate compensation for rising costs like fuel, squeezing worker income.

- **Government Measure Related to the Gig Economy**

- ✓ **Code on Social Security, 2020** provides for the framing of suitable social security schemes for gig workers and platform workers on matters relating to life and disability cover, accident insurance, health and maternity benefits, old age protection, etc.
- ✓ **e-Shram portal** for registration and creation of a Comprehensive National Database of Unorganized Workers, including gig workers and platform workers.
- ✓ **According to the Code on Wages, 2019**, a universal minimum wage and floor wage should be provided to all organised and unorganised sectors, including gig workers.
- ✓ **Rajasthan Platform-Based Gig Workers (Registration and Welfare) Act, 2023 (RGW)**, a pioneering state-level initiative to offer social security to gig workers.

WAY FORWARD

To improve the lives of gig workers in India, NITI Aayog suggests a multi-pronged approach:

- **Financial Inclusion:** Enhance access to credit through FinTech solutions like cash flow-based loans designed for gig workers with limited credit history.
- **Skill Development:** Leverage platforms to provide gig workers with skill development opportunities to make them more competitive.
- **Social Security:** Extend social security benefits like old-age security, health insurance, and paid sick leave to gig workers.
- **Fair Treatment:** Implement regulations to ensure fair treatment of gig workers, including minimum wage, transparent payment structures, overtime pay for extended hours, and restrictions on platform practices like indefinite account deactivation.
- **Platform Incentives:** Provide tax breaks or grants to platforms that promote women's participation in the gig economy and those that ensure accessibility for People with Disabilities (PwDs).

By implementing these recommendations, India can create a more secure and sustainable gig economy that empowers workers and fosters their well-being.

4.8. UTTAR POORVA TRANSFORMATIVE INDUSTRIALIZATION SCHEME, 2024 (UNNATI)

Context

Recently, the Union Cabinet approved the Uttar Poorva Transformative Industrialization Scheme, 2024 (UNNATI – 2024) for a period of 10 years.

ABOUT UNNATI

The Uttar Poorva Transformative Industrialization Scheme (UNNATI) 2024, also known as the New Industrial Development Scheme, is a Central Sector Scheme aimed at fostering industrial growth and job creation in India's northeastern states.

Objectives: The primary objective of this scheme is to stimulate economic activities in the manufacturing and services sectors.

Timeline: UNNATI is a long-term initiative with a ten-year operational period, effective from the notification date until 2034. An additional eight years are allocated to fulfil committed liabilities.

KEY FEATURES

- This will be a **Central Sector Scheme under the Ministry of Commerce and Industry**.

Uttar Poorva Transformative Industrialization Scheme 2024 (UNNATI-2024) Following incentives available under the scheme to investors for setting up new units or undertaking significant expansion of existing units		
S. No.	Where GST is applicable	Where GST is not applicable
01.	Capital Investment Incentive (For Both New & Expanding Units): Zone A: 30% with cap of Rs. 5 Crore Zone B: 50% with cap of Rs. 7.5 Crore	Capital Investment Incentive (For Both New & Expanding Units): Zone A: 30% with cap of Rs. 10 Crore Zone B: 50% with cap of Rs. 10 Crore
02.	Central Capital Interest Subvention (For Both New & Expanding Units): Zone A: 3% for 7 years Zone B: 5% for 7 years	Central Capital Interest Subvention (For Both New & Expanding Units): Zone A: 3% for 7 years Zone B: 5% for 7 years
03.	Manufacturing & Services linked incentive (MSLI)-For New Units only linked to Net Payment of GST, Le., GST paid less Input Tax Credit with upper limit of Zone A: 75% of eligible value of investment in P&M Zone B: 100% of eligible value of investment in P&M	NIL
Maximum Eligible benefits to one unit from all components of the scheme: Rs. 250 Crore. Source: PIB		

- Commencement of Operations:** Eligible businesses must begin production or operations within 4 years of receiving registration under UNNATI.
- Zonal Classification:** Districts are categorised as either Zone A (industrially advanced) or Zone B (industrially backward) to ensure the targeted allocation of resources.
- Environmentally Conscious Approach:** Maintains a balance between industrial growth and the unaltered environment of the NER; certain industries are kept in the following:
 - ✓ **Positive list** includes industries like renewable energy and EV charging stations.
 - ✓ **Negative list** includes sectors such as cement and plastic to protect the environment.
- Fund Distribution:** 60% of the outlay of Part A has been earmarked to 8 NE states and 40% on a First-In-First-Out (FIFO) basis.
- Eligibility:** Both new and expanding industrial units can benefit from UNNATI's incentive programs.
- Implementing Agency:** The Department for Promotion of Industry and Internal Trade (DPIIT) by following committees.
 - ✓ **Steering Committee (National Level)** headed by Secretary, DPIIT (SIIT).
 - ✓ **State Level Committee** headed by the Chief Secretary of the respective state
 - ✓ **Secretary Level Committee** (State Level) headed by Senior Secretary of the state (Industries)

FOCUS AREAS

UNNATI targets the socio-economic development of the region by:

- Attracting new industrial units
- Encouraging expansion of existing businesses
- Generating employment opportunities

INCENTIVE STRUCTURE

- The scheme offers a range of financial benefits to incentivise industrial activity:
- Capital Investment Incentives:** Financial aid to reduce the initial investment burden for new or expanding businesses.
- Central Capital Interest Subvention:** Partial subsidy on interest accrued on loans taken for capital investment.
- Manufacturing and Services Linked Incentives:** Additional support for businesses in the NER's manufacturing and service sectors.

4.9. INDEX OF INDUSTRIAL PRODUCTION (IIP)

Context

Industrial growth slowed down to 3.8% in January as manufacturing decelerated.

MORE ON THE NEWS

- In January 2024, industrial growth decelerated, with the headline number **slipping to 3.8 per cent from 4.2 per cent in December**. It is measured by the **Index of Industrial Production (IIP)**
- According to data from the National Statistical Office (NSO), the output growth of the **manufacturing sector slowed to 3.2 percent in January compared to 4.5 percent in December**. Mining expanded by 5.9%, and electricity production increased by 5.6%.
- Within 23 manufacturing sectors, Computer Electronics and optics products witnessed the steepest fall of 11.9%
- Manufacturing, which constitutes about **15 percent of Gross Value Added (GVA)**, is recognised as a major job creator and significantly influences overall indirect tax collection.
- The easing of industrial growth to 3.8 percent in January was primarily attributed to a **slowdown in manufacturing and reduced public capital expenditure**.
- Despite the slowdown, factory output in January remained 14.0 percent higher than the pre-COVID level.

progress, providing insights into the changing patterns of Industrial Production over time relative to a **chosen base year**. This index illustrates the proportional shifts in physical output across various industries during a specified period compared to the preceding year.

- **Published monthly by the Central Statistical Organization (CSO)** under the Ministry of Statistics and Programme Implementation (MoSPI).
- India's **IIP series currently employs 2011-12** as its base year.

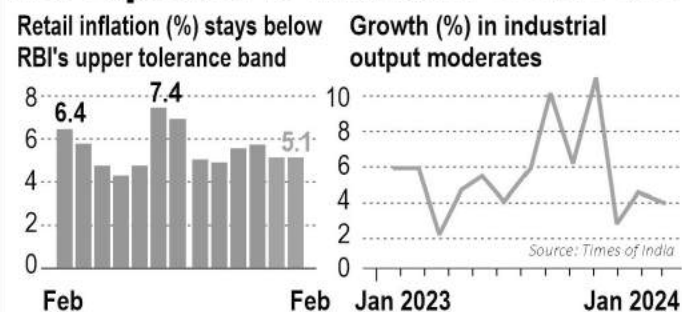
EIGHT CORE INDUSTRIES

- The Index of Eight Core Industries evaluates the combined and individual production performance of selected core industries.
- The eight Core Industries in decreasing order of their weightage: **Refinery Products (28.04%) > Electricity (19.85%) > Steel (17.92) > Coal (10.33%) > Crude Oil (8.98) > Natural gas (6.88%) > Cement (5.37%) > Fertilizers(2.63%)**. The Eight Core Industries comprise **40.27%** of the weight of items included in the Index of Industrial Production (IIP).
- The primary aim of this index is to offer an early indication of production trends in core industries prior to the release of the IIP by the Central Statistics Office. These industries are expected to influence both overall economic activities and industrial operations.
- Compiled and published by **the Office of the Economic Adviser (OEA)** under the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry, Government of India.

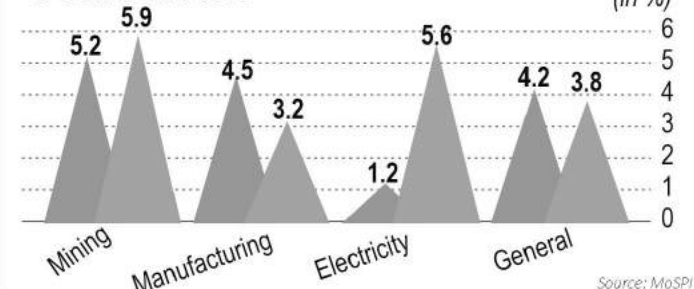
GROSS VALUE ADDED (GVA)

- GVA of a sector, **as defined by the RBI**, denotes the **output value minus the intermediary inputs, encompassing raw materials and other goods and services consumed in production processes**.
- This resultant "value added" is allocated among the primary factors of production, including **labour and capital**. Assessing GVA growth enables the identification of sectors prospering and those encountering difficulties within the economy.
- At the macroeconomic level, **GVA encompasses a nation's GDP along with subsidies and taxes** adjusted within the economy, **following national accounting standards**.
- **Gross Value Added = GDP + subsidies – taxes**

RBI Expected To Maintain Status Quo



Gears down



IIP (INDEX OF INDUSTRIAL PRODUCTION)

- It represents a benchmark for evaluating economic

4.10. PM SURAJ PORTAL

Context

Recently, the Prime Minister virtually launched the PRADHAN MANTRI SAMAJIK UTTAHAN EVAM ROZGAR ADHARIT JANKALYAN (PM-SURAJ) portal.

MORE ON THE NEWS

- During the event, the Prime Minister highlighted transferring **financial assistance** worth **720 crore rupees** directly into the **bank accounts** of one lakh beneficiaries of the disadvantaged sections.
- Ayushman health cards** and **personal protective equipment (PPE)** kits were also distributed to sewer and septic tank workers (**Safai Mitras**) under the **National Action for Mechanized Sanitation Ecosystem (NAMASTE)**.

National Action for Mechanized Sanitation Ecosystem (NAMASTE)

- It is Central Sector Scheme of the Ministry of Social Justice and Empowerment.
- It envisages safety and dignity of sanitation workers in urban India by creating an enabling ecosystem that recognizes sanitation workers as one of the key contributors.

PM SURAJ PORTAL

- PM-SURAJ portal has been launched by the Ministry of Social Justice and Empowerment as a nationwide initiative to offer credit support to the marginalised segments of society.

- The portal symbolises the ministry's dedication to placing the underprivileged at the forefront of development initiatives.
- The Government has committed to extending credit support to one lakh entrepreneurs from disadvantaged communities. The **credit support** will be provided to the eligible persons across the country, facilitated through banks, NBFC-MFIs, and other organisations.

OBJECTIVES OF THE PORTAL

- The objective of PM-SURAJ is to prioritise the underprivileged (vanchiton ko varyata). It is a transformative initiative aimed at uplifting the most marginalised segments of society.
- The portal supports the broader vision of "Viksit Bharat," wherein every individual has the opportunity to contribute to and benefit from India's development journey.
 - ✓ **Viksit Bharat 2047'** is the current government's roadmap to making India a **developed nation by 2047**; 100 years after independence.

4.11. FIRST OIL MILL UNDER OIL PALM MISSION

Context

Recently, the Prime Minister inaugurated the first oil mill under the Oil Palm Mission.

SIGNIFICANCE OF FIRST OIL MILL

- It will make India **self-sufficient (Atmanirbhar)** in producing edible oil by promoting **oilseeds and palm oil**.
- It will help in the government's commitment to fostering **economic growth, empowering farmers, and creating** a sustainable and self-reliant ecosystem for edible oil production in India.
- The **North-Eastern Region (NER)** is pivotal in achieving Atmanirbharta in edible oil as the region has a vast potential area of 8.4 lakh hectares.

NATIONAL MISSION FOR EDIBLE OILS - OIL PALM (NMEO-OP)

- The Mission is a Centrally Sponsored Scheme with a special focus on the Northeast region and the Andaman and Nicobar Islands.
- It is approved with the aim to enhance **edible oilseeds production** and **oil availability** in the **country by harnessing Oil Palm area** expansion to reduce the import burden on edible oils.

- It is committed to **escalating oil palm cultivation** and elevating Crude Palm Oil production to **11.20 lakh tonnes** by 2025-26.
- It is presently operational in **15 states** nationwide.
- It has provisioned **INR 5,870 Cr** exclusively for the **Northeast region** out of the total national budget for the promotion of oil palm, **where 90% contribution** will be made by the **Central government**.
- The Government of India will pay a **differential of 2%** on the **Crude palm oil (CPO) price** to farmers considering the tough and difficult terrain of the **Northeast region**.
- It protects the farmers from the global price volatility in oil palm by providing **viability gap payment (VGP)** to hedge farmers' risk.
- It is also promoting private players to invest in the NER for establishing post-harvest processing facilities in the region, where special assistance of Rs 5 crore is allocated for oil palm processing mills in the NER.

Need for investment in palm oil

- India is presently a net importer of edible oil, with 57% of the total edible oil being imported from various countries. The insufficiency in edible oil is negatively impacting our FOREX by 20.56 billion USD.

About Oil Palm

- Oil Palm (*Elaeis guineensis*), originated from West Africa is comparatively a new crop in India and has highest vegetable oil yielding capability per ha.
- Andhra Pradesh, Telangana and Kerala are major Oil palm growing States and accounting around 98% of total production.
- Its climatic requirements
 - ✓ It is a **humid crop**. It requires evenly distributed rainfall of 150mm/month or 2500-4000mm/annum.
 - ✓ Crop comes up well between 29-33°C max. and 22-24°C min. temperatures and with bright sunlight for at least 5 hrs. per day.
 - ✓ Humidity of more than 80% is required to come up well.

4.12. STANDARDS AND LABELLING PROGRAM

Context

The government has launched the Standards and Labelling Program to help consumers choose energy-consuming appliances effectively.

MORE ON THE NEWS

- The Bureau of Energy Efficiency has launched this Program under the **Ministry of Power**.
- It enables saving energy, reducing electricity consumption and contributing to a **greener planet**.
- The latest product to be added to BEE's Standards and Labeling Programs is the **Grid-Connected Solar Inverter**.
- The Program will help consumers get better-quality inverters that can be used as part of the **solar rooftop system**.
- The event also highlights the **Perform, Achieve and Trade (PAT) scheme**, which reduced about 110 million tonnes of carbon dioxide emissions per annum.

Bureau of Energy Efficiency (BEE)

- Established in 2002 under the Energy Conservation Act, 2001 provisions.
- Headquarters: Sewa Bhawan, New Delhi
- Its vision is to improve the Energy Intensity of the Indian Economy, thereby contributing towards the country's sustainable development.

ABOUT STANDARDS AND LABELING (S&L) PROGRAM FOR GRID-CONNECTED SOLAR INVERTER

- It has been launched under a voluntary phase, valid from 15th March 2024 till 31st December 2025.
- The program will function as a **Minimum Energy Performance Standard (MEPS)** for the product, covering

only grid-connected solar inverters without storage, with a rated capacity of up to 100 kW.

S&L PROGRAMME HELPS IN REDUCING CARBON DIOXIDE EMISSIONS

- BEE's S&L programs have reduced carbon dioxide emissions by 60 million tonnes per annum.
- Transmission and distribution** losses have come down to zero, and the reduction in carbon emissions is huge, since the energy consumed is renewable energy

STANDARDS & LABELLING PROGRAMME FOR SOLAR PANELS

- The programme was launched in 2023 by the **Union Ministry for Power and New & Renewable Energy**.
- The Program for solar inverters aims to optimise the solar PV system's efficiency so that consumers can assess the overall **efficiency and performance** of the inverter before deciding to purchase or use it.

SIGNIFICANCE

- This initiative serves as a catalyst for **India's transition towards sustainable energy**, underscoring our dedication to a cleaner, greener future.
- It signifies a bold stride forward in our dedication to a greener and **more energy-efficient world**.
- It helps in **reducing carbon dioxide emissions** and in ensuring high product quality.

4.13. GRID-INDIA ACHIEVES MINIRATNA STATUS

Context

GRID-INDIA has earned the status of a Miniratna Category-I Central Public Sector Enterprises (CPSEs) as designated by the Ministry of Power.

KEY HIGHLIGHTS

- Grid Controller of India Limited (GRID-INDIA) was established in **2009**.
- It plays a crucial role in managing the **nation's power system, ensuring smooth power transfer across regions**.
- It facilitates **international power exchanges** with a focus on reliability and sustainability.
- GRID-INDIA oversees the **operation** of the **All India synchronous grid**, which is one of the **world's largest** and most **complex power systems**, through its five **RLDCs** (Regional Load Despatch Centres) and the **NLDC** (National Load Despatch Centre).

- GRID-INDIA is also designated as the nodal agency for major reforms in the power sector, such as the implementation and operation of the Green Energy Open Access Portal, Renewable Energy Certificate (REC) Mechanism, transmission pricing, short-term open access in transmission, Deviation Settlement Mechanism, Power System Development Fund (PSDF), etc.

BACKGROUND

- The government classifies public sector undertakings (PSUs) into three groups: **Maharatna, Navratna, and Miniratna**.

Maharatna	Navratna	Miniratna
<ul style="list-style-type: none"> • Criteria to grant Maharatna status to CPSEs: • Having Navratna status and listed on Indian stock exchange with minimum prescribed shareholding as per SEBI guidelines • An average annual turnover of more than ₹25,000 crore or annual net worth of more than ₹ 15,000 crore or annual net profit after tax of more than ₹ 5,000 crore during the last 3 years • It should have a significant global presence. • Example: Coal India Limited, GAIL NTPC Limited etc. 	<ul style="list-style-type: none"> • Criteria to grant of Navratna status to CPSEs: • Public Sector undertakings must be a Miniratna-I, Schedule 'A' company, and achieve an 'excellent' or 'very good' MoU rating in three of the last five years. • Having a composite score of 60 in six performance indicators. • Example: Bharat Electronics Limited, Oil India Limited etc. 	<ul style="list-style-type: none"> • Criteria to grant Miniratna Category-I status to CPSEs: • Companies that made a profit in the last three years continuously, pre-tax profit is ₹30 crores or more in at least one of the three years • Having a positive net worth. • Examples: Airports Authority of India, Antrix Corporation Limited etc. • Miniratna Category-II status CPSEs. • Public sector companies that have made a profit for the last three years continuously • Having a positive net worth. • Miniratna CPSEs should not have defaulted in the repayment of loans/interest payments on any loans due to the Government. • Miniratna CPSEs shall not depend upon budget support. • Example: Engineering Projects (India) Limited etc.
Benefits of Maharatna Status: <ul style="list-style-type: none"> • The key benefit of being a Maharatna PSU is the significant investment range between ₹ 1,000 crore to ₹ 5,000 crore. • Employees hold gazetted officer positions. • 13 Maharatna companies in India. 	Benefits of Navratna status: <ul style="list-style-type: none"> • It enjoys financial autonomy to invest up to ₹1,000 crore without government approval. • Their boards have the authority to spend on new acquisitions or replacements without monetary limits and can engage in technology collaborations or alliances. • It permits PSUs to pursue mergers and acquisitions domestically and abroad, subject to approval from the Cabinet Committee on Economic Affairs (CCEA). • 16 Navratna companies 	Benefits of Miniratna status: <ul style="list-style-type: none"> • Miniratna-I: Financial autonomy extends to either ₹ 500 crore or their net worth, whichever is lower. • Miniratna-II: Financial autonomy is capped at either ₹ 300 crore or 50% of their net worth, whichever is lower. • 75 Miniratna companies in India.

4.14. ONE LAKH PATENTS GRANTED IN A SINGLE YEAR BY THE PATENT OFFICE

Context

Recently, the number of patents granted by the Indian Patent Office has crossed the one lakh mark for the first time this year.

KEY HIGHLIGHTS

- The **Patent Rules, 2024**, has been officially notified to simplify the process of obtaining and managing patents, thus representing a crucial step in **promoting innovation and economic growth**.
- These rules incorporate provisions designed to streamline the patent acquisition and management process, creating a favourable environment for inventors and creators.
- This is meant to help inventors and creators and boost the country's economy by promoting science and technology as part of the **Viksit Bharat Sankalp vision**.

SALIENT FEATURES OF THE REVAMPED RULES

- A unique provision for a **New 'Certificate of Inventorship'** has been introduced to acknowledge the contribution of inventors in the patented invention.
- Renewal fee has been reduced by **10% if paid in advance through electronic mode** for a period of at least 4 years.
- Frequency to file the statements of working of patents in Form 27 has been reduced **from once in a financial year to once in every three financial years**.

Patent	Geographical Indication	Copyright	Industrial Design	Trade Marks
<ul style="list-style-type: none"> • Patent granted on invention of new product or its process. • Given for a period of 20 years. • Functions under Ministry of Commerce and Industries. • It is governed by Indian patent act 1970 act. 	<ul style="list-style-type: none"> • It's a legal recognition given to products, like food or crafts, that come from a specific geographic location. For example: Rasagola (Odisha). • Once a product gets this special label, no one else can use the name to sell similar stuff. • Given for period of 10 years and can be renewed on payment of renewal fee. • Functions under Ministry of Commerce and Industries • They are issued as per Geographical Indications of Goods (Registration & Protection) Act, 1999 	<ul style="list-style-type: none"> • It legally protects the rights of creators over their literary and artistic works. • Examples, music, painting, books, computer programs etc. • Given for the period of 60 years. • Regulated by Ministry of commerce and Industries. • It governs under The Copyright Act, 1957 along with Copyright Rules. 	<ul style="list-style-type: none"> • Industrial design can encompass three-dimensional elements like an object's shape, as well as two-dimensional features such as patterns, colors, and lines. • Registration of a design lasts for 10 years from the date of registration which can then be renewed for another 5 years. However total term for registration cannot exceed 15 years. • Ministry of commerce and Industries • It administered by the Designs Act, 2000 and corresponding Designs Rules, 2001. 	<ul style="list-style-type: none"> • It may be a word, sign, and symbol or even graphic that is applied to a company, goods or services to distinguish them from those of the competitor. • Given for period of 10 years. • Functions under Ministry of Commerce and Industries • Trade Marks Act 1999.

4.15. GOVERNMENT PLANS TO IMPLEMENT NEW TOLL COLLECTION SYSTEM

Context

The Minister of Road Transport recently announced that the government plans to introduce a new highway toll collection system based on a **global navigation satellite system**.

KEY HIGHLIGHTS OF THE NEW PROPOSED HIGHWAY TOLLING SYSTEM

- Global navigation satellite system, which also includes the United States Global Positioning System (GPS), is a type of navigation system that relies on satellites.
- It uses a **network of many satellites to give more precise location and navigation details** to Users around the world, offering better accuracy than **GPS alone**.
- It is proposed that the new system will involve fitting a tracking device called an **On-Board Unit (OBU) inside vehicles**.

FASTags

- Introduced in 2016 using radio frequency identification.
- Compulsory from **February 16, 2021**.
- **98.9%** of vehicles passing through national highway toll plazas being FASTag compliant by December 2023.
- Toll collection at national highway increased 1.5 times from ₹17,942 crore in 2016-2017 to ₹27,744 crore in 2020-2021.

- These OBUs will use **GAGAN, India's satellite** navigation system, with an accuracy of about **10 meters**, to track the vehicle's location.

- **GAGAN** is the acronym for **GPS Aided GEO Augmented Navigation** jointly developed by **ISRO and Airport Authority of India**.
- it uses a **system of ground stations to provide** necessary augmentations to the **GPS standard positioning service (SPS)** navigation signal.
- **Coordinates of all national highways** in the country will need to be recorded using digital image processing.
- **Software** will then determine the toll rates for each highway and calculate the toll amount based on the distance traveled by the vehicle.
- This toll amount will be deducted from a wallet linked to the OBU.
- Additionally, **gantries equipped with CCTV cameras** will be installed along highways for enforcement purposes.
- These **CCTV capture images of vehicles' high security registration plates and verify** whether a vehicle is trying to avoid tolls by either removing the tracking device or traveling without an OBU onboard.

SIGNIFICANCE

- The aim of the technology is to **enable users to pay tolls based actual distance travelled** on a highway, **known as pay-as-you-use**.
- it will **facilitate barrier-free movement**.

- Global navigation satellite system offers **lower operational costs** compared to **FASTags** because it eliminates toll plazas and involves fewer entities in the toll collection process.

CHALLENGES

- Recovering the toll becomes difficult if a road user doesn't pay after completing a journey on a highway and the digital wallet linked to **the OBU is empty**.
- Other issues include vehicles travelling on a highway without an OBU device or intentionally turning it off to avoid payment.
- There's also the problem of vehicles using **a car's OBU on a truck to pay lower tolls**.

WAY FORWARD

- To address these issues, highway-mounted **Automatic Number-Plate Recognition (ANPR)** systems must be installed across India.
- In order to **protect the privacy of Vehicle users**, the government has decided to use the GAGAN satellite system rather than GPS, which is in line with the Data Protection Act 2023.
- It needs to avoid **widening of exemptions granted to government agencies** that may facilitate increased state surveillance.

5.1. ETHANOL BLENDING

Context

India achieved an average ethanol blending rate of 11.60% in the first four months of the 2023-24 supply year that started in November.

MORE ON THE NEWS

- The Government's target is to achieve a 15% ethanol blending rate for the whole Year
- The government aims to achieve a 20% ethanol blending rate with petrol by the 2025 supply year.
- Around 57% of the contracted ethanol supply was delivered by sugar mills and distilleries between November and February.

ABOUT ETHANOL

- Ethanol is a type of alcohol (chemical formula $\text{CH}_3\text{CH}_2\text{OH}$) that can be used as a fuel.
- It is also known as **ethyl alcohol**. It is a **Biofuel** produced through the fermentation of sugar.
- In India, it's primarily derived during the sugar extraction process from sugarcane, though other organic materials like food grains can also be used.
- It is used as a blending agent with gasoline to increase octane value and reduce carbon monoxide and other smog-causing emissions.

COMMON ETHANOL BLENDS

- The most common blend of ethanol is E10 (10% ethanol, 90% gasoline) and is approved for use in most conventional gasoline-powered vehicles up to E15 (15% ethanol, 85% gasoline).
- Some vehicles, called flexible fuel vehicles, are designed to run on E85 (a gasoline-ethanol blend containing 51%–83% ethanol, depending on geography and season), an alternative fuel with much higher ethanol content than regular gasoline.

GENERATIONS OF BIOFUELS

- **First-Generation Biofuels** are obtained majorly from animal feed crops or other food products.
- **Second-Generation Biofuels** are entirely produced from non-food feedstocks such as dedicated energy crops and other lignocellulosic plants, agricultural residues, forest residues and other waste products.
- **Third-Generation Biofuels** are derived from microalgae via

transesterification or hydrotreatment of the algal oil.

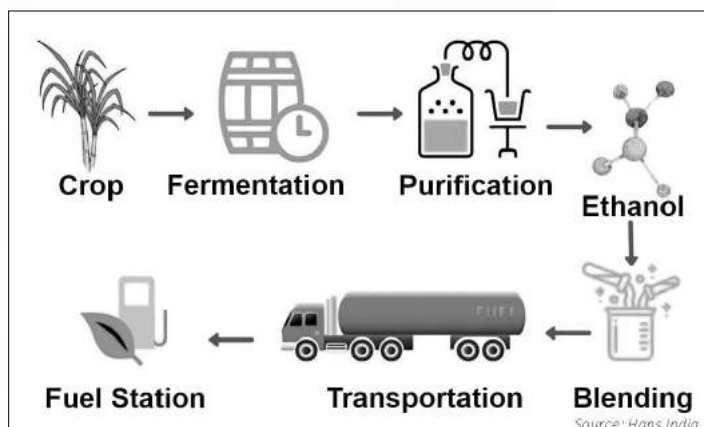
- **Fourth-Generation Biofuels** are processed using genetically modified (GM) algae and photobiological solar fuels and electro-fuels.

ETHANOL BLENDING PROGRAM

- **EBP was launched in 2003** to promote the use of alternative and environment friendly fuels and to reduce import dependency to fulfil energy requirements.

