Sleepy Classes IAS
Awakening Toppers



TWO MINUTE SERIES

JULY 2025

This Compilation Facilitates Revision of Crucial UPSC Prelims 2025 Topics within Minutes



Table of Contents

Polity & Governance 3

Zonal Councils 3
Admiralty Law 5
What Is Special Intensive Revision Of Electoral Roll?? 6
How Can a High Court Judge be Removed? 8
AI in Judiciary: Kerala High Court Guidelines 10

Geography 12

Locational Factors Influencing Distribution of Pharma Industries 12
Factors responsible for concentration of Jute Industry in Hooghly Basin 13
Factors that Determine the Location of the Commercial Fishing Industry 15
Factor that affect the Location of the Cotton Textile Industry 16

History 18

Indian Bronze Sculptures 18
American Revolution 23
British Economic Policy in India 30

Environment 36

Critical Minerals 36

Science & Tech 39

Black hole Vs White hole 39
Barbie Doll with Type I Diabetes 43
KAMALA Vs PUSA Rice Varieties 45
3I/ATLAS Alien life in Space! 47

International Relations 48

Can India push Pakistan into FATF's 'Grey list'? 48
Grey Zone Warfare 49
Increased Military Spending Worldwide 51
Bedouins & Druze Communities in Syria 52
China's Brahmaputra Dam- Water Bomba 56

Polity & Governance

Zonal Councils

Q. With reference to India, consider the following bodies:

1. The Inter-State Council
2. The National Security Council
3. The Zonal Councils

How many of the above were established as per the provisions of the Constitution of India?

A. Only one

B. Only two

C. All three

D. None

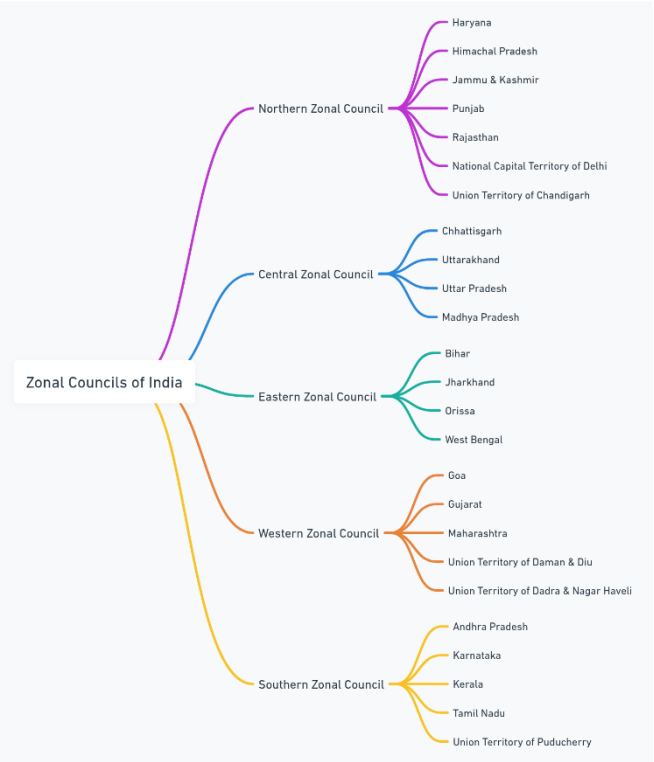
Answer: A

Zonal Councils

- The idea of creation of Zonal Councils was mooted by the first Prime Minister of India, Pandit Jawahar Lal Nehru in 1956 during the course of debate on the report of the States Re-organisation Commission.

Context:

- linguistic hostilities and bitterness as a result of re organisation of the States on linguistic pattern were threatening the very fabric of our nation.
- **Chairperson – Union Home Minister**
- **Vice Chairpersons – Chief Ministers of all member states by rotation, one year at a time**
- **Members**
  - **CM and two other ministers nominated by Governor**
  - **Two members from each UT in the zone**
- **Advisors : One nominee from NITI Aayog Chief Secretaries**
- **Union Ministers as invitees**



Objectives:

- Bringing out national integration
- Arresting the growth of acute state consciousness, regionalism, linguism and particularistic tendencies
- Enabling the Centre and the States to cooperate and exchange ideas and experiences
- Establishing a climate of cooperation amongst the states for successful execution of development projects.

Functions

- Discuss any matter of common interest
- Particularly:
  - Economic and Social Planning
  - Border Disputes
  - Linguistic minorities
  - Inter State Transport

- Regarding Reorganisation of States under Reorganisation act 1956

Standing Committees

- Each zonal council has set up standing committee
- Chief Sceretaries of member states

North East Council

- North-Eastern Council Act 1972, amended in 2002:
  - Assam
  - Arunachal Pradesh
  - Manipur
  - Tripura
  - Mizoram
  - Meghalaya
  - Nagaland and
  - Sikkim
- Composition:
  - Governors of the States of the Council
  - Chief ministers of the states of the council
  - Three members nominated by the President
- President to nominate the Chairperson of the Council.
  - The Council shall function as a regional planning body for the north-eastern area.
  - While formulating the regional plans for the northeastern area, the Council shall give priority to schemes and projects which will benefit two or more States:
- The council shall meet twice a year
- *Council shall have such power as delegated by the President*

Q. Which of the following bodies does not/do not find mention in the Constitution?

1. National Development Council
2. Planning Commission
3. Zonal Councils

Select the correct answer using the codes given below

A. 1 and 2 only

B. 2 only

C. 1 and 3 only

D. 1, 2 and 3 only

Answer: D

Q. The North Eastern Council (NEC) was established by the North Eastern Council Act, 1971. Subsequent to the amendment of NEC Act in 2002, the Council comprises which of the following members?

1. Governor of the Constituent State
2. Chief Minister of the Constituent State
3. Three Members to be nominated by the President of India
4. The Home Minister of India

Select the correct answer using the code given below:

A. 1, 2 and 3 only

B. 1, 3 and 4 only

C. 2 and 4 only

D. 1, 2, 3 and 4

Answer: D

Admiralty Law

Admiralty

- the jurisdiction of courts of law over cases concerning ships or the sea and other navigable waters.



Case Background

- Kerala HC ordered conditional arrest of Liberian container ship MSC Akiteta II at Vizhinjam Port, Thiruvananthapuram.
- In response to admiralty suit filed by the Kerala government.
- Linked to the sinking of MSC Elsa III on May 25, 2024, 25 km off Alappuzha coast.
- Ship went down with 643 containers – included plastic pellets, hazardous substances, and diesel.

Key Allegations and Claims

- Kerala Govt seeks **₹9,531 crore compensation**:
  - ₹8,626.12 Cr – **Environmental damage**
  - ₹378.48 Cr – **Remediation efforts**
  - ₹526.51 Cr – **Losses to fishermen**
- Based on **Central Pollution Control Board (CPCB)** Guidelines.
- Allegation: **Oil pollution and cargo-related contamination** of marine ecosystem

Legal Provisions Invoked

- **Admiralty (Jurisdiction and Settlement of Maritime Claims) Act, 2017:**
  - Replaced colonial-era laws (1861 & 1890).
  - Expanded jurisdiction from only **Bombay, Calcutta, Madras** HCs to include:
    - **Kerala, Karnataka, Odisha, Telangana, Andhra Pradesh**
  - Jurisdiction: Up to **12 nautical miles** (territorial waters), includes **seabed, subsoil, airspace**.
- **Section 4 of Admiralty Act 2017**
- HC can hear claims arising from:
  - **Damage caused to environment by a vessel**
  - **Compensation for such damage**
  - **Measures taken to remove/contain damage**

Other Relevant Laws

- **Merchant Shipping Act, 1958 :** Shipowners liable for **oil pollution** from leaks.
- **Environment Protection Act, 1986:** Legal framework for **environmental protection**, empowers action against polluters.
- **National Green Tribunal (NGT):** Can impose compensation for environmental harm.
- **2016 Precedent**: Panama-based company fined **₹100 Cr** after **M V Rak** oil spill (Mumbai, 2011).

What is ship arrest?

- **Legal detention** of a vessel to **secure maritime claim**.
- Common practice globally to ensure **liability** of shipowners is enforced.
- In this case: MSC Akiteta II detained until:
  - ₹9,531 crore is **deposited**, or
  - **Security furnished** by shipowners.

- Intersection of **environmental regulation** & **maritime jurisdiction**.
- Application of **Section 4 of Admiralty Act, 2017** in ecological damage.
- Example of **judicial activism** in marine conservation.
- Case study for GS3 (Environment) & GS2 (Governance, Judiciary).

What Is Special Intensive Revision Of Electoral Roll??

Electoral Roll Revisions

- Electoral rolls = foundational to democratic elections.
- Revised by Election Commission of India (ECI).
- Three types: Intensive, Summary, and Special Revisions.

Types

- Intensive Revision
  - Full preparation afresh via house-to-house enumeration.
  - No reference to existing rolls.
- Summary Revision
  - Annual, routine maintenance.
  - Draft rolls published; claims/objections invited.
  - No house-to-house visits.
- Special Revision
  - In case of extraordinary circumstances (e.g., delimitation, legal mandates, large-scale errors).
  - May use intensive/summary/both methods.
  - Governed by Section 21(3), Representation of the People Act, 1950.

Special Intensive Revision

- SIR = Hybrid exercise under ECI's discretionary power (Sec 21(3), RPA, 1950).
- Combines:
  - Door-to-door verification (intensive)
  - Use of existing rolls & forms (summary)
- Unique addition: **documentary proof required** at enumeration stage (esp. DOB/POB).

SIR and BIHAR

- **Nationwide rollout** announced June 24, 2024.
- Bihar chosen first — Assembly polls due before Nov 2025.
- Reasons:
  - Rapid urbanisation & migration.
  - Duplicate enrolments.
  - Political complaints (e.g., Maharashtra roll manipulation).
  - Large additions/deletions since last intensive revision.

Controversy and Legal Challenge

- Supreme Court (July 10): Refused to stop SIR in Bihar.
  - Advised ECI to consider Aadhaar, Voter ID, Ration Card

as valid documents.

- Political opposition:
    - New rule: Post-2003 electors must submit DOB/POB documents.
    - Concern: Risk of disenfranchisement.
    - Confusion at ground level.

Past Revisions

- Major exercises: 1952–56, 1957, 1961, 1965–66, 1983–84, 1987–89, 1992, 1993, 1995, 2002–04.
- Evolution of purpose:
    - Post-Independence: Fix flawed rolls.
    - 1980s: Stop enrolment of foreign nationals.
    - 1990s: Migration, delimitation, and photo ID card implementation.
- ECI's Guiding Principles Over Time
    - **Due process**: No deletion without verification.
    - **Burden of proof**: On the objector, not the elector.
    - **Sanctity of existing rolls**: To prevent arbitrary disenfranchisement.
    - **Gradual shift to summary revision** due to improved quality & reduced cost.

Concerns with Current SIR in Bihar

- New documentation rule is unprecedented.
- Potential exclusions: Migrants, illiterate citizens, poor documentation holders.
- Legal & political implications:
- Risk of violating universal franchise.
- Allegations of voter suppression.

Documents List

- Birth Certificate
- Passport
- Matriculation / higher education certificate
- Government issues id card
- Permanent residence from DM
- Forest Rights Certificate under FRA 2006
- Caste certificate issued by competent authority
- NRC document where applicable
- Family register by local bodies
- Land or house allotment certificate
- Government or PSU ID document s

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    - 1990s: Migration, delimitation, and photo ID card implementation.

Supreme Court intervention

- Bench: Justices Sudhanshu Dhulia & Joymalya Bagchi.
- Refused to stay the process
- Three key concerns raised:
    - EC's role in checking **citizenship**.
    - Importance of **due process**.
    - **Timing** of the revision (close to Bihar elections).
- Citizenship Determination Issue
    - SC: Citizenship is the domain of **Ministry of Home Affairs**.
    - EC's exclusion of Aadhaar challenged.
    - EC's argument: **Article 326** mandates adult suffrage based on citizenship.
    - SC: **Timing is problematic**, should've begun earlier.
- Procedural Safeguards & Due Process
    - RPA mandates notice & hearing before deletion.
    - SC: Even in intensive revision, summary protections must apply.
    - Query: Will disenfranchised voters get chance to appeal before elections?
    - Example: If deletion happens now, voters may not vote in 2025.

Way Forward

- Valid Documents & Confusion
    - EC's current list of **11 accepted documents**.
    - SC: Why not include Aadhaar, Voter ID, Ration Card?
    - Highlighted **ground-level confusion** and lack of awareness.

How Can a High Court Judge be Removed?

- Justice Yashwant Varma currently serves in the Allahabad High Court.
- Previously a Delhi High Court judge.
- Allegations: Recovery of unaccounted cash from official residence.
- Supreme Court's in-house committee found misconduct.
- Based on findings, then CJI Sanjiv Khanna recommended impeachment.

Legal Framework

- Article 217 read with Article 124(4) of the Constitution.
- Judges (Inquiry) Act, 1968 lays down the procedure.
- Grounds: Proven misbehaviour or incapacity.
- Motion must be signed by:
    - **100 Lok Sabha MPs** or
    - **50 Rajya Sabha MPs**

Background

- March 14: Fire incident at Justice Varma's official residence.
- In-house committee:
    - Headed by Chief Justice Sheel Nagu (Punjab & Haryana HC)
    - Conducted 10-day inquiry.
    - Examined 55 witnesses.

- May 8: CJI Khanna writes to President and PM recommending impeachment.

Removal Notice

- July 21 (Monday):
    - **12:30 PM:** Lok Sabha MPs submit notice (145 MPs).
    - **Later same day:** VP Dhankhar mentions Opposition notice (63 RS MPs).
- Confusion due to parallel submissions.
- VP Dhankhar resigned same evening.
- As per Judges (Inquiry) Act:
    - Committee of 3 members:
        - 1 SC judge
        - 1 HC judge
        - 1 distinguished jurist
- Constitution of the committee is the Speaker's prerogative when motion is admitted in Lok Sabha.
- If both Houses receive notice the same day:
    - Speaker and Chairman must jointly constitute the committee.
- As VP did not admit the motion, Rajya Sabha's role is passive for now.
- Deputy Chairman Harivansh may be consulted.
- If found guilty:
    - Motion taken up in Lok Sabha for discussion.
    - Requires **2/3rd majority** of present and voting
- If passed:
    - Same process in Rajya Sabha.
    - If passed in both Houses, President can remove the judge.
- Detailed Procedure in
    - Judges Enquiry Act 1968
    - Judges Enquiry Rules 1969

Earlier Instances:

- 1993 – Justice V Ramaswamy – Motion brought up in Lok Sabha but failed to secure majority
- 2011 – Justice Soumitra Sen – Rajya Sabha passed impeachment motion Against him – Resigned
- 2011 – Justice PD Dinakaran – Resolution passed in Rajya Sabha, resigned.
- 2015 – Justice JB Pardiwala – RS members moved impeachment notice
- 2015 – Justice SK Gangele – RS motion moved- Enquiry committee did not find sufficietnt evidence
- 2018 – Justice Deepak Misra -

Justice Verma's response

- Moved Supreme Court against:
    - In-house committee report.
    - CJI's recommendation.
- Claims procedural illegality.
- SC to set up bench to hear the plea.

AI in Judiciary: Kerala High Court Guidelines

Responsible use of AI in Judiciary and Law Enforcement

Context:

- Kerala high Court issued policy document titled ' Policy regarding use of AI tools in District Judiciary '
- This is the first time in India that a High Court has tried to frame principles and guidelines for using AI in judiciary

Introduction

- India has over **5.4 crore pending cases** (as of 2024)
- Average delay per case: **4–6 years** in lower judiciary
- Need for **digital reform, speedy trial, and access to justice**
- AI offers **automation, translation, case analytics, surveillance** tools

Kerala High Court Policy

- **First Indian High Court** to release official AI usage guidelines
- Title: *"Policy Regarding the Use of AI Tools in District Judiciary"*
- Applies to **all district-level judiciary staff** — judges, clerks, interns
- Applicable across **personal and official devices**

Four core principles of policy

- Transparency – disclose AI involvement in tasks
- Fairness – avoid bias, ensure neutrality
- Accountability – humans remain answerable for outcomes
- Data Protection – avoid AI handling of sensitive/confidential case files

What is prohibited?