OBJECTIVES

- By blending ethanol with petrol, India aims to reduce reliance on volatile global oil prices and ensure consistent fuel supplies.



- Ethanol's cleaner burning nature fosters improved air quality and combats climate change.
- Increased demand for feedstock crops like sugarcane and corn generates additional income opportunities for farmers.

SIGNIFICANCE OF ETHANOL BLENDING

- Lower dependence on imported oil translates to significant cost savings on foreign exchange.
- Additional Income to Farmers as agricultural residues/waste can be converted to ethanol and can provide a price for this waste; conversion of surplus grains and agricultural biomass.

- Infrastructural Investment in Rural Areas such as addition of 2G bio refineries across the Country will spur infrastructural investment in the rural areas.
- Ethanol supports complete combustion, leading to notable reductions in carbon monoxide emissions.

Current Situation

- India has already rolled out 20 per cent blended fuel, though in a phased manner, in April 2023 and widespread availability is expected in days to come.
- The government aims to achieve 20% ethanol-blended petrol by 2024-25 and 30% by 2029-30. The target for E20 fuel has been advanced from 2030 to 2025.
- Currently, over 9,300 retail outlets sell E20 fuel, with plans to cover the entire country by 2025.
- India aims to reduce the emissions intensity of GDP by 45 per cent. India has committed to net-zero emissions by 2070.

CHALLENGES OF ETHANOL BLENDING

- Most ethanol production relies on water-intensive crops like sugarcane or rice. The reliance on these crops poses challenges, especially during times of supply disruption or price fluctuations.
- Growing crops solely for biofuels can divert land from food production, potentially raising food prices and even leading to scarcity.
- If domestic production doesn't rise adequately, meeting ethanol blending targets may require increased imports. This contradicts with the aim of reducing dependence on imported fuels.
- Upgrading fuel stations and vehicles for higher ethanol blends requires significant investment in storage, transportation, and potentially engine modifications.
- Initiatives of Government towards Ethanol Blending
- A "Roadmap for Ethanol Blending in India 2020-25" was released in 2021, which lays out a detailed pathway for achieving 20% ethanol blending.

- **Pradhan Mantri JI-VAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana** aims to provide financial support to Integrated Bioethanol Projects using lignocellulosic biomass and other renewable feedstock.
- **National Policy on Biofuels" in 2018:** It was notified by the Ministry of New and Renewable Energy in 2018 in order to promote biofuels in the country.
 - ✓ The Policy categorises biofuels as "Basic Biofuels", viz. First Generation (1G) bioethanol & biodiesel and "Advanced Biofuels" - Second Generation (2G) ethanol, Municipal Solid Waste (MSW) to drop-in fuels, Third Generation (3G) biofuels, bio-CNG etc. to enable extension of appropriate financial and fiscal incentives under each category.
 - ✓ It expands the scope of raw material for ethanol production by allowing use of sugarcane juice, sugar containing materials like sugar beet, sweet sorghum, starch containing materials like corn, cassava, damaged food grains like wheat, broken rice, rotten potatoes, unfit for human consumption for ethanol production.

WAY FORWARD

- **Re-evaluate E20 Target:** Assess the impact of the E20 blending target on land use, food security, and rural development, considering alternative strategies and timelines.
- **Prioritize EVs:** Focus on promoting EV adoption and expanding renewable energy generation for clean electricity as a sustainable solution to reduce emissions in the transportation sector.
- **Research & Development:** Continued investments in research to improve ethanol production efficiency and explore advanced technologies like cellulosic conversion remain paramount.
- **Sustainable Practices:** Encouraging the adoption of sustainable farming methods to ensure long-term feedstock availability without compromising food security.

5.2. GLOBAL WASTE MANAGEMENT OUTLOOK REPORT

Context

Recently, the Global Waste Management Outlook Report 2024, was jointly published by the UN Environment Programme (UNEP) and the International Solid Waste Association (ISWA).

MORE ON THE NEWS

- The report is titled '**Beyond an Age of Waste: Turning Rubbish into a Resource**'.
- This publication of the report was financially supported by the **Governments of Japan and Sweden**.
- It provides an overview of the amount of municipal solid waste being generated, how it is being managed, and the impacts of current practices on planetary and human health.

Other Reports of UNEP

- Global Resources Outlook.
- Emissions Gap Report.
- Adaptation Gap Report.

KEY FINDING OF REPORT

- Municipal Solid Waste (MSW) is generated globally, contributing to **climate change, pollution, and biodiversity loss**.
- Waste generation is influenced by three factors: **product**

design, consumer choices, and the capacity of waste management systems.

- MSW generation is expected to increase from **2.3 billion tonnes in 2023 to 3.8 billion tonnes in 2050**, indicating a substantial growth trajectory.

What is circular economy?

- In a circular economy, things are made and consumed in a way that minimizes our use of the world's resources, cuts waste and reduces carbon emissions.
- In Circular Economy, products are kept in use for as long as possible, through repair, recycling, and redesign, so they can be used again and again.
- In 2020, the global direct cost of waste management was an estimated USD 252 billion. When the hidden costs of pollution, poor health, and climate change from poor waste disposal practices were factored in, the cost rose to USD 361 billion.
- Without urgent action on waste management, the global annual cost could almost double to USD 640.3 billion by 2050.
- By 2050, a Circular Economy approach could result in a net gain of \$108 billion annually.



- Three scenarios of **MSW generation and management to 2050** were developed for this report:
 - ✓ **Waste Management as Usual (WMU):** Practices continue as today, with waste generation projected to grow fastest in regions without adequate waste management capacity.
 - ✓ **Waste Under Control (WUC):** A midway point, with some progress made towards preventing waste and improving its management.
 - ✓ **Circular Economy (CE):** Waste generation is decoupled from economic growth. The global MSW recycling rate reaches 60 per cent, and the remainder is managed safely.

SITUATION OF WASTE IN INDIA

- India ranks **among the top 10 countries globally in generating municipal solid waste (MSW)**.
- India produces **277 million tonnes of MSW** every year.
- Currently, **about 5% of the total collected waste** is recycled, **18% is composted**, and the remaining is dumped at landfill sites.

Incineration

- It is the process of burning hazardous materials at temperatures high enough to destroy contaminants.
- According to the **Central Pollution Control Board (CPCB)**, India produces more than 25,000 tonnes of plastic waste every day on average. It accounts for almost 6% of the total solid waste generated in the country.
- Indus, Brahmaputra, and Ganges rivers** are known as the '**highways of plastic flows**' as they carry and drain most of the plastic debris in the country.
- The annual 62 MT of waste includes hazardous waste (7.9 MT), plastic waste (5.6 MT), e-waste (1.5 MT), and biomedical waste (0.17 MT). The Central Pollution Control Board (CPCB) projects a rise to 165 MT by 2030.

CHALLENGES RELATED TO WASTE MANAGEMENT IN INDIA

- Inadequate Infrastructure:** Insufficient MSW collection systems and lack of proper planning result in overflowing landfills.
- Lack of Emission Control in Incinerators** Primitive incinerators lack proper emission control, violating environmental norms.
- Financial Challenges:** Urban Local Bodies (ULBs) face financial challenges, hindering private sector participation in waste management projects.
- Technological Suitability:** Current waste disposal technology in India is unsuitable for Indian garbage, with low calorific content rendering incineration ineffective and unsafe.
- Legislative Oversight:** Until 2000, there were no specific laws for MSW management. Existing rules like Hazardous Wastes (Management and Handling) Rules, 1989 only tangentially addressed the issue.
- Challenges in Waste-to-Energy Process:** Specific criteria outlined in **Section 21 of the Solid Waste Management Rules, 2016**, pose challenges for waste-to-energy processes, including the disposal of non-recyclable waste with a calorific value of 1500 Kcal/kg or more and the need for authorisation from State Pollution Control Boards.
- Large quantities of waste are **dumped illegally** in vacant lots, drains, and waterways due to inadequate collection systems or lack of proper disposal facilities (less than 3/4th collected).

GOVERNMENT INITIATIVES TO TACKLE THE PROBLEMS OF WASTE IN INDIA

- **Municipal Solid Waste (Management & Handling) Rules, 2016:**
 - ✓ Extended the rules **beyond municipal areas to cover** urban agglomerations, census towns, industrial townships, areas controlled by Indian Railways, airports, special economic zones, pilgrimage sites, and State and Central Government organisations.
 - ✓ Recognizes and addresses different waste categories, **including plastic, biomedical, hazardous, and e-waste**, reflecting the diverse nature of waste generated.
 - ✓ Promotes sustainable waste management practices, including **waste segregation, recycling, composting, and decentralised treatment methods**.
 - ✓ Focuses on increasing waste collection rates and enhancing the percentage of waste undergoing proper processing and treatment.
- **E-Waste (Management) Rules, 2022:** It aims to enhance environmentally sustainable management of electronic waste (e-waste) in India.

Torrefaction

- Torrefaction is a thermochemical treatment of biomass carried out at temperatures typically between 200 and 320°C, under atmospheric pressure and in the absence of oxygen.
- During this process, water and volatiles are released from the biomass, and biopolymers such as cellulose, hemicellulose, and lignin partly decompose.
- The resulting product is a solid, dry, blackened material known as torrefied biomass or bio-coal.

- **Plastic Waste Management Amendment Rules, 2021:** It prohibits identified single-use plastic items by 2022.
- **National Thermal Power Corporation (NTPC) Vidyut Vyapar Nigam Limited (NVVNL)** has commissioned a commercial 'green coal' plant in Varanasi, Uttar Pradesh, to produce green coal or **torrefied charcoal** from waste. This plant is the **first-of-its-kind attempt in India** to produce **green coal from agricultural residue and MSW**.

RECOMMENDATIONS AND WAY FORWARD

- **Halt Waste Growth:** Urgent action is needed to stop negative impacts. Transition to zero waste and circular economy models.
- **Prioritize Municipal Waste Management:** Ensure affordable services for all communities. End harmful practices like open dumping and waste burning.
- **Promote Responsible Production:** Encourage producers to minimise waste generation. Phase out problematic materials for sustainable alternatives.
- **Tailored Technology:** Utilize bio-methanation for India's organic-rich waste, opting for sustainable solutions over replicating models from developed nations.
- **Public-Private Partnerships:** Encourage private sector participation with clear regulations, incentives, and performance guarantees.
- **Decentralization:** Prioritize smaller, localised waste processing facilities for efficient segregation and treatment.

By implementing these suggestions, India can move towards a more sustainable and efficient waste management system, fostering a cleaner and healthier future.

5.3. BENGALURU WATER CRISIS

Context

Recently, Karnataka and its capital, Bengaluru, have faced a severe water crisis.

MORE ON THE NEWS

- Bengaluru is at risk of approaching '**Zero-day**', similar to the situation witnessed by Cape Town in 2018, where water resources are on the brink of depletion.
- According to the State Government, Bengaluru is facing a shortage of 500 million litres of water every day, which is about a fifth of the city's daily total demand.

Day Zero

- Day Zero is a term used to describe a situation where a city or region reaches a point where water supplies are so low that the government is forced to implement strict water restrictions
- However, the shortage of water is not restricted to Bengaluru,

rather the entire state of Karnataka is facing water scarcity.

- The water crisis has impacted over 7,000 villages, 1,100 wards, and 220 talukas, thus highlighting the widespread consequences of water scarcity across Karnataka.
- The water level at the Krishnaraja Sagar Dam has reached a five-year low for February, exacerbating the crisis. Additionally, underground water table levels have depleted, further intensifying the situation.
- Many households in Bengaluru rely on water supply from the Cauvery River or water tankers. They have faced difficulties as tanker prices have surged, worsening the water supply crisis.

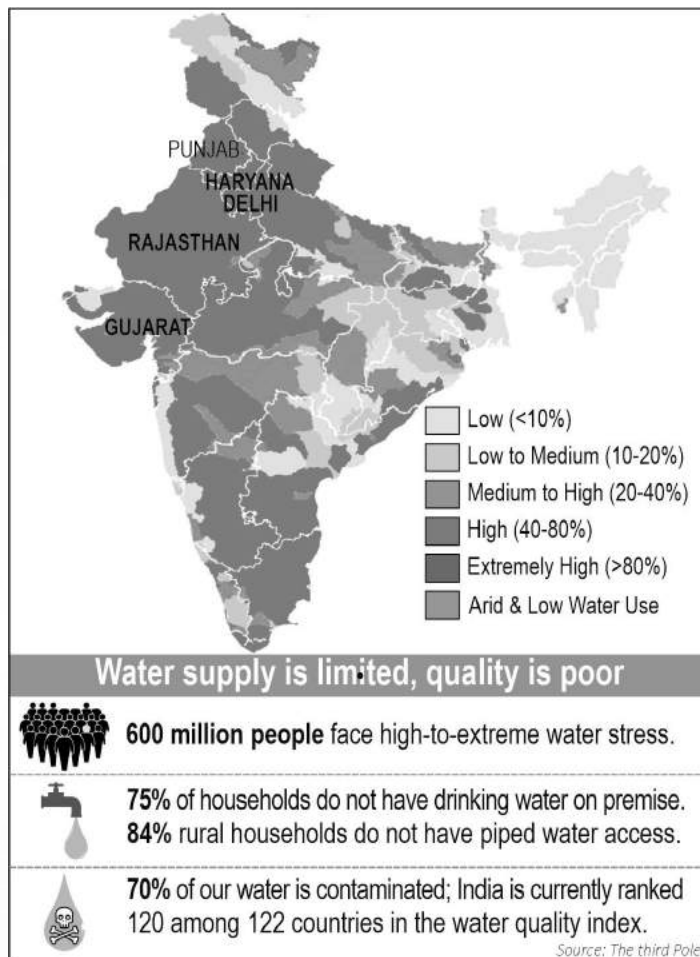
CAUSES OF BENGALURU'S WATER CRISIS

- **Dependence on Single Water Source:** Bengaluru relies heavily on the Cauvery River for its water supply, which is over 100 kilometres away from the city. It poses logistical challenges and vulnerabilities to the water supply.
- **Reduced Rainfall and Reservoir Levels:** Insufficient rainfall affects the Cauvery River. It leads to low water levels in key reservoirs like Harangi, Hemavathi, and Kabini, which are currently at only 39% capacity (February data).
- **Groundwater Depletion:** Urban expansion has hindered groundwater recharge, with excessive extraction causing rapid depletion and the drying up of many borewells.
- **Nature of Underground Aquifers in South India:** The aquifer system of South India, unlike North India, is very rocky and thus doesn't hold much water. They get emptied out and recharged very quickly. This means that groundwater resources are not able to sustain for very long in the event of a prolonged dry spell.
- **Water Body Pollution:** Approximately 85% of Bengaluru's water bodies are polluted, worsening the water crisis according to a study by EMPRI (Environmental Management & Policy Research Institute).
- **Urban Expansion and Concretization:** In the 1970s, Bengaluru had 68% green cover, and 8% of the surface was paved. Now, 86% of the surface is concretised, and the green cover has shrunk to 3%. Rapid urbanisation has diminished the porous surface area needed for rainwater absorption, thereby hindering groundwater recharge.
- **Population Growth:** Bengaluru's population has more than doubled since 2001. It has reached about 13 million and is projected to increase further to 20 million by 2031, intensifying water demand.

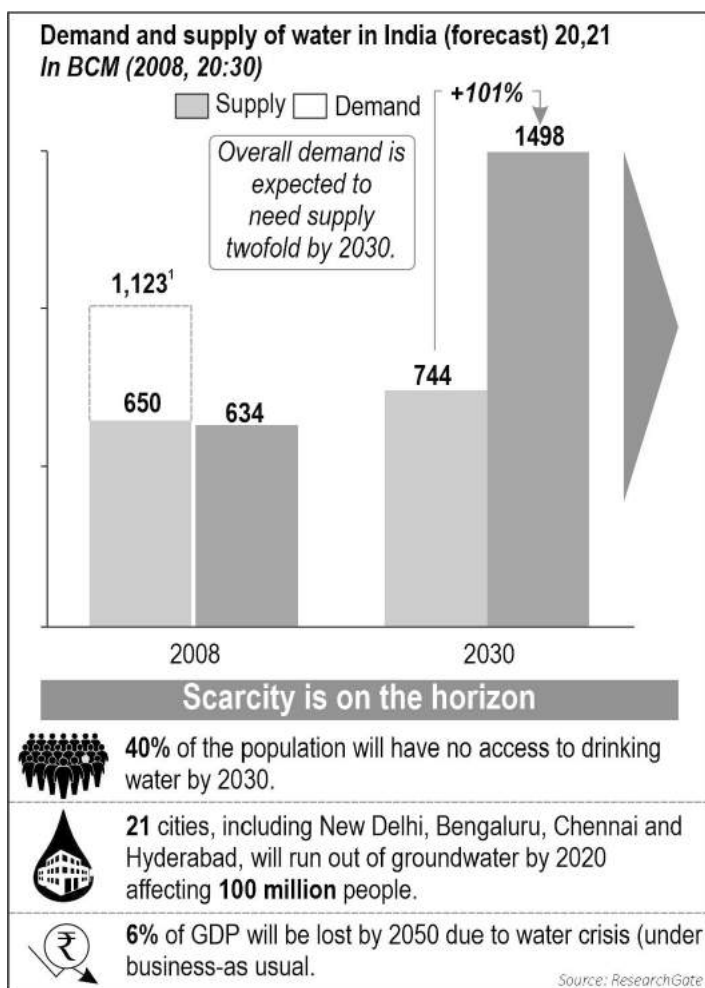
WATER CRISIS SITUATION IN INDIA

- **Limited Freshwater Resources:** Despite having 17% of the global population, India possesses only 4% of the world's freshwater resources.
- By 2030, the country's water demand is projected to be twice the available supply, resulting in an eventual ~6% loss in the country's GDP.
- **Worst Water Crisis in History:** According to the NITI Aayog's Composite Water Management Index (CWMI) report, India is currently undergoing its most severe water crisis. Approximately 600 million people are facing high to extreme water stress.
- **Declining Per Capita Availability:** India's annual per capita water availability, which was 1,486 cubic meters in 2021, falls within the water stress category (less than 1700 cubic meters). Government estimates predict a further decrease to 1,341 cubic meters by 2025 and 1,140 cubic meters by 2050.

- ✓ An area is experiencing water stress when annual water supplies drop below 1,700 m³ per person. When annual water supplies drop below 1,000 m³ per person, the population faces water scarcity, and below 500 cubic metres, "absolute scarcity".



- **Lack of Access to Safe Drinking Water:** According to the NITI Aayog CWMI Report:
 - ✓ Roughly 200,000 people die annually due to inadequate access to safe water.
 - ✓ 75% of households in India lack access to drinking water.
 - ✓ By 2030, projections indicate that 40% of the country's population will be deprived of access to drinking water.
- **Overexploitation and Pollution of Groundwater:**
 - ✓ India ranks as the largest groundwater user globally, utilising over 25% of the total global usage. Nearly 70% of India's groundwater is contaminated.
 - ✓ Critical groundwater resources, which account for 40% of our water supply, are being depleted at unsustainable rates.
 - ✓ India's water quality index rank is 120 among 122 countries.



- **Agricultural Practices:** Subsidies for water-intensive crops and practices like flood irrigation encourage excessive water use in agriculture.

GOVERNMENT MEASURES TO TACKLES THE WATER CRISIS SITUATION

- **National Water Policy:** The policy is centred on water conservation, promotion, and protection. It advocates measures like rainwater harvesting to meet water demand and ensure sustainable water management practices.
- **Jal Shakti Abhiyan (JSA):** Launched in 2019, it aims to promote water conservation, recharge, and rainwater harvesting in water-stressed districts.
- **Namami Gange Program:** This comprehensive initiative targets the effective reduction of pollution in the Ganga (Nirmal Dhara) and the conservation and rejuvenation of the river.
- **Atal Bhujal Yojana:** This program prioritises groundwater recharge and sustainable exploitation of groundwater resources to address water scarcity issues.
- **Amrit Sarovars:** The government plans to construct 50,000 water bodies, known as Amrit Sarovars. Each Sarovar, covering approximately one acre, will promote water conservation across the country.
- **Nal Se Jal Scheme:** Part of the Jal Jivan Mission, this scheme aims to provide piped drinking water to every rural household by 2024. It operates under the jurisdiction of the Jal Shakti Ministry.

REASONS BEHIND THE WATER CRISIS IN INDIA

- **Unsustainable Groundwater Use:** Overexploitation for agriculture is driven by factors like faulty cropping patterns and electricity subsidies for pumping. This depletion is happening much faster than natural recharge rates.
- **Climate Change:** Erratic monsoon rains and rising temperatures reduce river water levels and increase droughts. This disrupts traditional water availability patterns.
- **Water Pollution:** Industrial waste, untreated sewage, and agricultural runoff contaminate surface and groundwater sources. This reduces usable water supplies and harms human health.
- **Poor Water Management:** Outdated policies, fragmented governance between states and centres and contribute to inefficient water use. This includes issues like a lack of proper rainwater harvesting and outdated laws granting unlimited groundwater rights to landowners.
- **Uneven Distribution of Water Resources:** Uneven rainfall patterns create water scarcity in some regions while others experience floods. The uneven river flows with surpluses in some basins and deficits in others further complicate water distribution.

WAY FORWARD

- **Mihir Shah Committee Recommendations:** Act on the Mihir Shah Committee's suggestions, including forming a National Water Commission. Focus on dam maintenance to improve water governance and sustainability.
- **Basin-level Governance:** The consolidation of several river authorities into the central Ministry of Water Resources to enable better decision-making for surface water projects and allocation.
- **Innovative Irrigation:** The renewed focus on micro-irrigation adoption by farmers in the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) to enable efficient on-farm water use.
- **Global Partnerships:** The formalisation of a partnership with Israel, the world leader in water governance and conservation, to leverage Israeli experience and knowledge for water conservation in India.
- **Adopting River Basin Management:** Embrace a basin-based approach to river management. Prioritise river interlinking projects while addressing environmental concerns.
- **Data-driven Policy-making:** Establish real-time water monitoring systems akin to Andhra Pradesh's water dashboard for informed decision-making and resource mapping.

5.4. DEBATE ON ANTHROPOCENE IN GEOLOGIC TIME SCALE (GTS)

Context

Recently, a committee of 18 scientists voted down a proposal to declare the start of the Anthropocene, or the Human Epoch, in geologic time.

MORE ON THE NEWS

- The **Anthropocene Working Group (AWG)** submitted its proposal to the **International Union of Geological Sciences (IUGS)**, seeking to mark the Anthropocene epoch.
- The proposal, involving over a million geoscientists from 120 countries, was then taken up for a vote by the Subcommission on Quaternary Stratigraphy (SQS) in March.
- The SQS, **part of the International Union of Geological Sciences (IUGS)**, rejected the proposal, with 12 out of 18 members voting against it.

REASONS FOR REJECTION

- The IUGS committee determined that adding the Anthropocene epoch and ending the Holocene **did not meet** the established standards in chronostratigraphy for defining epochs.
- Some committee members doubted the evidence supporting the Anthropocene, citing recent changes that didn't fully meet **the strict criteria for defining geological epochs**.
- Critics argued that the proposed start date of the mid-20th century was too recent and lacked a clear geological marker.
- Proponents of the Anthropocene allege that the **vote violated protocol and are calling for an investigation into the decision-making process**.

International Union of Geological Sciences (IUGS)

- Founded in 1961.
- It promotes the study of geological problems, especially those of world-wide significance, and supports and facilitates international and interdisciplinary cooperation in the Earth sciences.

Anthropocene Working Group (AWG)

- It is an interdisciplinary research group dedicated to the investigation of the Anthropocene.
- It was established in 2009 by the Sub commission on Quaternary Stratigraphy (SQS), a component body of the International Commission on Stratigraphy (ICS).

Sub commission on Quaternary Stratigraphy (SQS-AWG)

- It is a commission responsible for recognising time units within our most recent period of geologic time.

- The scientific community, particularly the Anthropocene Working Group (AWG), has been engaged in a 15-year process to formally define the Anthropocene as a geological unit within the Geological Time Scale.

Geological Time Scale

- It relates stratigraphy (layers of rock) to periods of time. The time scale is used by geologists, palaeontologists and many other Earth scientists to date certain historical events on Earth.

EARTH'S GEOLOGICAL TIMELINE

- Geoscientists, or scientists who study the Earth, use the geologic time scale (GTS) to measure the planet's history. The GTS (since the formation of Earth roughly 4.54 billion years ago) is divided, in descending order of duration, into aeons, eras, periods, epochs, and ages. According to current understanding, we are in the Holocene epoch.

HOLOCENE EPOCH

- The Holocene epoch (from the Greek "holos", meaning 'whole', and "kainos", meaning "new") began some 11,700 years ago, at the end of the Last Glacial Period (LGP).
- During the LGP, up to 25% of the Earth's land surface was covered by glaciers, the mean sea level was up to 400 feet lower, and the average temperature fell to 8 degrees Celsius.
- The Holocene saw the warming of the Earth, which closely corresponded with the rise and increase in number of human beings.

Geological Time Scale

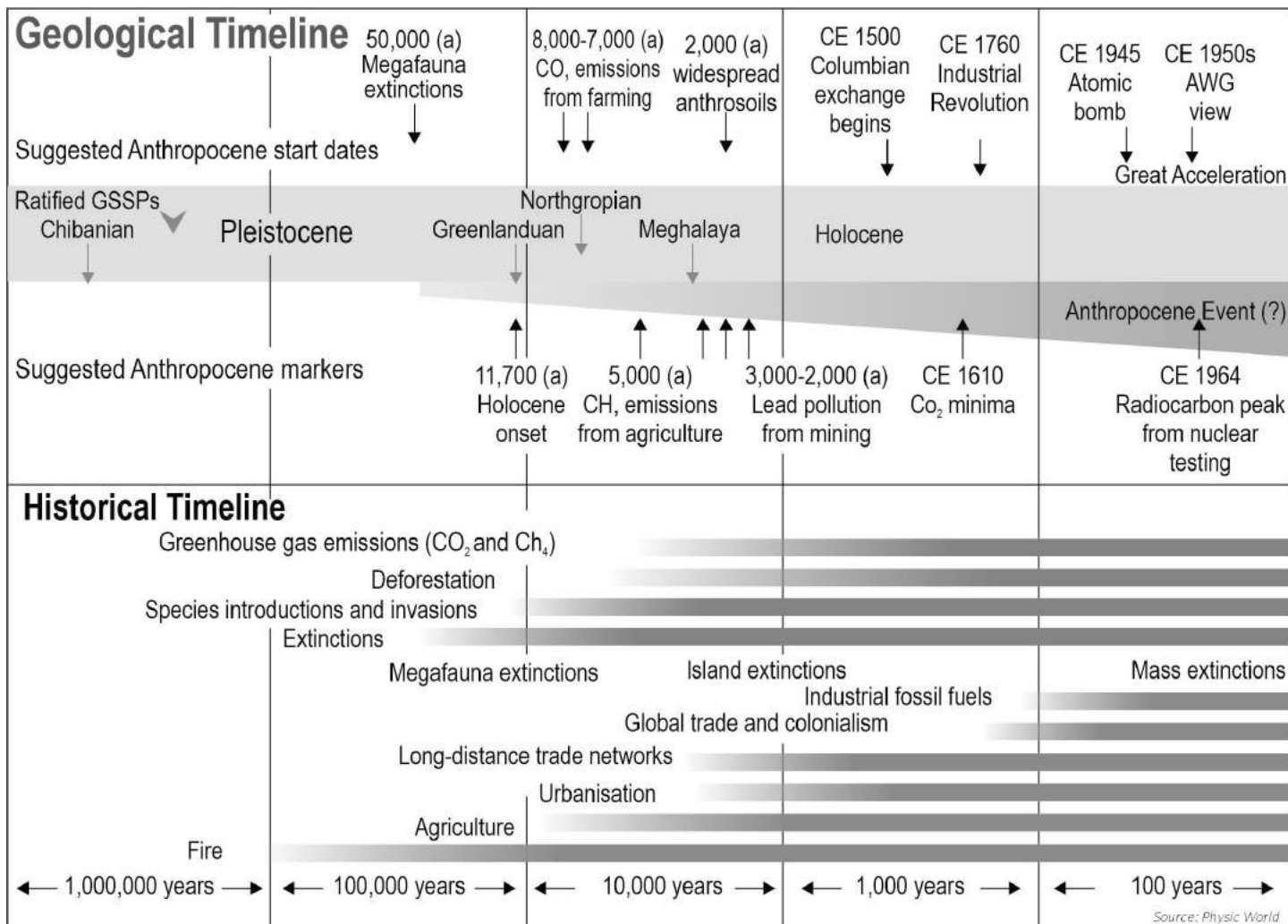
- It relates stratigraphy (layers of rock) to periods of time. The time scale is used by geologists, palaeontologists and many other Earth scientists to date certain historical events on Earth.

- While Homo sapiens as a species had evolved well before the Holocene began, all of humanity's recorded history falls in this epoch.
- During the Holocene, **humanity experienced significant growth**, established civilisations, and achieved remarkable technological advancements.
- However, the stability of Earth's climate during this epoch has been **disrupted due to human activities**.
- **Why Scientists are Proposing a New Geological Epoch**

ANTHROPOCENE EPOCH

- This refers to the period in Earth's history when human activities significantly impacted the state of the planet's ecology.

- Since the year 2000, when the Dutch meteorologist Paul Crutzen and American botanist Eugene Stoermer coined the term Anthropocene, the idea of a separate 'human' epoch ("Anthropo": relating to humankind) has excited many geoscientists.
- The onset of the Anthropocene Epoch coincides with the Industrial Revolution from the late 18th century.
- Proponents of the Anthropocene argue that humans have changed the Earth to such an extent that a new geological epoch has begun.



- The proposal of a new geological epoch called the Anthropocene lies in the overwhelming evidence of global transformations linked to human activities, such as **rising temperatures, sea-level changes, ozone layer depletion, and ocean acidification**.
- The starting date of the Anthropocene, placing it just after World War II, with a unique reference point at **Crawford Lake in Ontario, Canada**. The selection of this location is due to the presence of traces of the **radioactive element plutonium**.
- The concentration of plutonium particles around the year 1950 clearly indicates **human impact**, marking the beginning of the Anthropocene era.
- Scientists propose the mid-20th century, around 1950, as the beginning of the Anthropocene. This coincides with the **"Great Acceleration"**, a period of rapid industrialisation and global development.
- The post-World War II era is known as the "Great Acceleration". It witnessed a surge in human population, increased burning of fossil fuels, widespread use of nitrogen-based fertilisers, and the proliferation of plastics.

MARKERS OF THE ANTHROPOCENE EPOCH

- **Temperature Increase:** Since the Industrial Revolution, there has been a notable rise in global average surface temperature.
- **Species Extinction:** Human activity has accelerated the extinction rate of various species, comparable in scale to major extinction events from millions of years ago.
- **Continental Erosion:** Increase in the erosion and the

denudation of continents at a pace greater than what one would expect from purely natural processes.

- **Urbanization and Water Depletion:** Accelerated urbanisation, land-use changes, and migration to urban

areas have led to persistent water depletion and shortage. Major rivers affected by damming and diversion have seen a decline in their water-carrying capacity over the past century.

5.5. EMISSION SCENARIOS AND REPRESENTATIVE CONCENTRATION PATHWAYS

Context

In the recent times, Representative Concentration Pathways (RCPs) have emerged as the latest approach to determining emission scenarios.

ABOUT EMISSION SCENARIOS

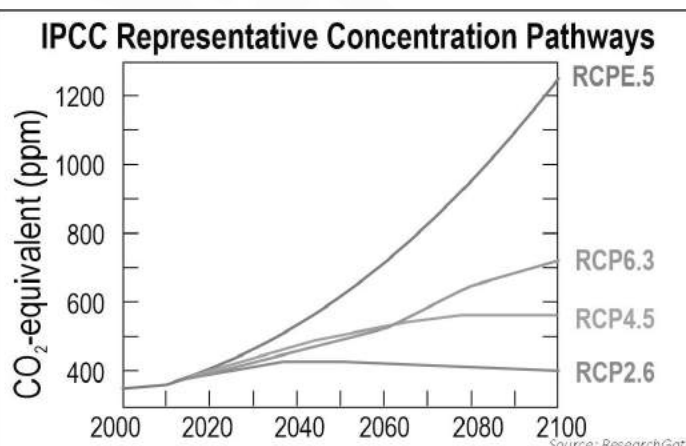
- Emission scenarios are pathways that tell us about emissions of greenhouse gas and aerosol due to human activities over a period of time.
- Scientists utilise these **scenarios as inputs for climate models**, which then calculate things like future global temperatures or sea levels.
- Scientists use diverse scientific and socioeconomic data, including population growth, GDP, air pollution, land use, and energy sources, to determine emission scenarios.
- The latest method for determining emission scenarios is termed Representative Concentration Pathways (RCPs)

REPRESENTATIVE CONCENTRATION PATHWAYS (RCPs)

- RCPs specify concentrations of greenhouse gases that will increase **total radiative forcing** by a target amount by 2100, relative to pre-industrial levels.
 - ✓ The Intergovernmental Panel on Climate Change (IPCC) considers 1750 as the base year as it predates the Industrial Revolution and the radiative forcing was quite stable.
- **Total radiative forcing** is the difference between the amount of energy that enters the Earth's atmosphere and the amount of energy that leaves it.
- Higher radiative forcing values indicate increased concentration of greenhouse gases and pollutants, leading to more significant global warming and climate change impacts.
- Radiative forcing is measured in **watts per square meter**.
- RCPs aren't forecasts or policy recommendations but only represent a broad range of climate outcomes.

DIFFERENT RCP LEVELS

- **There are four pathways:** RCP8.5, RCP6, RCP4.5, and RCP2.6
- The numbers represent the expected change in radiative forcing from the year 1750 to 2100. So, RCP4.5 represents an increase of 4.5 watts per square meter of radiative forcing between 1750 and 2100.



Intergovernmental Panel on Climate Change (IPCC)

- The IPCC is a United Nations body established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).
- Its objective is to furnish governments with scientific information for developing climate policies.
- **Assessment Reports:** The IPCC has produced six Assessment Reports since 1988, serving as the most comprehensive global scientific resources on climate change.

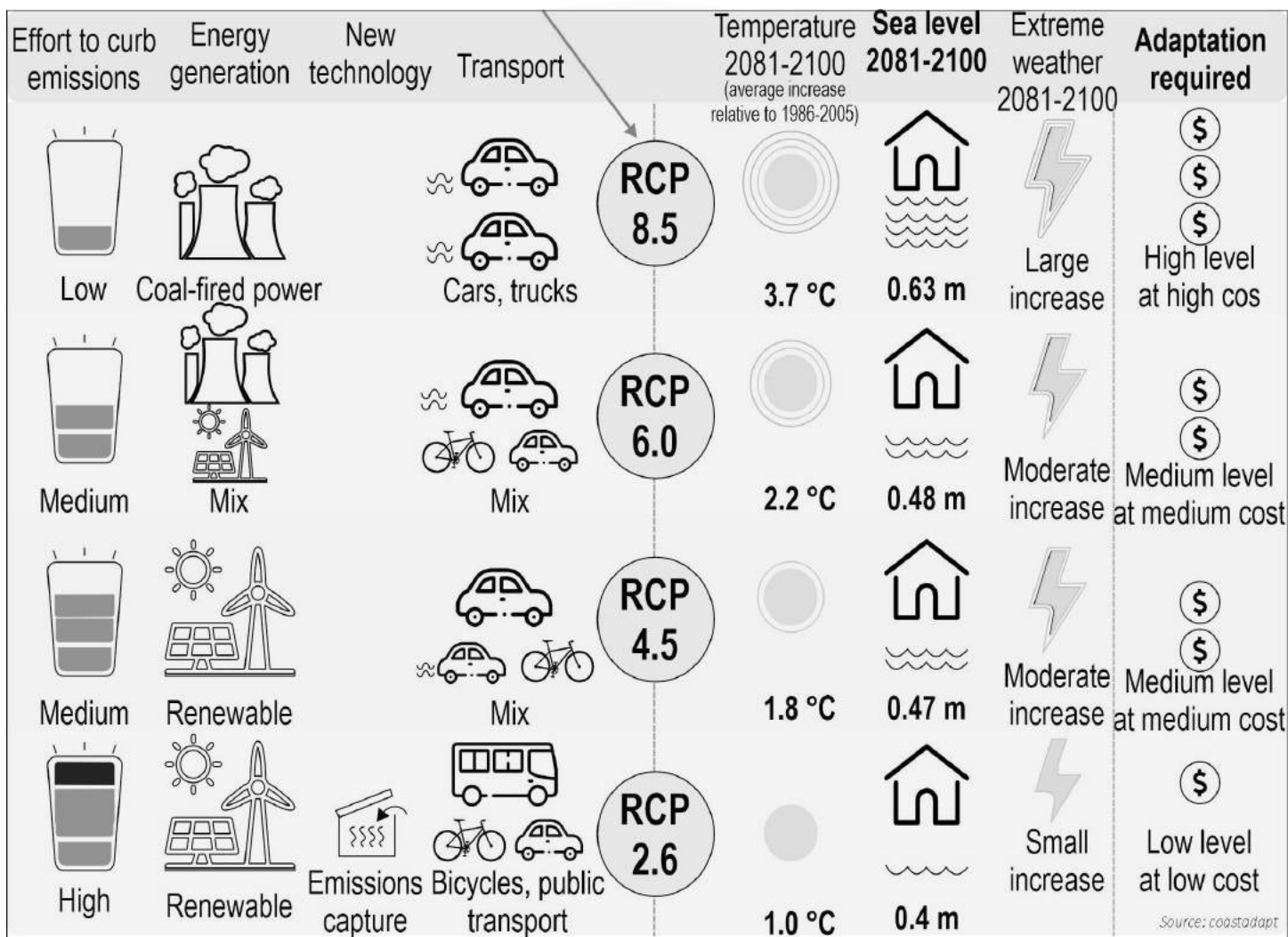
IPCC and RCPs

- The RCPs were used in the Fifth Assessment Report of the IPCC in 2014 as a basis for the report's findings.
- Previous IPCC assessment reports used a set of scenarios known as **SRES (Special Report on Emissions Scenarios)**, which start with socioeconomic circumstances from which emissions trajectories and climate impacts are projected.
- In contrast, RCPs fix the emissions trajectory and resultant radiative forcing rather than the socioeconomic circumstances.
- **RCP2.6** depicts the best-case scenario, with a modest additional radiative forcing of 2.6 watts per square meter by the end of the 21st Century.
 - ✓ This scenario involves a substantial reduction in greenhouse gas concentrations and stringent mitigation efforts.

- ✓ RCP2.6 is also known as RCP3PD as emissions peak around 2050 and then decline.
- ✓ Consequently, the global average temperature is projected to increase by 1.6 degrees Celsius compared to pre-industrial levels.
- **RCP4.5** and **RCP6** are intermediate scenarios, with global

temperature would increase by 2.4 and 2.8 degrees Celsius above the pre-industrial levels respectively.

- **RCP8.5** signifies the worst-case scenario, with greenhouse gas concentrations three times higher than present levels. It can lead to a temperature rise of 4.3 degrees Celsius by 2100.



SIGNIFICANCE OF CALCULATING EMISSIONS SCENARIOS

- **Future Insight:** Calculating emission scenarios offers a glimpse into potential future trajectories based on varying levels of greenhouse gas emissions.
- **Policy Formulation:** It aids in the formulation of policies by providing data on potential emission levels. It allows policymakers to set realistic targets and develop appropriate strategies for mitigation.
- **Risk Assessment:** Understanding emission scenarios helps in assessing the risks associated with different levels of emissions. It enables better preparation and adaptation measures.
- **Resource Allocation:** Emission scenarios aid resource allocation by pinpointing priority areas for emission

reduction and sustainable technology investment.

- **Stakeholder Engagement:** Emission scenarios foster dialogue among governments, industries, and communities, promoting collaborative action on climate change challenges.
- **Long-term Planning:** Emission calculations support long-term planning across sectors like energy, transportation, and agriculture, ensuring resilience and sustainability.

CHALLENGES IN CALCULATING EMISSIONS SCENARIOS

- **Data Availability:** Gathering accurate data on factors affecting emissions, like economic trends and population growth, poses challenges.

- **Modeling Uncertainties:** Complex modelling techniques used to predict emissions are prone to uncertainties, including assumptions about future trends and policies.
- **Socioeconomic Factors:** Predicting emissions is complicated by factors such as urbanisation and consumption patterns, which are challenging to forecast accurately.
- **Policy Dynamics:** Changes in government policies and international agreements can introduce uncertainties in emission predictions.

WAY FORWARD

- **Enhance Data Collection:** Invest in improving data collection methods to ensure the accuracy and reliability of input factors influencing emissions.
- **Refine Modeling Techniques:** Continuously refine and

update modelling techniques to reduce uncertainties and improve the accuracy of emission predictions.

- **Account for Socioeconomic Trends:** Account for dynamic socioeconomic factors such as urbanisation and consumption patterns, incorporating more nuanced forecasting approaches.
- **Adaptive Policy Framework:** Implement an adaptive policy framework that can accommodate changes in government policies and international agreements, ensuring flexibility in emission prediction scenarios.
- **Interdisciplinary Collaboration:** Foster interdisciplinary collaboration between researchers, policymakers, and stakeholders to develop comprehensive emission scenarios considering diverse perspectives and expertise.

5.6. RISING SEA SURFACE TEMPERATURE

Context

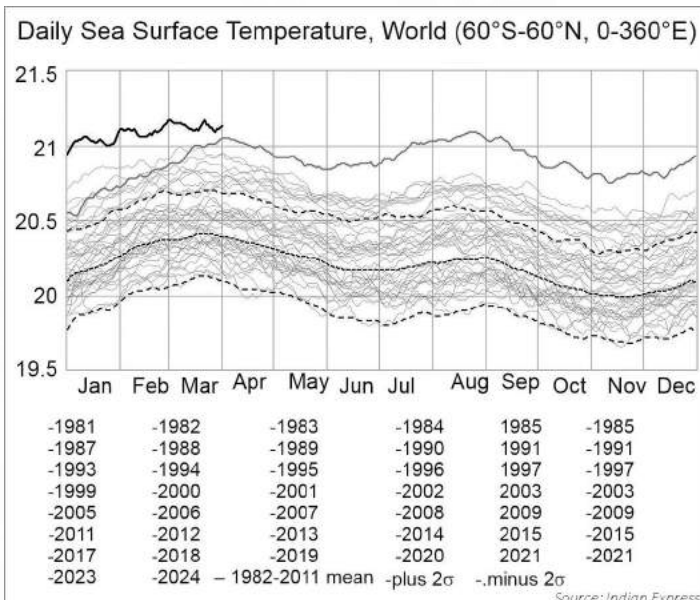
According to the monthly climate bulletin of the Copernicus Climate Change Service (C3S), February 2024 recorded the highest ever average global sea surface temperature (SST).

MORE ON THE NEWS

- The average global sea surface temperature (SST) for February 2024 was recorded at **21.06 degrees Celsius**, the highest ever in a dataset that goes back to 1979.
- The previous record of 20.98 degrees Celsius was set in August 2023.
- Since March 2023, the average daily sea surface temperatures (SST) have exceeded historical records, as indicated by the graph below.
- The orange line on the graph represents SST data for 2023, showcasing notably high temperatures compared to previous years, depicted by grey lines.
- In 2024, depicted by the solid black line, SST levels have surpassed even the exceptionally warm conditions observed in 2023.

ABOUT SST

- Sea surface temperature is the temperature of the water at the ocean surface. It is an important physical attribute of the world's oceans.
- The surface temperature of the world's oceans varies mainly with latitude, with the warmest waters generally near the equator and the coldest waters in the Arctic and Antarctic regions.
- As the oceans absorb more heat, sea surface temperature increases, and the ocean circulation patterns that transport warm and cold water around the globe change.



FACTORS CONTRIBUTING TO INCREASE IN SST

- **Greenhouse Gas Emissions:** Since the onset of Industrial Revolution, human activities like burning fossil fuels have released significant amounts of greenhouse gases (GHGs) into the atmosphere. These gases, such as carbon dioxide, methane, ozone, and nitrous oxide, trap heat in the atmosphere leading to global warming.
- **Ocean Heat Absorption:** Approximately 90% of the excess heat trapped by GHGs has been absorbed by the oceans.

This continuous absorption has led to a steady increase in ocean temperatures over the decades.

- **Impact of El Niño:** El Niño is characterised by abnormal warming of surface waters in the equatorial Pacific Ocean. It contributes to ocean warming and rising global surface temperatures.
- **Weakening of Sahara Dust Effect:** The Sahara Desert typically produces dust that forms a protective barrier, shading Atlantic waters and reducing ocean temperatures.
- However, weaker-than-average winds have led to less dust blowing off the Sahara Desert and decreasing the protective effect. Consequently, more sunlight reaches the ocean surface, contributing to increased ocean temperatures.

CONSEQUENCES OF RISING SEA SURFACE TEMPERATURES

- **Ocean Stratification:** Warmer oceans lead to an increase in ocean stratification. Stratification is the natural separation of an ocean's water into horizontal layers by density.
 - ✓ Stratification leads to warmer water, which is lighter, less salty, and nutrient-poor water layer on top of heavier, colder, saltier, nutrient-rich water.
 - ✓ Usually, ocean ecosystems, currents, wind, and tides mix these layers. The rise in temperatures, however, has made it harder for water layers to mix with each other.
 - ✓ Due to this, oceans are able to absorb less carbon dioxide from the atmosphere, and the oxygen is not able to mix appropriately with cooler ocean waters below. This leads to ocean acidification, threatening the survival of marine life.
 - ✓ Stratification also results in nutrients not being able to travel up to the surface of the oceans from below. This could threaten the population of phytoplankton, the single-celled plants that thrive on the ocean surface and are the base of several marine food webs.
 - ✓ Phytoplankton are eaten by zooplankton, which are consumed by other marine animals such as crabs and fish. The decline of the phytoplankton population can result in the collapse of marine ecosystems.
- **Marine Heat Waves:** Warmer oceans cause marine heat

waves (MHWs). MHWs occur when the surface temperature of a particular region of the sea rises more than 3 degrees Celsius above the average temperature for at least five days.

- ✓ Between 1982 and 2016, such heatwaves doubled in frequency and became longer and more intense, according to a 2021 study by the UN's Intergovernmental Panel on Climate Change (IPCC).
- ✓ MHWs are devastating for marine ecosystems as they contribute to coral bleaching, reducing corals' reproductivity and making them more vulnerable to life-threatening diseases. They also impact the migration pattern of aquatic animals.
- **Extreme Weather Events:** Sea surface temperature influences global climate by affecting atmospheric water vapour levels over oceans.
 - ✓ Higher sea surface temperatures lead to increased atmospheric water vapour, which fuels weather systems generating precipitation. This increase in precipitation increases the risk of heavy rain and snow events.
 - ✓ Changes in sea surface temperature can alter storm paths, potentially contributing to drought conditions in certain regions.
 - ✓ Additionally, rising sea surface temperatures are expected to extend the growth season for bacteria that contaminate seafood, increasing the risk of foodborne illnesses and associated health effects.

WAY FORWARD

- **Paris Agreement:** Achieve the mitigation targets set by the Paris Agreement to limit global temperature rise to well below 2°C above pre-industrial levels.
- **Reduce Greenhouse Gas Emissions:** Efforts to reduce emissions are crucial to prevent further ocean warming.
- **Protect Coral Reefs:** Implement measures to prevent coral bleaching and preserve marine biodiversity.
- **Monitor and Adapt:** Continuously monitor ocean temperatures and adapt policies and practices accordingly.
- **Raise Awareness:** Educate communities about the impact of ocean warming and the need for action.

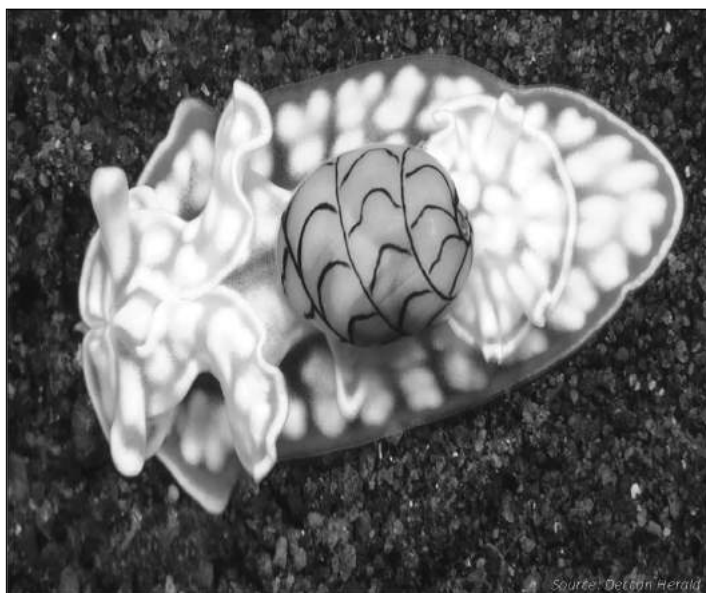
5.7. A NEW SPECIES OF HEAD SHIELD SEA SLUG NAMED AFTER DRAUPADI MURMU

Context

The Zoological Survey of India named a newly found head shield sea slug species **Melanochlamys Draupadi**.

MORE ON NEWS

- The new species has been named after the President of India, Droupadi Murmu.
- It belongs to the *Melanochlamys* genus and was discovered on the West Bengal and Odisha coasts.
- This new species of head-shield sea slug is **endemic to India**.



HEAD SHIELD SEA SLUG

- It is a small **invertebrate** with a maximum length of up to 7 mm.
- This species is **Brownish black in colour with a ruby-red spot**.
- Their reproduction period is around between **November and January**.

- This is the **second species** of head-shield sea slug found in India.
- The sea slugs are **rapid hunters** and feed upon mobile prey such as other shelled and unshelled sea slugs, roundworms, marine worms and small fishes.

About Zoological Survey of India (ZSI)

- It was established in 1916 to promote survey, exploration and research leading to the advancement of our knowledge.
- Its headquarters is located in Kolkata.
- Scientists in ZSI are engaged in exploring, naming, describing, classifying and documenting animals from all over India.

HABITAT

- These specimens inhabit **wet, soft and sandy beaches**.

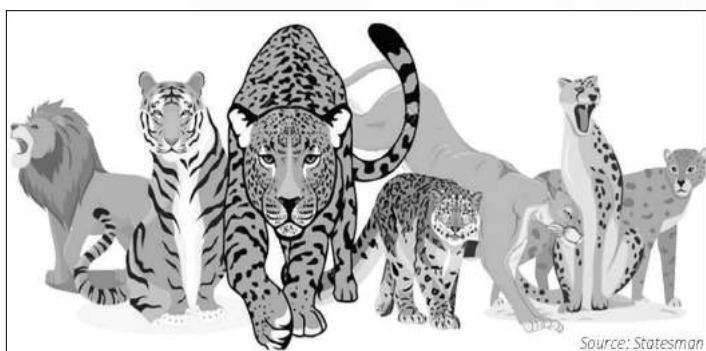
IMPORTANT FACTS ABOUT SEA SLUG

- All sea slugs contain **both male and female organs (hermaphroditic)**.
- Males of this species have **reproductive systems in their heads**, while females have them in their **tails**.
- These species are predominantly found in temperate regions of the Indo-Pacific Oceans.

5.8. INTERNATIONAL BIG CAT ALLIANCE (IBCA)

Context

Recently, the Union Cabinet approved the establishment of the International Big Cat Alliance (IBCA)



ABOUT BIG CATS

- A 'Big Cat' refers to the larger species within the Felidae family, primarily including those in the Panthera genus: Tiger (Panthera tigris), Lion (Panthera leo), Jaguar (Panthera onca), Leopard (Panthera pardus), and Snow Leopard (Panthera uncia)."
- The cats **Puma and Cheetah** are **not part of Panthera**. But they are usually included in most lists of 'big cats'.
- India is home to **five out of seven big cat** species: Tiger, Lion, Leopard, Snow Leopard, and Cheetah.

Significance of protecting Big Cats

- To keep ecosystem in balance
- Big cat habitat is a source of water for hundreds of millions of people.
- Mitigate climate change.
- Cultural significance.
- Big cat conservation supports economies.

ABOUT THE INTERNATIONAL BIG CAT ALLIANCE

- It is a **global network for the conservation of big cats**.
- The Indian government originally proposed the IBCA program in 2019, which was started in Mysuru to mark the 50th anniversary of Project Tiger.
- Its framework has been drafted based on the International Solar Alliance Pattern.
- It was founded as a multi-country, multi-agency coalition of 96 big cat range countries and non-range conservation.
- Headquarters: India.

OBJECTIVE

- To ensure cooperation in conserving seven big cats: lion, tiger, leopard, cheetah, snow leopard, jaguar, and puma.

- Reinforcing India's leadership in **global biodiversity conservation**

ORGANISATIONAL STRUCTURE

- The IBCA's structure will include an Assembly of Members, a Standing Committee, and a Secretariat, with headquarters based in India.
- The statute of the IBCA will be finalised by an International Steering Committee, which includes national focal points of founding member countries.
- An interim head of the IBCA Secretariat will be appointed by the Ministry of Environment, Forest and Climate Change

(MoEFCC) until the IBCA appoints its Director-General during an Assembly meeting.

FINANCIAL SUPPORT AND EXPLORATION

- The government has allocated a one-time budgetary support of Rs 150 crore for a five-year period, from 2023–24 to 2027–28.
- The Centre plans to seek contributions from bilateral and multilateral agencies and other appropriate institutions, mobilise financial support from public sector organisations, etc, to support the initiatives.

5.9. RESOLUTION ON SUSTAINABLE LIFESTYLES

Context

The United Nations Environment Assembly (UNEA), in its Sixth Session, adopted the resolution on sustainable lifestyles submitted by India.

MORE ON THE NEWS

- The Sixth Session was held in Nairobi, Kenya, from 26 February to 1 March 2024
- **All participating member states** of the sixth session adopted the resolution, which was **co-sponsored by Sri Lanka and Bolivia**.
- The resolution recognises the potential of behavioural changes toward sustainable lifestyles to contribute to the achievement of sustainable development.
- It **encourages Member States** and invites other stakeholders to create the necessary evidence-based enabling conditions to empower citizens to make informed choices about **sustainable lifestyles**, as referenced in **SDG 4.7** (Education for Sustainable Development and Global Citizenship).

United Nations Environment Programme (UNEP)

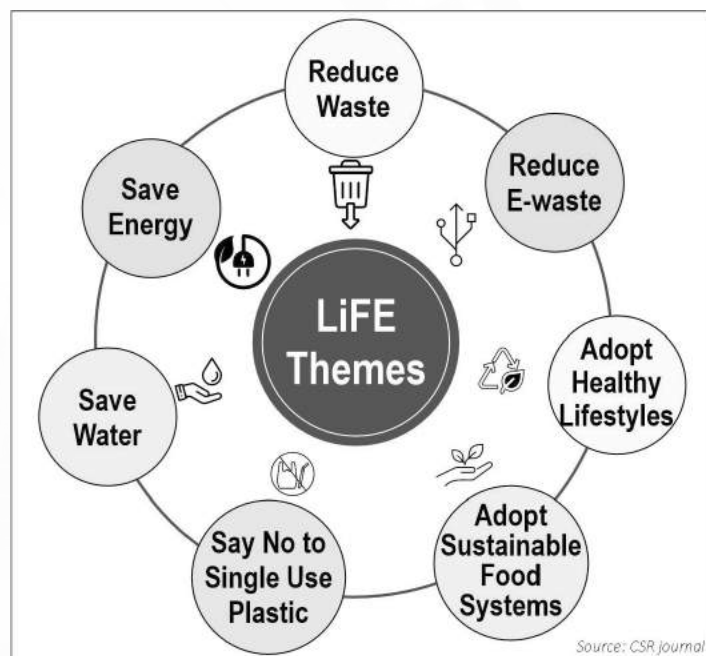
- It is founded on 5 June 1972 after the Stockholm Conference on the Human Environment.
- Its headquarters is located at Nairobi, Kenya.
- 5th June is celebrated as World Environment Day.

United Nations Environment Assembly (UNEA)

- It is the decision-making body of the UNEP
- It was created in June 2012 at the United Nations Conference on Sustainable Development (Rio+20)
- It enjoys the universal membership of all 193 UN Member States and convenes every two years.

ABOUT MISSION LIFE'S

- The **concept of LiFE (Lifestyle for Environment)** was envisioned by the Prime Minister of India at the **World Leaders' Summit in Glasgow at COP26 of UNFCCC**. It was launched in October 2022 at the Statue of Unity, Ekta Nagar, Gujarat.
- Mission LiFE is an India-led global mass movement to nudge individual and community action to protect and preserve the environment by practising a lifestyle that is synchronous with nature and does not harm it.