- Drafting of judgments, orders, findings using AI (e.g., ChatGPT, DeepSeek)
- Translations without judge/translator verification
- AI-based legal research must be manually verified
- Violations = automatic disciplinary action

Permissible Use Cases

- **Administrative tasks only** (e.g., case scheduling, calendar management)
- Must be **supervised by a human officer** and **recorded**
- Errors to be reported to **Principal District Judge** & **HC IT Cell**
- **Mandatory AI training** for judiciary members

Recent push

- **February 2025: Govt of India promotes AI in judiciary for:**
- **Reducing pendency**
- **Standardizing processes**
- **Enhancing access to justice**
- **Initiated discussions on legal safeguards & data ethics**

Judicial Warnings Against AI Dependence

- **July 2025, Karnataka HC:**
  - SG Tushar Mehta: *"AI hallucinates, needs human correction"*
  - Justice M. Nagaprasanna: *"Too much dependence will destroy the profession"*
- **March 2023, Punjab & Haryana HC:**
  - Used **ChatGPT** for global perspective on bail jurisprudence
  - Justice Anoop Chitkara: *"For broader context only, not binding"*

e-Courts Phase III

- **Budget:** ₹7210 Crore
- ₹53.57 Crore dedicated to **AI + Blockchain** in HCs
- Implemented under **National Informatics Centre** (NIC)
- Objective: **Digitally integrated, faster, citizen-friendly courts**

AI Applications in e-Courts

- **Automated Case Management**: Smart scheduling, backlog forecasting
- **Legal Research Support**: Precedent identification, judgment summaries
- **AI in Filing**: OCR + NLP for faster documentation
- **Chatbots**: Case status updates, procedural help
- **Predictive Analytics**: Likely outcome forecasts based on past rulings

Barriers

- 85% of lower court litigants are **non-English speakers**
- AI tools trained on **legal terminology** improve accessibility
- Supports **translation of orders, affidavits, chargesheets**

Policing and Law Enforcement

- Predictive Policing: Pattern recognition to deploy police pre-emptively
- Surveillance: Facial recognition linked to NCRB databases
- FIR Filing: AI-based speech-to-text tools (Hindi, Tamil, etc.)
- Evidence Analysis: Digital forensics via AI
- Database Integration: CCTNS + e-Prisons + e-Forensics

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Challenges in AI Adoption

- **AI hallucinations**: Fabrication of non-existent facts
- **Bias risks**: Training data bias = judgment bias
- **Privacy concerns**: Sensitive judicial data may leak
- **Over-dependence**: Threatens judicial discretion and legal creativity

Ethics & Legal Safeguards Needed

- Must define AI's **role boundaries**
- **Approval mechanism** for AI tools
- **Audit trails** for AI-generated output
- **Human-in-the-loop** approach = essential
- **PM Narendra Modi:**
  - "Technology will integrate police, forensics, jails, and courts… we are moving towards a justice system that will be fully future-ready."
- **Justice Nagaprasanna (Karnataka HC):**
  - "AI should not make your intelligence artificial."

Geography

Locational Factors Influencing Distribution of Pharma Industries

Proximity to Raw Materials	• Access to essential raw materials like bulk drugs, chemicals, and active pharmaceutical ingredients (APIs) is crucial, and the plants must be located near reliable suppliers to ensure consistent supply. • For e.g., Ankleshwar (Gujarat) is located close to ports for raw material imports.
Infrastructure	• Well-developed infrastructure, including transportation networks, power supply, and industrial zones, is vital for efficient operation and distribution. • For e.g., Visakhapatnam, with its industrial infrastructure and proximity to a major port, has become a pharmaceutical manufacturing hub. • Singapore's pharma hub is located near world-class port facilities
Government Initiatives	• Special economic zones (SEZ) and government initiatives (tax breaks, subsidies, etc.) attract investments and promote growth in specific locations. For e.g., Baddi in Himachal Pradesh has seen growth in the pharmaceutical sector due to various government incentives. • Brazil's simplified drug approval process attracts foreign investments.
Availability of Skilled Workforce	• The world of pharmaceuticals demands a skilled workforce (chemists, biologists, engineers, etc.) and institutions like those in Boston, USA, a hub for biotech and pharma giants like Moderna, create this vital talent pool, attracting companies seeking expertise. • Pune is another example.
Proximity to Markets	• Plants near consumer markets or export hubs optimise distribution and reduce transportation costs. • For e.g., Navi Mumbai's strategic location is near Mumbai.
Environmental Factors	• Certain drugs require specific climatic conditions for production. For e.g., the cool and temperate climate in Ireland attracts companies that manufacture temperature-sensitive medications

Sustainability and Waste Management	• **Environmental considerations (sustainability and efficient waste management practices) have become pivotal in locating industries.** • **For e.g., Denmark's focus on green energy and sustainable practices has positioned it as a leader in eco-friendly pharmaceutical production.**

Factors responsible for concentration of Jute Industry in Hooghly Basin

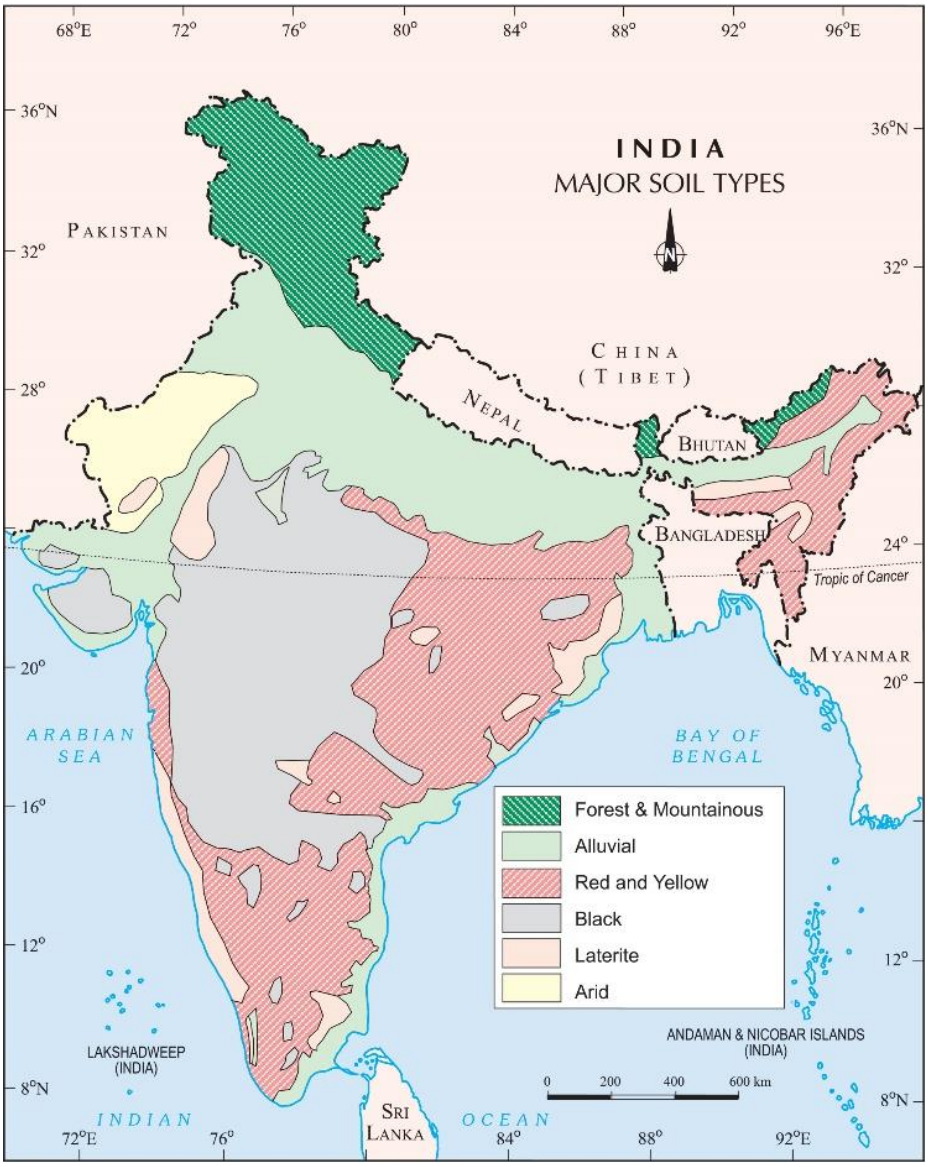
Geography	**Soil and climatic conditions** of severely flood prone areas are most ideal for jute cultivation.
Raw Material	**India leads global jute production**, with west Bengal contributing 72 percent of India's jute production.
The British Factor	The region **benefits from an early start advantage, heavily promoted by the British with capital and expertise**.
Capital	**Kolkata (the capital of British India from 1772 to 1911) has had excellent banking facilities.**
Transportation	**Hooghly is well-connected by waterways** and rail to jute growing areas. **Kolkata port facilitates machinery import and finished jute product expert.**
Market	**There is a vast domestic market throughout India for jute products (gunny bags). The mills in Hooghly exports jute hessian to Bangladesh.**
Power	**Thermal stations in the Hooghly basin use coal from Raniganj Coalfields (~170 km).**
Climate	**The humid climate is very conducive for spinning and weaving.**
Labour	**The Gangas-Brahmaputra Delta has a dense population. Labour is readily available from nearby states .**
Water	**Hooghly River (plenty of standing water is required processing of Jute .**
Livelihood	**The jute industry employs over 40 lakh people directly or indirectly.**

Government support	- Jute Corporation of India procures raw jute at Minimum Support Price (MSP) The Jute Packaging Act of 1987 mandates that 100% of food grains and 20% of sugar be packed in diversified (jute) gunny bags .

NCERT Basics

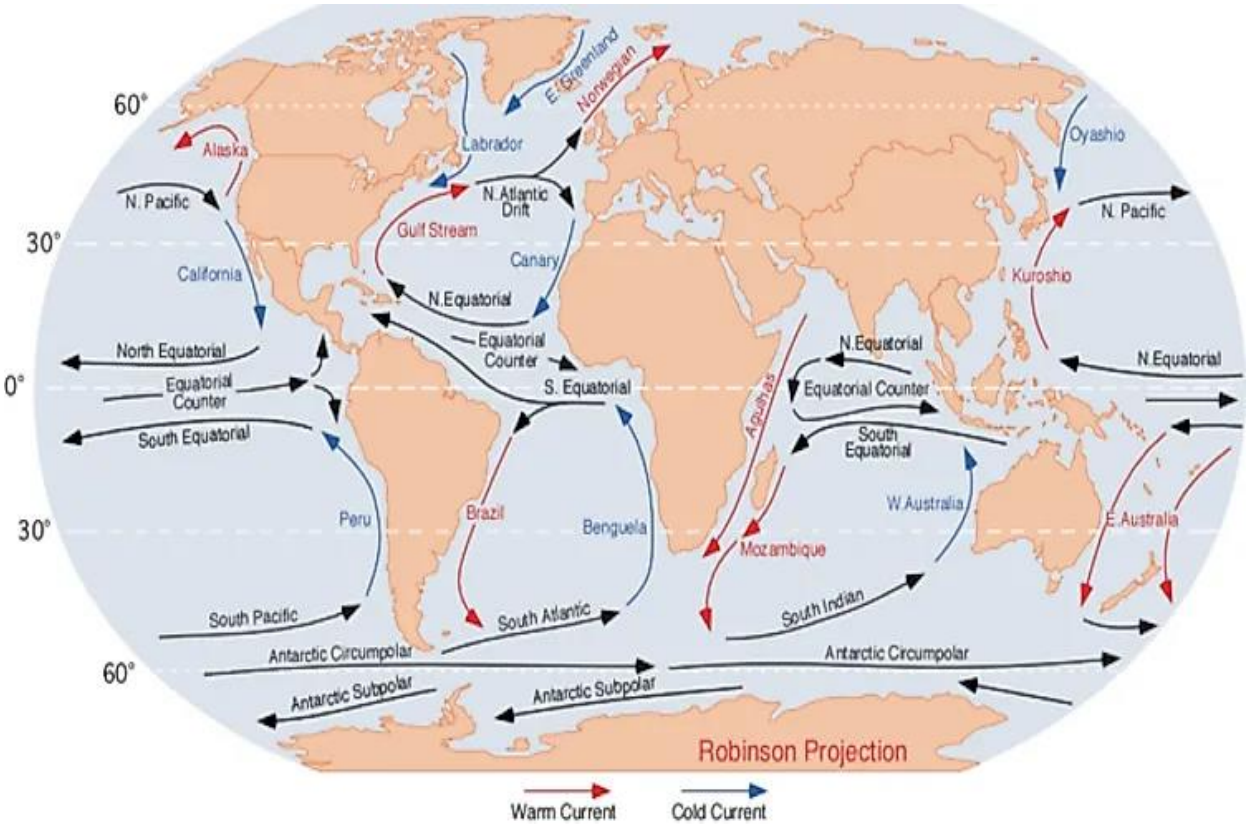
Jute: Jute was also known as the 'Golden Fibre'. It grows well on alluvial soil and requires high temperature, heavy rainfall and humid climate. This crop is grown in the tropical areas. India and Bangladesh are the leading producers of jute.





Factors that Determine the Location of the Commercial Fishing Industry

Proximity to the Fishing Grounds	**Close proximity to fishing grounds lowers refrigeration and transportation expenses**, though **modern trawlers** have lessened the importance of this factor. For e.g., Japanese vessels reach as distant as Antarctica and the Grand Banks.
Climate	The **cold climates of higher latitudes** enable **economical fish refrigeration, unlike the tropics,** where warmer temperatures and higher humidity **increase preservation costs**, **rendering the marine fishing industry less viable there.**
Ports	Sheltered inlets and estuarine coasts are ideal for fishing ports. In **the northern hemisphere's middle and high latitudes, both Atlantic and Pacific coastlines are heavily indented** and **backed by rugged terrain**, hosting **dedicated fishing ports with complete infrastructure**, making the industry efficient and cost-effective.
Capital	Successful marine fisheries rely on **cost-efficient technology**, necessitating substantial capital for R&D, mechanisation, and infrastructure. **Countries like Europe, Japan, the USA, and Canada, with established financial services, excel in this capital-intensive and risky industry.**
Market	• Fish are food and raw materials for various products, such as fertilisers, lubricants, cosmetics, etc. Additionally, fish oil provides essential long-chain polyunsaturated fatty acids (PUFAs) that are critical for human health. • Fish is the primary dietary option in countries like Norway and Japan, where alternatives are limited due to geographical constraints.
Employment	Japan and Norway heavily rely on fishing due to limited alternatives in their primary sectors. Japan has a high population density and limited arable land, while Norway's terrain is hilly with harsh winters. So, deep-sea fishing remains their most practical economic activity.



Factor that affect the Location of the Cotton Textile Industry

Raw material	• In India and the U.S., **the industry is coterminous with the cotton-growing tracts.** For e.g., Ahmedabad (Manchester of India), Solapur, Nagpur & Coimbatore (Manchester of South India), southern states of the US. • **But since the cotton industry is not a weight-losing industry, it isn't always necessary to set up the industry close to the cotton-producing areas.** For e.g., Kanpur (market, local investment), Kolkata (port), Manchester (market, coal, water), and Bangladesh (cheap labour, government support).
Transportation linkages	• **The ideal location for the cotton textile industry is one that is well-connected to both cotton-producing areas and markets**. This ensures cost-effective transportation of raw cotton and finished cloth, minimizing production costs. • **In India, the cotton industry expanded from the old nuclei (Mumbai, Ahmedabad) after 1921, with railway lines penetrating the peninsular region (Madurai, Bengaluru).** • The **industry reached Nagpur for its proximity to coal and Kolkata for its broad market and port access, despite the distance from cotton sources.**
Access to the market for cotton textiles	• **The cotton industry is market-driven. In the 1800s, the British (Lancashire, Manchester) imported from the West Indies, the U.S., Egypt, and India,**

	producing cloth for export to Europe and colonies like India, Bangladesh, Egypt. • India's diverse climates offer vast market potential for the cotton textile industry. For instance, regions like West Bengal, Bihar, Uttar Pradesh, Kerala, and Odisha, despite not growing cotton, have thriving cotton textile industries.
Access to the market for the byproducts of the cotton textile industry	• The good thing about the cotton industry is that nothing goes to waste. • Cottonseed contributes 12-15% of cotton production value. It is crushed to produce cottonseed meal and oil. It is a protein-rich feed for poultry and livestock in cotton-producing regions like India, China, and the U.S. • All the auxiliary industries (poultry, cottonseed oil extraction) are located close to the market.
Power	• The first modern cotton mills were water-powered and located in Lancashire and nearby rural areas. They faced challenges with labour supply and access to urban markets.
Climate	• Cotton mills require hot and humid air (18°C to 26°C, 85% humidity) to prevent thread breakage, making coastal regions in the tropics and subtropics, like Mumbai and the Southeastern U.S., ideal locations. • However, now electricity-based temperature and humidity controllers enable the mills to be set up in a wide range of locations.
Labour	• The industry moved from areas with high labour costs (the UK, Germany, and Japan) to areas with low labour costs (India, China, and Bangladesh). Bangladesh, despite minimal cotton production, is a major textile producer due to its abundant cheap labour. • Labor costs were pivotal in establishing the industry in Madural, Tirunelvell, and Coimbatore.
Water	• Textile Industries are typically located near soft water sources due to the significant water demand for bleaching and dyeing cotton fabric. For e.g., Manchester (Mersey River), Mumbai (Mithi River), Ahmedabad (Sabarmati River), and Coimbatore (Noyyal River).
Government interventions	• Manchester became a cottonopolis only because the British were able to secure raw cotton and markets in colonies like India. • Bangladesh's friendly government policy (coupled with cheap labour) made it a significant producer of cotton textiles.
Technological developments	• The British got an early start, mainly due to a series of inventions that paved the way for the modern cotton textile industry.