- It is designed with the objective of mobilising at least one billion Indians and other global citizens to take individual and collective action to protect and preserve the environment in the period 2022 to 2027.
- Mission LiFE aims to follow a **three-pronged strategy** for changing our collective approach towards sustainability -
 - ✓ **Change in Demand:** Encouraging individuals to practice simple yet effective environment-friendly actions in their daily lives.
 - ✓ **Change in Supply:** Enabling industries and markets to respond swiftly to the changing demand.
 - ✓ **Change in Policy:** To influence government and industrial policy to support both sustainable consumption and production.
- India is the first country to include LiFE in its Nationally Determined Contributions (NDCs)

5.10. WORLD WILDLIFE DAY

Context

World Wildlife Day is celebrated on 3rd March.

- **2024 Theme: Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation**

HISTORICAL BACKGROUND

- On 20 December 2013, the Sixty-eighth session of the United Nations General Assembly decided to proclaim 3 March as World Wildlife Day to celebrate and raise awareness of the world's wild fauna and flora.
- The date is the day of adopting the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1973, which is important in ensuring that international trade does not threaten the species' survival.

KEY HIGHLIGHTS OF THIS YEAR WORLD WILDLIFE DAY

- It encourages the exploration of existing digital innovations, addresses intersectional discrepancies, and envisions inclusive digital connectivity for all people and the planet.



- This year, the CITES Secretariat has teamed up with the United Nations Development Programme (UNDP), WILDLABS, Jackson Wild, and the International Foundation for Animal Welfare to promote the vital discussions.
- With 183 Member States, CITES remains one of the world's most powerful tools for biodiversity conservation through the regulation of trade in wild fauna and flora.

WILDLIFE AND TECHNOLOGY

- Technological advancements have significantly improved various aspects of wildlife conservation, including research, communication, tracking, and DNA analysis, but challenges such as uneven access, environmental pollution, and unsustainable technology use impede the achievement of universal digital inclusion by 2030.

WORLD WILDLIFE DAY 2024 AND INDIA

- WWF EIACP PC-RP [(Environmental Information, Awareness, Capacity Building and Livelihood Programme), Resource Partner (RP)] under Ministry of Environment, Forest and Climate Change celebrated World Wildlife Day, 2024, by organizing various activities at Okhla Bird Sanctuary, one of the places blessed with a rich biodiversity focusing Mission LIFE (An India-led global mass movement to nudge individual and community action to protect and preserve the environment.)

SIGNIFICANCE

- It is an important global awareness event for the protection and conservation of animals.

5.11. INDIA'S 1ST GREEN HYDROGEN PLANT IN THE STAINLESS STEEL SECTOR

Context

Union Minister of Steel inaugurates India's 1st Green Hydrogen Plant in the Stainless-Steel Sector.

KEY HIGHLIGHTS

- It is located at Jindal Stainless Limited, Hisar, Haryana.
- It will be the world's first off-grid Green Hydrogen plant for the stainless-steel industry and the world's first Green Hydrogen plant with rooftop & floating solar.
- This project is a state-of-the-art green hydrogen facility aiming to reduce carbon emissions considerably by around

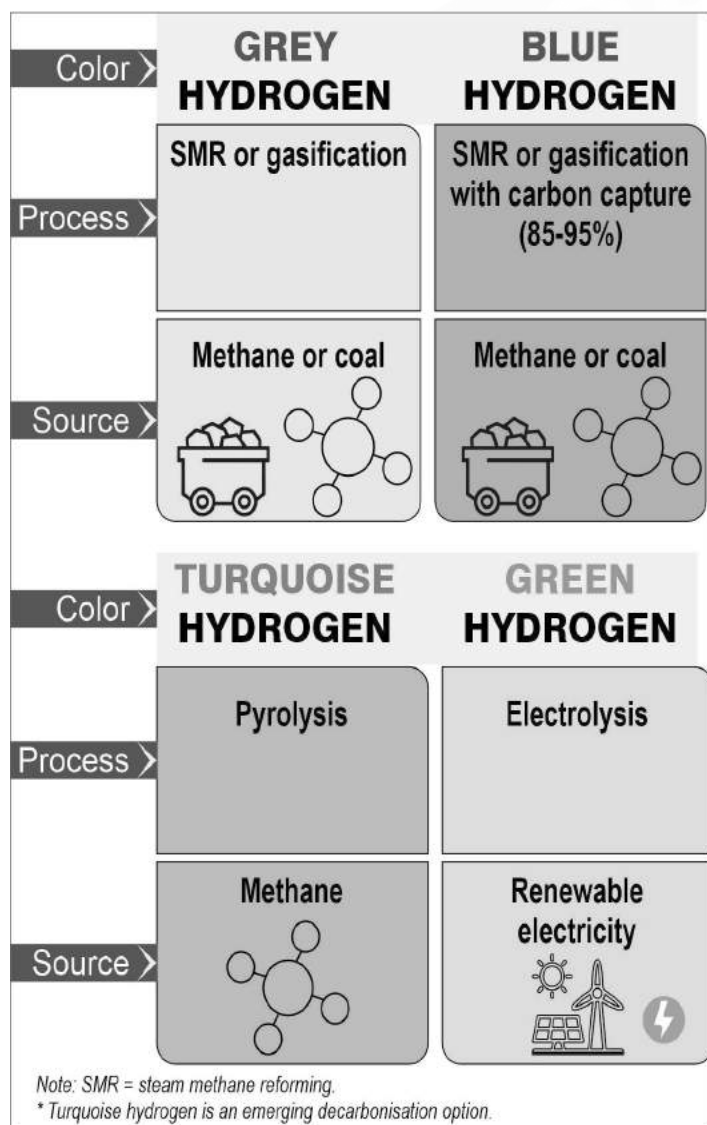
2,700 Metric Tonnes per annum and 54,000 tons of CO₂ emissions over the next two decades.

- India's progress in the steel sector has evolved from a net importer to a net exporter, and it aims to become the world's largest producer of crude steel.
- One key initiative in this journey is the **National Green Hydrogen Mission (NGHM)**, launched last year to

make India a Global Hub for producing, using, and exporting Green Hydrogen and its derivatives.

SIGNIFICANCE

- India marks a significant step towards a greener economy by adopting clean technologies.
- It drives India's journey towards net zero carbon emissions by 2070.



- Encourages industries to actively participate in India's transformative journey towards sustainable development.
- Creation of valuable employment opportunities underscores the socio-economic benefits of green initiatives.
- Positions India as a pioneer in green hydrogen technology and reinforces its commitment to climate action on the global stage.

- The project aligns with the government's vision and creates valuable employment opportunities, showcasing the potential of responsible industrial practices.

Based on production methods and environmental impact, hydrogen can be categorised into several types

Green Hydrogen:

- Produced via electrolysis using renewable energy sources such as solar, wind, or hydroelectric power to split water molecules into hydrogen and oxygen.
- Environmentally friendly and sustainable, as it does not produce CO₂ emissions during production.
- Considered the cleanest form of hydrogen and plays a crucial role in decarbonising various sectors.

Grey Hydrogen:

- Produced from fossil fuels, typically natural gas, through steam methane reforming (SMR) or coal gasification.
- Generates carbon dioxide (CO₂) emissions during production, contributing to climate change.
- Most common type of hydrogen currently produced worldwide.

Blue Hydrogen:

- Similar to grey hydrogen, produced from fossil fuels (natural gas or coal) using SMR or gasification.
- Utilizes carbon capture and storage (CCS) technology to capture and store CO₂ emissions, reducing environmental impact.
- Aims to mitigate carbon emissions associated with hydrogen production, making it a transitional solution towards cleaner energy.

Turquoise Hydrogen:

- Produced from natural gas, but with carbon capture and utilisation (CCU) technology.
- Carbon emissions from production are captured and converted into useful products, reducing overall environmental impact.
- Offers a lower carbon footprint than grey hydrogen but is not entirely emission-free.

Pink Hydrogen:

- Produced using nuclear energy through high-temperature electrolysis or thermochemical processes.
- Uses heat generated from nuclear reactors to power hydrogen production, minimising carbon emissions.
- Provides a low-carbon alternative to fossil fuel-based hydrogen production methods.

Brown Hydrogen:

- Produced from coal through gasification.
- Similar to grey hydrogen, it generates significant CO₂ emissions during production.
- Less common and less environmentally favourable than other types of hydrogen due to the environmental impact of coal mining and combustion.

5.12. ELECTRIC MOBILITY PROMOTION SCHEME 2024

Context

Recently, the Ministry of Heavy Industries introduced the Electric Mobility Promotion Scheme (EMPS), 2024 to boost Electric Vehicle (EV) adoption in India

ABOUT THE ELECTRIC MOBILITY PROMOTION SCHEME

- It is approved by the **Department of Expenditure**, Ministry of Finance to further accelerate the adoption of Electric vehicles in the country.
- This is a **fund-limited scheme** with a total outlay of Rs. 500 crores for the period of **4 months** (1st April 2024 till 31st July 2024).
- Incentives will be provided solely to EVs equipped with advanced batteries to encourage technological advancement.
- Eligible EV categories
 - ✓ **Two Wheelers** (electric) (e-2W).
 - ✓ **Three-wheeler** (electric) including registered e-rickshaws & e-carts and L5 (e-3W).

COMPONENTS OF EMPS 2024

- Subsidies/Demand Incentive:** This component covers incentives for electric 2-wheelers (e-2W) and electric 3-wheelers (e-3W), including registered e-rickshaws, e-carts, and L5 vehicles.
- Administration of Scheme:** This includes managing Information, Education & Communication (IEC) activities and fees for the Project Management Agency.

OBJECTIVE

- It aims to increase the **sale of electric two-wheelers, three-wheelers and e-rickshaws**.
- The Government plans to cover more than **31,000 small three-wheelers (e-rickshaws and e-carts) under the scheme and will provide financial support of ₹25,000 for purchasing them**.

BENEFITS OF THE SCHEME

- To reduce pollution caused by **diesel and petrol-operated** vehicles.
- To promote **manufacturing of electric and hybrid** vehicles
- It promotes an efficient, competitive and **resilient EV manufacturing industry** in the country.
- It promotes an **efficient, competitive and resilient EV**

manufacturing industry in the country, thereby promoting the vision of Aatma-Nirbhar Bharat.

- It will also create **significant employment opportunities** along the value chain.

OTHER GOVERNMENT INITIATIVES TO PROMOTE ELECTRIC VEHICLE

- Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India):**
 - ✓ It operates in two phases

FAME I

- The first phase of Fame India Scheme started in 2015 and was functional till 31st March 2019.
- FAME India Phase I had four focus areas - technological development, demand generation, pilot project and charging infrastructure components.

FAME II

- The second phase of this scheme started in April 2019 and will continue till 31st March 2024.
- This phase aims to generate demand by way of supporting 7000 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars (including Strong Hybrid) and 10 lakh e-2 Wheelers

- Goods and service tax (GST)** rate on all Electric Vehicles reduced from 12% to 5% and of charger or charging stations for EVs from 18% to 5%.
- The Ministry of Power, along with the Ministry of Road Transport and Highways, Ministry of Heavy Industries and NITI Aayog, has launched a nationwide "Go Electric" Campaign in 2021 to educate the general public on the benefits of electric vehicles.
- A Phased Manufacturing Programme (PMP) has been adopted, which encourages domestic manufacturing and strengthens the EV supply chain.
- Phased Manufacturing Programme (PMP):** It aims to promote indigenous manufacturing of electric vehicles.
- The government has proposed the **exemption of registration fees for battery-operated** electric vehicles to promote **eco-friendly vehicles** in the country.

5.13. E-VEHICLE POLICY FOR EV MANUFACTURING

Context



Recently, the Government introduced a policy to promote the manufacturing of electric passenger cars in India.

KEY HIGHLIGHTS OF THE POLICY

- The Government has approved this scheme to promote

India as a manufacturing destination so that e-vehicles with the latest technology can be manufactured in the country.

- The policy is designed to attract investments in the e-vehicle space by reputed global EV manufacturers. The **approved applicants** will be required to set up manufacturing facilities in India with a **minimum investment of Rs. 4,150 crore (USD 500 million)** for e-4W (4 Wheelers) manufacturing with no cap on maximum Investment.
- The manufacturing facility(ies) shall be made operational within a period of **3 years** from the date of issuance of the approval letter by the Ministry of Heavy Industries (MHI) and achieve a minimum **Domestic Value addition (DVA) of 25%** within the same period.

THE IMPACT OF DUTY CUT			
CASE-1			
Committed investment: \$500 million (₹4,150 CR)	CIF (cost, insurance and freight) price of every EV: \$35,000		
Duty foregone: ₹15, 97, 750 Maximum imports: 25,974 units			
CASE-2		CASE-3	
Committed Investment: \$781 million (₹6,484 CR)	CIF (cost, insurance and freight) price of every EV: \$35,000	Committed investment: \$500 million (₹4,150 CR)	CIF (cost insurance and freight) price of every EV: \$50,000
Duty foregone: ₹15, 97, 750 Maximum imports: 40,582 units		Duty foregone: ₹35, 27, 500 Maximum imports: 11,764 units	
			
The duty foregone on the total number of electric vehicles (EVs) allowed for Import would be limited to the Investment made or 6,484 crore (equal to Incentive under production linked Incentive scheme) whichever is lower - Central government			

- **Domestic value addition (DVA) during manufacturing:** A localisation level of **25% by the 3rd year and 50% by the 5th year** will have to be achieved from the date of issuance of the approval letter by the **Ministry of Heavy Industries (MHI)**.
- **The applicant will be allowed to import Completely built units (CBUs) of e-4W manufactured by them**, with a minimum CIF value of USD 35,000, at a reduced customs duty of 15%. It would be applicable for a period of 5 years
 - ✓ At present, **CBU vehicles** priced at more than \$40,000 attract a 100% duty, while those below \$40,000 are subject to **70% tax**.
- Not more than **8,000 EVs per year** would be permissible for import under this scheme. The **carryover** of unutilised annual import limits **would be permitted**.
- Tenure of the Scheme will be 5 years or as notified by the Government of India.
- The Scheme will be implemented through a Project

Management Agency (PMA), which will be responsible for providing secretarial, managerial and implementation support and carrying out other responsibilities as assigned by the Government of India.

- The company's commitment will have to be backed by a bank guarantee from a scheduled commercial bank in India equivalent to the total duty to be forgone during the scheme period.
- The Bank guarantee will be invoked in case of non-achievement of DVA and minimum investment criteria defined under the scheme guidelines

SIGNIFICANCE OF THE SCHEME

- NITI Aayog has projected that by the year 2030, the penetration of various categories of EVs is likely to be as follows:
 - ✓ **35-40% for 2-wheelers**
 - ✓ **9-11% for private 4-wheelers**
 - ✓ **20-25% for shared 4 wheelers**
 - ✓ **13-16% for buses.**
- Electric vehicles can help **reduce carbon footprint** and achieve the goal of getting to net-zero emissions by 2070 for India, under the **United Nations Framework Convention on Climate Change (COP 26)**
- **Access to Latest Technology:** The scheme will provide Indian consumers with access to cutting-edge technology, enhancing transportation efficiency and reducing reliance on traditional fossil fuel-powered vehicles.
- **Strengthening the EV Ecosystem:** Encouraging competition among EV players leads to increased production volumes, economies of scale, and lower production costs. It will contribute to the growth and sustainability of the electric vehicle ecosystem in India.
- **Reduction in Crude Oil Imports:** The scheme will help reduce India's dependence on imported crude oil. It will lower the trade deficit and enhance the country's energy security and self-sufficiency.

OTHER SIMILAR INITIATIVES

- **Faster Adoption and Manufacturing of Hybrid & Electric Vehicles Scheme:**
 - ✓ **The Ministry of Heavy Industry (MHI)** rolled out a scheme for Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (**FAME**) in **2015**.
 - ✓ The Phase II of the FAME scheme (FAME II) was **launched in 2019** with a budgetary layout of Rs.11,500 crore. The scheme provides upfront subsidies to purchasers of EVs to reduce their cost of acquisition.
- **PLI Scheme for Automobile and Automotive Components (PLI-Auto):** It was launched by the Ministry of Heavy Industries (MHI) in 2021 to promote domestic

manufacturing and draw investments into the value chain of the automotive manufacturing industry

- **PLI Scheme for Advanced Chemistry Cell (PLI-ACC):** This scheme was launched by MHI to incentivise manufacturers of advanced chemistry cells. This scheme aims to build a local manufacturing capacity of 50 GWh, out of which 30 GWh has already been subscribed.
- **State Policies:** Currently, more than 22 states and UTs in India have dedicated EV policies

CHALLENGES TO EV MANUFACTURING IN INDIA:

- **Limited Battery Manufacturing:** India heavily relies on imported batteries, posing supply chain vulnerabilities and high costs.
- **Infrastructure Investment Needed:** Expanding domestic battery capacity requires substantial R&D and infrastructure development investment.
- **Skilled Workforce Shortage:** Limited expertise in critical

areas like battery technology and software development hampers EV manufacturing growth.

- **Fragmented Supply Chain:** The fragmented EV supply chain makes quality control and supply chain management challenging.

WAY FORWARD

- **Promote Domestic Battery Production:** Government incentives and subsidies should encourage setting up battery manufacturing plants in India.
- **Standardise Charging Infrastructure:** Develop standardised charging infrastructure to facilitate easy EV charging across locations.
- **Enhance Skilled Workforce:** Implement training programs to develop battery technology and power electronics skills.
- **Streamline Supply Chain:** Invest in infrastructure and foster supplier collaboration to streamline the EV supply chain.

5.14. ETHANOL 100 FUEL

Context

The Union Minister for Petroleum & Natural Gas recently inaugurated 'ETHANOL 100', an innovative automotive fuel.

ABOUT ETHANOL 100

- Ethanol 100, also known as E100, is a type of fuel comprising **93-93.5% ethanol, 5% gasoline and 1.5% co-solvent** (which acts as a binder).
- It is a renewable fuel that is derived from plant material, such as corn or sugarcane.
- Ethanol 100 is being promoted as a cleaner and more sustainable alternative to gasoline.

BENEFITS OF ETHANOL 100

- **Reduced greenhouse gas emissions:** Ethanol 100 burns cleaner than gasoline, which can help to reduce greenhouse gas emissions and combat climate change.

Flex-fuel vehicles (FFVs)

- FFVs also sometimes called dual-fuel vehicles, are those that can run on more than one type of fuel. The most common combination is gasoline and ethanol blends, though methanol has also been used in some FFVs in limited applications.

Key feature of flex-fuel vehicles

- **Fuel versatility:** FFVs have internal combustion engines designed to operate on gasoline or gasoline-ethanol blends, typically containing up to 85% ethanol (E85) and E100.
- **Automatic adjustment:** These vehicles have special sensors and controls that can automatically detect the type of fuel being used and adjust the engine settings accordingly to optimize performance.

- **High octane rating:** Ethanol 100 has a high-octane rating (between 100-105), which means that it can improve engine performance and fuel efficiency while also minimising environmental impact.
- With the launch of ETHANOL100 at 183 outlets of IndianOil, India will achieve the 20% ethanol blending target by 2025-26.
- **Domestically produced:** Ethanol 100 can be produced from domestic crops, which can help to reduce reliance on foreign oil.

DRAWBACKS TO ETHANOL 100

- **Not all vehicles can use it:** E100 is not compatible with all the vehicles. Only flex-fuel vehicles, which are specially designed to run on gasoline, ethanol, or any blend of the two, can use E100.
- **Lower energy density:** Ethanol 100 has a lower energy density than gasoline, meaning vehicles will get fewer miles per litre on E100.
- **Can attract water:** Ethanol 100 can absorb water from the air, leading to corrosion in some engines.

ETHANOL BLENDING PROGRAM (EBP)

- It was launched in India in January 2003 with a 5% ethanol blend (E5) in select states to reduce reliance on imported oil.
- The Government achieved the target of 10% average

blending of ethanol in Petrol in the country in June 2022.

- The Government has set a target of 20% blending of ethanol in petrol under the EBP programme by Ethanol Supply Year (ESY) 2025-26.
- **Implementation:** Public Sector Oil Marketing Companies (OMCs) like Indian Oil Corporation and Bharat Petroleum are responsible for procuring ethanol and blending it with petrol.

AIMS AND OBJECTIVE

- **Reduce reliance on imported oil:** By using domestically

produced ethanol, India lessens its dependence on foreign oil sources for transportation fuels.

- **Promote renewable fuels:** Ethanol is a biofuel derived from plant material like sugarcane, making it a renewable resource.
- **Boost the agriculture sector:** Increased demand for ethanol production can benefit farmers cultivating sugarcane and other feedstocks.
- **Improve air quality:** Ethanol burns cleaner than gasoline, potentially reducing harmful emissions and improving air quality.

6.1. 100% FDI IN SPACE SECTOR

Context

The Union cabinet recently approved the amendment to the Foreign Direct Investment (FDI) policy, allowing up to **100% FDI** for the space sector.

BACKGROUND

- In 2020, the government of India introduced comprehensive reforms to the space sector to encourage **greater involvement of non-governmental entities** in the space domain.
- In 2023, the Government of India officially sanctioned the **Indian Space Policy-2023** as an overarching framework to implement the vision for **unlocking India's potential in the Space sector** through enhanced private participation. It aims to:
 - ✓ Augment space capabilities, develop a flourishing commercial presence in space,
 - ✓ Use space as a driver of technology development and derived benefits in allied areas,
 - ✓ Pursue international relations by leveraging space technology
 - ✓ Create an ecosystem for effectively implementing space applications among all stakeholders.
 - ✓ As per the existing FDI policy, **100% FDI is permitted** to establish and operate satellites through the government-approval route only.

AMENDMENTS IN FDI POLICY FOR THE SPACE SECTOR

The entry routes for the various activities under the amended policy are as follows:

- **Upto 74% under Automatic route:** Satellites-Manufacturing & Operation, Satellite Data Products and Ground Segment & User Segment. Beyond 74% of these activities are under the government route.
- **Upto 49% under Automatic route:** Launch Vehicles and associated systems or subsystems, Creation of Spaceports for launching and receiving Spacecraft. Beyond 49% of these activities are under the government route.
 - ✓ Currently, there is only one spaceport operated by ISRO in Sriharikota.
- **Upto 100% under Automatic route:** Manufacturing of components and systems/ sub-systems for satellites, ground segment and user segment.
- FDI up to 74% is permitted under the Automatic route; Government Approval is required beyond
- **NOTE:**
 - ✓ Under the **Automatic Route**, the foreign investor or the Indian company does not require any approval from RBI or the Government of India for the investment.

- ✓ Under the **Government Route**, prior approval of the Government of India is required.

OTHER INITIATIVES OF GOVERNMENT TO PROMOTE PRIVATE SECTOR IN THE SPACE INDUSTRY

- **New Space India Limited (NSIL):** It is the commercial arm of the Indian Space Research Organisation (ISRO) with the primary responsibility of enabling Indian industries to take up high-technology space-related activities and is also responsible for the promotion and commercial exploitation of the products and services emanating from the Indian Space Programme.
- **Indian National Space Promotion and Authorisation Centre (IN-SPACe):** It is responsible for promoting, enabling, authorising and supervising various space activities of the Non-Government Entities (NGEs) that include
 - ✓ The building of launch vehicles & satellites and providing space-based services;
 - ✓ Sharing of space infrastructure and premises under the control of DOS/ISRO;
 - ✓ Establishment of new space infrastructure and facilities.

Some Recent Achievement of Private Sector

- **Vikram-S:** India's first privately developed rocket by Skyroot Aerospace Private Limited.
- **Dhawan-1:** India's first privately developed fully cryogenic rocket engine by Skyroot Aerospace.
- A private launchpad and mission control centre is established within the ISRO campus at Satish Dhawan Space Center (SDSC), SHAR, Sriharikota, for the first time. It is designed and operated by a private company, an Indian space-tech start-up, Agnikul.
- **National Geospatial Policy, 2022:** It aims to strengthen the geospatial sector to support economic prosperity, national development and a thriving information economy. It will not only create an enabling infrastructure but will also work to bring a high-resolution topographical map.
- India is the 27th country to sign the **Artemis Accords**, which establishes a practical set of principles to guide **space exploration cooperation** among nations participating in **NASA's Artemis program**.

THE BENEFITS OF 100% FDI IN THE SPACE SECTOR

- **Increased Ease of Doing Business:** Streamlined regulations and approval processes will attract foreign investment, making it easier for them to set up and operate in the sector.
- **Employment Generation:** With the liberalised FDI policies, experts predict a substantial uptick in these figures, with projections suggesting a potential GDP contribution of \$50 billion by 2030 and creating over 500,000 new jobs in the space sector.
- **Modern Technology Adoption:** Foreign investment will bring access to cutting-edge technologies and expertise, enabling India to stay competitive in the global space market.

Current Status of Space Sector

- India's current space economy is \$8.4 billion, holding a 2% share in the global space economy.
 - IN-SPACe projects that by 2033, the Indian space economy could reach \$44 billion, constituting about 8% of the global share.
 - Currently, the domestic market share is \$8.1 billion, and the export market share is \$0.3 billion.
 - The goal is to increase the domestic share to \$33 billion and the export share to \$11 billion.
 - India's space industry contributes approximately \$7 billion to the national GDP and employs over 100,000 skilled professionals across various disciplines.
- **Make in India and Atmanirbhar Bharat:** Encouraging foreign companies to set up manufacturing facilities in India aligns with the 'Make in India' and 'Atmanirbhar Bharat' initiatives, promoting domestic production and reducing reliance on foreign imports.
 - **Larger Share in the Global Market:** By attracting foreign investment and fostering domestic innovation, India can capture a larger share of the global space economy. The space sector in India currently accounts for a little over 2% of the global space economy.

CHALLENGES 100% FDI IS ALLOWED IN THE SPACE SECTOR

- **National Security Concerns:** Allowing foreign companies

full control over certain space technologies and data could raise concerns about potential misuse or access to sensitive information.

- **Technological Dependence:** Overreliance on foreign technology and expertise due to increased dependence on foreign investment could hinder domestic innovation and long-term self-reliance in the space sector.
- **Unequal Partnerships:** Smaller Indian companies might struggle to compete with established foreign players, leading to potential exploitation or unfair partnerships.

WAY FORWARD

- **Pre-defined Sensitive Technologies List:** Clearly define a list of sensitive space technologies and data with restricted foreign ownership or access.
- **Technology Transfer Clauses:** Mandate technology transfer clauses in FDI agreements to foster domestic expertise and reduce dependence on foreign know-how.
- **Financial Support for Domestic R&D:** Allocate dedicated funds to support research and development in domestic space companies and institutions.
- **Fair & Transparent Regulatory Framework:** Establish clear and transparent regulations for both domestic and foreign companies in the space sector.
- **Facilitation & Dispute Resolution Mechanisms:** Create mechanisms to facilitate collaboration between Indian and foreign companies while providing effective dispute resolution channels.
- **Prioritize Manufacturing in India:** Emphasize the 'Make in India' initiative by incentivising foreign companies to set up manufacturing facilities within the country.
- **Focus on Downstream Applications:** Encourage the development and commercialisation of space-based applications across various sectors like agriculture, communication, and disaster management.

By implementing these measures, India can leverage the benefits of 100% FDI in the space sector while mitigating potential risks. This approach can propel India to become a major global space economy player.

6.2. INDIA'S INDIGENOUS FIFTH-GEN FIGHTER JET AMCA

Context

Recently, the Cabinet Committee on Security (CCS) has approved the project to design and develop India's fifth-generation fighter jet, Advanced Medium Combat Aircraft (AMCA).

MORE ON THE NEWS

- The Aeronautical Development Agency (ADA) under the Defence Research and Development Organisation (DRDO) will be the nodal agency for executing the programme and designing the aircraft.
- The manufacturing agency will be Hindustan Aeronautics Limited (HAL).
- After the approval, the ADA plans to have the first AMCA flight in four and a half to five years. The full development of the aircraft is expected to take around 10 years from now.