History

Indian Bronze Sculptures

Harappan Civilization:

- Perhaps the 'Dancing Girl' from Mohenjodaro is the earliest bronze sculpture datable to 2500 BCE. The limbs and torso of this female figurine are simplified in tubular form.
- A similar group of bronze statuettes have been discovered from archaeological excavation at Daimabad (Maharashtra) datable to 1500 BCE.
- The Statues were made using the "Lost Wax Method" or " Cire Perdu".



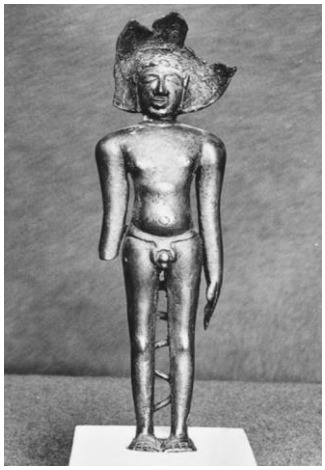


Lost Wax Method: -

- A wax model of the image is made by hand of pure beeswax.
- The image is now covered with a thick coating of paste, made of equal parts of clay, sand and cow-dung.
- In this molten metal is poured.
- The clay-plastered model is exposed to firing.
- The wax inside melts, the metal flows down the channel and takes on the shape of Wax Image.
- The image is later chiselled with files to smoothen it and give it a finish.

Kushana Period:-

- Interesting images of Jain tirthankaras have been discovered from Chausa, Bihar, belonging to the Kushana Period during second century CE.
- These bronzes show how the Indian sculptors had mastered the modelling of masculine human physique and simplified muscles.
- Remarkable is the depiction of Adinath or Vrishabhnath, who is identified with long hairlocks dropping to his shoulders. Otherwise the tirthankaras are noted by their short curly hair.





Fifth to Seventh Century CE :-

- Gujarat and Rajasthan have been strongholds of Jainism since early times.
    - A famous hoard of Jain bronzes was found at Akota, on the outskirts of Baroda, dated between the end of the fifth and the end of the seventh century CE.
    - Finely cast through the lost-wax process, these bronzes were often subsequently inlaid with silver and copper to bring out the eyes, crowns and details of the textiles on which the figures were seated.
- Hansi in Haryana, Chausa in Haryana, Tamil Nadu and Karnataka.
- Between 6th – 9th Centuries, Bronze Sculptures from Akota, Gujarat show a new format was invented in which tirthankaras are seated on a throne; they can be single or combined in a group of three or in a group of twenty-four tirthankaras.
- Female images were also cast representing yakshinis or Shasanadevis of some prominent tirthankaras.
- Chakreshvari is the Shasanadevi of Adinath and Ambika is of Neminath.
- Stylistically, they were influenced by the features of both the **Gupta and the Vakataka period bronzes.**





Buddhist Sculptures :

- Many standing Buddha images with right hand in abhaya mudra were cast in North India, particularly Uttar Pradesh and Bihar, during the Gupta and Post-Gupta periods, i.e., between the fifth, sixth and seventh centuries.
- The whole figure is treated with **refinement;** there is a certain **delicacy in the treatment of the torso**. The figure appears **youthful and proportionate in comparison** with the

Kushana style.

- Sarnath-style bronzes have foldless drapery. The outstanding example is that of the Buddha image at Sultanganj, Bihar, which is quite a monumental bronze figure. The typical refined style of these bronzes is the hallmark of the classical quality.
- Sultanganj Buddha, an over two metre high bronze image of the Buddha.



- Buddha, Gupta-Vakataka – 5th Century
- Phophanar, Madhya Pradesh





- Himachal Pradesh and Kashmir regions also produced bronze images of Buddhist deities as well as Hindu gods and goddesses.
- Most of these were created **during the eighth, ninth and tenth centuries** and have a very **distinct style** in comparison with bronzes from other parts of India.
- A noteworthy development is **the growth of different types of iconography of Vishnu images.** Four-headed Vishnu, also known as **Chaturanana or Vaikuntha Vishnu,** was worshipped in these regions. While the central face represents **Vasudeva,**
- the other two faces are that of Narasimha and Varaha.



Ganesh, seventh century CE, Kashmir



- In Buddhist centres like Nalanda, a school of bronze- casting emerged around the ninth century during the rule of the Pala Dynasty in Bihar and Bengal regions.
- A remarkable bronze is of a four-armed Avalokitesvara, which is a good example of a male figure in graceful tribhanga posture.

- **Worship of female goddesses** was adopted which is part of the growth of the Vajrayana phase in Buddhism. **Images of Tara** became very popular. Seated on a throne, she is accompanied by a growing curvilinear lotus stalk and her right hand is in the abhaya mudra.

Votive Stupa

Pala – 9th Century – Bihar





Chola Sculptures :

- The making of bronze sculptures reached a high stage of development in South India during the medieval period. Although bronze images were modelled and cast during the **Pallava period in the eighth and ninth centuries**, (the icon of Shiva seated in ardhaparyanka asana (one leg kept dangling. The right hand is in the achamana mudra gesture, suggesting that he is about to drink poison.),
- some of the most elegant and exquisite statues were produced during the Chola Period:
- The **ninth-century kalyanasundara murti** is highly remarkable for the manner in which Panigrahana (ceremony of marriage) is represented by two separate statuettes.
- The union of Shiva and Parvati is very ingeniously represented in the **Ardhanarishvara murti** in a single image.







- The well-known **dancing figure of Shiva as Nataraja** was evolved and fully developed during the Chola Period and since then many variations of this complex bronze image have been modelled.
- The figure of Lord Shiva as Nataraja represents the creation and destruction of the cosmic cycle.

- A wide range of Shiva iconography was evolved in Thanjavur (Tanjore) region of Tamil Nadu during this period.

Chola Bronze Sculpture:

- Unique mould preparation
- Sculptures are anatomically accurate and aesthetically pleasing.
- Expressive in Nature – emotions via facial expressions and body language.
- Expression to religious ideas
- Various Mudras
- Elements of Idealization – Portrait statues at Tirupati



Vijayanagara Period :

- During the sixteenth century, known as the Vijayanagar Period in Andhra Pradesh, the sculptors experimented with **portrait sculpture** in order to preserve knowledge of the royal patron for posterity.
- At Tirupati, life-size standing portrait statues were cast in bronze, depicting Krishnadevaraya with his two queens, Tirumalamba and Chinnadevi.
- The sculptor has combined the likeness of the **facial features** with **certain elements of idealisation**. The idealisation is further observed in the manner the **physical body** is modelled to appear imposing as well as graceful.
- The standing king and queens are depicted in praying posture, that is, both hands held in the namaskara mudra.



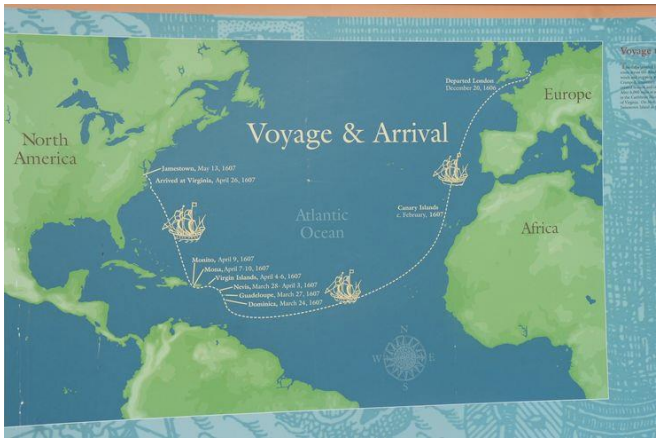


American Revolution



Britain and its American Colonies

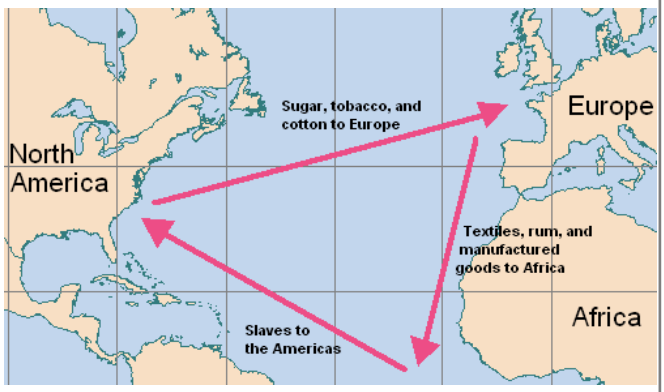
- Throughout the **1600s and 1700s**, British colonists had formed ***a large and thriving settlement*** along the eastern shore of North America, just as in India.
- The **London Company** founded the ***first permanent settlement in 1607*** on the James River at **Jamestown, Virginia** upstream from Chesapeake Bay.
- With the time, this single settlement of Britain swelled upto **13 British American Colonies by 1732 (Georgia)**

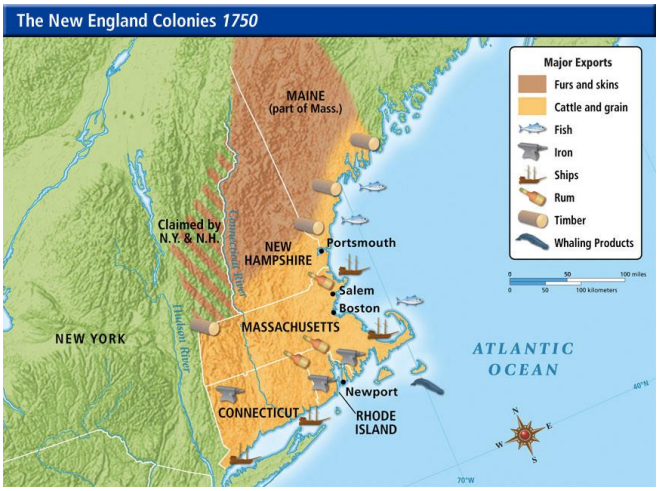


- By 1776, the conditions became worse when **The Great American Story** began to form -
  - Along with ***increasing population and prosperity***, a new ***sense of identity*** was growing in the colonists' minds.
- By the mid-1700s, colonists had been living in America for nearly 150 years. Each of the 13 colonies had its own government, and people were used to a great degree of independence.



- Initially the colonies were **accepting the rule of Britain without any hesitation** as the social, economic and political standing of America as a colony and as a state itself was very minimal, however with the time - ***The complexities grew when the Socio - Economic and Political situation of American changed for good.***
- Colonists saw themselves **less as British and more as Virginians or Pennsylvanians.** However, they were still British subjects and were expected to obey British law.



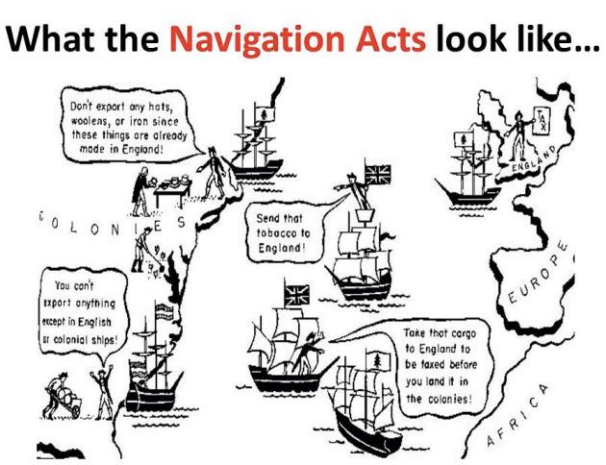




American Revolution - Causes

1651 - NAVIGATION ACT

- The **Navigation Act of 1651** was a British law designed to regulate **trade and shipping**, primarily **targeting the Dutch** who controlled much of Europe's trade at the time.
- It stipulated that goods imported into England or its colonies had to be transported on English ships, or ships of the country of origin.
- This act, and subsequent Navigation Acts, were **key components of British mercantilist policies** aimed at enhancing English maritime power and economic dominance.



- 1662 - ENUMERATED COMMODITIES ACT
- The Enumerated Commodities Act (formally part of the Navigation Acts) was a British law passed in 1660 and reinforced in 1662, which listed specific goods (called "enumerated commodities") that colonies could only export to England or English territories — not to any other country.
- 1663 - STAPLE ACT
- The Staple Act of 1663 was part of a series of British Navigation Acts under mercantilist policy, passed during the reign of Charles II. It required that all goods bound for the American colonies from Europe (or elsewhere) had to first pass through England, be offloaded, taxed, and then re-exported to the colonies only in English ships.
- Then later on till 1750's, various acts followed such as **Iron Act, Hat Act and Woollen Act.**
- Certain colonial goods — such as:
- Sugar
- Tobacco
- Cotton

- Indigo
- Ginger
- Dyes like fustic and wood — were restricted to export only through English ships to England – Enumerated Commodities Act, 1662.

Prominent Causes of American Revolution

Britain and its American Colonies

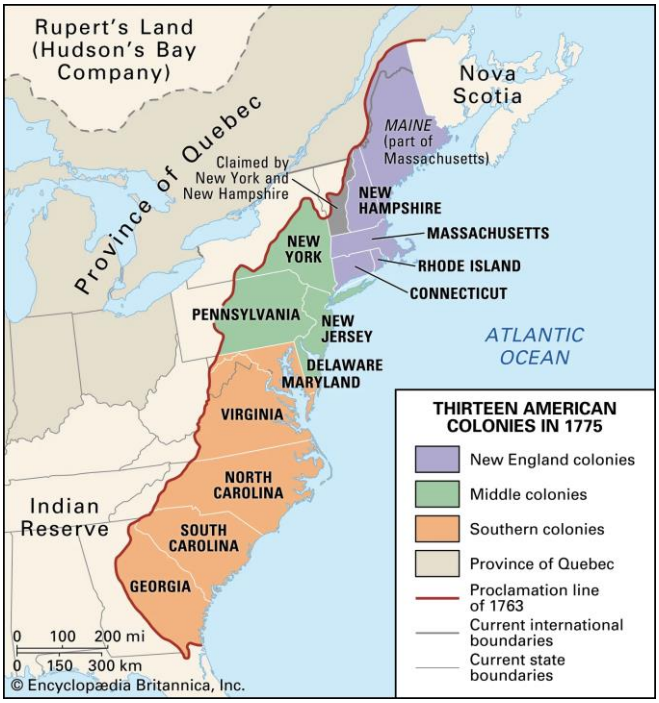
- Political Causes - Encouraged own Representation
- Economic Causes - Encouraged Materialism which promoted growth and stature.
- Cultural Societal Causes - The Great American Story of being cosmopolitan, Liberal society which accepts every ideology of the world.
    - Enlightenment
    - John Locke - Father of Liberalism (Power of People)
    - Benjamin Franklin - Pennfylvania Gazette - Founding Father
    - Thomas Paine - Common Sense (1776)
    - Samuel Adams - True Character of British Rule
- 1754 - Albania Congress
- Meeting of 07 American Colonial Representatives where Benjamin Franklin proposed Trade Union, but other Representatives refused.



- French Problem in North America - 7 Years War (1756 - 1763)
- Policy of England which changed after 1760.
    - ***Prior 1760*** - There was loose execution of Laws,
    - ***Post 1760*** - Britain started imposing tight control and more controlling regulations which further aggravated the situation.