FUTURE'S FIGHTER

Stealth aircraft are designed to avoid detection by enemy radars and radar-guided weapons. India's Advanced Medium Combat Aircraft (AMCA) Mark-1 will be a fifth-generation stealth aircraft

LENGTH
17.6m

WINGSPAN
11.13m

MAXIMUM TAKE-OFF WEIGHT
25,000kg

MAXIMUM SPEED
2,600 kmph
(Mach 2.15)

COMBAT RANGE
1,620km

SERVICE CEILING
20,000m

PAYLOAD CAPACITY
6,500kg

PERFORMANCE
Can achieve supersonic speed without afterburner

COST
₹15,000 crore
to develop the first five jets

WEAPONS

Air to Air

- Close Combat Missile
- Beyond Visual, Range Missile

AMCA VARIANTS

AMCA Mark-1

- US-made engines
- Fifth-gen technologies

WINGS

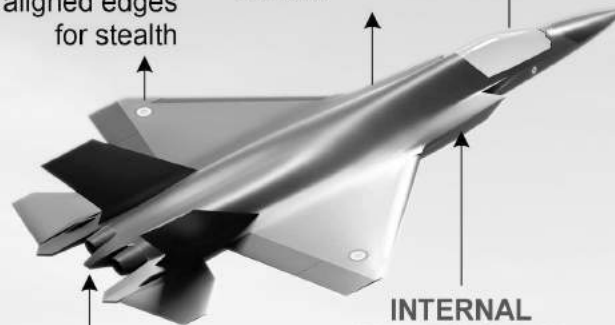
The shoulder-mounted, diamond-shaped trapezoidal wings will reduce drag at supersonic speeds; aligned edges for stealth

FUSELAGE

Faceted design; radar-absorbent surface

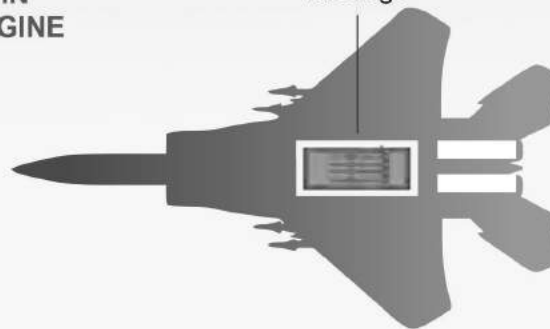
COCKPIT

Glass cockpit with single bubble canopy



TWIN ENGINE

INTERNAL WEAPONS BAY
Under the fuselage



ADVANCED FIGHTER GENERATIONS

FOURTH GENERATION

F-16



Can switch and swing between air-to-air and air-to-ground roles; first fighter to make regular use of fly-by-wire control system (a fully electronic flight control system)
Development: 1960s to late 1980s

Examples: MiG-29, Su-27, F/A-18, F-15, F-16 and Mirage-2000

4.5-GENERATION

Rafale



Evolved from fourth-gen aircraft; better avionics and limited stealth characteristics, and reduced visibility compared with fourth-gen aircraft

Development: late 1980s and into the 1990s

Examples: Eurofighter Typhoon, Dassault Rafale, MiG-35, SU-30SM, F/A-18E/F Super Hornet

FIFTH-GENERATION

F-22



Advanced stealth characteristics and advanced integrated avionics, improved situational awareness and decision superiority over adversaries

Development: 1980s-present
Examples: F-22, F-35, Su-57 (not inducted yet), Chengdu J-20 (claimed)

Air to Ground

- Joint Direct Attack Munitions
- Precision Guided Munitions

AMCA Mark-2

- Will have indigenously developed engines
- Sixth-gen technologies (expected)

- Turkey's TF-X has a similar timeline as the AMCA
- BAE Systems Tempest and Future Combat Air System are the European programmes working on next-gen fighters
- South Korea's advanced fighter KF-21 MS to conduct its first flight this year

Source: AERONAUTICAL DEVELOPMENT AGENCY

- Five prototypes will be built before HAL begins manufacturing the aircraft.

Background

- Discussions for developing the AMCA started in 2007. The initial plan was to jointly develop the aircraft with Russia under a Fifth Generation Fighter Aircraft (FGFA) programme.
- However, in 2018, India withdrew from the FGFA project and planned to develop its own AMCA.

ADVANCED MEDIUM COMBAT AIRCRAFT (AMCA)

- The AMCA will be India's indigenous fifth-generation fighter aircraft (FGFA), which will be bigger than other fighters in the Indian Air Force (IAF) inventory.
- An FGFA integrates advanced stealth, supercruise (achieving supersonic speeds without afterburners), super-maneuverability, data fusion, and multi-sensor integration into a single fighter aircraft.
- The development of AMCA will build upon the expertise gained in developing Light Combat Aircraft (LCA) Tejas.
 - ✓ LCA Tejas is a 4.5-generation single-engine multi-role aircraft.
- **The US, Russia, and China** are the only countries to have developed such advanced jets.
- Currently, there are **only four operational fifth-generation** fighters in the world –
 - ✓ **U.S.** - F-22 Raptor and F-35A Lightning II
 - ✓ **China** - J-20 Mighty Dragon,
 - ✓ **Russia** - Sukhoi Su-57

KEY FEATURES OF AMCA

- **Stealth:** The 25-tonne **twin-engine aircraft** will have advanced stealth features to avoid detection by enemy radar.
- **Fuel & Weapons:** The aircraft will have a large, concealed internal fuel tank of 6.5-tonne capacity and an **internal weapons bay** for a range of weapons to be carried in its belly.
- **Engine:** The **AMCA Mk1** variant will have the US-built GE414 engine of the **90kN (kilonewton) class**. The **AMCA Mk2** will be more advanced and powered by a stronger engine of 110kN, which will be developed indigenously by the Gas Turbine Research Establishment (GTRE) **in collaboration with a foreign defence major**.

SIGNIFICANCE OF AMCA FOR INDIA

- **Modernized Air Force:** AMCA's stealth features and advanced weaponry will significantly improve the Indian Air Force's (IAF) capability to counter modern threats.
- **Indigenous Technology:** Developing AMCA will propel India's aerospace sector. The experience gained can be applied to future indigenous fighter jet programs.

- **Self-Reliance:** Reduced dependence on foreign jets for national security.
- **Closing the Gap:** AMCA helps bridge the gap between India's current fighter jets and those of China and Pakistan.
- **Low Cost:** Including a comprehensive Integrated Vehicle Health Management (IVHM) system to keep track of multiple structural components and assess the aircraft's condition in real-time will ensure a higher utilisation time and smaller serviceability and maintenance cost for the aircraft.

CHALLENGES IN DEVELOPING AMCA

- India can't build its own top-notch engine yet. Even getting approval to make American GE engines in India takes a long time. This delays the AMCA project.
- Making the **AMCA invisible to radar (stealth technology)** is a **tough task** for India to master. This stealth feature is crucial for modern fighter jets.

IAF's dwindling numbers

- The IAF currently has around 30 fighter squadrons, against the sanctioned strength of 42.
- This number is expected to go down further as squadrons of MiG-21s, MiG-29s, Jaguars, and Mirage 2000s are scheduled to be phased out by the middle of the next decade.
- However, considering the threat of two-front war, the planned inductions of LCA Tejas and AMCA will not fulfil the huge requirement of IAF.

- Developing the AMCA from scratch is a slow process. It will take **around 10 years to build a fully functional jet**. This long development time can put India **behind in military advancements**.
- The presence of advanced fighter jets in China and Pakistan, with Pakistan acquiring from China, raises concerns about a **potential two-front war scenario**, impacting the regional balance of power.

WAY FORWARD

- Collaboration with a foreign defense major for the AMCA Mk2 engine could pave the way for future indigenous development.
- While AMCA and LCA Tejas inductions are planned, India must bridge the gap between **planned squadrons and the IAF's sanctioned strength** to ensure air defense readiness, especially considering a potential two-front war scenario.
- By prioritising engine development and potentially increasing production numbers, India can ensure the AMCA program truly strengthens its domestic aerospace industry and Air Force capabilities.

6.3. INDIA'S INDIGENOUS PROTOTYPE FAST BREEDER REACTOR (PFBR)

Context

Recently, the Prime Minister witnessed the “core loading” of India's first and totally indigenous Prototype Fast Breeder Reactor (PFBR) in Kalpakkam in Tamil Nadu.

MORE ON THE NEWS

- It is a crucial step towards utilising the country's **abundant thorium reserves**, eliminating the need for **nuclear fuel import**, contributing to **India's goals of energy self-reliance** and progressing **towards a net-zero carbon footprint**.

Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)

- It was incorporated as a Public Limited Company (2003) under the Companies Act, 1956.
- Its primary objective is to construct and commission the first 500 MWe Fast Breeder Reactor (FBR) at Kalpakkam, Tamil Nadu.
- It aims to pursue the construction, commissioning, operation, and maintenance of subsequent Fast Breeder Reactors to generate electricity.
- Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)** has developed this 500 MWe fast breeder reactor, with contributions from over 200 Indian industries, including MSMEs.
- Once operational, **India will become the second country**, following Russia, with a commercially operating fast breeder reactor.
- Many countries, including the **US, Japan, and France**, have **tried developing fast breeder reactors and have given up due to repeated failures** to handle liquid sodium safely.

ABOUT FAST BREEDER REACTOR (FBR)

- A Fast Breeder Reactor (FBR) operates by utilising fast neutrons to induce the fission of uranium-238, in contrast to conventional nuclear reactors that rely on slow neutrons. The term “breeder” signifies the capability of these reactors to generate more fissile material, such as Plutonium-239, than they consume.

ABOUT THE PROTOTYPE FAST BREEDER REACTOR (PFBR)

- PFBR is a 500 MWe unit designed by the **Indira Gandhi Centre for Atomic Research**, Kalpakkam.
- It is a **sodium-cooled, mixed oxide (MOX) fuelled, pool-type** fast reactor.
- The core thermal power is **1253 MW**, and the gross electrical output is **500 MWe**. It is part of India's three-stage nuclear program.

3-STAGE NUCLEAR PROGRAMME OF INDIA

- Homi Bhabha envisioned India's nuclear energy programme

in three stages to suit the country's low uranium resource profile.

- Stage-I: Natural uranium fuelled Pressurised Heavy Water Reactors (PHWRs):**

✓ **Natural Uranium (U235 + U238)** is used as fuel which produces **Plutonium (Pu239)** as by-product

Fissile and Fertile Materials

- Fissile materials are those that are capable of undergoing fission or disintegration of the nucleus with low-energy neutrons. e.g.- U235; Pu239; U233.
- Fertile materials are those that are not capable of undergoing fission with low-energy neutrons. Rather, they change into fissile material after absorption of neutrons within a reactor. e.g., U238 and Th232 are the only two naturally occurring fertile materials.
- PHWRs use natural uranium as fuel, whereas light water reactors (LWRs) and boiling water reactors (BWR) are fuelled by low-enriched uranium (LEU).
- Natural uranium contains only 0.7% of the fissile isotope Uranium-235. Most of the remaining 99.3% is Uranium-238 and can be converted in a reactor to the fissile isotope Plutonium-239.

- Stage-II: Fast Breeder Reactors (FBRs) utilising Plutonium-based fuel:**

✓ FBRs would use a **mixed oxide (MOX) fuel** made from Pu239 (recovered by reprocessing spent fuel from the first stage) and natural uranium.

✓ In FBRs, plutonium-239 undergoes **fission to produce energy**, while the **uranium-238 present in the mixed oxide fuel** transmutes to additional plutonium-239. Thus, the Stage II FBRs are designed to “breed” more fuel than they consume.

✓ Once the inventory of plutonium-239 is built up, thorium can be introduced as a blanket material in the reactor and transmuted to uranium-233 for use in the third stage.

✓ **Prototype Fast Breeder Reactor (PFBR):** India's first fast breeder.

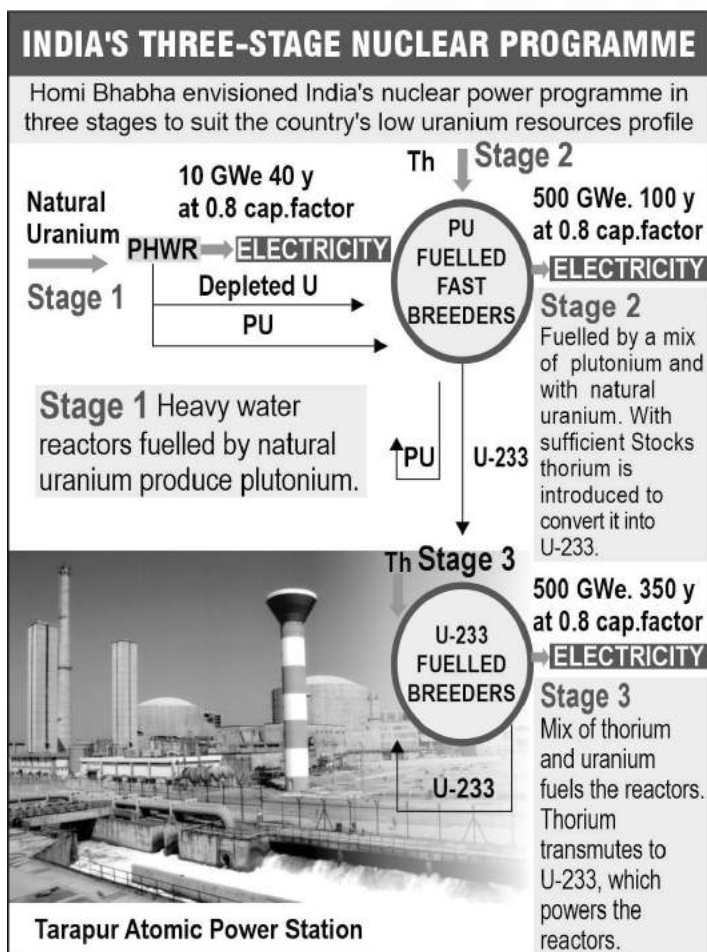
- Stage-III: Advanced nuclear power systems for utilisation of Thorium:**

✓ **Uranium-233** from the second stage is used along with **Thorium as fuel**.

✓ The thorium transmutes to U-233 as in the second stage, which powers the reactor. Fresh thorium can replace the depleted thorium in the reactor core, making it essentially

a thorium-fuelled reactor even though it is the U-233 that is undergoing fission to produce electricity.

- ✓ Thus, it is a self-sustaining breeder reactor using the **naturally occurring Thorium**
- ✓ **KAMINI (Kalpakkam Mini reactor)** is a research reactor at IGCAR. It is the world's only thorium-based experimental reactor and is fueled by uranium-233 metal produced by the thorium fuel cycle harnessed by the neighbouring **FBTR (Fast Breeder Test Reactor) reactor**.



CHALLENGES ASSOCIATED WITH THE PFBR

- **Project Delays and Cost Overruns:** The PFBR project faced numerous delays, cost overruns, and unmet deadlines since its inception in 2003.
 - ✓ The original cost of **Rs 3,492 crore** escalated to **Rs 6,800 crore** by 2019.
- **Technical Hurdles:** It faced technical challenges, including the shift to **mixed carbide fuel** due to sanctions post the 'Smiling Buddha' nuclear test.
- **Procurement Challenges:** A CAG 2014 audit revealed that BHAVINI struggled with procurement, relying excessively on the Nuclear Power Corporation of India, Ltd.

- **Radioactive Byproducts:** The thorium fuel cycle, integral to India's nuclear program, produces radioactive byproducts like caesium-137, actinium-227, radium-224, radium-228, and thorium-230, complicating handling and storage.

CHALLENGES OF WORKING WITH THORIUM-BASED FUELS

- **High Melting Point of Thorium oxide (ThO₂):** Thorium oxide has a much higher melting point than uranium oxide (UO₂), requiring a temperature of over 2000°C to produce high-density Thorium oxide and Thorium oxide-based mixed oxide fuels.
- **Inert Nature of Fuels:** Thorium oxide and Thorium oxide-based fuels are relatively inert and do not dissolve easily in concentrated nitric acid, requiring the addition of HF, causing corrosion issues in reprocessing plants.
- **Radiation Dose and Short Half-life Isotopes:** Irradiated Thorium or Thorium-based fuels contain ²³²U with a short half-life, leading to significant radiation dose buildup during storage, requiring remote and automated reprocessing.
- **Long Cooling Time for Protactinium-233:** The conversion of ²³²Th to ²³³U produces ²³³Pa with a longer half-life, requiring extended cooling time for decay.
- **Three-Stream Separation Process:** The development of a three-stream process for separating uranium, plutonium, and thorium from spent (Th, Pu) O₂ fuel is yet to be achieved.
- **Limited Database and Experience:** The database and experience related to thorium fuels and thorium fuel cycles are limited compared to uranium-based fuels, requiring augmentation before large investments for commercial use.

WAY FORWARD

- **Focus on overcoming challenges:** Despite the PFBR's achievement, challenges like complex FBR technology, public perception of safety, and independent nuclear regulation must be addressed for successful stage II implementation.
- **Evaluate the role of SMRs:** Small modular reactors (SMRs) offer faster deployment, lower costs, and potential safety advantages. India should consider their role alongside FBRs for a balanced nuclear strategy.
- **International Collaboration:** Partner with other countries pursuing Thorium technology to share knowledge, accelerate development, and potentially pool resources for large-scale projects.
- **Leverage Abundant Thorium Reserves:** India boasts vast Thorium reserves. By focusing on Thorium, India can achieve energy independence and minimise reliance on uranium imports.

By embracing Thorium and overcoming technical hurdles through R&D and collaboration, India can achieve energy security, reduce its carbon footprint, and become a global leader in clean nuclear power.

6.4. MISSION DIVYAstra: MIRV TECHNOLOGY

Context

Recently, India successfully conducted the first test launch of its Agni-V ballistic missile equipped with MIRV (Multiple Independently Targetable Re-entry Vehicle) technology.

KEY HIGHLIGHTS

- **Mission Divyastra:** The Defence Research and Development Organisation (DRDO) under **Mission Divyastra** conducted the first successful flight test of an indigenously developed Agni-V missile with MIRV technology.
- **Test Site:** The flight test was conducted from Dr APJ Abdul Kalam Island in Odisha.
- **Significant Contribution by Women:** The project director for Mission Divyastra is a woman (Sheena Rani), highlighting significant contributions by women in India's defence sector.

SIGNIFICANCE OF THE TEST

- **Strengthens India's Credible Minimum Deterrence:** The Agni-V with MIRV technology bolsters India's ability to respond to a nuclear attack, making it a more credible deterrent.
- **Places India in Elite Group:** India has joined the select group of nations with MIRV technology. India is 6th country after the US, Russia, United Kingdom, France, and China to have this technology.
- **Indigenous Technology:** The success of Mission Divyastra highlights India's progress in developing its own defence technology, including avionics and high-accuracy sensors.
- **Geostrategic Significance:** This advancement strengthens India's position as a major regional power and contributes to its march towards greater self-reliance in strategic matters.

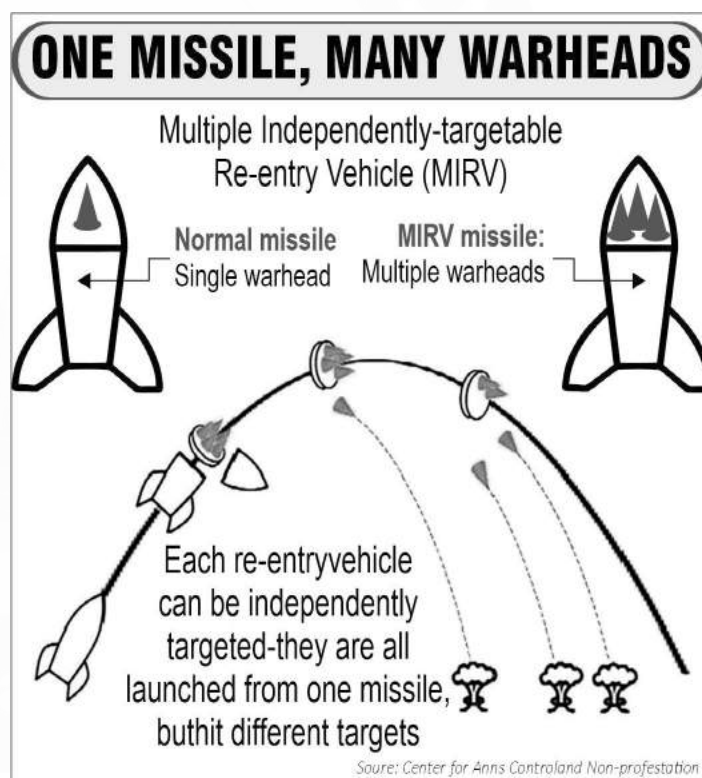
No First Use Policy

- India conducting successful nuclear tests in 1998. After that, India adopted a "no first use" (NFU) policy in 2003.
- It states that nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere.
- This doctrine emphasised "minimal deterrence, no first use and non-use against non-nuclear weapon states".

- **Counters Regional Threats:** The increased capability of Agni-V enhances India's deterrence against potential threats from China and Pakistan.
- **Breaching Enemy Defenses:** MIRV technology allows a single missile to target multiple locations, making it difficult for enemies to defend against such attacks.

ABOUT MIRV TECHNOLOGY

- Unlike a traditional missile, which carries one warhead, MIRVs can carry multiple warheads, which can be released from the missile at different speeds and in different directions, thus greatly enhancing the missile's destructive potential.
- These missiles can be launched from land or sea from a submarine.
- After launch, these warheads separate during the final stages of flight and independently re-enter the atmosphere, targeting **distinct locations**.



- The development of MIRV technology is also difficult as it requires the combination of large missiles, small warheads, accurate guidance, and a complex mechanism for releasing warheads sequentially during flight.
- Compared to **MRV (Multiple Re-entry Vehicle)** technology, MIRV offers the advantage of independent targeting capability.
- **Components**
 - ✓ **Missile Bus:** The main body of the missile carrying the warheads and guidance systems for initial launch.

- ✓ **Re-entry Vehicles (RVs):** Individual warheads designed to survive atmospheric re-entry and detonate on separate targets.

ABOUT AGNI-V

- Agni-V is an intercontinental ballistic missile (ICBM) developed by DRDO.
- It is the most advanced surface-to-surface missile in India's arsenal.
- **Range:** Exceeds 5,000 km, placing targets across Asia and parts of Europe within reach.
- **Propulsion:** Three-stage, solid-fueled engine for high thrust and operational simplicity, capable of carrying a 1.5-tonne nuclear warhead.
- **Launch Platforms:** Road-mobile and canisterized, enabling greater mobility, launch flexibility, and weather protection.
- **Warhead:** Designed to carry nuclear warheads for strategic deterrence.
- **MIRV Capability:** With the success of Mission Divyastra, the MIRV can target multiple targets that can be hundreds of kilometres apart with a single missile.

IGMDP (Integrated Guided Missile Development Program)

- **IGMDP (1983-2008):** This ambitious program aimed to establish India's self-sufficiency in missile technology.
- The Agni missile, developed in the 1990s under India's IGMDP, was one of several missiles developed alongside the Prithvi, Nag, Akash, and Trishul missiles.

OTHER VARIANTS OF AGNI MISSILE

- **Agni-1: Pioneer in the Series**
 - ✓ Introduced in 1983, Agni-1 marked the inception of the Agni series, serving as a nuclear-capable missile with a payload capacity of up to 1,000 kg and a range of 700 kilometres.
- **Agni-2: Intermediate-Range Ballistic Missile**
 - ✓ Launched in 1999, Agni-2 extended the capabilities of

its predecessor with an intermediate-range capability of 2,000 to 2,500 kilometres and advanced navigation systems for enhanced accuracy.

- **Agni-3: Further Reach and Precision**

- ✓ Successor to Agni-2, Agni-3 expanded the range to 3,500 kilometres while maintaining a high level of precision, boasting a circular error probable (CEP) of approximately 40 meters since its induction in 2011.

- **Agni-4: Extended Range and Mobility**

- ✓ With Agni-4, introduced in 2012, India achieved a range of 4,000 kilometres, demonstrating enhanced mobility through road-mobile launchers and covering over 3,000 km in a single test launch.

- **Agni-Prime:** Strike range of 1,000 to 2,000 km, has significant upgrades, which include composite motor casing, **manoeuvrable reentry vehicle (MaRV)**, improved propellants, and navigation and guidance systems.

Other recent developments

- **Nuclear Triad:** India has completed its nuclear triad with the induction of INS Arihant, indigenously built nuclear ballistic missile submarine, ensuring operational second-strike capability.
- **Previous Demonstrations:** DRDO had previously demonstrated Anti-Satellite (ASAT) capability under Mission Shakti in March 2019, further highlighting India's advancements in defence technology.

WHAT LIES AHEAD

- While Mission Divyastra marked a significant step, several more tests will likely be conducted to refine the MIRV technology and ensure its reliability before full-scale production of MIRV-equipped Agni-V missiles begins.
- This development will undoubtedly be closely monitored by China and Pakistan, which are major players in the regional power dynamic. How they react – through statements, military exercises, or their own technological advancements will be a crucial factor to watch in the coming years.

6.5. DIABETES IN INDIA

Context

According to a recently published nationwide study, India is estimated to have 10.13 crore people with diabetes and another 13.6 crore people are pre-diabetic.

KEY FINDINGS OF THE REPORT

- India accounts for 17% of all diabetes patients in the world.
- More than 35% of Indians suffer from hypertension and nearly 40% from abdominal obesity, both of which are risk factors for diabetes.
- One of the most commonly used tests to diagnose pre-diabetes and diabetes (both type 1 and type 2) and to help manage diabetes is the **haemoglobin A1C (HbA1C) test**.

ABOUT HBA1C TEST

- The HbA1C test is one of the several tests used to diagnose diabetes. It is also known as the **glycated haemoglobin test** or **glycosylated haemoglobin test**.
- The American diabetes association approved it as a diagnosis tool in 2009; similarly, **WHO approved it in 2011**.

How does it work?

- Sugar enters our bloodstream by getting attached to the haemoglobin in our red blood cells.
 - ✓ Haemoglobin is a protein that transports oxygen to all the cells of our body.
- Everybody has some sugar attached to their haemoglobin, but for those with pre-diabetes or diabetes, more of the sugar is attached to haemoglobin.
- The HbA1C test measures the percentage of red blood cells that have sugar-coated (or glycated) haemoglobin.

WHAT DO THE RESULTS OF AN HBA1C TEST LOOK LIKE?

- HbA1C levels are provided **as either a percentage or in mmol/mol** (millimoles per mole).
 - ✓ A mole is a unit of measurement often used for chemical substances.
- The **higher the percentage, the higher blood glucose levels are.**
 - ✓ An HbA1C below 5.7% (or below 42 mmol/mol) is considered normal.
 - ✓ Between 5.7% - 6.4% (or 42-47 mmol/mol) may indicate pre-diabetic; and
 - ✓ 6.5% or higher (48 mmol/mol or over) can indicate diabetes.
- However, test results may change under certain conditions, including if a patient has kidney or liver failure, severe anaemia (common in India) or a blood disorder such as thalassaemia.

Who and when does the test need to be taken?

- According to the Indian Council of Medical Research's Guidelines for Management of Type 2 Diabetes (2018), all individuals older than 30 years must take the test.
- Retests should be conducted after three years in case of normal glucose tolerance. If a person is pre-diabetic, retests should be annual.

How does this test differ from other tests?

- While fasting and post-prandial (after a meal) or post-meal, blood sugar tests give you blood **sugar levels within a specific time frame**. Traditional blood sugar tests may fluctuate depending on the person's latest meal and when they last consumed it.
- The HbA1C test reflects your average blood glucose levels **over the last two to three months**.
- The HbA1C test is independent of these variables, making it more reliable. It can be taken irrespective of when the latest meal was consumed.

SHORTCOMINGS OF THE TEST

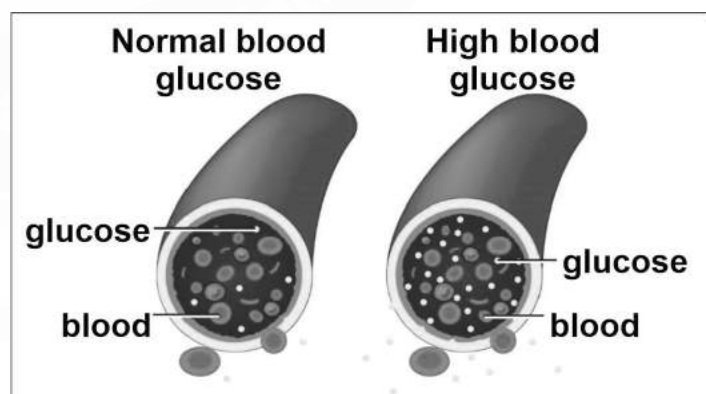
- The HbA1C test does not replace other tests and may be

carried out alongside others, such as the traditional blood sugar tests to test for diabetes and pre-diabetes.

- It also does not replace regular blood-sugar testing at home, as the blood sugar levels may spike and dip through the day or night, and the possibility that the HbA1C test may not capture this.
- It is not uniformly accepted as a diagnostic test by all global medical bodies.
- This test may also have limitations, particularly in India because **a 2013 paper published in the journal Diabetes Technology and Therapeutics noted that in some clinical situations, accurate measurements are harder to make**, including conditions like thalassaemia, structural haemoglobin variants in the population, iron-deficiency anaemia (which is relatively high in India), and the use of certain drugs.

WHAT IS DIABETES?

- Diabetes is a chronic (long-lasting) health condition that affects how the body turns food into energy.
- Our body breaks down most of the food we eat into sugar (glucose) and releases it into the bloodstream.
- When blood sugar goes up, the pancreas releases insulin. Insulin acts like a key to letting the blood sugar into the body's cells for use as energy.
- **With diabetes, the body doesn't make enough insulin or can't use it as well as it should.**
- **When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream.**
- Over time, **that can cause serious health problems, such as heart disease, vision loss, and kidney disease.**
- **There is no cure for diabetes**, but losing weight, eating healthy food, and being active can help.



TYPES OF DIABETES

- **Diabetes Mellitus:** Diabetes mellitus is a common condition that affects the body's ability to convert glucose into energy. There are three main types of diabetes

Mellitus: type 1, type 2, and gestational diabetes (diabetes while pregnant).

✓ **Type 1 Diabetes**

- Type 1 diabetes is caused by an autoimmune reaction (the body attacks itself by mistake). This reaction stops the body from making insulin.
- Approximately 5-10% of the people with diabetes type 1.

✓ **Type 2 Diabetes**

- With type 2 diabetes, the body doesn't use insulin well and can't keep blood sugar at normal levels.
- About 90-95% of people with diabetes have type 2.
- It develops over many years and is usually diagnosed in adults (but can affect children, teens, and young adults).
- It can be prevented or delayed by pursuing a healthy lifestyle, for example - losing weight, eating healthy food, and being active.

✓ **Gestational Diabetes**

- Gestational diabetes develops in pregnant women who have never had diabetes.
- If a person has gestational diabetes, then their baby could be at higher risk for health problems.
- Gestational diabetes usually goes away after your baby is born. However, it increases the risk of type 2 diabetes later in life.
- Baby is more likely to have obesity as a child or teen and develop type 2 diabetes later in life.

• **Diabetes Insipidus:**

- ✓ Diabetes insipidus is a problem that causes the fluids in the body to become out of balance.
- ✓ It causes the body to make large amounts of urine. It also causes a feeling of being very thirsty even after having something to drink.
- ✓ Diabetes insipidus is also called arginine vasopressin deficiency and arginine vasopressin resistance.

GOVERNMENT INITIATIVES

- **NPCDCS (National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke):** Provides support for the prevention & control of Non-Communicable Diseases (NCDs) under NHM.
- **Population-based NCD screening:** Targets those over 30 for early detection.
- **Free Drugs Service Initiative:** Provides essential medicines, including insulin, to the needy.
- **PMBJP (Pradhan Mantri Bhartiya Janaushadhi Pariyojana):** Offers quality generic medicines, including insulin, at affordable prices.
- **Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana:** Provides in-patient care for eligible families.
- **Research Support:** The Department of Biotechnology aids research in high disease-burden areas like Diabetes.
- **National Diabetes Policy 2017:** Aims to reduce diabetes prevalence by 20% by 2025.

WAY FORWARD

- **Increase awareness campaigns:** Launch extensive campaigns to educate the public about diabetes prevention, early detection, and management.
- **Strengthen primary healthcare:** Enhance infrastructure and manpower at primary healthcare centres to facilitate diabetes screening and management.
- **Promote a healthy lifestyle:** Encourage the adoption of healthy habits, including regular exercise and a balanced diet to prevent and manage diabetes.
- **Improve access to healthcare:** Ensure accessibility and affordability of diabetes screening tests, medications, and treatment options.
- **Enhance research efforts:** Invest in research to develop innovative solutions for diabetes prevention, treatment, and cure.

6.6. SAKHI APP

Context

Recently, the SAKHI app was launched to help astronauts on the Gaganyaan space flight mission.

KEY HIGHLIGHTS

- The Vikram Sarabhai Space Centre (VSSC) has developed a multi-purpose app called Space-borne Assistant and Knowledge Hub for Crew Interaction (SAKHI) to help astronauts on the Gaganyaan space flight mission carry out a range of tasks such as looking up vital technical information or communicating with one another.
- SAKHI will keep the crew connected with the onboard computer and ground-based stations, guaranteeing a seamless communication link.
- It will also keep a close watch on their health by providing information on key parameters like blood pressure, heart rate and oxygen saturation. The app will also remind them about their hydration, dietary schedules and sleep patterns.
- The App will be strapped in their space suits and can be quickly accessed at all times. Further, the astronauts can use the app to maintain a log on the mission in multiple formats including voice records, texts and images.
- ISRO is planning to launch the Gaganyaan human spaceflight mission in 2025 and has already selected four astronaut-designate.

ABOUT GAGANYAAN MISSION

- Gaganyaan refers to the ISRO's mission to **send Indian astronauts to low-earth orbit** for a **short period** using an Indian launch vehicle.

WHAT ARE THE VARIOUS COMPONENTS OF GAGANYAAN?

- It consists of the following components:
- HSFC (Human Space Flight Centre):** It was set up by ISRO as the implementing body for the Gaganyaan Mission.
- Its role involves end-to-end mission planning, development of Engineering systems for crew survival in space, crew selection & training and also pursuing activities for sustained human space flight missions.
- Launch Vehicle Mark-3:** Formerly called **GSLV Mk-III**, the LVM-3 is a **three-stage rocket**.
 - ✓ The first part has two solid-fuel boosters attached to the rocket core.
 - ✓ The second part uses two liquid-fueled Vikas 2 engines clustered together.
 - ✓ The third part has the **CE-20 indigenous cryogenic engine**, which uses liquid hydrogen and liquid oxygen as its fuel and oxidizer, respectively.

Low Earth Orbit (LEO)

Low Earth Orbit (LEO) spans an altitude range from approximately 160 to 1000 kilometres above Earth's surface. Satellites within LEO travel swiftly, completing orbits in under 2 hours.

Importance of LEO:

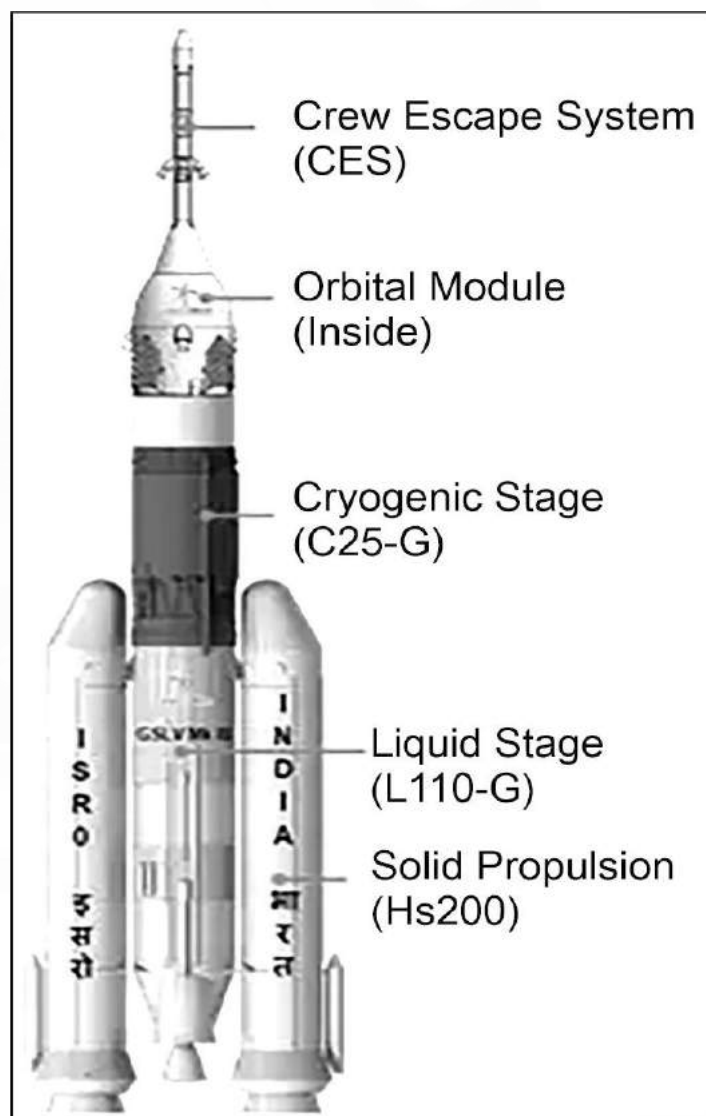
LEO plays a crucial role in various domains:

- Satellite Communication:** It is vital for communication satellites and global positioning systems (GPS). ISRO deployed a constellation of 36 communication satellites for OneWeb, a satellite communications company, in LEO.
- Earth Observation:** LEO facilitates weather forecasting, environmental monitoring, disaster management, and other observation tasks. ISRO launched the RISAT-2B satellite into LEO to support applications such as disaster management systems.
- Scientific Research:** LEO enables studies in astronomy, physics, biology, and microgravity effects.
- Space Exploration:** LEO is a platform for staging space exploration missions. The International Space Station (ISS) is a prominent fixture in LEO, which facilitates scientific research and international collaboration in space exploration.
- The orbital module:** The orbital module is the object the LVM-3 rocket will launch and place in low-earth orbit. It includes the **crew module** and the **service module**.
 - ✓ The crew module can accommodate up to three astronauts for a week. The crew module will also include a **gynoid (female robot)** named '**Vyommitra**' equipped with sensors to monitor radiation, check capsule conditions, and alert for emergencies.

- ✓ The crew module also includes an environmental control and life-support system (ECLSS; to control the temperature, breathing environment, waste disposal, fire protection, etc.); and the **crew escape system**, which the astronauts can use to escape in case the rocket malfunctions during its ascent.
- ✓ The service module includes the **propulsion system** needed to increase the altitude of the orbital module once it separates from the rocket and later to guide it back toward Earth.
- The Crew:** The first four astronaut candidates are – Prashant Nair, Ajit Krishnan, Angad Pratap, and Shubanshu Shukla.

SIGNIFICANCE OF GAGANYAAN

- Space Exploration:** Gaganyaan paves the way for affordable human space missions and scientific research beyond Earth.



- **Scientific Discoveries:** Microgravity experiments hold promise for breakthroughs in medicine, materials, and biology.
- **Economic Benefits:** Gaganyaan can spur economic growth through space industry development, job creation, and technological advancements.
- **Self-dependence:** Gaganyaan will help India send its own astronauts into space without depending on expensive foreign services.
- **STEPS TAKEN TO SUPPORT THE INITIATIVE**
- **Indian Space Policy 2023 outlines** what India wants to

achieve in space in the coming years, including missions to space, the moon, and beyond for science, business, and exploration.

- The government is eyeing to boost the revenue of the space sector, therefore, established new **bodies like NSIL** (New Space India Limited) and **IN-SPACE** (The Indian National Space Promotion and Authorization Centre).
- Other initiatives such as **National Geospatial Policy 2022**, Telecommunications Act 2023 and **100% FDI** in space service and spaceflight to earn more revenue for the country's growth and development.

6.7. OBESITY RATES GOING UP ACROSS THE WORLD: LANCET STUDY

Context

As per the report published by Lancet, the total number of children, adolescents and adults worldwide living with obesity has surpassed one billion.

KEY HIGHLIGHTS OF THE REPORT

- The study was conducted by the **NCD Risk Factor Collaboration (NCD-RisC)**, in collaboration with the **World Health Organization**.
- It studied data from over **220 million people aged five and above** across 190 countries.
- They examined **Body Mass Index (BMI)** trends from 1990 to 2022 to understand global changes in obesity and underweight.

Body Mass Index (BMI)

BMI, formerly called the Quetelet index, is a measure for indicating nutritional status in adults. It is defined as a person's weight in kilograms divided by the square of the person's height in metres (kg/m²).

- Obesity rates among children and adolescents worldwide **increased four times** from 1990 to 2022, whereas the obesity rates among adults have more than doubled.

THE OBESITY MAP

India			World		
	1990	2022		1990	2022
Men	1.1	26	Men	67	374
Women	2.4	44	Women	128	504
Boys	0.2	7.3	Boys and girls (total)	31	160
Girls	0.2	5.2			

Source: Lancet

All figures in million

- In India, the obesity rate increased from **0.1% in 1990 to 3.1% in 2022 for girls**, and **0.1% to 3.9%, for boys**.
- In women, the obesity rate increased from **1.2% in 1990 to 9.8% in 2022** and in men from 0.5% to 5.4%.
- In the prevalence of obesity category for girls and boys, India ranked **174th highest in the world in 2022**.

ABOUT OBESITY

- According to **WHO**, Overweight and obesity are defined as **abnormal or excessive fat accumulation** that presents a risk to health.
- A body mass index (BMI) over 25 is considered overweight, and over 30 is obese.

CAUSES OF OBESITY

- A shift in dietary choices away from traditional foods and physical inactivity.
- Consuming extra calories, especially those found in fatty and sugary foods.
- Poor sleep and high-stress levels for prolonged periods.
- Health conditions like metabolic syndrome, PCOS, hypothyroidism and arthritis.
- Your genes, metabolism and hormones can put you at a higher risk.

IMPACT OF OBESITY

- Carrying extra fat leads to serious health consequences such as cardiovascular disease (mainly heart disease and stroke), type 2 diabetes, musculoskeletal disorders like osteoarthritis, and some cancers (endometrial, breast and colon).
- Obese individuals often face social stigma, low self-esteem, and depression.
- Mobility limitations, fatigue, and discomfort impact daily life.
- Obesity-related healthcare costs strain healthcare systems and individual finances.
- Food production, transportation, and waste disposal related to obesity contribute to environmental issues.

INITIATIVE TO DEAL WITH OBESITY

- **Fit India movement** implemented by Ministry of Youth

Affairs and Sports for increasing public awareness for promotion of healthy lifestyle.

- **National Family Health Survey (NFHS) initiative** to assess abdominal obesity through waist circumference.
- **World Obesity Day (4th March)** is an annual global initiative aimed at raising awareness about the challenges posed by obesity.
- **Food Safety and Standard Authority of India:** FSSAI has implemented new rules and campaigns such as “Eat Right” and many more. The FSSAI is carrying out actions at many levels to

address the junk food issue in school premises/canteens.

- **ICDS program:** This is a programme for additional nutrition, only caloric values of the foods are examined, not food quality, which is a key factor of a balanced diet.

CONCLUSION

- The report advocates for creating a **Framework Convention on Food Systems (FCS)** to limit the food industry’s impact on policy decisions and to galvanize national efforts toward healthier, fairer, and more sustainable food systems.

6.8. INDIA’S FIRST SEMICONDUCTOR FABRICATION PLANT

Context

The Union Cabinet Approved India’s first commercial semiconductor chip fabrication unit in Gujarat to be managed by TATA group.

KEY HIGHLIGHTS

- PM Modi laid the foundation stone of three semiconductor facilities of about ₹1.25 lakh crore, which include two in Gujarat and one in Assam.



Source: Indian express

- The three semiconductor projects launched include **India’s first Fab facility at Dholera in Gujarat, Outsourced Semiconductor Assembly and Test (OSAT) facility at Sanand in the state, and an OSAT facility in Morigaon, Assam.**
- **India’s first Fab facility set up by Tata Electronics Pvt. Ltd.** in partnership with Taiwan’s Power Chip Semiconductor Manufacturing Corp.
- The plant will have a capacity for 15 million chips per day.
- These chips will find applications in various industries, including high-performance computing, electric vehicles, defence, and consumer electronics.
- The first chip from **Dholera plant will be out in December 2026 and chip from Micron plant will be out by December 2024.**

ABOUT SEMICONDUCTOR FABRICATION PLANT

- It is a manufacturing plant in which **raw silicon wafers** are turned into **integrated circuits (ICs)**.

- A semiconductor fabrication plant, which is also **known as a foundry**, is a factory where devices such as integrated circuits are manufactured. These are found in the microelectronics industry.
- A foundry does not produce its own designs but rather produce designs of fabless semiconductor companies.
- The core of a semiconductor fabrication plant is **the clean room**, essential for controlling the environment and eliminating dust. The clean room must combat vibration and maintain strict control over temperature and humidity to minimize static electricity, ensuring the precision and reliability of semiconductor manufacturing processes.
- Various kinds of **chemicals are used** during the phases of the semiconductor fab process, including gases, oxidizers and acids.
- Many types of ICs are manufactured in a semiconductor fab facility, including **NAND flash devices, dynamic RAM memory chips, microprocessors, graphics controllers, hard drive controllers, RAID (redundant array of independent disks) controllers and application-specific ICs.**
- Such **chips are used in a wide range of devices**, such as computers, solid-state drives, hard disk drives, mobile phones, televisions and automobiles.

SIGNIFICANCE

- It will build India’s first AI-enabled **state-of-the-art fab.**
- It will also address the growing demand in markets such as computing and data storage, **automotive, wireless communication, and artificial intelligence.**
- These units will be used to make high performance compute chips with 28 nanometre technology, and also to make chips for power management.
- This is a crucial step for India towards creating an indigenous semiconductor ecosystem in India.
- It may reduce India’s dependency on other countries as the

global semiconductor chip industry is dominated by some countries (**Taiwan and South Korea make up about 80% of the global foundry base for chips**).

- It will create **20,000 direct jobs and 60,000 indirect jobs**.

CHALLENGES

- A report states that **nearly “10 gallons”** of water are required to make a single computer chip.
- Manufacturing process is highly complex and involve a wide range of specialized equipment and materials.
- India also currently lacks original research in semiconductor design and a talent pool.
- India faces competition from countries **like the US and EU** with more attractive incentives for chip manufacturers.

- India is currently focusing on older chip technology compared to cutting-edge nodes used in advanced devices.
- India lacks enough skilled workers specifically trained for chip fabrication facilities.

WAY FORWARD

- The government of India needs to fill in domestic gaps in establishing a semiconductor.
- Ecosystem in order to bring in technology suppliers and investors.
- India needs to place a high priority on strengthening the **capabilities of chip design**.

6.9. INDIA SEIZED DUAL-USE ITEMS BOUND FOR PAKISTAN

Context

Indian customs officials seized a consignment of dual-use items, being shipped from China to Pakistan.

MORE ON NEWS

- The Custom Officials at Nhava Sheva Port (JNPT) Mumbai seized dual-use items being shipped from China to Pakistan that could be used in Pakistan’s nuclear weapons programme.
- Seized items were two **advanced Computer Numerical Control (CNC) machinery**. North Korea had in the past used CNC machines in its **nuclear programme**.
- The **restrictions on the international transfer** of CNC machines were put in place by the **Wassenaar Arrangement** since 1996.

Dual-use Goods

- Dual-use goods are items that can be used both for civilian and military applications.
- Computer Numerical Control (CNC) machinery is one of the dual use items.
- The equipment seized would also be useful in manufacturing critical parts for Pakistan’s missile development programme, thus strengthening the apprehensions that Pakistan is continuing the illegal trade of missiles and violating the Missile Technology Control Regime (MTCR)

PAKISTAN’S PERSPECTIVE

- Pakistan protested India’s “unjustified seizure” of commercial goods destined for Karachi, saying the consignment was a “simple case” of import of a commercial lathe machine by a commercial entity which supplies parts to the automobile industry in this country.

CHINA’S RESPONSE

- Seized materials by no means a piece of military equipment or a dual-use item covered by China’s non-proliferation export control regime.

MULTILATERAL EXPORT CONTROL REGIMES

- **Missile Technology Control Regime (MTCR)**
 - ✓ It is an **informal political understanding** among states that seek to limit the **proliferation of missiles** and missile technology.
 - ✓ It was formed in **1987 by the G-7** industrialized countries (Canada, France, Germany, Italy, Japan, the UK, and the United States).
 - ✓ **India has been a member** of the MTCR since 2016. It is a 35-member group.
- **Wassenaar Arrangement**
 - ✓ It is a **global export control regime** that curbs the spread of items with dual civilian and military applications.
 - ✓ Formally established in July 1996, it is a voluntary export control regime whose 42 members exchange information on transfers of conventional weapons and dual-use goods and technologies.
 - ✓ India joined the Wassenaar Arrangement in December 2017 as the 42nd member.
- **Australian Group**
 - ✓ It is a **multilateral export control regime** that works to impede the proliferation of chemical and biological weapon.
 - ✓ The number of participants has now expanded to **43 (42 countries and the European Union)**.
 - ✓ India joined the Australia Group (AG) in January 2018.
- **Nuclear Suppliers Group (NSG)**
 - ✓ It seeks to contribute to the **non-proliferation of nuclear weapons** through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports.
 - ✓ It came into existence in 1974 as a response.
 - ✓ India is **not** a member of the group.

INTERNAL SECURITY

7.1. DRUG TRAFFICKING IN INDIA

Context

Recently, the Indian agencies made their highest-ever narcotics seizure of around 3,300 kg of narcotic drugs from an Iranian boat off the Gujarat coast.

MORE ON THE NEWS

- Drug smuggling has increased through the maritime route over the last few years, and this was one of the biggest offshore illegal drug busts made in the country to date.
 - ✓ The operation was jointly carried out by the Navy, the Narcotics Control Bureau (NCB) and the Gujarat Anti-Terrorism Squad (ATS) under the codename 'Sagarmanthan-1'.
- The Narcotics Control Bureau (NCB) said that the source of the drugs was found to be the **Chabahar Port** in Iran.
- The drug packets carry the name of a Pakistani food company and hence NCB suspects the hand of Pakistan in mobilising this cache.



REASONS FOR HIGH DRUG TRAFFICKING IN INDIA

- **Geographical Location:** India lies between two major narcotics-producing areas, i.e., the **Golden Crescent** and the **Golden Triangle**. The proximity makes India more vulnerable to drug trafficking.
 - ✓ The "Golden Crescent" includes places where opium is illegally produced in Iran, Afghanistan, and Pakistan.
 - ✓ The "Golden Triangle" is the second-largest area for opium production globally. It includes areas of Myanmar, Thailand, and Laos.
- **Long Border:** India shares its border with seven countries and has a coastline longer than 7500 km. Thus making the task of monitoring drug smuggling challenging.
 - ✓ According to the Narcotics Control Bureau's (NCB) annual report, approximately 70% of illegal drugs smuggled into India come through sea routes in the Arabian Sea and the Bay of Bengal.
- **Population:** India's large population and factors like stress, unemployment, and peer pressure contribute to increased consumption.
- **Economic Disparities:** Poverty and limited economic opportunities push vulnerable individuals into drug use and drug trafficking.
- **Cultural and Social Factors:** Traditional acceptance of opium and cannabis practices fuels drug cultivation and trafficking by normalising substance abuse.

DRUG USE SCENARIO IN INDIA

- As per a UN report, there has been a 30% increase in the use of narcotic drugs in India between 2009 and 2018.
- The UN Office on Drugs and Crime's World Drug Report 2022 highlights India as one of the largest opiate markets.
- As per the National Survey on Extent and Pattern of Substance Use in India conducted by the Ministry of Social Justice and Empowerment (MoSJE) in 2018, the percentage of adults and children who are current users of various psychoactive substances are as follows:

Substance	Children & Adolescents (10-17 years) Prevalence (%)	Adults (18-75 years) Prevalence (%)
Alcohol	1.30	17.10
Cannabis	0.90	3.30
Opioids	1.80	2.10
Sedatives	0.58	1.21
Inhalants	1.17	0.58
Cocaine	0.06	0.11
ATS	0.18	0.18
Hallucinogens	0.07	0.13

IMPACT OF DRUG TRAFFICKING

- **National Security**
 - ✓ **Funding terrorism and insurgency:** Profits from drug trafficking provide financial resources to fuel terrorist groups and insurgencies operating in and around India's borders. This money strengthens their capabilities and prolongs the conflict.
 - ✓ **Nexus with Organized Crime:** Drug trafficking cartels often form alliances with organised crime groups. It leads to increased violence, corruption of officials, and weakening of the rule of law. This undermines the stability of the state.
 - ✓ **Border Vulnerability:** India's extensive and sometimes porous borders with countries like Pakistan and Myanmar (both known producers or transit routes for narcotics) make it vulnerable to drug smuggling. This can compromise border security and strain relations with neighbouring countries.
- **Economic Impacts**
 - ✓ **Illicit Economy:** Drug trafficking feeds the black-market economy, depriving the government of substantial tax revenue. These illegal funds further destabilise legitimate economic systems.
 - ✓ **Money Laundering:** The money generated through drug trafficking is often laundered through complex financial networks, making it difficult to trace and seize. It damages the integrity of India's financial system.
- **Social Costs**
 - ✓ **Public Health Crisis:** Drug addiction fuels a widespread public health crisis. It leads to devastating health consequences, increased crime rates, and lost productivity in the workforce.
 - ✓ **Exploitation of Youth:** Drug traffickers target vulnerable communities and youth, trapping them in cycles of addiction and crime. This weakens the social fabric of the nation.
 - ✓ **Strain on Resources:** Tackling drug trafficking and its consequences diverts critical resources away from other essential sectors such as education, healthcare, and infrastructure development.

GOVERNMENT MEASURES TO TACKLE DRUG PROBLEM

- **National Policy on Narcotic Drugs and Psychotropic Substances (NDPS):** Introduced in 1985 to regulate drug trafficking and usage in India.
- **National Narcotics Coordination Portal (NCORD):** Established by the Ministry of Home Affairs for nationwide coordination in combating the drug menace
- **National Action Plan for Drug Demand Reduction (NAPDDR):** Launched for 2018-2025 by MoSJE to focus on reducing adverse effects of drug abuse through various

strategies like awareness programs, workshops, treatment facilities, and capacity building.

- **Nasha Mukh Bharat Abhiyaan:** Started in 2020 for 272 vulnerable districts across 32 States/Union Territories. It involves assisting over 500 voluntary organizations financially under the NAPDDR scheme.
- **Narcotics Control Bureau (NCB):** Established in 1986 as the nodal agency for drug law enforcement.
- **Integrated Rehabilitation Centers for Addicts (IRCA):** Financial assistance is provided by MoSJE to NGOs for maintaining IRCA. IRCA offer comprehensive rehabilitation services to substance abusers.

CHALLENGES IN TACKLING THE PROBLEM OF DRUGS

- **Emergence of Synthetic Drugs:** Synthetic drugs are replacing natural and semi-synthetic ones. It poses challenges for governments and law enforcement due to the difficulty in tracking and regulating them.
- **Precursor Control:** Legal precursor chemicals are diverted from legitimate use to illicit drug production. Regulating precursor chemicals is a difficult task
- **Crypto Currency Transactions:** The rapid proliferation of online pharmacies and crypto-based transactions worsens India's illicit drug trade situation.
- **Use of Drones:** Drones are being utilised for smuggling drugs and weapons across borders. It presents a new challenge for law enforcement.
- **Treatment Gap:** National surveys reveal a treatment gap of over 70% for drug use disorders, with only a mere 5% receiving inpatient care. This indicates significant challenges in addressing substance abuse effectively.

WAY FORWARD

- **Improving Border Control:** Enhance border surveillance, utilise advanced technology, and strengthen border security forces to improve control over drug trafficking routes.
- **Creating Public Awareness:** Launch public awareness campaigns to educate about drug abuse risks and the importance of preventing trafficking.
- **Tackling Addiction:** Expand support for addiction treatment and rehabilitation by establishing more centres and increasing funding. The Mental Health Care Act (2017), including alcohol and drug use disorders under its ambit, is a step in the right direction.
- **Addressing Socio-Economic Issues:** Implement measures to alleviate poverty, generate employment, and improve access to education to address socio-economic factors contributing to drug abuse and trafficking.
- **Strengthening Laws and Regulations:** Enforce stricter penalties for drug trafficking through enhanced legislation and regulations.

7.2. AGREEMENT WITH TIPRA MOTHA FOR TRIBAL RIGHTS

Context

Recently, A tripartite agreement was signed between the Government of India, the Government of Tripura, and The Indigenous Progressive Regional Alliance (TIPRA), popularly known as Tripra Motha for Tribal Rights.

MORE ON THE NEWS

- The agreement aims to provide a **“time-bound”** and **“honourable”** solution to all issues concerning Tripura’s indigenous people (The indigenous people of Tripura constituting 33% of the population).
- Pradyot Kishore Manikya Debbarma, the founder of **Tripura Motha**, initiated a **“fast-unto-death”** protest on February 27 to emphasise the need for a permanent solution to indigenous people’s problems.