Crown's Proclamation

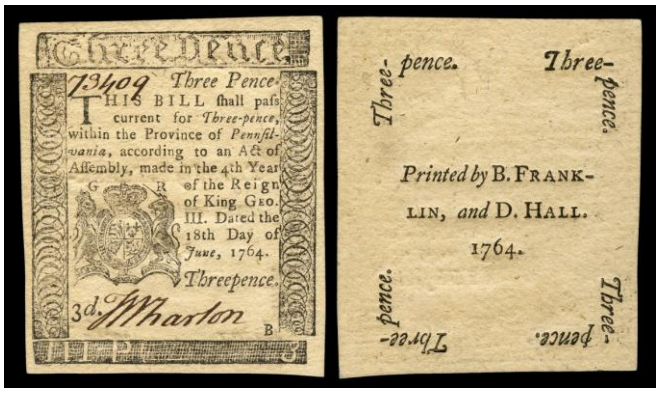


Grenville Policy

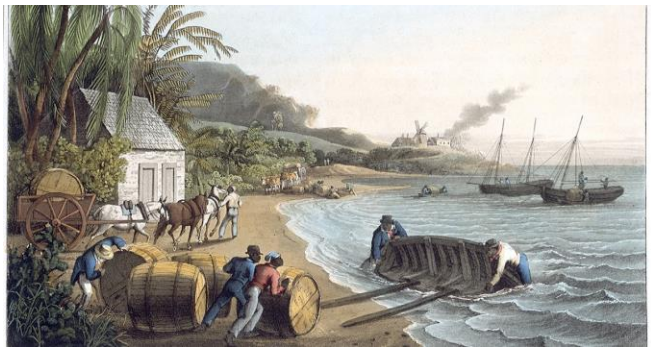
Currency Act of 1764

Key Provisions:

- **Banned Paper Currency:** Colonies could no longer issue paper money as **legal tender** (official currency for debts, public/private).
- **Debt Payments:** Required colonial debts to British merchants (e.g., for imported goods) to be paid in **specie** (gold/silver coin) or **"sterling bills of exchange."**
- **Existing Currency:** Voided existing colonial paper currencies already in circulation
- British Motive:
    - To **stabilize the imperial economy** by controlling colonial currency.
    - **Protect British merchants** from being paid in depreciated colonial paper money.
    - Centralize financial authority under Parliament.



- **2. Sugar Act of 1764**
- The Sugar Act (also known as the American Revenue Act) was passed by the British Parliament in 1764 under Prime Minister George Grenville.
- It aimed to raise revenue from the American colonies by taxing imported sugar and other goods, while also strictly enforcing customs laws to curb smuggling.

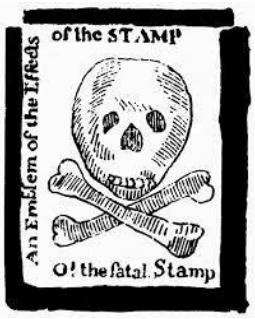


Quartering Act of 1765

- The Quartering Act of 1765 was passed by the British Parliament, requiring the American colonies to provide housing, food, and supplies to British soldiers stationed in the colonies — not just in barracks, but if needed, in private homes, inns, or public buildings.
- It was seen by the colonists as a direct violation of their civil liberties and property rights.



3. 1765 - Stamp Act - 1st Direct Tax



- **What it did**:
  - Imposed the first **direct tax** on American colonists – **Stamp Taxes on all business transactions in American Colonies.**
  - Required **revenue stamps** (purchased with British currency) on paper goods:
- Legal documents, newspapers, pamphlets, playing cards, dice, land deeds, liquor licenses, and even marriage certificates.
- 2. Why Britain passed it:
  - To repay debts from the **French and Indian War** (1754–1763).
  - Fund British troops stationed in the colonies.
- **Colonial reaction**:
  - **"No taxation without representation!"**: Argued only *colonial assemblies* could tax them. James Otis, Patrick Henry, and Samuel Adams famously denounced the Act as unconstitutional
  - **Mass protests**:
    - **Sons of Liberty** intimidated tax collectors.
    - **Stamp Act Congress** (Oct. 1765): Delegates from 9 colonies met in NYC, issuing the **Declaration of Rights and Grievances** asserting only colonial assemblies could tax colonists.
- **British Response & Repeal:**
  - **Repealed in 1766** due to colonial economic pressure and appeals by British merchants.
  - **But…** The **Declaratory Act** (1766), **Rockingham Declaration**
  - was passed simultaneously, **asserting Parliament's authority to legislate for colonies "in all cases whatsoever."**
- **To every action there is a reaction** and because of the actions of the Britishers, the reactions of the Americans were clear and loud, that no longer they wanted to be under the dominion of Britain.
- In order to counter the Britishers, ***they emerged as one Group - Industrialisation gave way to Urbanisation which further led to development of Education, modern Society and spread of Rational Thought which ultimately made the America Free.***

Outcome of all these Actions

- All these actions led to widespread protests all over the American colonies, Smuggling was at all time high for ex. in ***1764 the revenue stood at $22,50,000 while it decreased to 19,44,000 in 1765.***
- Therefore, prompting the British authorities to levy more taxes and duties which started a Vicious cycle of protests and demonstrations which ultimately led to Demand for American Independence which grew up in the voice of "**No Taxation without Representation** ".

Rockingham Declaration of 1766

- **Repeal of Stamp Act but we also have the right to tax you without consulting you**



Townshend Act of 1767

- The **Townshend Acts** (also called the **Townshend Plan**) were a series of laws passed by the **British Parliament in 1767**, named after **Charles Townshend**, the Chancellor of the Exchequer.
- These acts aimed **to raise revenue from colonies *without* direct taxes (like the Stamp Act), using "external" trade duties instead.**
- **Key Acts Under the Townshend Plan**
    - **Revenue Act (1767)** – Imposed **import duties** on glass, lead, paints, paper, and **tea** imported into the colonies.
    - **Commissioners of Customs Act** – Established a **Board of Customs** in Boston to curb smuggling and enforce trade laws more strictly.
    - **Vice-Admiralty Court Act** – Created **new courts without juries** to try violators of trade regulations.
    - **New York Restraining Act** – Suspended New York's Assembly for refusing to comply with the **Quartering Act of 1765**



Boston Massacre of 1770

Tensions were high due to:

- **Townshend Acts (1767)** and earlier taxes (e.g., Stamp and Sugar Acts)
- Ongoing **British military presence** in Boston to enforce customs and suppress dissent
- Colonists were protesting **unfair taxation, British interference, and loss of autonomy.**
- A group of **colonists confronted British soldiers**, throwing snowballs, stones, and taunts.
- In the chaos, British soldiers **opened fire — five colonists were killed**, including **Crispus Attucks**, a man of African and Native American descent (often seen as the first martyr of the Revolution).



American Revolution

- In 1770, **Lord North became the PM of Britain** and he ***adopted conciliatory approach towards the American Colonies.***
- He waived off all the duties, taxes and acts but maintained the **Tea tax in 1773**, and this eventually led to **Boston Tea Party incident in 1773**. - Samuel Adams, rebel leader.

- The **Boston Tea Party** was a **political protest** that took place on **December 16, 1773**, in which **American colonists disguised as Native Americans boarded British ships and dumped 342 chests of tea** into Boston Harbor. It was a **symbolic act of defiance** — not just about tea, but about **colonial rights and sovereignty**

Intolerable Act of 1774

- King George III, infuriated by the "Boston Tea Party," as it was called, ordered the British navy to close the port of Boston and order the **Intolerable Act of 1774**.
- The **Intolerable Acts**, also known as the **Coercive Acts**:
    - **Boston Port Act –** Closed the port of Boston until the tea was paid for.
    - **Massachusetts Government Act –** Took away self-rule.
    - **Quartering Act (Reinforced) –** Required colonists to house British soldiers.
    - **Administration of Justice Act –** Allowed British officials to be tried in Britain for crimes.



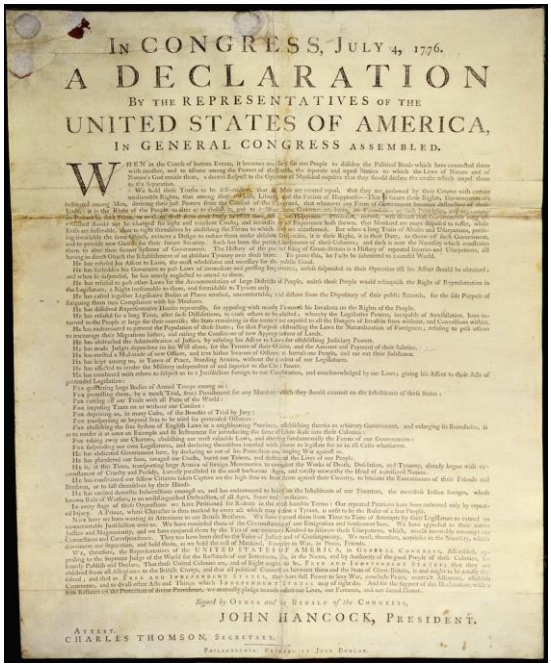
American Revolution - 1st Continental Congress

- In **September 1774**, *representatives from every colony except Georgia gathered in Philadelphia* to form the **First Continental Congress**. This group protested the treatment of Boston.
    - **Unity of American Colonies** against their exploitation by Britain.
    - Demanded –
        - **Removal of restrictions** on **industries and trade.**
        - Do **not impose any tax** on colonists without their **consent.**
    - British King declared this as an act of mutiny and send troops to suppress this → Battle of Lexington, 1775 (I Battle of Revolution)

American Revolution - 2nd Continental Congress

- **The Second Continental Congress** voted to raise an army and organize for battle under the command of a **Virginian named George Washington**. The American Revolution had begun.
- In **July 1776, the Second Continental Congress issued the Declaration of Independence.** This document, written by political leader **Thomas Jefferson**, was firmly based on the **ideas of John Locke and the Enlightenment**. The Declaration reflected these ideas in its eloquent argument for natural rights.

A shift from Right as Englishmen → Right to be an independent nation


IN CONGRESS, JULY 4, 1776.

A DECLARATION

BY THE REPRESENTATIVES OF THE

UNITED STATES OF AMERICA,

IN GENERAL CONGRESS ASSEMBLED.

JOHN HANCOCK, PRESIDENT.

ATTEST. CHARLES THOMSON, SECRETARY.

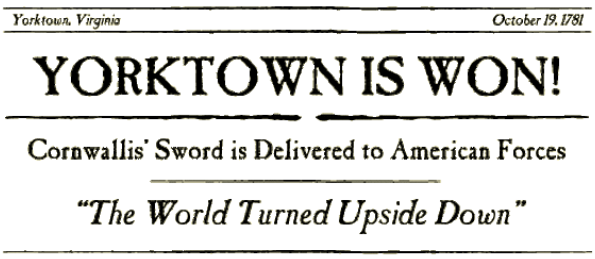
- "We hold these truths to be self-evident that **all men are created equal,** that they are endowed by their Creator with **certain unalienable rights,** that among these are

life, liberty, and the pursuit of happiness", states the beginning of the declaration.

- Finally, **the Americans did not fight alone**. Louis XVI of France had little sympathy for the ideals of the American Revolution. However, ***he was eager to weaken France's rival, Britain***. **French entry into the war in 1778 was decisive.**

The Colonists Win

- In **1781**, combined forces of about ***9,500 Americans and 7,800 French trapped a British army commanded by Lord Cornwallis near Yorktown, Virginia.***
- Unable to escape, Cornwallis eventually surrendered. The Americans had shocked the world and won their independence.
- Shortly after declaring their independence, the 13 individual states recognized the need for a national government. As victory became certain, **all 13 states ratified a constitution in 1781.**


Yorktown, Virginia October 19, 1781

YORKTOWN IS WON!

Cornwallis' Sword is Delivered to American Forces

"The World Turned Upside Down"

- This plan of government was known as the **Articles of Confederation**. The Articles established the ***United States as a republic,*** a government in which **citizens rule through elected representatives. (First Democracy of the World). George Washington became the first President of USA.**
- To protect their authority, the 13 states created a loose confederation in which they held most of the power **(Federal System)**. Thus, the Articles of Confederation deliberately created a **weak national government.**
- **A Bill of Rights was incorporated as an amendment.**
- **1775 - King George III** - Sent Army to America (**General Gate**)
- **George Washington** leads America - 4 July 1776 - **Declaration of Independence.**
- **1776 - 1781 - War of Independence** (**Lord Cornwallis surrenders to Yorktown**)
- **1783** - **Britain accepted the America's Independence, Treaty of Paris**

British Economic Policy in India

Topic	Question	Year	Marks
British Economic Policy in India	Examine critically the **various facets of economic policies of the British in India** from mid-eighteenth century till independence.	2014	10
	Examine how the **decline of traditional artisanal industry** in colonial India **crippled the rural economy.**	2017	15

	Why was there **a sudden spurt in famines in colonial India** since the mid-eighteenth century? Give reasons.	2022	10
	How far was the **industrial revolution in England responsible for decline of handicrafts and cottage industries** in India?	2024	15

Various facets of economic policies of the British in India

- The British economic policies in India were not a monolithic entity but evolved through distinct phases, driven primarily by the interests of the British metropolis and shaped by the evolving nature of colonial rule.

Core Objectives Driving British Policies:

- **Resource Extraction:** Primary motive – transfer wealth (raw materials, revenue, capital) to Britain.
- **Market Creation:** Transform India into a captive market for British manufactured goods.
- **Source of Raw Materials:** Ensure steady supply of cheap agricultural products (cotton, jute, indigo, opium) and minerals for British industries.
- **Strategic & Military:** Finance Britain's global empire and wars using Indian revenues and manpower ("Drain of Wealth").
- **Profit for East India Company (EIC) & Later Crown:** Maximize returns for shareholders and the British state.

I. The Phase of Mercantilist Exploitation & Plunder (Mid-18th Century - 1813) :

Aspect	Key Features	Critical Impacts
Diwani Rights (1765)	EIC acquired revenue collection in Bengal, Bihar, and Orissa.	▪ **Excessive revenue extraction** (often 50%+ of produce). ▪ **Peasant impoverishment**. ▪ Triggered **famines** (e.g., Bengal Famine, 1770). ▪ **Collapse of rural economy**. ▪ ***Drain of Wealth Initiated:*** Massive surplus revenues were remitted to Britain via "Home Charges" (salaries, pensions, dividends, purchase of goods in India for export to Britain). **By the end of the 18th century, the drain constituted nearly 9% of India's national income.**

Monopoly Trade & Investments	EIC monopolized trade in salt, opium, spices; artisans forced to sell below market price (dadni system).	▪ **Destruction of artisan economy**. ▪ **Forced de-industrialization** began. ▪ Local trade networks were disrupted.

Land Revenue Systems (Permanent Settlement - 1793, Bengal; Ryotwari & Mahalwari elsewhere):

Revenue System	Region	Key Features	Critical Impact
Permanent Settlement (Zamindari)	Bengal, Bihar, Orissa	Revenue fixed with **Zamindars** (landlords); state demand permanent.	▪ **Absentee landlordism**. ▪ **Rack-renting** of peasants. ▪ No incentive for **land improvement**. ▪ **Rural indebtedness** entrenched.
Ryotwari System	Madras, Bombay	Direct settlement with **individual peasants (ryots)**.	▪ **High and rigid revenue demand** pushed peasants toward **moneylenders**; ▪ led to **insecurity and exploitation**.
Mahalwari System	NW Provinces, Punjab	Revenue settled with **village communities or headmen**.	▪ **Over-assessment** led to **communal debt**, ▪ **Disintegration of village solidarity**, and ▪ **Agricultural decline**.

2. The Phase of Free Trade Imperialism & Forced De-industrialization (1813 - c. 1858):

Policy/Development	Key Features	Critical Impacts
Charter Act of 1813	Ended East India Company's monopoly (except in tea and China trade); opened India to "free trade."	▪ **Inflow of cheap British goods** (e.g., Lancashire textiles) led to **deindustrialization** of India's handloom industry. ▪ **One-way free trade**: Indian exports to Britain faced tariffs, while British goods entered duty-free.

		→ India became an **exporter of raw materials** and **importer of finished goods**. *India's global manufacturing share declined from about 25% before 1800 to 2% by 1900*
Railway Construction (from 1853)	Introduced under the guise of development and famine relief; financed through Indian revenue.	▪ Served **strategic and economic interests**: troop movement, resource extraction. ▪ **Drain of wealth**: Guaranteed returns to British investors, repaid via Indian taxes. ▪ **Limited integration**: Connected resource areas to ports, not regional economies; facilitated **commercialization**, not holistic development.
Commercialization of Agriculture	Promotion of **cash crops** like cotton, jute, indigo, opium, and wheat for export.	▪ **Reduced food crop production**, heightening famine vulnerability (e.g., 1876–78, 1896–97, 1899–1900). ▪ Peasants became **dependent on volatile global markets** and **exploited by moneylenders/traders** (often British-linked). → Led to **agrarian distress** and resistance movements like the **Indigo Revolt (1859–60)** due to coercive indigo cultivation.

- ***India absorbed roughly 10 to 12 percent of Britain's total exports and about 20 percent of Britain's textile exports during the late 19th century.***
- By 1811-12, cotton piece goods (finished textiles) accounted for 33% of India's exports, but by 1850-51, this share dropped dramatically to around 3%. Concurrently, the export of raw cotton from India to Britain increased substantially, by around 300% during the 19th century.

III. The Phase of Finance Colonialism & Controlled "Development" (Post-1858 - 1947):

Theme	Key Features	Critical Impacts
Drain of Wealth (Post-1858)	Expansion of Home Charges: expenses of India Office, pensions, army costs, interest on public debt (esp. for railways, irrigation, wars).	▪ **Continuous outflow of Indian surplus capital** to Britain. ▪ **Suppressed domestic investment**, as highlighted in **Naoroji and R.C. Dutt's Drain Theory**. Naoroji estimated the annual drain to be about £20–30 million by the late 19th century, roughly 2-3% of Britain's national income.

Fiscal Policy	Revenue reliance on **land tax, salt tax, and customs duties**.	▪ **Heavily regressive**; burden fell on poor. ▪ **Discriminatory protection**: Excise duties on Indian goods nullified revenue tariffs on British imports.
Infrastructure Development	Railways, ports, telegraph, canals developed—financed via Indian debt and public revenues.	▪ **Positive**: Enabled trade, irrigation, and transport. ▪ **Negative**: Served **colonial goals**; **suboptimal design**, **foreign procurement**, **debt burden**.
Industrial & Tariff Policy	- Favoured **British capital and managing agencies**. - Indian entrepreneurs faced **capital & policy constraints**.	▪ Indian industries like **TISCO (1907)** succeeded despite opposition. ▪ **Protective tariffs introduced late (1920s–30s)** under fiscal pressure, limited in scope.
Monetary & Exchange Policy	Gold Exchange Standard (1898) fixed rupee to sterling at 1s 4d.	▪ Cheaper British imports into India. ▪ Costlier Indian exports and higher debt servicing burden (in sterling).
Agricultural Stagnation	High revenue/rent extraction. Minimal investment in R&D, credit, or rural infrastructure.	▪ Sustained agrarian backwardness. ▪ Semi-feudal land tenure discouraged improvements.
Famines & Policy Failures	• Famine relief neglected; • laissez-faire approach dominated. • Grain exported even during crises.	Deadly famines (e.g., 1876–78, 1896–97, Bengal Famine 1943) worsened by colonial policies.

Long-Term Consequences & Legacy for Independent India:

- **Structural Imbalance:** Predominantly agrarian economy with weak industrial base.
- **Low Productivity Agriculture:** Legacy of exploitative land systems, lack of investment, and indebtedness.
- **Skewed Industrial Structure:** Dominance of consumer goods (cotton, jute), lack of capital goods/heavy industry.
- **Infrastructure Bottlenecks:** Railways/ports geared for extraction, not integrated national development.
- **Dependency:** Integration into world economy as primary producer, vulnerable to global shocks.
- **Poverty & Inequality:** Mass impoverishment, entrenched rural and regional disparities.
- **Fiscal Weakness:** Heavy debt burden inherited by independent India.
- **Demographic Disaster:** Famines and disease caused massive avoidable mortality.
- British economic policies in India were **fundamentally exploitative, designed to serve the interests of the colonial power.** While elements like railways or administrative unification had long-term existence, they were by-products of colonial needs, not drivers of genuine development.
- The core processes – **the Drain of Wealth, systematic deindustrialization, exploitative land revenue systems, discriminatory tariff policies, and forced commercialization of agriculture without safeguards** – created a structure of colonial underdevelopment. This legacy left independent India with profound challenges: widespread **poverty,** an **underdeveloped industrial sector**, an **inefficient and unequal agrarian system**, **heavy foreign debt**, and deep-seated **economic imbalances**.

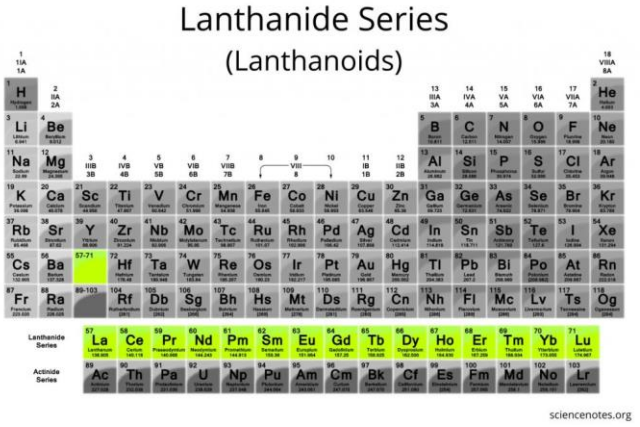
Environment

Critical Minerals

- Critical minerals are a subset of minerals considered crucial for the **manufacturing and technological** needs of companies, industries, nations, or even the world.
- In recent years, the **concept of critical minerals has gained popularity** because the new technologies that are shaping the ongoing green and digital transitions (together known as the 'twin transition') utilise far higher amounts of minerals than more traditional technologies.

Usage of Critical Minerals

- Solar energy
    - Critical minerals such as silicon, tellurium, indium, and gallium are vital for the production of photovoltaic (PV) cells used in solar panels.
- Wind energy
    - Rare earth elements like dysprosium and neodymium are used in permanent magnets for wind turbines.
- Electric vehicles (EVs)
    - Lithium, nickel, and cobalt are key materials used in lithium-ion batteries.
- Energy storage
    - Lithium-ion batteries used in advanced energy storage systems depend on lithium, cobalt, and nickel.
- Rare earth elements (REEs) are a group of 17 chemical elements, including the **15 lanthanides, plus scandium and yttrium.** Despite their name, they are not exceptionally rare in the Earth's crust, but they are dispersed and often found mixed with other elements, making them challenging and costly to extract and refine.



- **These elements are critical to technologies ranging from cell phones and televisions to LED light bulbs and wind turbines**

Distribution

- Critical mineral resources across the world are geographically concentrated with **at least 55% of each of the identified critical minerals found in only 15 countries, as of date.**
- A significant amount of lithium reserves is found in **Latin American countries.**
- The **Democratic Republic of Congo (DRC)** has almost 50% of the world's cobalt reserves.
- **Indonesia and the Philippines** have abundant nickel and cobalt reserves, with **Indonesia** standing out as a global leader in nickel reserves.
- Moreover, **China** produces about 60% of **rare earth elements (REE) and molybdenum**, while covering for almost 85% processing of much of the overall global rare earth supply.
- *According to IEA, although **mining operations** for critical minerals have become more **geographically diverse,** little has changed for refining facilities.*

- *China controls 50% of planned lithium chemical plants, while Indonesia dominates with 90% of planned nickel refining facilities.*

National Critical Mineral Mission

- The Government of India launched the National Critical Mineral Mission (NCMM) in 2025 to establish a robust framework for fin the critical mineral sector.
- Under this mission, the Geological Survey of India (GSI) has been tasked with conducting 1,200 exploration projects from 2024-25 to 2030-31.
- A committee formed by the Ministry of Mines in November 2022 identified 30 critical minerals, with 24 included in Part D of Schedule I of Mines and Minerals Development and Regulation Act, 1957 (MMDR Act, 1957).
- The inclusion of 24 critical minerals in Part D of the First Schedule of the Mines and Minerals (Development and Regulation) Act (MMDR Act) means that the Central Government now has the exclusive authority to auction mining leases and composite licenses for these specific minerals.
- It also recommended setting up a Centre of Excellence on Critical Minerals (CECM) to regularly update the mineral list and guide strategy.

Components of the National Critical Mineral Mission



Key International Initiatives

- **KABIL (Khanij Bidesh India Ltd)** signed an agreement with CAMYEN SE, a state-owned enterprise in Catamarca, Argentina, on 15th January 2024 for lithium exploration covering 15,703 hectares.
- KABIL also signed an MoU with the Critical Mineral Office (CMO), Department of Industry, Science and Resources (DISER), Government of Australia, in March 2022.

MMDR Act Amendment – August 2023

- Earlier, 6 critical minerals (like **lithium, beryllium, titanium, niobium, tantalum, zirconium**) were in the atomic minerals list – reserved for government companies only.
- The amendment removed them from this list to enable private sector participation.
- Exploration Licence

OAMDR Amendment Act 2023

- Seeks to make amendments to the Offshore Areas Mineral (Development and Regulation) Act, 2002 ('OAMDR Act')
- To bring **major reform by introducing auction** as the method of allocation of operating rights in the offshore areas.

GSI

- Geological Survey of India under the **Ministry of Mines, follows the United Nations Framework Classification (UNFC) classification and Minerals (Evidence of Mineral Contents) (MEMC) Rules, 2015,** to carry out exploration activities for critical minerals.
- Earlier in 2021-22 and 2022-23, GSI conducted reconnaissance surveys for **rare earth elements (REEs) including neodymium in Sirohi and Bhilwara districts of Rajasthan.**
- Additionally, the Department of Atomic Energy discovered around 1,11,845 tonnes

of in-situ Rare Earth Elements Oxide (REO) in Balotra, Rajasthan.

IREL

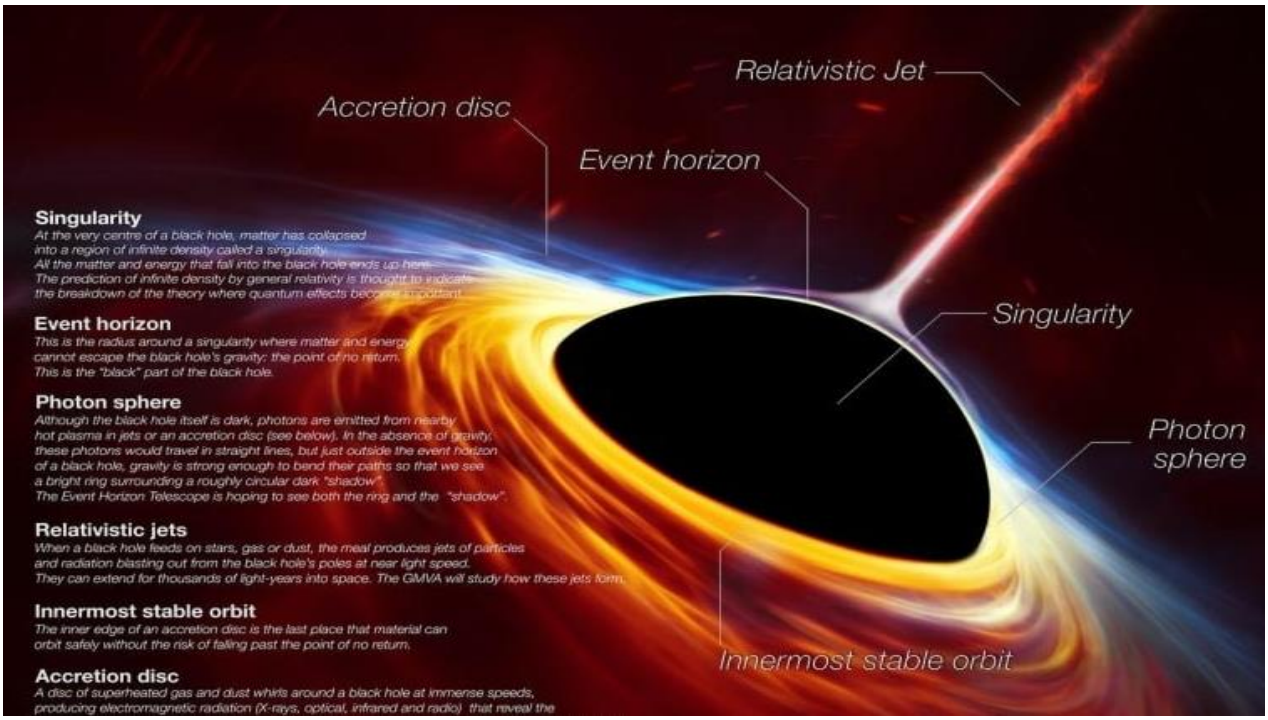
- Under Department of Atomic Energy.
- With a processing capacity of 6 lakh tons per annum, IREL produces key minerals like **ilmenite, rutile, zircon, sillimanite, and garnet.**
- It also operates a **Rare Earth Extraction Plant in Chatrapur, Odisha and a Rare Earth Refining Unit at Aluva, Kerala.**
- IREL is focused on expanding its production capacity, supporting value chain industries, and advancing R&D through its facility in Kollam, Kerala.

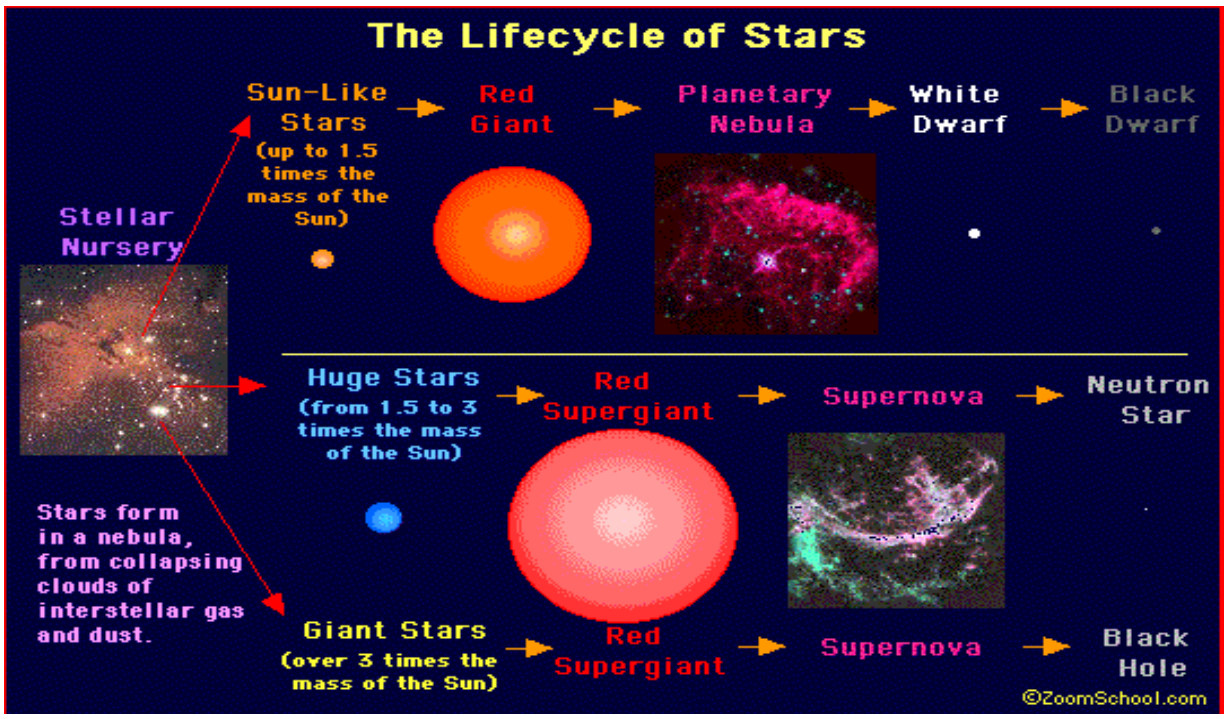
Science & Tech

Black hole Vs White hole

What Is a Black Hole?

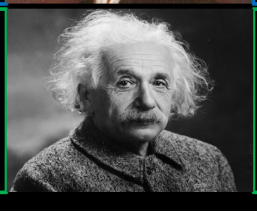
- A black hole is a place in space where **gravity pulls so much that even light can not get out.** The gravity is so strong because matter has been squeezed into a tiny space. This can happen when a star is dying.
- Because no light can get out, people can't see black holes. They are invisible. Space telescopes with special tools can help find black holes. The special tools can see how stars that are very close to black holes act differently than other stars.