KEY POINTS OF AGREEMENT

- The pact **addresses issues** related to the history, land and political rights, economic development, identity, culture, and language of Tripura’s indigenous population.
- The parties agreed to establish a **joint working group/committee** to formulate and execute mutually agreed points on the specified issues.

ABOUT GREATER TRIPRALAND

Tripura History

- Tripura was ruled by the **Manikya dynasty from the late 13th century** until 1949 when the **Instrument of Accession** was signed with the Indian government.
- **Origin of Demand:**
 - ✓ The demand for Greater Tripraland is often compared to the earlier Tripraland demand put forth by the **Indigenous People’s Front of Tripura (IPFT) in 2009**.
 - ✓ The IPFT had initially presented the Tripraland demand after breaking away from the **Indigenous Nationalist Party of Tripura (INPT)**.
 - ✓ According to the 1941 Census, the tribal and non-tribal population ratio in Tripura was nearly 50:50.
 - ✓ The tribal population had decreased to **a little over 37%** (because of the influx of refugees from Bangladesh).
 - ✓ Between 1950 and 1952, approximately **1.5 lakh refugees sought shelter in Tripura**, primarily from Bangladesh.
 - ✓ The influx of refugees led to bitter differences between tribal and non-tribal populations.
 - ✓ The conflict between tribals and non-tribals took the form of armed insurgency in 1980.
 - ✓ During this period, demands shifted from autonomy or separate regions to calls for sovereignty and independence.
 - ✓ After a political truce was established between the State and rebel groups, there was a revival in the demand for

statehood.

TIPRA MOTHA’S DEMAND

- The earlier Tripraland demand aimed **to create a separate state for the tribal population** within the **TTAADC (Tripura Tribal Areas Autonomous District Council)** areas.
- The present demand goes beyond the TTAADC areas and encompasses at **least 36 additional villages where the tribal population ranges from 20 to 36%**.
- It encompasses both the **nine percent Muslim population** and the **majority Hindu population** within the specified limits.

Tripura Tribal Areas Autonomous District Council (TTADC)

- It was established in 1985 under the sixth schedule of the Constitution.
- Its primary purpose is to ensure the **development and safeguard** the rights and cultural heritage of the tribal communities in Tripura.
- The TTADC, with legislative and executive powers, covers nearly **two-thirds of the state’s geographical area**.
- It consists of 30 members, with 28 elected and two nominated by the Governor.

- The demand is to create a separate state of ‘Greater Tripaland’ for the indigenous communities of the northeastern state. They want the Centre to create a separate state under Articles 2 and 3 of the Constitution.

Article 2 of the Indian Constitution

- Parliament may, from time to time, by law admit into the Union or establish new States on such terms and conditions as it thinks fit.

Article 3 of the Indian Constitution

- Parliament may, by law-
 - ✓ Form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State;
 - ✓ increase the area of any State;
 - ✓ diminish the area of any State;
 - ✓ alter the boundaries of any State;
 - ✓ alter the name of any State;

- Among the 19 notified Scheduled Tribes in Tripura, Tripuris (aka Tipra and Tiprasas) are the largest. According to the 2011 census, there are at least 5.92 lakh Tripuris in the state, followed by Reangs) and Jamatias.
- The demand also includes granting additional powers to

the TTAADC, such as direct funding from the Centre, its own police force, and a share of revenue from state gas exploration. Additionally, there's a request to declare the Roman script as the official script for the indigenous Kokborok language.

REASONS FOR GOVERNMENT RELUCTANCE TO THE CREATION OF "GREATER TRIPRALAND"

- **Geographical and Social Challenges:**
 - ✓ Tripura, being a geographically small state with diverse communities, would face significant challenges in implementing "Greater Tripraland."
 - ✓ The creation of a separate state for the tribal population within Tripura could disrupt the existing social and cultural fabric, making it impractical.
- **Economic Sustainability Concerns:**
 - ✓ The demographic composition of Tripura, where the tribal population constitutes around 37%, raises concerns about the economic viability of establishing a separate state.
 - ✓ Allocating resources and infrastructure for this portion of the population might not be economically sustainable in the long term.
- **Advocacy for Autonomy as a Practical Alternative:**
 - ✓ The Tripura government supports an alternative approach by advocating for increased autonomy for the existing Tripura Tribal Areas Autonomous District Council (ADC).

- ✓ A drafted bill from 2018, awaiting central government approval, aims to empower tribal communities within the existing framework, ensuring territorial integrity.

WAY FORWARD

- **Constitutional Exploration:** Motha can explore the possibility of including Tripura under a provision similar to Article 371 for other states. It grants special provisions that address tribal needs while maintaining territorial integrity.
- **Strengthening Sixth Schedule:** Collaborating with the existing Tripura Tribal Areas Autonomous District Council (ADC) to ensure effective implementation of the Sixth Schedule's provisions can empower the council and address development needs within the existing framework.
- **Socio-economic Focus:** Prioritizing initiatives for education, healthcare, infrastructure, and livelihood opportunities in tribal areas can generate widespread support and enhance the viability of a separate state.
- **Inclusive Dialogue:** Promoting open and inclusive dialogue with political parties, community leaders, and civil society organisations is crucial for building consensus on addressing concerns and respecting diverse rights.
- **Openness to Alternatives:** Maintaining openness to exploring alternative solutions within the existing constitutional framework, such as law amendments or decentralised governance models, can address tribal concerns while preserving national unity.

7.3. INS JATAYU

Context

Recently, INS Jatayu was commissioned by the Indian Navy at Minicoy Island in Lakshadweep to enhance its operational capability.

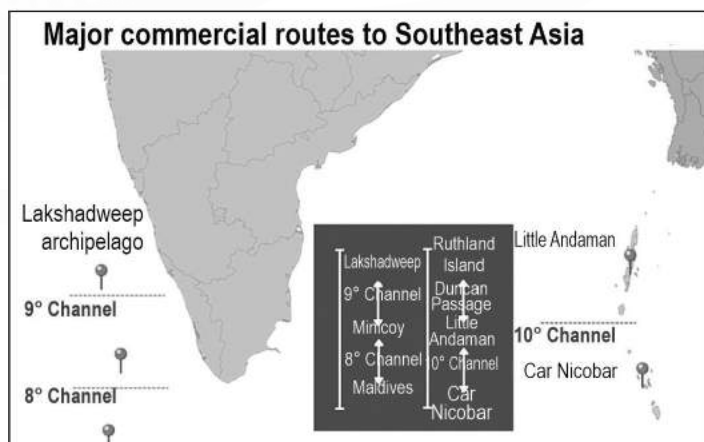
KEY HIGHLIGHTS

- Naval Detachment Minicoy was set up in early 1980s under the operational command of Naval Officer-in-Charge (Lakshadweep)
- ✓ The establishment of INS Jatayu will turn an existing small naval detachment into an "independent naval unit".
- Minicoy Island, strategically situated as the **southernmost island of Lakshadweep**, is vital for Sea Lines of Communications (SLOCs).
- It is the **second Naval base in Lakshadweep** after **INS Dweep** in Kavaratti.
- It reflects the Government of India's emphasis on comprehensive development of islands.

STRATEGIC IMPORTANCE OF INS JATAYU

- It enhances India's capabilities to establish itself as a 'Net Security Provider' in the Indian Ocean region (IOR)

- Positioned strategically, approximately 50 miles from the Maldives, the base enhances surveillance and monitoring capabilities in the Arabian Sea, which is crucial for safeguarding India's maritime interests in IOR.



- It will enhance the overall operational capability of the Indian Navy in the islands and facilitate the Indian Navy's operational effort towards Anti-Piracy and Anti-Narcotics Operations in the Western Arabian Sea.
- It will also augment the Indian Navy's capability as the first responder in the region and augment connectivity with the mainland.
- Serving as a counterpart to INS Baaz in the Andaman and Nicobar Islands, INS Jatayu strengthens India's maritime defence posture, forming a robust network of naval assets.

CHALLENGES FOR INS JATAYU

- **Logistical Challenges:** Establishing and maintaining logistical support and infrastructure in remote island locations pose challenges due to harsh maritime environments, limited resources, and accessibility.
- **Potential Geopolitical Tensions:** Increased naval presence in the region may lead to potential geopolitical tensions with neighbouring countries, necessitating careful diplomacy and strategic engagement.
- **Environmental Concerns:** Operations in sensitive island ecosystems raise environmental concerns, necessitating sustainable development and conservation efforts to mitigate negative impacts.

INDIA'S CHALLENGES IN THE INDIAN OCEAN REGION

- India is concerned about potential security threats posed by the increasing presence of China in the Indian Ocean.
- Rising maritime threats, including piracy, smuggling, and illegal activities, challenge India's efforts to maintain maritime security and stability in the region.
- Balancing economic interests, such as maritime trade and resource exploitation, with security imperatives poses a challenge for India in the Indian Ocean.
- Ensuring freedom of navigation and unimpeded trade

routes in the Indian Ocean is crucial for India's economic and strategic interests.

Lakshadweep Overview

Geography

- Lakshadweep consists of 36 islands divided into three groups: Laccadive, Amindivi, and Minicoy.
- Includes atolls, reefs, and submerged banks.
- Total land area: 32 km², coastline: 132 km, lagoon area: 4,200 km².
- Formed from subsidence of volcanic islands, with fringing reefs.

Location and Connectivity

- Located between Arabian Sea and Laccadive Sea, 220–440 km from Malabar Coast.
- Strategic for trade and maritime activities.

Tourism Potential:

- Offers pristine beaches and vibrant marine life, with potential for tourism.

WAY FORWARD

- Continued investment in infrastructure development and logistical support in island territories to enhance operational capabilities.
- **Surveillance and Reconnaissance:** Investing in advanced surveillance and reconnaissance capabilities, leveraging technologies like;
 - ✓ High-resolution satellite imagery from its **CARTOSAT** series and maritime patrol aircraft such as the **P-8I Poseidon** will bolster situational awareness and response capabilities in the Indian Ocean, enabling timely detection and interception of potential threats.
- India needs to augment its efforts towards modernisation of its naval fleet in order to match China's naval capabilities.
 - ✓ India needs to increase its nuclear submarine fleet and indigenous aircraft carriers to maintain its role as a net security provider in the region.

7.4. ADITI SCHEME

Context

Recently, the Defence Minister launched the Acing Development of Innovative Technologies with iDEX (ADITI) scheme.

MORE ON NEWS

- The scheme has been launched during **DefConnect 2024** in New Delhi.
- The ADITI scheme worth Rs 750 crore for the period 2023-24 to 2025-26 falls under the iDEX (Innovations for Defence Excellence) framework of the Department of Defence Production (DDP), Ministry of Defence. Under the scheme, start-ups are eligible to receive grant-in-aid of up to Rs 25 crore for their research, development, and innovation endeavours in defence technology.

- The event also witnessed the launch of the **11th edition of the Defence India Start-up Challenge (DISC)**.

Innovations for Defence Excellence (iDEX)

- It aims to achieve **self-reliance** and foster innovation and technology development in Defence and Aerospace.
- It was launched by the Indian Prime Minister in April 2018.
- iDEX was expanded to **iDEX Prime**, with the assistance increasing from Rs 1.5 crore to Rs 10 crore, to motivate young innovators.

OBJECTIVES

- It aims to develop about **30 deep-tech critical** and **strategic technologies** in a proposed timeframe.
- ADITI also aims to create a “Technology Watch Tool” to bridge the gap between the expectations & requirements of the modern Armed Forces and the capabilities of the Defence innovation ecosystem. The idea behind schemes such as ADITI is also to transform India into a ‘knowledge society’ to achieve a technological edge around the globe.

DEFENCE INDIA STARTUP CHALLENGE (DISC)

- It aims to address critical defence challenges, inviting innovators to propose innovative solutions that can enhance the country’s defence capabilities and contribute to national security.
- I will support Startups/MSMEs/Innovators to create

prototypes and/or commercialise products/solutions in the area of **National Defence and Security**.

- It has been launched by the **Ministry of Defence** in partnership with **Atal Innovation Mission**.
- The **DISC 11** introduces **22 problem statements** - Indian Army (4), Indian Navy (5), Indian Air Force (5), Armoured Vehicles Nigam Limited (7) and Hindustan Shipyard Limited (1).

BENEFITS OF THE ADITI SCHEME

- It helps to enhance defence capabilities.
- It aims to encourage the youth to bring innovative ideas.
- It highlights the government’s vision of attaining self-reliance.
- Development of advanced technologies will boost defence capabilities and preparedness
- The scheme will stimulate technology innovation, manufacturing and job creation.

7.5. ‘CHAKSHU’ AND ‘DIP’ PLATFORMS

Context

The Union Minister for Communications launched the **Digital Intelligence Platform (DIP)** and **CHAKSHU** Portal to combat online fraud.

CHAKSHU PORTAL

- The government introduced the **Chakshu portal** as part of the **Sanchar Sathi initiative**.

Sanchar Sathi initiative

- It is a citizen centric initiative of the Department of Telecommunications to empower mobile subscribers, strengthen their security and increase awareness about citizen centric initiatives of the Government.

The facilities already available Sanchar Saathi portal

- To know the mobile connections issued in their name and report the mobile connections for disconnection which are either not required or not taken by them,
- To report the stolen/ lost mobile handset for blocking and tracing,
- To check the genuineness of mobile handset while buying a new/old device,
- To report the incoming international calls received with Indian telephone number as calling line identification,
- To check the details of licensed wireline Internet Service Providers.

- It allows users to report **suspicious activities** such as fraudulent calls, messages regarding lottery or job offers, and potential leaks of phone numbers by businesses.
- The **Telecom Regulatory Authority of India (TRAI)** is also working on developing an app for CHAKSHU.
- It is able to facilitate real-time intelligence sharing among various stakeholders.

DIGITAL INTELLIGENCE PLATFORM (DIP)

- It was developed by the **Department of Telecommunications** as a secure and integrated platform for **real-time intelligence sharing**, information exchange and coordination among the stakeholders.
- DIP is not accessible to citizens and is a back-end module allowing real time intelligence sharing between law enforcement agencies, telecom service providers, social media platforms and document issuing authorities etc. It is also a part of the **Sanchar Sathi Initiative**.
- The portal also contains information regarding the cases detected as misuse of telecom.

7.6. SELA TUNNEL PROJECT

Context

The Prime Minister virtually inaugurated the Sela Tunnel project during the **Viksit Bharat Viksit North East** program in Itanagar, Arunachal Pradesh.

ABOUT SELA TUNNEL

- The Sela tunnel project consists of **two tunnels** and a link

road. It is the longest bi-lane tunnel above 13,000 feet in the world.

- While Tunnel 1 will be 980-metre long single-tube, Tunnel 2 will be 1,555-metre with one bi-lane tube for traffic and emergency services. The link road between the two tunnels will be 1.2 km long.
- It was constructed by the Border Roads Organisation (BRO) under **Project Vartak**.
- The tunnel is aimed at providing all-weather connectivity to Tawang across Sela Pass on the Balipara-Chariduar-Tawang (BCT) Road, which connects Tezpur in Assam to Tawang in Arunachal Pradesh.
- The Sela Tunnel has been constructed using the new **Austrian Tunnelling Method** and incorporates safety features of the highest standards.



SIGNIFICANCE

- **Strategic Importance:** The Sela Tunnel provides an all-weather route through the Himalayas, connecting Guwahati in Assam to Tawang in Arunachal Pradesh. This is crucial for military movement and logistics, especially considering the border dispute with China.
- **Improved Accessibility:** Previously, the Sela Pass remained closed for months due to heavy snowfall. The tunnel eliminates this barrier, allowing year-round access to Tawang and other border areas.
- **Socio-Economic Benefits:** Improved connectivity fosters

economic development by enabling easier transportation of goods and services. It also promotes tourism in the region.

- **Faster Deployment:** The Sela Tunnel allows for quicker troop movement and deployment of resources in case of emergencies or security threats on the border. Heavy artillery guns can also be transported through the tunnel.

Project Vartak

- Started in 1960
- **Organization:** Project of the Border Roads Organisation (BRO) under the Ministry of Defence of India.
- **Focus:** Construction and maintenance of roads in Arunachal Pradesh and adjoining districts of Assam.
- **Key Achievements:**
 - ✓ First departmentally constructed pre-stressed concrete bridge in the region.
 - ✓ Instrumental in building the Sela Tunnel (world's highest bi-lane tunnel above 13,000 feet).
- **Significance:**
 - ✓ **Strategic:** Improves border security with faster troop deployment.
 - ✓ **Economic:** Enables better connectivity, promoting trade and tourism.
 - ✓ **Engineering Feat:** Overcoming harsh Himalayan terrain for crucial infrastructure.

CHALLENGES

- **Difficult Terrain and Weather:** Building a tunnel at such a high altitude in challenging terrain and harsh weather conditions presented significant engineering hurdles.
- **Environmental Concerns:** Construction projects in the Himalayas can disrupt fragile ecosystems. Mitigating these environmental impacts requires careful planning and construction practices.
- **Cost and Time:** Constructing such a large-scale infrastructure project involves substantial costs and takes time to complete.
- **Conclusion:** The Sela Tunnel represents a significant advancement in Himalayan connectivity, offering strategic, economic, and social benefits.

7.7. INDIA REMAINS WORLD'S TOP ARMS IMPORTER

Context

According to a report by SIPRI, India was ranked as the world's top arms importer for the period 2019-23.

KEY HIGHLIGHTS OF THE REPORT

- India was the world's top arms importer for the period 2019-23 with **imports having gone up by 4.7%** compared to the period of 2014-18.
- Arms imports by European countries surged by 94% between 2014-18 and 2019-23, possibly influenced by the war in Ukraine.
- **Russia** remained India's primary arms supplier, **accounting**

for 36% of its arms imports. However, this period marked the first time since 1960-64 when deliveries from Russia comprised less than half of India's arms imports.

- Nine out of the top 10 biggest arms importers in 2019-23 were located in Asia and Oceania or the Middle East, with India, Saudi Arabia, and Qatar among the top three.
- **Ukraine** emerged as the **fourth largest arms importer** globally during the period, receiving transfers of major

arms from over 30 states in 2022-23. Pakistan was the fifth largest arms importer in 2019–23, and China became even more dominant as its main supplier, providing 82 per cent of its arms imports.

- China's own arms imports shrank by 44 per cent, mainly as a result of substituting imported arms with locally produced systems.

The Stockholm International Peace Research Institute (SIPRI)

SIPRI is an independent international institute dedicated to research on issues related to conflict, armaments, arms control, and disarmament.

Mission and Focus:

- Established in 1966, SIPRI provides data, analysis, and recommendations based on open sources.
- SIPRI's publications, such as the **SIPRI Yearbook**, are highly respected resources for policymakers and scholars globally.
- Core areas include:
 - ✓ Armed conflict
 - ✓ Military expenditure and arms trade
 - ✓ Disarmament and arms control

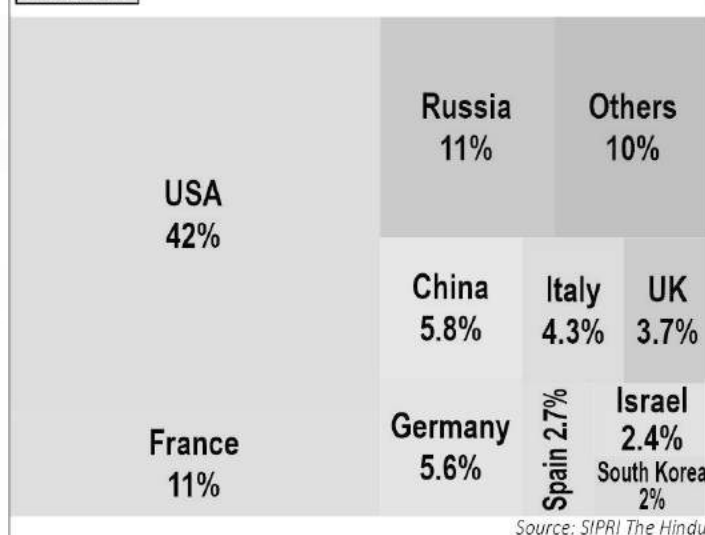
Headquarters and Funding:

- SIPRI is located in Stockholm, Sweden.
- It receives funding from the Swedish government and various other organizations.

Russia (11%), China (5.8%), Germany (5.6%), Italy (4.3%), UK (3.7%), Spain (2.7%), Israel (2.4%) and South Korea (2%).

Share in global arms exports (%)

2019-23

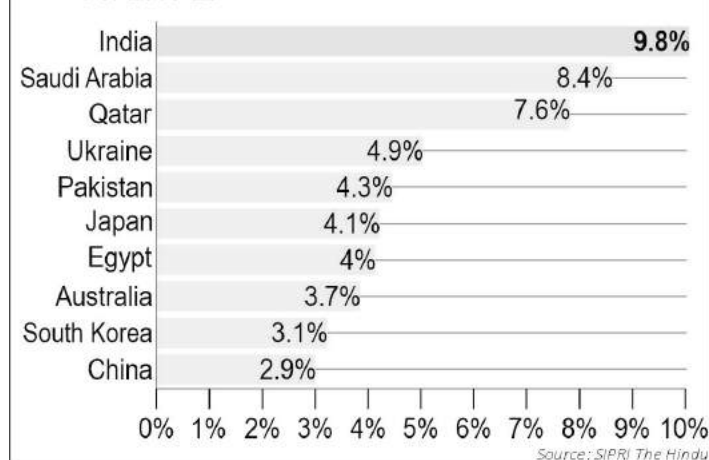


TOP ARM IMPORTERS

- India is the top importer of arms, followed by Saudi Arabia (8.4%), Qatar (7.6%), Ukraine (4.9%), Pakistan (4.3%), Japan (4.1%), Egypt (4%), Australia (3.7%), South Korea (3.1%) and China (2.9%).

Share in global arms imports (%) - top 10 countries

For 2019-23



TOP ARM EXPORTERS

- The top 10 arms exporters are US (42%), France (11%),

REASONS FOR HIGH IMPORT DEPENDENCY

• Geopolitical Tensions

- ✓ **Border Disputes:** Long-standing territorial disputes with neighbouring countries, particularly China and Pakistan, necessitate a strong military presence along the borders.
- ✓ **Perceived Security Threats:** The volatile regional security situation with ongoing border skirmishes and concerns over cross-border terrorism fuel the need for advanced weaponry.

• Military Modernization

- ✓ **Aging Inventory:** A significant portion of the Indian armed forces' equipment is outdated and requires urgent modernization to effectively counter contemporary threats.

• Technological Advancements

- ✓ **Rapid Evolution:** The constant evolution of warfare tactics necessitates acquiring advanced weaponry like fighter jets, missile defence systems, and other sophisticated equipment.
- ✓ **Limited Domestic Capabilities:** India still lags in certain high-end defence technologies, necessitating imports to maintain a technologically sound military.

• Impacts of High Arms Import

- ✓ **Economic Burden:** Large expenditures on imported arms strain the national budget, potentially diverting resources from crucial areas like infrastructure and social development.

✓ India spent over US \$10.5 billion in arms imports during the last three years and is expected to spend another \$30 billion in the next five years.

- **Dependence Vulnerability.** Strained supply chain with traditional suppliers like Russia due to the Ukraine war highlight the vulnerability associated with dependence on external sources.
- **Limited Leverage:** Over-reliance on external sources weakens India's bargaining power in negotiating arms deals and technology transfer agreements.
- **Impact on Domestic Industry:** Excessive reliance on imports can hinder the growth of the indigenous defence sector, hindering long-term self-sufficiency goals.

WAY FORWARD

- **Boosting Indigenous Arms Industry:** Allocate greater resources to research and development in indigenous defence technologies. Encourage collaboration between public and private sector entities to foster innovation and production capabilities.
- **Increased R&D Spending:** Investing in research and development to bridge the technological gap and achieve self-sufficiency in critical defence sectors.
- **Strategic Partnerships:** Collaborating with foreign countries for technology transfer and joint ventures to expedite indigenous production capabilities.
- **Expanding Options:** Look beyond traditional suppliers to reduce dependence on any single source.

ART AND CULTURE

8.1. SHREENATH VEER MHASKOBA FESTIVAL

Context

Shreenath Veer Mhaskoba festival was celebrated during the Magh Purnima (full moon of February) for 10 days.

ABOUT SHRINATH VEER MHASKOBA FESTIVAL

- The name “Shrinath Veer Mhaskoba” refers to one of Lord Shiva’s avatars.
- The Shepard community in the western Maharashtra region worships it.
- Celebrates **Lord Shiva’s marriage** (marriage of two Gods: **Mhaskoba and Mata Jogeshwari**) and lasts for 10 days.
- The day of wedding is celebrated with the scattering of **red paint and flowers** all around during the festivities called **Bhandara**.
- Celebrated is **attended by the residents of Veer village**, located on the banks of the **Purnaganga river**, 50 km from Pune.
- The festival is held during the Magh Purnima (February full moon), with the final Sunday being the most important day.

ABOUT VEER MHASKOBA

- Shrinath Mhaskoba is the Hindu God Shiva’s Kaal Bhairava avatar.

- He is also worshipped by the tribal communities of **Mhaswad, Borban, and Sonari**.

ABOUT KAAL BHAIRAVA AVATAR

- He is a powerful Shiva manifestation, or avatar, connected to **annihilation in Shaivism**.
- Bhairava is the symbol of **Supreme Reality**, also known as **Para Brahman, in the Trikasytem**.
- As he uses a rod or danda to chastise offenders, **Bhairava is also known as Dandapani (one who holds the Danda in hand) and Svasva, which means “whose chariot is a dog” in Hinduism**.
- He is also known as **Heruka, Vajrabhairava, and Yamantaka in Vajrayana Buddhism**.
- He is seen as a fierce manifestation of the **bodhisattva Majur**. Together with Tibetan Buddhism, he is admired in **India, Nepal, Indonesia, Sri Lanka, and Japan**.

8.2. PRESIDENT OF INDIA TO CONFER SANGEET NATAK AKADEMI AWARDS

Context

President of India conferred the Sangeet Natak Akademi Awards (**Akademi Puraskar**) and **Sangeet Natak Akademi Fellowship (Akademi Ratna)** for the Years 2022 and 2023.

KEY HIGHLIGHTS OF THE NEWS

- The General Council selected 94 artists from the field of Music, Dance, Theatre, Traditional/Folk/Tribal Music/ Dance/ Theatre, Puppetry and Overall contribution/ scholarship in the Performing Arts for **Akademi Puraskar**.
- The **General Council of Sangeet Natak Akademi, the National Academy of Music, Dance and Drama, New Delhi**, unanimously elected six (6) eminent personalities in the field of performing arts as **Akademi Ratna**.
- 80 young artists to be given **Ustad Bismillah Khan Yuva Puraskar** for the years 2022 & 2023.

ABOUT SANGEET NATAK AKADEMI FELLOWSHIP & AWARD

- **Akademi Awards:**
 - ✓ The **Awards in Hindustani and Carnatic** music were

instituted as **early as in 1951**, even before the Akademi was set up and these were known as **Presidential Awards**.
✓ With the formation of the Akademi the Awards came to be known as **Sangeet Natak Akademi Awards** and the investiture became the responsibility of the Akademi.

Sangeet Natak Akademi

- It founded in 1953 as an autonomous body under the Ministry of Culture for preservation and promotion of the vast intangible heritage of India’s diverse culture expressed in forms of music, dance and drama.
- The Chairman, appointed by the President of India, serves a term of five years.
- The Akademi’s functions are outlined in its Memorandum of Association, adopted in 1961, establishing it as a society.
- The management of the Akademi is vested in its General Council.

- **Presidential Awards for 1952 and 1953** were later incorporated into the list of Sangeet Natak Akademi Awards.
- It carries purse money of **Rs. 1.00 lakh, a Tamrapatra and an Angavastram.**



AKADEMI FELLOWSHIP

- Akademi Ratna is the **highest honour** given to eminent artists in the **field of performing arts** for his or her exceptional contribution to performing art form.
- It is **restricted to 40** at any given time.
- The first Fellow of the Akademi was elected in 1954, and, till

date the Akademi has honoured 153 eminent personalities as Akademi Fellows.

- The award conferred irrespective of **nationality, race, caste, religion, creed, or sex.**
- **Criteria:** individuals below the **age of 50.**
- Recommendations come from **General Council** of the Akademi.
- Fellowship carries a purse of **Rs. 3.00 lakhs, a Tamrapatra, and an Angavastram.**

USTAD BISMILLAH KHAN YUVA PURASKAR

- Sangeet Natak Akademi instituted the “Ustad Bismillah Khan Yuva Puraskar” from 2006, **recognizes young artists** in music, dance, and drama.
- **Eligibility:** Practitioners up to **40 years old** as of April 1st of the nomination year.
- The award is given annually with a maximum of **33 recipients per year.**
- It **covers five fields:** Music, Dance, Theatre, Other Traditional/Folk/Tribal Dance/Music/Theatre, and Contribution/Scholarship in Performing Arts.
- It carries a purse money of **Rs. 25,000/- (Rupees Twenty-five Thousand Only)** besides a **Tamrapatra and Angavastram.**

8.3. STATUE OF VALOUR

Context

‘Statue of Valour’ was unveiled by the Prime Minister at the Lachit Barphukan Maidam.

ABOUT THE STATUE OF VALOUR

- The statue is a 125-foot bronze statue of **Ahom general Lachit Borphukan** at his maidam (burial site) in eastern Assam’s Jorhat district.
- The foundation of the statue was laid by former President **Ram Nath Kovind** in February 2022.
- It was **built by** Veteran sculptor **Ram Vanji Sutar** (Padma Bhushan awardee). He had earlier crafted the Statue of Unity in Gujarat.
- The Statue is a part of the Lachit Barphukan Maidam Development Project that also includes a museum, a 500-seating capacity auditorium and a hostel.



ABOUT LACHIT BORPHUKAN

- Lachit Borphukan was a legendary army commander of the **Ahom kingdom (1228-1826)**, best known for his leadership in the ‘**Battle of Saraighat**’ of 1671.
- He defeated the Mughal forces, led by Raja Ramsingh-I, in this battle, and thwarted a drawn-out attempt by them to take back Assam.
- He was buried at the ‘maidam’ — burial grounds for Ahom royals and nobles — at Hollongapar, after passing away a year after the battle at the age of 49 due to illness.

BATTLE OF SARAIGHAT

- It was a naval battle fought in 1671 between the **Mughal Empire and the Ahom Kingdom.**
- It was fought on the **Brahmaputra River**, which flows through their entire territory, divides the kingdom almost into two halves, and then enters present-day Bangladesh.
- At that time, **Aurangzeb was the ruler of the Mughal Empire** and the Mughal army headed by Raja Ram Singh-I (son of Mirza Raja Jai Singh) fought with the Ahom Kingdom led by **Lachit Borphukan** in Saraighat, Guwahati.
- The battle played a significant role in determining the history of the Brahmaputra valley and the **north-east region.**

8.4. KOCHRAB ASHRAM & SABARMATI ASHRAM REDEVELOPMENT PROJECT

Context

On the 94th anniversary of Dandi March, the Prime Minister inaugurated the Kochrab Ashram and launched the Master Plan for Gandhi Ashram Memorial in Sabarmati, Gujarat.

KEY HIGHLIGHTS

- On the Dandi March anniversary, the PM inaugurated the redeveloped Kochrab Ashram and launched the Master plan for Sabarmati Gandhi Ashram redevelopment.
- The Master Plan for the Gandhi Ashram Memorial includes expansion, restoration, and creation of new facilities to showcase Gandhiji's life and teachings.
- Under this master plan, the existing five-acre area of the Ashram will be expanded to 55 acres.
- Sabarmati Ashram is managed by the Sabarmati Ashram Preservation and Memorial Trust (SAPMT).
- The PM highlighted the start of Azadi Ka Amrit Mahotsav from Sabarmati Ashram itself on 12th March 2021, commemorating India's freedom struggle.
- Stressed the importance of heritage preservation, citing Sabarmati Ashram as the heritage of humanity.
- Discussed various development projects related to India's freedom struggle and heritage restoration, including Rajpath redevelopment and the Statue of Unity.

KOCHRAB ASHRAM

- This was the **first ashram established by Mahatma Gandhi** after returning to India from South Africa in 1915. Its redevelopment ensures its preservation as a memorial and tourist space.
- Named Satyagraha Ashram initially, it served as a base for Gandhi's experiments with self-sufficiency and social upliftment for about 18 months before shifting to the Sabarmati Ashram.

SABARMATI ASHRAM

- It was set up by Gandhiji in 1917.
- Sabarmati Ashram, on the banks of the Sabarmati River in Ahmedabad, was Mahatma Gandhi's home from 1917 to 1930.
- It played a crucial role in India's freedom struggle.
- He pledged not to return to the Ashram until India gained independence.
- Simple mud-brick buildings and a prayer ground reflect his values.
- Today, the ashram is a national monument and peace center with a Gandhi Museum showcasing his life and philosophy.
- It remains a symbol of Gandhi's ideals of peace, non-violence, and social justice.
- Gandhi launched the famous Dandi March from here on March 12, 1930, he also launched:
 - ✓ the Champaran Satyagraha (1917),
 - ✓ the Ahmedabad mills strike and Kheda Satyagraha (1918),
 - ✓ the Khadi movement (1918),
 - ✓ the Rowlatt Act and Khilafat Movements (1919), and
 - ✓ the Non-Cooperation movement (1920) while living in Sabarmati.



8.5. GLOBAL SPIRITUALITY MAHOTSAV

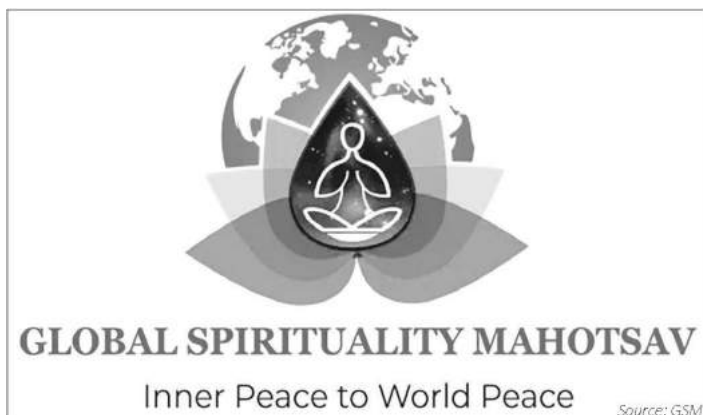
Context

The Ministry of Culture organised the Global Spirituality Mahotsav at Kanha Shanti Vanam, Hyderabad, Telangana.

KEY HIGHLIGHTS OF GLOBAL SPIRITUALITY MAHOTSAV

- This event was held at **Kanha Shanti Vanam**, the world's largest meditation centre.
- Scheduled from **14th to 17th March 2024**, it marks an auspicious period known as **Amrit Kaal**.
- Its aims to celebrate and showcase India's rich spiritual heritage on a global platform.
- It is the **world's first-ever** congregation of various spiritual traditions, interfaith **leaders, yoga gurus, and holistic wellness experts**.
- **The Union Ministry of Culture**, in coordination with the **Sri Ram Chandra Mission** and others is organising this Mahakumbh of Spirituality.
 - ✓ Shri Ram Chandra Mission is a spiritual movement with

a focus on the practice of “Sahaj Marg” or “Heartfulness Meditation.”



About Heartfulness

- Heartfulness emerged in the late 1800s in a small town called Fatehgarh on the Ganges River in the north of India.
- The practices are based on the ancient art of Transmission, a transformative yogic technique, which was rediscovered by Ram Chandra of Fatehgarh, who was famously known as Lalaji.
- The theme of Mahotsav is “From Inner Peace to World Peace”. It highlights the importance of addressing internal conflicts as a pathway to resolving global issues and promoting peace.

- It also echoes India’s vision of “Vasudhaiva Kutumbakam” the world is one family.

ABOUT KANHA SHANTI VANAM

- It is the world **headquarters** of the Heartfulness Institute.
- It offers **spiritual training** along with interactive programs that promote overall wellness and the opportunity to learn and contribute.
- **Achievements** of Kanha Shanti Vanam
 - ✓ In 2019, Kanha was awarded ‘**The Pride of Telangana**’ for inner wellness by **Round Table India & Times of India**.
 - ✓ Green Building Council (IGBC) **Platinum award in 2019** for following world-class environment-friendly practices becoming the **first meditation center in the world** to achieve the feat.

SIGNIFICANCE OF THE EVENT

- The global landscape is increasingly marked with escalating geopolitical tensions, unequal development, intolerance, discrimination and violence based on religion or belief. In this situation, India home to **one-sixth** of the world’s population is a beacon of hope and enlightenment.
- **Spiritual Mahotsav** is **both a salutation and celebration** of universal values that bind humanity together.

8.6. SRI AYYA VAIKUNDA SWAMIKA

Context

Prime Minister Shri Narendra Modi paid tributes to Sri Ayya Vaikunda Swamikal on his birth anniversary.

ABOUT AYYA VAIKUNDAR

- Vaikundar was born in 1809 CE in a poor Nadar family in the village of Poovandan Thoppu, near the town of Tamaraikkulam, about five miles from Kanyakumari.



- When Vaikundar was born, divine light shone on his face, filling his parents with joy.

- Vaikundar’s parents initially named him ‘Mudi Soodum Perumal,’ but due to objections from upper castes and government officials, they changed it to ‘Muthukutty.’
- Muthukutty miraculously disappeared into the sea and reappeared three days later, proclaiming himself as Narayana incarnate, thus beginning his journey as **Ayya Vaikundar**.

TEACHINGS AND SOCIAL REFORMS

- His teachings focused on equality, fraternity, and the eradication of caste-based discrimination, challenging the established religious and social hierarchies of the time.
- He established a new sect called **Ayyavazhi** sect and created temples where the **oppressed could worship freely**.
- His teachings **emphasized** charity, patience, and the recognition of God within oneself.
- Vaikundar’s life was dedicated to uplifting the **downtrodden and fighting against oppression**.
- His teachings continue to **inspire spiritual and social reform**, fostering a sense of self-respect and dignity among marginalized communities.

- He initiated the **Thuvayal Panthy programme**, teaching vegetarianism and discipline to followers, who spread these teachings across Tamil Nadu.
- He established **Nizhal Thangals as community worship spaces**, which did not have any idol or deity, and only Tamil was used for worship. These community worship centers also had community kitchens and even basic schools.
- He tirelessly strived to remove the inequality based on birth and to establish a **casteless society** and preached **equality among all the people**.
- The teachings of Ayya Vaikundar are described in **Akilath thirattu Ammanai and Arulnool** which is the holy books of Ayya vazhi followers.

8.7. MEDARAM JATARA FESTIVAL

Context

The Union Minister for Tribal Affairs visited country's largest Tribal festival, the Sammakka- Saralamma Maha Jatara at Medaram in Telangana.

KEY HIGHLIGHTS

- The **biennial tribal festival** is the second-largest fair of India, after the Kumbh Mela, symbolizes 'Ek Bharat Shreshtha Bharat'.

About Koya Tribe

- The Koyas are mainly inhabiting the hilly areas of West Godavari, East Godavari, Khammam and Warangal districts and are sparsely found in Adilabad and Karimnagar districts.
- Koyas popularly call themselves as Dorala Sattam (Lords group) and Putta Dora (original lords).
- The Koyas are mainly **settled cultivators**. They grow Jowar, Ragi, Bajra and other millets.
- It celebrated by the **Koya tribe for four days** in Mulugu district which is 90km from Warangal city.
- It is a **State Festival of Government of Telangana**, declared in 1996.
- This year it is being celebrated from 21st-24th February, 2024, in collaboration with the **Tribal Welfare Department, Government of Telangana**.

ABOUT MEDARAM JATARA FESTIVAL

- **Medaram Jathara or Sammakka Saralamma Jathara** is a tribal festival of honouring the goddesses celebrated in the state of Telangana, India.
- It commemorates the fight of a mother and daughter, **Sammakka and Saralamma, with the ruling rulers against an unjust law**.
- There are many legends about the miraculous powers of Sammakka Goddess.
- **Location:** Medaram is a remote place in the **Eturnagaram**

Wildlife Sanctuary, a part of Dandakaranya, **the largest surviving forest belt in the Mulugu**.

- It is the largest tribal religious congregation in the world.
- **Ritual:**
 - ✓ People offer bangaram/gold (jaggery) of a quantity equal to their weight to the goddesses and take holy bath in Jampanna Vagu (stream).
 - ✓ It is a festival with no vedic or brahmanic influence.



Cultural Significance:

- ✓ This festival preserves and promote cultural heritage and Medaram Jathara is being celebrated with great fervor as part of Azadi Ka Amrit Mahotsav.
- ✓ This festival aims to generate awareness of tribal cultures, festivals and heritage as well as maintain a harmonious bond between the visitors and the Tribal communities of Telangana.

PRACTICE MCQ

Q 1. With reference to PM-Surya Ghar: Muft Bijli Yojana, consider the following statements:

1. This scheme promote rooftop solar installations.
2. India currently stands at rank 6th globally in solar power capacity.
3. Systems of higher wattage will not be eligible for central subsidy.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 2. With reference to recent leopard status report, Consider the following statements:

1. India's leopard population decreased from 2018 to 2022.
2. It is listed under Schedule I of the Wildlife (Protection) Act, 1972.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 3. With reference to India's first semiconductor fabrication plant, consider the following statement:

1. It is being set up in Gujarat.
2. The manufacturing plant is being established through public-private partnership.

How many of the statements given above are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 4. Consider the following statements regarding Melanochlamys Draupadi:

1. It is a newly found head shield sea slug species.
2. It has been discovered by the Bombay Natural History Society.

Which of the above given statements is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 5. Consider the following statements regarding the Global Diplomacy Index 2024:

1. It is an annual index released by Lowy Institute.
2. USA tops the index in 2024.

Which of the above statements is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 6. Consider the following statements regarding the Resolution on Sustainable Lifestyles:

1. It was envisioned by the Prime Minister of India at the World Leaders' Summit in Glasgow at COP26.
2. It was adopted by the United Nations Environment Assembly (UNEA).

Which of the above statements is /are incorrect?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2.

Q 7. With reference to the Mobile World Congress 2024, consider the following statements:

1. It was held in Barcelona, Spain.
2. At this congress smartphone brands showcase their latest innovations.
3. As a result of the congress, C-DOT and Qualcomm signed MoU to stimulate the telecom ecosystem.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 8. With reference to Heat waves, consider the following statements:

1. If the maximum temperature of a plain region reaches 30 degrees Celsius then it would be declared as a heat wave.
2. Heatwave often begins with the low-pressure system.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 9. Recently, Neduntheevu, Nainativu, and Analaitivu islands were in the news, these islands belong to which of the following countries?

- (a) Sri Lanka
- (b) China
- (c) Russia
- (d) Ukraine

Q 10. With reference to the particularly vulnerable tribal group, consider the following statements:

1. There are 92 PVTGs officially notified.
2. There are no PVTs group found in Punjab and Haryana
3. Odisha has the highest number of PVTGs.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 11. With respect to the International Big Cat Alliance, consider the following statements:

1. Its framework is largely based on the International Solar Alliance.
2. Its headquarters are located in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 and 2

Q 12. With reference to Project ODISERV, consider the following statements:

1. It is an industry-academia collaboration project.
2. This project is launched by Ministry of Commerce & Industry.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 13. With reference to National Science Day (NSD), Consider the following statements:

1. National Council for Science & Technology Communication (NCSTC) is the nodal agency in celebration of NSD.
2. The theme of NSD-2024 is "Indigenous Technologies for Viksit Bharat".

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 14. With reference to Ocean Grace, consider the following statements:

1. It was developed by Mazagon Dock Shipbuilders Limited.
2. It is a first-ever Made-in-India Approved Standard Tug Design and Specifications (ASTDS) boat.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 15. Consider the following statements regarding Computer Numerical Control (CNC) machinery:

1. It can be used both for civilian and military applications.
2. CNC machinery can be used in nuclear research.
3. The International transfer of CNC is restricted under the Australian Group.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 16. Consider the following statements regarding Press Sewa Portal:

1. It was launched by the Minister of Information and Broadcasting.
2. This Portal is created under the Press & Registration of Periodicals Act (PRP) Act 1867.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 17. With reference to the Tripura Tribal Areas Autonomous District Council, consider the following statements:

1. Chairman of the district council summons the meeting of the council.
2. All members of the district council are elected by the adult franchise.
3. The Chairman of the district council has his own Secretariat, headed by the Secretary to the District Council.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 18. Consider the following statements, regarding the "Chakshu Portal":

1. It is part of the Sanchar Sathi initiative.
2. It has been launched to curb the online fraud.
3. It is able to facilitate real-time intelligence sharing among various stakeholders.

How many of the above statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 19. Consider the following statements, regarding the ADITI Scheme:

1. It was launched by the NITI Aayog.
2. It aims to achieve self-reliance and foster innovation and technology development in Defence and Aerospace.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 20. Consider the following statements regarding India's Three-Stage Nuclear Power Programme:

1. The first stage utilizes natural uranium as fuel in Pressurized Heavy Water Reactors (PHWRs).
2. The main purpose of the second stage is to generate electricity using Thorium.
3. Uranium is the primary fuel source for reactors in the third stage, which are still under development.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 21. Green hydrogen offers several potential benefits, but also faces some challenges. In this context, consider the following statements:

1. Green hydrogen can be directly used in internal combustion engines without modifications.
2. Green hydrogen production requires significant amounts of renewable energy, potentially impacting existing electricity grids.
3. Compared to traditional fossil fuels, green hydrogen offers a cleaner option for transportation, with water vapor as the only emission.

How many of the statements given above is/are correct?

- | | |
|---------------|--------------|
| (a) Only one | (b) Only two |
| (c) All three | (d) None |

Q 22. Which of the following space agencies launched the "MethaneSAT"?

- (a) National Aeronautics and Space Administration
- (b) European Space Agency
- (c) Japan Aerospace Exploration Agency
- (d) SpaceX

Q 23. With reference to Gevra mines, consider the following statements:

1. It is located in the Bokaro, Jharkhand.
2. It is India's largest coal production mine.
3. It is also known as 'mega opencast mine'.

How many of the above given statements is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 24. Consider the following statements regarding the Coral reef:

1. Coral reefs are primarily found in polar regions and polyps secrete silica to form their exoskeletons.
2. Coral bleaching is a phenomenon caused by the expulsion of symbiotic algae from coral tissues.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 25. Consider the following statements regarding the Panchayats (Extension to Scheduled Areas) Act, 1996 (PESA Act):

1. PESA empowers Gram Sabhas in Scheduled Areas to manage natural resources like forests and water within their villages.
2. The Act mandates states with Scheduled Areas to enact their own Panchayat laws, ensuring consistency with PESA provisions.
3. PESA grants Gram Sabhas complete autonomy in decision-making, without any oversight from higher-level authorities.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 26. With reference to Sangeet Natak Akademi, consider the following statements:

1. It is an autonomous body of the Ministry of Culture.
2. The Sangeet Natak Akademi Award is the highest national recognition given to practicing artists, gurus and scholars.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 27. Shreenath Veer Mhaskoba festival is held annually in which state?

- (a) Maharashtra
- (b) Karnataka
- (c) Andhra Pradesh
- (d) Telangana

Q 28. With reference to Medaram Jatara Festival, consider the following statements:

1. This festival is celebrated by Tribal Welfare Department, Government of Odisha.
2. It is a festival with no vedic or brahmanic influence.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 29. Consider the following statements regarding Frontier technology Labs (FTLs):

1. It is launched by the collaborative effort of Atal Innovation Mission (AIM), NITI Aayog and Meta.
2. These labs empower students to innovate using technologies like Robotics and Nanotechnology only.

Which of the above given statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 30. Consider the following statements regarding Trade Secrets:

1. Trade secrets are intellectual property rights on confidential information that may be sold or licensed.
2. Trade secrets are protected by law even if not registered with any government agency.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 31. Consider the following statements regarding the Law Commission:

1. The Law Commission is a statutory body.
2. The Law Commission is headed by the Chief Justice of India.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 32. Which one of the following countries does not share border by the Baltic Sea?

- (a) Denmark
- (b) Estonia
- (c) Iceland
- (d) Poland

Q 33. Consider the following statements about the Baltic Sea:

1. It is an arm of the Arctic Ocean.
2. It separates Scandinavia from mainland Europe.
3. It is a brackish inland sea.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 34. Consider the following statements regarding India's AI Mission:

1. The mission is being implemented under the Ministry of Electronics and Information Technology.
2. An India AI Innovation Centre (IAIC) is being set up under the mission.
3. It is based on public-private partnership model.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q 35. Which of the following statements is TRUE about the Uttar Poorva Transformative Industrialization Scheme, 2024 (UNNATI)?

- (a) UNNATI is a Central sponsored Scheme.
- (b) The scheme categorizes districts based on industrial advancement and allocates funds accordingly.
- (c) It offers incentives only to new industrial units in the North Eastern Region.
- (d) The scheme focuses on the manufacturing sector and excludes service industries.

Q 36. Recently, the India-European Free Trade Association signed a Trade and Economic Partnership Agreement (TEPA) in this regard consider the following statements:

1. Through this agreement, India signed a free trade agreement with Iceland.
2. TEPA will give impetus to "Make in India" and Atmanirbhar Bharat by encouraging domestic manufacturing.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 37. Which of the following country was awarded with 'Measles and Rubella Champion' Award 2024:

- (a) United States of America
- (b) Sweden
- (c) Norway
- (d) India

Q 38. Consider the following statements regarding "Poshan Pakhwada 2024":

1. It is celebrated by Ministry of Social Justice and Empowerment.
2. It focus of mass sensitization and community activities under 'Poshan Bhi Padhai Bhi' theme.

Which of the above given statement is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 39. Consider the following statements regarding Revamped Pharmaceuticals Technology Upgradation Assistance (RPTUAS) scheme:

1. It is a credit linked scheme launched by Ministry of Health and Family Welfare.
2. Its project management consultant is Pharmacy Council of India.

Which of the above given statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 40. The Golden Langur's social structure typically involves:

- (a) Solitary animals
- (b) Family groups led by a single male
- (c) Large herds with no hierarchy
- (d) Pairs bonding for life

Q 41. According to the IUCN Red List, the Golden Langur's conservation status is:

- (a) Least Concern
- (b) Near Threatened
- (c) Endangered
- (d) Critically Endangered

Q 42. Consider the following statements regarding the Agni-V missile:

1. It is a short-range ballistic missile primarily used for tactical battlefield deployments.
2. It is a three-stage, solid-fueled missile.
3. It is designed to carry a single conventional warhead.

How many of the statements given above is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

Q 43. The Golden Langur is primarily found in:

- (a) Western Ghats
- (b) Eastern Ghats
- (c) Northeast India
- (d) Western Himalayas

Q 44. With respect to the Battle of Saraighat, consider the following statements:

1. The battle was fought between the Mughal Empire and the Ahom Kingdom.
2. Aurangzeb was the Mughal ruler during the time of battle.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 45. With reference to the Liberal Democracy Index (LDI), consider the following statements:

1. It is released by Varieties of Democracy Institute.
2. As per the latest report, the average Indian now enjoys a higher level of liberal democracy than in 1975.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 46. With reference to Mahatari Vandan Yojana, consider the following statements:

1. It is a financial assistance scheme to provide ₹1000 to eligible married women.
2. It does not include women who are receiving money from other pension schemes.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 47. With reference to Jal Shakti Abhiyan: Catch the Rain 2024 Campaign, consider the following statements:

1. Its theme is "Nari Shakti se Jal Shakti,".
2. The campaign comes under the National Water Mission.

Which of the statements given above is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 48. Consider the following statements regarding "Lokpal"?

1. He can take Suo Moto action against public servants.
2. First Administrative Reforms Commission (ARC) recommended setting up of 'Lokpal'.

Which of the above given statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 49. Consider the following statements regarding the "Light combat aircraft (LCA) Tejas":

1. It is designed by Defence Research and Development Organisation (DRDO).
2. It was developed under the Light Combat Aircraft (LCA) programme.

Which of the above given statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q 50. Consider the following statements:

1. In 1915, Gandhi Ji founded Kochrab Ashram which served as a base for Gandhi's experiments with self-sufficiency and social upliftment.
2. Sabarmati Ashram founded in 1917 witnessed events like the Dandi March.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

ANSWER KEY

1. B	6. D	11. C	16. A	21. C	26. C	31. D	36. C	41. C	46. A
2. B	7. C	12. A	17. B	22. D	27. A	32. C	37. D	42. A	47. C
3. B	8. D	13. C	18. C	23. B	28. B	33. B	38. B	43. C	48. B
4. A	9. A	14. B	19. B	24. B	29. A	34. C	39. D	44. C	49. B
5. D	10. B	15. B	20. A	25. B	30. C	35. B	40. B	45. A	50. C

MAINS ANSWER WRITING

- Q 1.** Analyze the recent Supreme Court verdict overturning the immunity granted to Members of Parliament (MPs) and Members of Legislative Assemblies (MLAs) in cases of bribery for votes or speeches in the House. (10 marks/150 words)
- Q 2.** "Cross-voting undermines the functioning of parliamentary democracy". In light of this statement discuss the measures needed to address the root causes of cross-voting in order to strengthen the representative democracy in India. (10 marks/150 words)
- Q 3.** Strong India-Bhutan Relations are one of the Key Pillars of India's North Eastern Region (NER) Security Architecture. Examine. (10 marks/150 words)
- Q 4.** The Micro, Small, and Medium Enterprises (MSMEs) are often referred to as the powerhouse of the Indian economy. However, several challenges remain in harnessing the full potential of India's MSME sector. Examine. (10 marks/150 words)
- Q 5.** Justify the establishment of the National Urban Cooperative Finance and Development Corporation Limited (NUCFDC) and its significance in the context of cooperative banking in India. (10 marks/150 marks)
- Q 6.** According to a report by Copernicus Climate Change Service (C3S), February 2024 recorded the highest-ever average global sea surface temperature (SST). Discuss the factors and consequences of rising SST on marine life and the global climate system. (10 marks/150 words)
- Q 7.** Discuss the effectiveness of HbA1C test compared to other tools for diagnosing diabetes. Also, highlight some of the initiatives taken by the government in controlling the diabetes burden in India. (10 marks/150 words)
- Q 8.** Assess the implications of the Gig Economy on worker rights and socio-economic stability in India. What measures has the government taken to ensure the welfare of Gig Economy workers? (10 marks/150 words)
- Q 9.** How does India's latest FDI policy in the space sector contribute to its aspirations of leveraging space capabilities for economic growth and global competitiveness? (10 marks/150 words)
- Q 10.** India's first indigenous prototype fast breeder reactor (PFBR) represents a unique opportunity towards the operationalization of India's 3-stage nuclear program. Examine. (10 marks/150 words)
- Q 11.** "One Nation One Election" has been advocated as a means to enhance governance efficiency and policy continuity. Critically examine how synchronized elections can contribute to effective policymaking and implementation at each federal tier. (15 marks/250 words)
- Q 12.** What is Model Code of Conduct (MCC)? To what extent has the MCC succeeded in upholding electoral integrity and ethical conduct during elections. Comment. (15 marks/250 words)
- Q 13.** Critically analyze the challenges and opportunities facing the dairy sector. Also, enumerate the potential of the dairy sector to contribute to India's nutritional goals. (15 marks/250 words)
- Q 14.** How does the concept of de minimis ceiling play a role in regulating agricultural subsidies at the WTO? What are its implications for developing countries like India? (15 marks/250 words)
- Q 15.** In the context of recent diplomatic turmoil, critically examine the evolving dynamics of India-Maldives relations. Analyze its implications for regional stability and India's strategic interests in the Indian Ocean region. (15 marks/250 words)
- Q 16.** 'The Right to Education (RTE) Act has been instrumental in achieving inclusive education in India'. In light of the above statement, critically examine the recent changes brought in by several state governments in the provisions of the RTE Act for children belonging to weaker sections of society. (15 marks/250 words)

- Q 17.** Define Self-Help Groups (SHGs). Also, discuss the transformative role of SHGs in empowering women and driving social and economic transformation in India, as highlighted in the recent report by the State Bank of India (SBI).
(15 marks/250 words)
- Q 18.** Describe 'Day-Zero'. Explain the factors contributing to the severe water crisis in Bengaluru and its surrounding regions. Also, evaluate the significance of the crisis in the context of urban water management and sustainable development.
(15 marks/250 words)
- Q 19.** Evaluate the strategic significance of India's Fifth Generation Advanced Medium Combat Aircraft (AMCA) development program amidst regional and global security challenges. How does it contribute to India's defence capabilities and technological advancements?
(15 marks/250 words)
- Q 20.** Q20. Enumerate some of the key points of the recent tripartite agreement signed between the Indian government, the Government of Tripura, and The Indigenous Progressive Regional Alliance (TIPRA). How does this agreement aim to address the issues concerning Tripura's indigenous population?
(15 marks/250 words)

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