Primordial Black hole	❑ Smallest ❑ Size-atom with mass of mountain ❑ Formation after big bang ❑ Not much of evidence
Stellar Black hole	❑ Medium ❑ Size-5-100 times mass of sun ❑ Formation-Collapse of star- supernova explosion ❑ Indirect evidence
Intermediate black hole	❑ Recent ❑ Between 100 to 100,000 solar masses ❑ Hard to detect; evidence is growing but still limited
Supermassive black hole	❑ Millions to billions of times mass of sun ❑ Size-of solar system ❑ Almost every galaxy contain BH at centre ❑ Indirect evidence ❑ Sagitarius A star (Milky way),BH in M-87

NOTHING CAN ESCAPE FROM BLACKHOLE

Newton law of escape velocity		❑ Escp vel of BH>Speed of light
Einstein special theory of relativity		❑ No object can travel faster than speed of light

Eddington limit

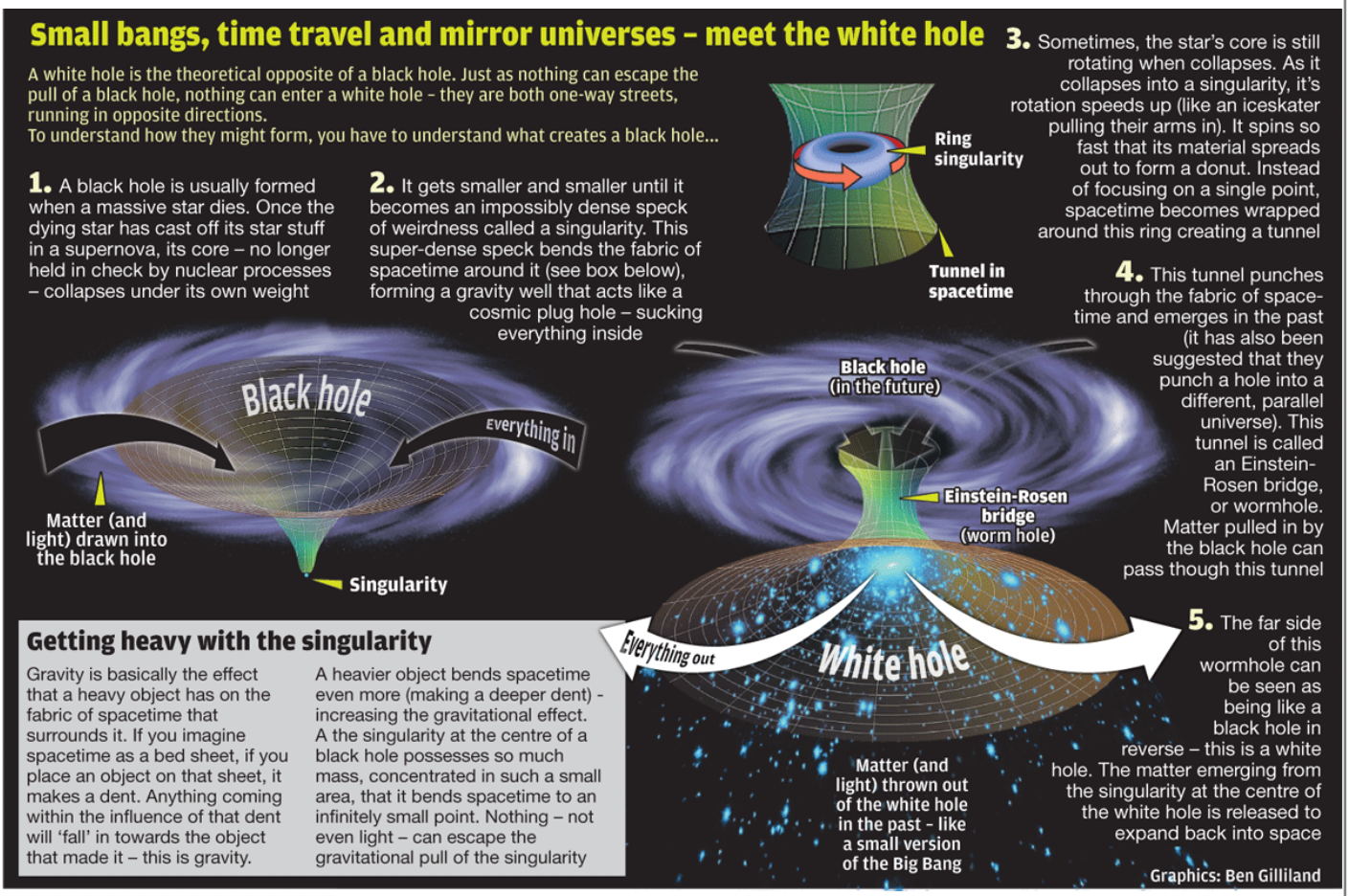
- The rate at which a **black hole feeds on matter** is governed by what astronomers call the Eddington limit. This limit — named after the English astronomer Arthur Stanley Eddington because he worked it out first — is also related to how brightly a black hole can

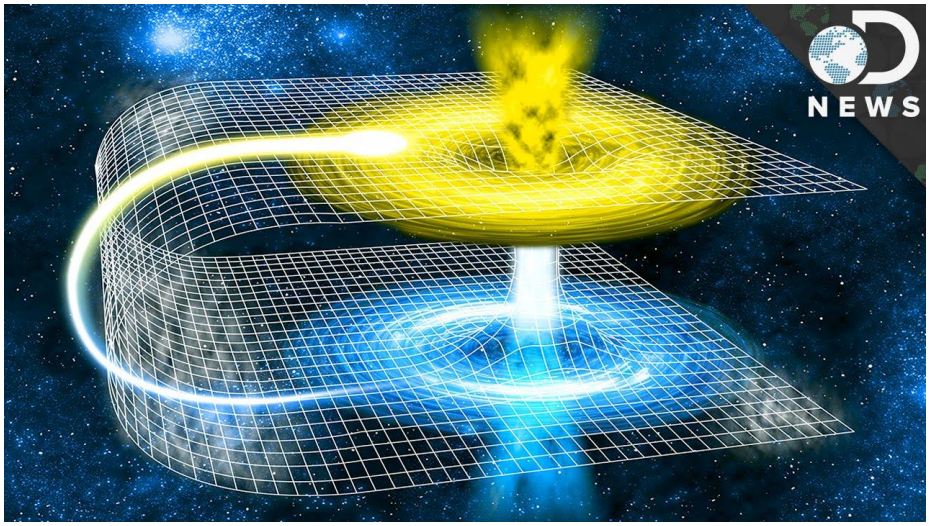
shine.

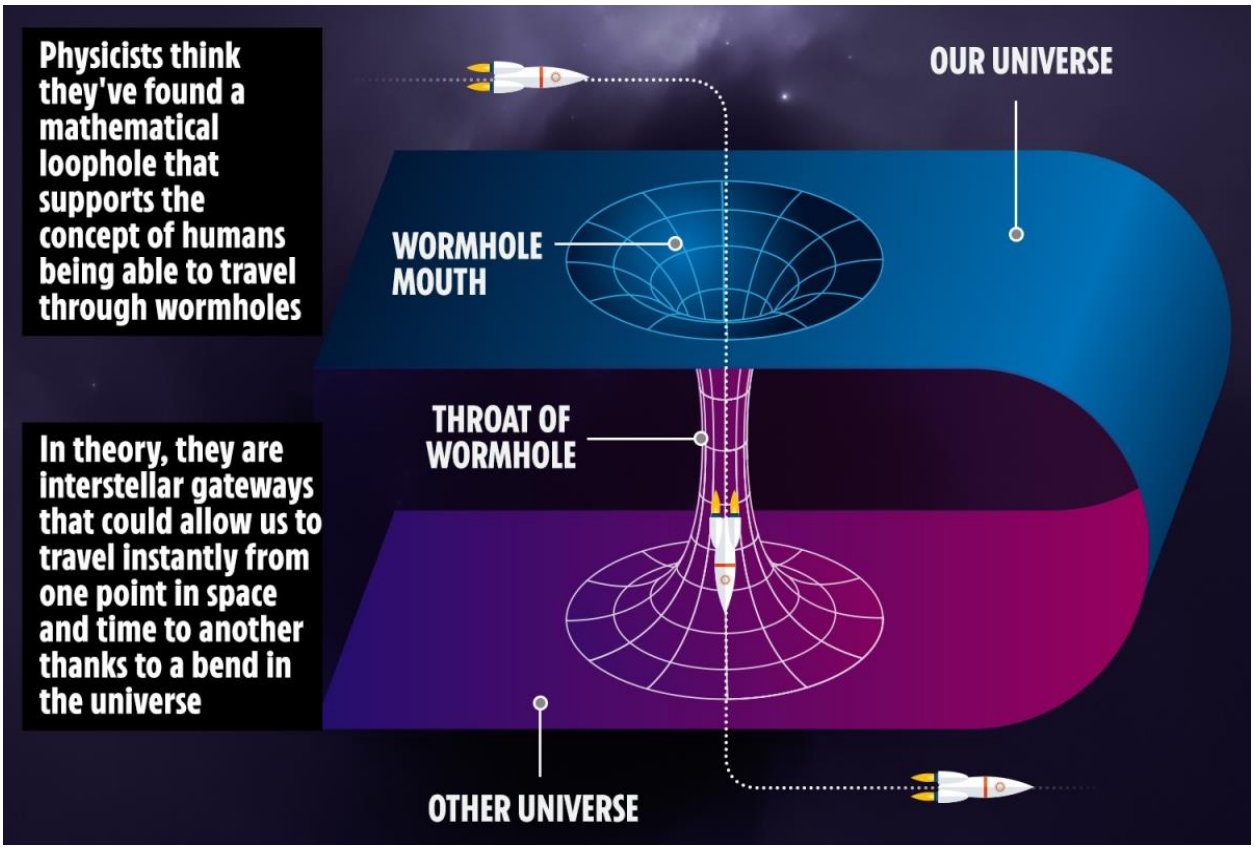
- Nothing can escape a black hole of course. But when a **black hole pulls surrounding matter towards itself,** the infalling material becomes compressed, heats up, and **emits radiation, especially X-rays.**
- The concept behind the Eddington limit is straightforward: as matter collects around the black hole and gets packed into the disc, it heats up and emits radiation that generates an outward pressure capable of counteracting the gravitational pull of the black hole. When this **radiation pressure balances the force of gravity**, the black hole will **stop accruing the matter**. There is a limit on how brightly the black hole can shine.

White holes

- are theoretical cosmic regions that function in the opposite way to black holes.
- Just as nothing can escape a black hole, nothing can enter a white hole.
- Physicists describe a white hole as a black hole's "**time reversal"**
- While a black hole's event horizon is a sphere of no return, a white hole's event horizon is a boundary of no admission – space-time's most exclusive club. No spacecraft will ever reach the region's edge.

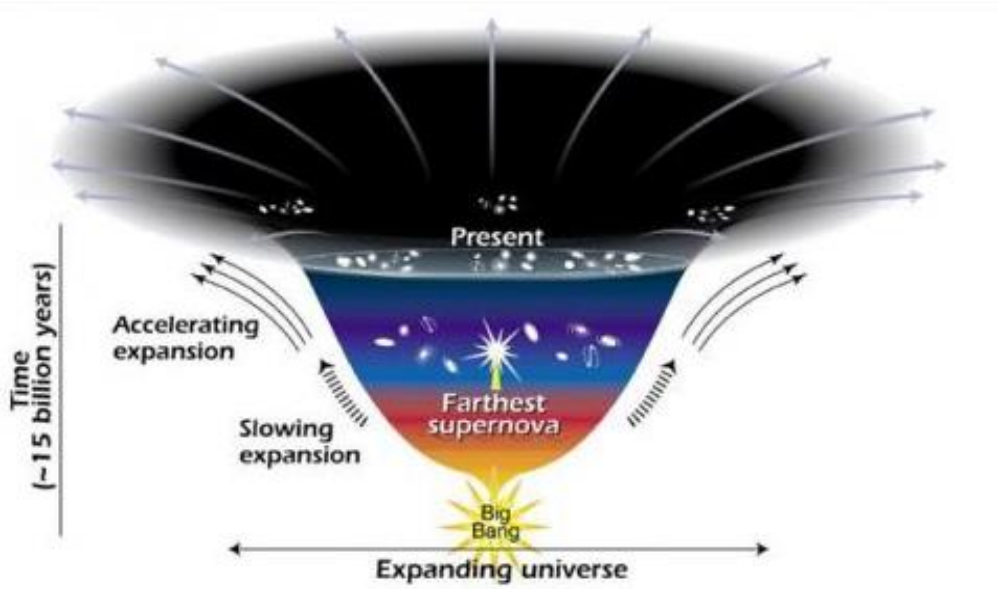






Big bang theory

- It suggests that about 1370 crore **(13.7 billion) years ago**, all matter and energy in the universe was concentrated into an area smaller than an atom.



Barbie Doll with Type I Diabetes

- To help normalize and include children with **Type 1 diabetes**—a condition where the immune system attacks insulin-producing pancreatic cells—a new Barbie doll now represents this condition on store shelves.
- **Previously**, Barbie dolls have been depicted as **visually challenged, with hearing aids** and with a prosthetic leg.
- **Continuous glucose monitor (CGM) - attached to an insulin pump on her waist**
- **Mobile phone displays an app showing her blood sugar readings**
- **Blue purse that contains snacks to manage sugar lows throughout the day.**

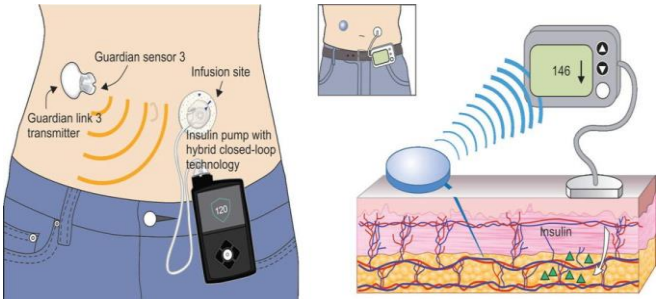
Significance

- Promotes Inclusion & Reduces Stigma:
    - Toys reflecting Type 1 diabetes help children feel accepted and prevent bullying by **building empathy among peers.**
- Boosts Self-Esteem & Identity:
    - Seeing themselves represented reminds **children they're not alone**, making them feel understood, heard, and confident.
- Encourages Disease Awareness & Education:
    - Dolls with insulin pumps and glucose monitors serve as learning tools for both diagnosed children and their classmates.
- **Fosters Peer & Self-Acceptance**:
    - These toys normalize medical routines and show that having a condition doesn't reduce a child's worth or capabilities.
- **Empowers Through Realism**:
    - Accurately depicted tasks like sugar checks and insulin use give children a sense of control and make daily routines feel less isolating.

Type 1 Diabetes

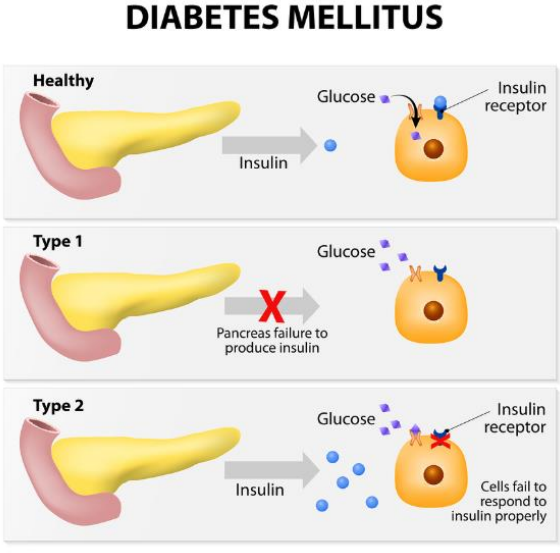
- It is a **chronic autoimmune condition** where the body's **immune system mistakenly attacks and destroys the insulin-producing beta cells** in the pancreas.

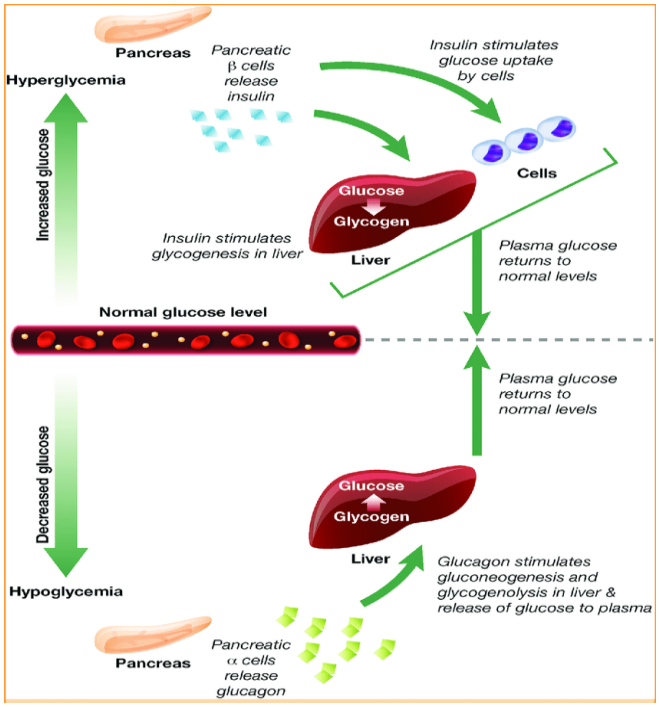
- Usually begins in **childhood or adolescence**, but can appear at any age.
- P eople with Type 1 diabetes need **daily insulin injections or an insulin pump** for life to survive.
- It's **not related to diet, weight, or lifestyle** – it's often genetic or triggered by unknown environmental factors.
- There are over **10 lakh children and adolescents living with type 1 diabetes in the world**, with **India accounting for the highest numbers**.
- Of the **2.5 lakh people living with type 1 diabetes in India, 90,000 to 1 lakh are under the age of 14 years**.

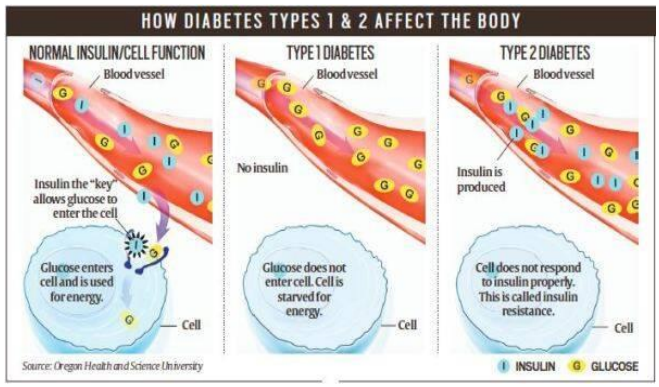


Type II Diabetes

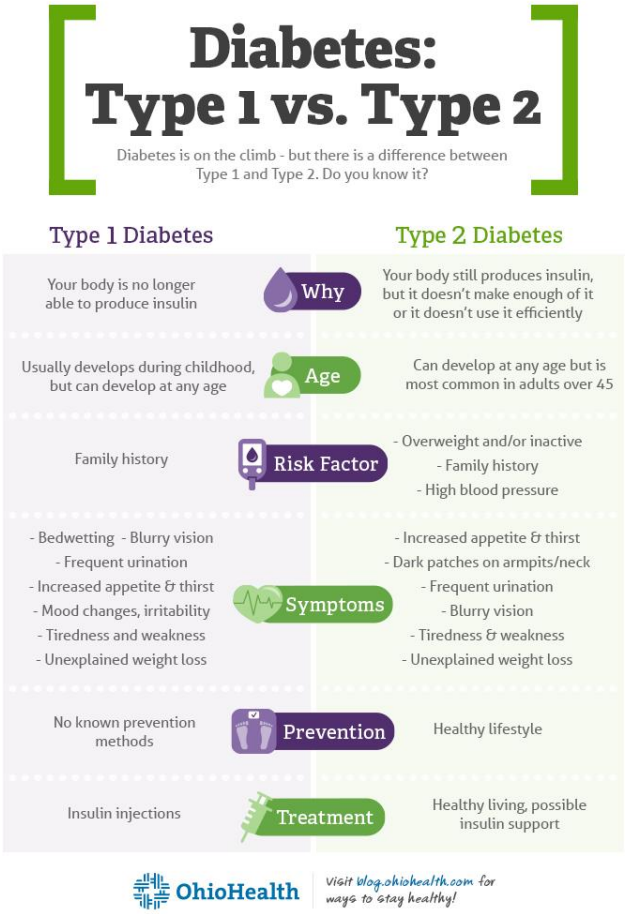
- **Type 2 Diabetes** is a **metabolic disorder** where the body either **doesn't produce enough insulin** or **can't use insulin properly** (insulin resistance), leading to **high blood sugar levels**.











KAMALA Vs PUSA Rice Varieties

Genome-edited rice varieties

- **Context**-Recently India released two genome-edited varieties of rice, the first achievement of its kind in the country.
- These varities have been named '**Kamala' and 'Pusa DST Rice 1**',developed by the Indian Council of Agricultural Research (ICAR)
- The ICAR scientists have used the revolutionary CRISPR-Cas9 genome-editing technology

About

Genome-edited rice varieties

DRR DHAN 100 (KAMALA)	**PUSA DST RICE 1**
Developed by the ICAR-Indian Institute of Rice Research (ICAR-IIRR)	Developed by ICAR-Indian Agricultural Research Institute (ICAR-IARI)
Developed using genome editing technology (SDN1)targeting the **Cytokinin Oxidase 2**	Targets the **Drought and Salt Tolerance (DST) gene** (SDN1) to improve the plant's resilience to harsh soil and climate conditions.

(CKX2) gene (also known as Gn1a), to increase grain numbers per panicle.	
Significantly **higher yields,** improved drought tolerance, and early maturity compared to its parent variety, Samba Mahsuri (BPT 5204).	The new variety is relevant for farmers of **saline and alkaline** soils, where traditional varieties underperform
ICAR-Indian Institute of Rice Research (ICAR-IIRR)	ICAR-Indian Agricultural Research Institute (ICAR-IARI)
Targeting Cytokinin Oxidase 2 (CKX2) gene	Targets the Drought and Salt Tolerance (DST) gene
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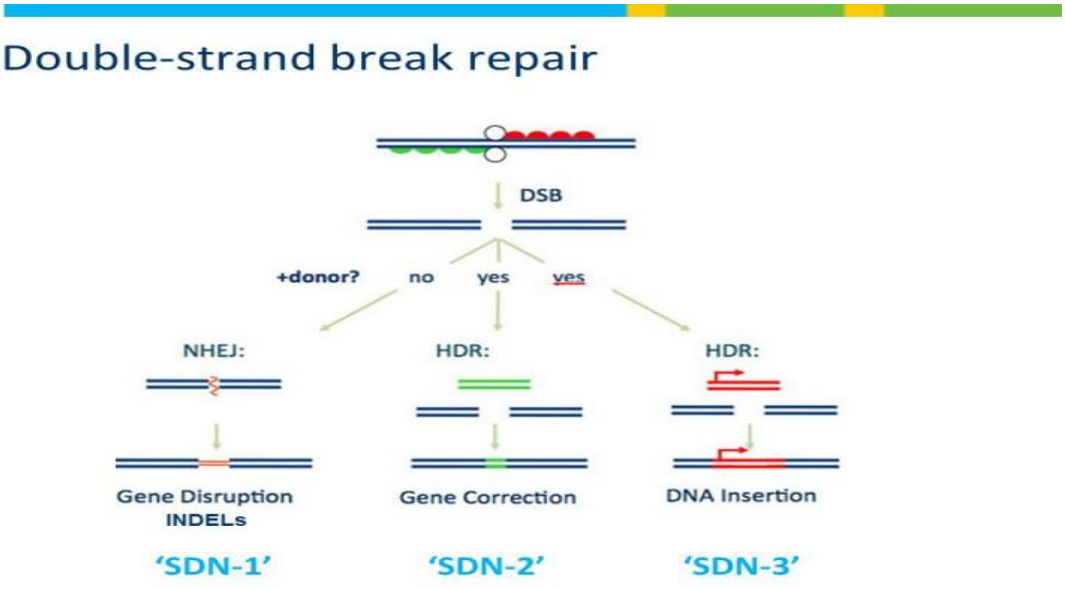


Significance

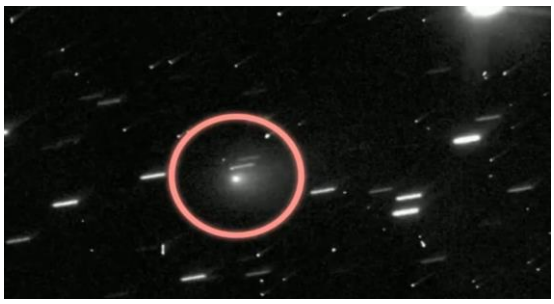
- West Bengal, Uttar Pradesh, Punjab, Odisha, Andhra Pradesh, Telangana, Tamil Nadu, Chhattisgarh, Bihar and Assam are the main paddy growing states.
- As per the Agriculture Ministry, paddy (kharif and rabi together) accounted for 45 million hectares of area, which was the **highest in the world in 2020**.
- However, in **terms of production**, India (186.5 million tonnes) **ranked second after China** (211 million tonnes).
- The reason is the **lower yield in India**.

India's paddy yield (4,138 kg/ha) was lower than the world's average of 4,717 kg/ha, China's (7,043 kg/ha), Indonesia's (5,128 kg/ha) and Bangladesh's (4,809 kg/ha).

3I/ATLAS Alien life in Space!

Alien life in space

- **A mysterious object from beyond our solar system, 31/ATLAS, has ignited a new wave of excitement about the possibility of alien life in space.**
- The NASA-funded **ATLAS (Asteroid Terrestrial-impact Last Alert System)** survey telescope in Rio Hurtado, Chile, first reported comet 3I/ATLAS on July 1, 2025.



Why expert believe in Alien theory

- The object, traveling at over **2, 10,000 km/h,** appears to be a massive comet with a coma or an envelope of gas and dust stretching up to 24 km
- Astronomers believe it could be as much as **3 billion years older than our solar system.**
- Strange trajectory and **speed**
- Entering the solar system from a different angle than previous interstellar visitors like **'Oumuamua (1st) or Comet Borisov (2nd).**
- Speculated that the object could **avoid detection** when closest to the Sun in October by
- staying hidden on the far side, suggesting it may be dropping off alien "gadgets" near other planets.
- If 31 ATLAS were a technological artifact, it might support the **dark Forest hypothesis,** which suggests extraterrestrial civilizations remain silent to avoid detection by potential threats.

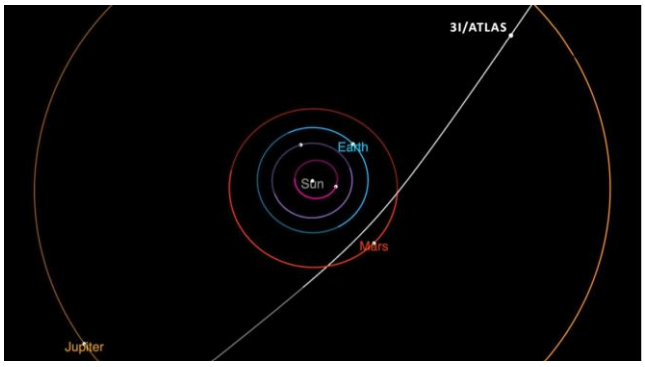
What NASA Says

Comet 3I/ATLAS poses no threat to Earth and will remain far away.

- The closest it will approach our planet is about 1.8 astronomical units (about 170 million miles, or 270 million kilometers).
- 3I/ATLAS will reach **its closest point to the Sun around Oct. 30, 2025**, at a distance of about 1.4 au (130 million miles, or 210 million kilometers) — just inside the orbit of Mars.
- 3I/ATLAS should remain visible to ground-based telescopes through September 2025, after which it will pass too close to the Sun to observe. It will **reappear on the other side of the Sun by early December 2025**, allowing for renewed observations.

How fast is it moving?

- Very fast. When it was discovered, the interstellar comet was traveling about 137,000 miles per hour (221,000 kilometers per hour, or 61 kilometers per second), and its speed will increase as it approaches the Sun.



International Relations

Can India push Pakistan into FATF's 'Grey list'?

Statement by FATF

- Pahalgam terror "could not occur without money and the means to move funds between terrorist supporters".
- FATF's has released such a statement only twice in this decade -- for the Paris terror attack (2015) and the Pulwama attack (2019).

FATF More Vigilant

- FATF has also developed a Terror Financing Risk & Context toolkit for assessors, so that countries cannot "fool them with lies" on terror financing risks from their jurisdictions.
- Pakistan has been placed 'thrice' in the 'grey' list of the FATF after it failed to take adequate measures to curb terror financing and money laundering.

Pakistan's Entry Into Grey List

- FATF first placed Pakistan on the grey list in 2008 after it failed to fight terror financing and money laundering.
- After cooperating with FATF's mutual evaluations, Pakistan was given an action plan to stop criminalisation of money laundering, identify, freeze and confiscate terrorist assets.
- It was removed from the list in 2015 owing to its progress but was reinstated in 2018.
- In October 2022, the country was finally removed from the list after it fulfilled all 34 action items by passing laws tackling money laundering, terror-financing, maintaining a database of terrorists and terror groups, and convicting terrorists such as Hafiz Saeed, Zakiur Rehman Lakhvi, Sajid Mir, and Rauf Asghar.
- However, Islamabad claims it couldn't trace Jaish-e-Mohammed chief Masood Azhar, a UN designated terrorist, and the mastermind of the 2019 Pulwama terror attack.

Condemnation By FATF- Meaningful?

- FATF's statement strengthens India's case against Pakistan to the global community, but is unlikely to translate into any meaningful action.
- Only Pakistan is in the black list will it negatively affect Pakistan.
- In the grey list the FATF only names and shames the country, so when investors i.e. FDIs flow into Pakistan, they will be acknowledging the risk involved.

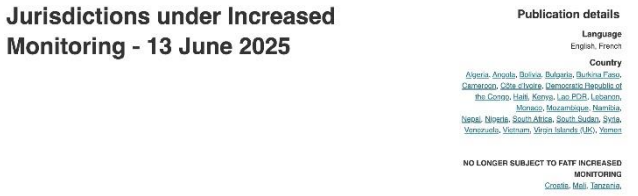
Can India 'push' Pakistan back into 'Grey' List?

- The process is a political one. Depending on what sort of member states' support India can garner at the FATF plenary session which will be held in October, what sort of dossiers and financial trails India can establish, it will decide if it is a clear cut case for Pakistan to be put back in the 'Grey' list.
- India would have to spend its political capital abroad with the 30–odd countries who will decide on the case.

Resistance by USA & Pakistan

- Beijing has its stakes in Islamabad with its China-Pakistan Economic Corridor.
- They have time and again supported Pakistan on international platforms.
- The recent optics also suggest that Pakistan does retain strategic significance for Washington.





Grey Zone Warfare

Collusion of China & Pakistan

Speaking at a Federation of Indian Chambers of Commerce and Industry (FICCI) event on "New Age Military Technologies" in New Delhi on July 4, 2025,

- **Real-Time Intelligence Sharing**: China provided Pakistan with live inputs on Indian military deployments during Operation Sindoor
- **China's Strategic Use of Pakistan**: Singh accused China of employing a strategy of "killing with a borrowed knife," using Pakistan as a proxy to challenge India without direct involvement in the conflict.
- **Pakistan's Military Hardware Dependency**: He revealed that 81% of Pakistan's military hardware over the past five years has been supplied by China
- **China's Use of Conflict as a "Live Lab"**: Singh described China's involvement as treating the conflict as a "live lab" to test its weaponry against Indian systems.

Grey Zone Warfare

- **Grey zone warfare involves coercive, ambiguous, and often non-military or sub-threshold actions designed to achieve strategic objectives without triggering open conflict.**

Features of Grey Zone Warfare

- **Ambiguity**: Actions are often deniable or difficult to attribute, complicating the target's ability to justify retaliation.
- **Incremental Gains**: The aggressor seeks gradual, cumulative advantages rather than immediate, large-scale victories.
- **Hybrid Approach**: Combines military, economic, psychological, and informational strategies to exploit vulnerabilities.
- **Avoiding Escalation**: Stays below the threshold of conventional warfare to minimize the risk of international intervention or full-scale conflict.

Getting someone else to help you pull—without anyone noticing or getting too upset!!

Real Time Intelligence Sharing

- China provided Pakistan with real-time intelligence on Indian military deployments during Operation Sindoor.
- Lieutenant General Rahul R. Singh, Deputy Chief of Army Staff, revealed that during Director General of Military Operations (DGMO)-level talks, Pakistan had "live inputs" from China about India's "important vectors" (key military assets or positions), enabling Pakistan to track Indian troop movements and deployments.
- This intelligence included satellite data and radar adjustments to monitor Indian activities.

Grey Zone Elements

- **Ambiguity and Deniability**: China's role was covert, avoiding direct attribution as a combatant. By providing intelligence rather than engaging militarily, China maintained plausible deniability, framing its actions as support for a strategic partner rather than aggression against India.
- **Incremental Advantage**: Real-time intelligence gave Pakistan a tactical edge, allowing it to anticipate Indian moves

without China crossing the threshold of direct conflict.

- **Hybrid Approach**: The use of satellite and cyber-enabled intelligence reflects a non-kinetic, technological approach to warfare, characteristic of grey zone strategies.

Information Warfare

- Pakistan, with **alleged Chinese backing**, orchestrated a sophisticated information warfare campaign during Operation Sindoor to delegitimize India's actions and shape global perceptions.
- This included **spreading fake news**, deepfakes, and exaggerated claims of Pakistani successes (e.g., downing Indian aircraft).
- China supported this by **providing technological assistance**, such as AI-driven tools for creating deepfakes and managing bot networks, and hosting propaganda websites on servers outside India's jurisdiction.
- Chinese bloggers and "wumao" (paid online commentators) amplified Pakistan's narratives, **exaggerating Indian losses** and portraying India as an aggressor.

Military Support Via Arms & Technology

- China supplied Pakistan with significant military hardware, **including 81% of its military equipment**, such as JF-17 Thunder and J-10C fighters, HQ-9 and LY-80 air defense systems, PL-15 missiles, and Wing Loong drones.
- During Operation Sindoor, China assisted Pakistan in **reorganizing radar and air defense systems** and adjusting satellite coverage to detect Indian troop movements.
- A banned Huawei satellite phone linked to China's Beidou navigation system was found in Pahalgam post-attack, suggesting pre-conflict intelligence support.

Diplomatic & Maritime Support

- China provided diplomatic cover to Pakistan at the UN Security Council, coordinating with Turkey and Bangladesh to counter India's narrative.
- In the maritime domain, China deployed over 200 "fishing boats" to the Indian Ocean to monitor Indian naval activities during Operation Sindoor, a tactic consistent with its grey zone strategy of using civilian vessels for military purposes.

MCQ

Q. Consider the following statements regarding Grey Zone Warfare, a strategy observed in contemporary geopolitical tensions:

1. It involves overt military operations with formal declarations of war to achieve rapid territorial conquests, often leading to immediate international sanctions.
2. It includes covert actions, economic pressures, and disinformation campaigns to gradually undermine an adversary's control without provoking a full-scale military conflict.
3. It is exclusively a diplomatic approach reliant on multilateral treaties and economic incentives, with no involvement of military or hybrid tactics.
4. It depends solely on non-state actors to execute large-scale terrorist activities, aiming to overthrow governments without state accountability.

Which of the above statements is/are correct?

A. 1 only

B. 2 only

C. 3 and 4 only

D. 1 and 4 only

Increased Military Spending Worldwide

Context

- North Atlantic Treaty Organization (NATO) summit in June pledged to increase military spending to 5% of the member nations' GDP (specifically "core defence requirements as well as defence and security-related spending by 2035").
- The previous spending target was 2%. Such a move is symptomatic of the sharp increase in global military spending in the last few years.

SIPRI Report

- **2024**
    - Global military spending was $2,718 billion in 2024. The year saw a 9.4% increase, which was the highest year-on-year increase since 1988, with the Russia-Ukraine war and the Israel-Gaza conflict contributing to it.
- **2025**
    - In 2025, the world saw two big additional conflicts, between India and Pakistan, and Israel and Iran. This, combined with the NATO pledge, will see further increases in global military spending in the coming years.

Who are Biggest Military Spenders?

- The United States is the biggest military spender in the world with $997 billion, followed by China at $314 billion, Russia at $149 billion, Germany at $88.5 billion and India at $86.1 billion — these nations are the top five military spenders.
- Almost 80% of the total worldwide military spending is spent by the top 15 military spenders.
- All of the NATO members (32) combined spent $1,506 billion, which makes it around 55% of global military spending.
- Thus, there is a concentration of spending in a few countries.
- In terms of GDP percentage, among the top 20 spenders (excluding countries at war such as Russia, Ukraine and Israel), the highest spenders include Saudi Arabia (7.3%), Poland (4.2%) and the U.S. (3.4%). The rest fall in the range of 2.6% to 1.3%.

What about the expenditure on other public goods?

- There is a significant crowding-out effect that increased military spending has on domestic government health spending.
- Spain, which spends only 1.24% of GDP on defence, asserted its sovereignty and opted out of the new NATO target citing that it is "unreasonable" and that the extra burden of 300 billion euros will cut welfare spending.
- It should be noted that 9 NATO members failed to meet even the 2% target by 2024 despite it being proposed first in 2002.

United Nations

- The present military spending of $2.7 trillion and its scale can be understood only by placing it in the context of other critical global expenditures.
- The latest budget of the United Nations is only $44 billion — with which it should fund development, humanitarian aid, and peacekeeping operations.
- But the UN, in six months, has only received $6 billion, and as a result, is seeking to reduce the budget to $29 billion.

Trumpian World

- While Mr. Trump wants to be known as a peace-making President, he has pushed NATO to adopt the 5% military spending target and has closed down the U.S. Agency for International Development (USAID), which provided annual assistance to the

tune of $50-60 billion worldwide in the few years until the Russian-Ukraine war.

- A Lancet study found that USAID assistance in healthcare, nutrition, etc., prevented 91 million deaths in low- and middle-income countries in the past two decades, and that Mr. Trump's decision could potentially cause a staggering 14 million additional deaths by 2030.

SDGs

- Ending extreme poverty and absolute monetary poverty globally by 2030 would need $70 billion and $325 billion respectively per year.
- It constitutes only 0.1% and 0.6% of the gross national income of high-income countries.
- Increased military spending has deleterious effects on another SDG as well – combating climate change.
- According to a study by the Conflict and Environment Observatory, if NATO's defence spending reached 3.5% of GDP, greenhouse gas emissions would increase 200 million tonnes annually.

India & Military Spending

- Funds allocated by the centre for Ayushman Bharat health insurance which covers 58 crore people was ₹7,200 crore for 2023-24.
- India spends 2.3% of GDP on the military whereas the public expenditure on health, despite increasing in recent years, is very low.
- It is 1.84% of the GDP, less than the 2.5% target of the National Health Policy, and much less than the 10% mark of most developed countries.

Do You Know

- Military conflicts and spending can be ruinous for middle- and low-income countries. Lebanon spent 29% of its GDP, and Ukraine 34%, on military spending last year.

Bedouins & Druze Communities in Syria

Context

- Syria's armed Bedouin clans announced they had withdrawn from the Druze-majority city of Sweida following weeklong clashes and a US-brokered ceasefire, as humanitarian aid convoys started to enter the battered southern city.

Sweida



Druze Populated Area



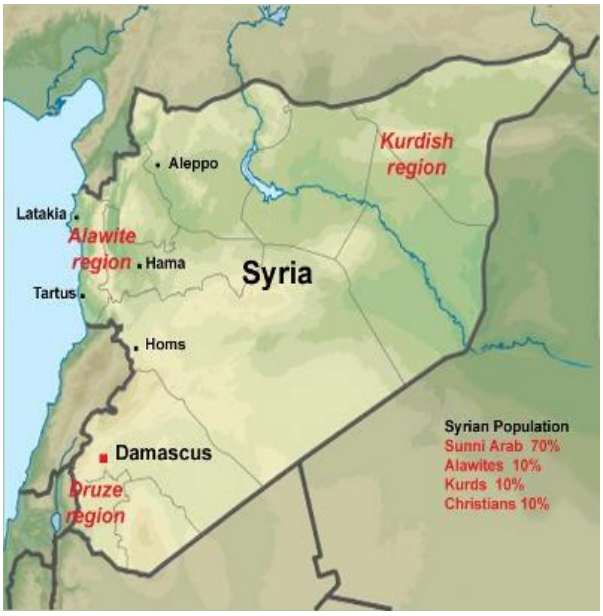
- Clashes between militias of the Druze religious minority and the Sunni Muslim clans killed hundreds and threatened to

unravel Syria's already fragile postwar transition. Israel also launched dozens of airstrikes in the Druze-majority Sweida province, targeting government forces who had effectively sided with the Bedouins.

Regional Presence for Bedouins

- Bedouin or Bedouin-descended populations dominate Syria's desert regions, stretching from Homs, Hama, and Qalamoun in the west to Palmyra, Raqqa, Hasakah, Deir ez-Zor, and the Iraqi border in the east.
- They are also established in the Aleppo countryside, the Ghouta agricultural belt near Damascus, and the southern Houran region.

Tribes in Syria



Bedouin

- The Bedouin clans of Syria are nomadic or semi-nomadic Arab tribes historically inhabiting the desert regions, particularly the Syrian Desert (Badiya), with a population estimated at over one million before the Syrian civil war.
- Most Bedouin clans in Syria trace their origins to the Arabian Peninsula, with significant migrations occurring in the 17th and 18th centuries during periods of weak Ottoman rule.
- These tribes, including the Anizzah and Shammar, established themselves in the Syrian Desert, engaging in nomadic herding since at least 6000 BCE.

Druze

- The Druze are Arabs who follow a religion derived from a branch of Islam.
- They maintain a degree of secrecy about the practice of their faith that emerged in the 11th century and incorporates elements from Islam and other philosophies, emphasizing monotheism, reincarnation and the pursuit of truth.
- Some hardline Sunni Muslims deem them heretics. Syria's interim President Ahmed al-Sharaa, an Islamist who once belonged to al Qaeda, called them part of the Syrian fabric
- Syria's Druze are concentrated in the southwest in the Sweida region bordering Jordan and in areas of Quneitra province, near the occupied Golan.
- They also reside in the Damascus suburb of Jaramana. In Israel, Druze reside primarily in the north and the occupied Golan.
- In Lebanon, they are concentrated in mountain regions, including Chouf and Aley, and others such as Hasbaya in south Lebanon.
- The Druze believe in reincarnation, an idea that is incompatible with almost all mainstream readings of the Hadith and the Quran.
- Central to the Druze faith is the divinity of Fatimid ruler al-Hakim, which is unacceptable to Islam.
- And the personal status of Druze women is considered much higher than women of other societies in the Middle East.
- The Druze do not permit conversion, into or out of their religion, and marriage outside the community is rare and strongly discouraged.

- Many Druze teachings and practices are kept secret, and are accessible only to a religious elite known as uqqal (literally "knowers").

Druze-Persecuted Minority

- Since their emergence as a sect in the 11th century, the Druze have historically been a persecuted minority in the predominantly Muslim Levant.
- Contemporary estimates suggest a Druze population of roughly 500,000 in Syria, around 250,000 in Lebanon, and 152,000 in Israel, including the occupied Golan Heights.
- In Syria, the Druze population largely resides in Jabal al-Duruz ("the Mountain of the Druze") to the south of Damascus, near the border with Israel.
- In fact, most of the world's Druze population lives in border areas near the Syria-Lebanon-Israel trijunction.

Motivation of Israel to be Involved

- Israel has long sought to create a demilitarised zone in southern Syria.
- Amid ongoing sectarian fighting in the region, Israel is extremely wary of the buildup of hostile Islamist forces on its northern borders.
- When Syrian tanks began advancing into the area, Israel acted not only to defend the Druze but also to enforce its demand to keep the region demilitarized.
- The imperative to keep southern Syria demilitarised is borne out of Israel's historic experience with the region being a springboard for hostile forces, most notably the now-decapitated Hezbollah.
- This is also why Israel first occupied the two-thirds of the Golan Heights after the Arab-Israeli War of 1967, and the rest of the strategic region in 2024, amid its offensive against Hezbollah.
- The occupation of Golan Heights is not recognised internationally, and the Syrian government has rejected Israel's declaration of a demilitarised zone in its sovereign territory.

Golan Height



Israel Syria Border



Motivation of Israel to be Involved

- Unlike almost every other ethnic group in the region, the Druze have long had close ties to the state of Israel.
- Although comprising slightly more than 1% of Israel's total population, the Druze have attained high positions in the Israeli bureaucracy and military, and have had some influence politically.

Druze- Jewish Connection

- Druze fought Zionism in 1948 and later accommodated the Israeli state as the only viable choice to survive in the land of their ancestors.
- Centuries of persecution in the hands of Muslims has driven the minority to the arms of the modern Jewish state.

Feature	**Druze**	**Alawites**	**Bedouins**
Religious Origin	Offshoot of Ismaili Shia Islam (11th century)	Offshoot of Twelver Shia Islam with syncretic beliefs	Sunni Islam (mostly Hanafi or Maliki schools)
Key Beliefs	Esoteric monotheism, reincarnation, secretive texts, no conversion allowed	Belief in divinized Ali, syncretism with Christian & Gnostic ideas	Tribal code (ʿurf), strong oral traditions
Religious Classification	Considered a distinct religious group; not fully accepted by mainstream Islam	Considered heterodox by mainstream Sunni & Shia	Recognized as Muslims, but identity is tribal and cultural
Population in Syria	~3–5%	~11–15%	~10% (varies by migration and sedentarization)
Geographic Concentration	Jabal al-Druze (southern Syria, Suwayda)	Coastal region (Latakia, Tartus), some in Homs	Central, eastern deserts, and southern Syria
Cultural Identity	Highly cohesive, closed religious community	Close-knit, historically marginalized	Tribal, nomadic/pastoral roots, now semi-nomadic
Political Influence	Traditionally local autonomy; low political influence nationally	High influence since Assad family (Alawites) came to power	Limited national role, more involved in local/traditional leadership
Relation with the Assad Regime	Mixed; generally neutral or cautious support	Strong support; Assad family is Alawite	Historically rebellious; relations vary by tribe
Language	Arabic	Arabic	Arabic
Conversion	Closed to outsiders	Open, but not actively proselytizing	No restrictions; based on Islam

Modern Trends	Migration to urban areas; educated middle class	Dominant in military and intelligence elite	Sedentarization, loss of nomadic lifestyle

China's Brahmaputra Dam- Water Bomba

Why we are talking about it?

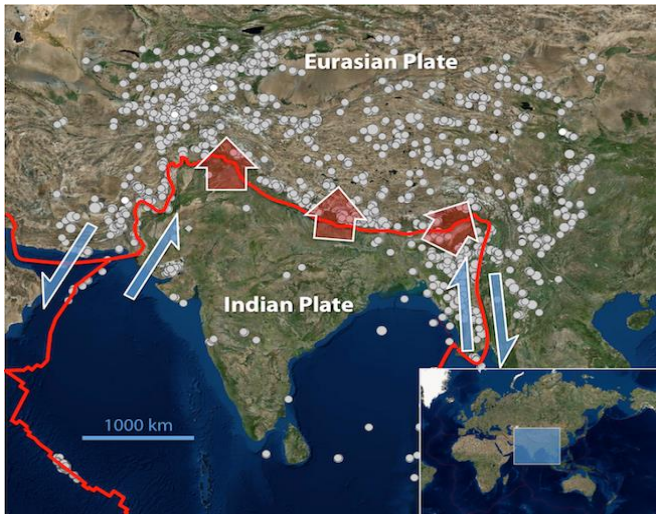
- China formally began construction of a massive dam on the Brahmaputra river close to the border with Arunachal Pradesh.
- The $167.8 billion hydropower project, which will be the world's largest when it is completed, has been talked about for long, and has raised concerns in India and Bangladesh about the impact it may have on the flow of the river.

Water Bomb

- China's **Brahmaputra dam**—specifically the large hydropower projects it is building on the **Yarlung Tsangpo** (the upper stream of the Brahmaputra in Tibet)—is often referred to as a **"water bomb"** due to its **potential downstream threat to India and Bangladesh**.



- The dam, which China announced in 2021, will have a generation capacity of 60,000 MW, three times that of the Three Gorges Dam on the Yangtze, which is currently the world's biggest hydropower station.
- Experts too have flagged the risk of flooding due to the intentional or unintentional operation of reservoirs in Tibet, as well as unforeseen events such as dam failure, landslides, or earthquakes.
- Tibet is a seismically active zone where the Indian tectonic plate collides with the Eurasian plate, and the region where the dam is coming up is considered to be earthquake-prone and ecologically extremely fragile.



Significance of Brahmaputra

- The Brahmaputra is the lifeline of Assam, fundamental to its economy, and central to its history, culture, and ecology.
- Any significant disruption in the flow of the river in the state will have far-reaching consequences.
- **Assam CM**
- Brahmaputra grows into a mighty

stream only in Assam, fed by numerous tributaries and bountiful monsoon rain

View From India

- As a lower riparian state with established user rights to the waters of the river, we have consistently expressed, our views and concerns to the Chinese side over mega projects on rivers in their territory.
- The Chinese side has been urged to ensure that the interests of downstream states of the Brahmaputra are not harmed by activities in upstream areas.
- **Original Brahmaputra MoU (2002, renewed through 2018)**
    - Initiated in **2002**, renewed in **2008**, **2013**, and **2018**.
    - Allowed China to share **rainfall, water level, and discharge data** twice a day from Tibet during the flood season (May–October).
    - The most recent MoU **expired on June 5, 2023**, and China ceased sharing Brahmaputra hydrological data after 2022

Fear For India

- China may seek to weaponise the dam project at some stage, perhaps to build pressure on behalf of Pakistan after India suspended the Indus Waters Treaty in the aftermath of the terror attack in Pahalgam in April.

What should India Do?

- India should make scientific calculations about the Chinese dam project, and build its own capability and capacity to preempt any deliberate actions in the future.
- India could plan storage on rivers of the Brahmaputra system to absorb potential variations in flows (periods of flooding and reduced flows).

Upper Siang Project

- Upper Siang project in Arunachal Pradesh, with its 300-metre-high dam, is seen as important not just for its formidable hydropower potential, but also as a strategic imperative in view of the Chinese projects in Tibet.
- The dam's storage can serve as a buffer against variations in the flow of the river.
- The SUMP is planned on the **Siang River** (downstream of the Brahmaputra/Yarlung Tsangpo), in Arunachal Pradesh. It's designed to have a generation capacity of around **11,000 MW**, making it India's largest hydropower project.
- The reservoir is expected to hold about **9–10 billion cubic meters**, with a proposed dam height of approximately **250–300 meters**.
- Strategically, the dam is seen as a buffer against potential water releases or flow manipulations from China's upstream 60,000 MW Medog project in Tibet.



Way Forward

- Experts have also stressed on the need to utilise diplomatic channels to seek detailed hydrological and project-related data from China in order to assess downstream impacts on a continuous basis.
- India should also have conversations with other low riparian neighbours — Bhutan, Bangladesh and even Myanmar — on developing a coordinated protocol for advance warning and disaster preparedness.