

CURRENT AFFAIRS

WEEKLY



MAINS ARTICLE

GS-II

- ▣ 6TH BIMSTEC SUMMIT
- ▣ INDIA ENDS TRANS-SHIPMENT FACILITY FOR BANGLADESH
- ▣ TAHAWWUR RANA EXTRADITION TO INDIA
- ▣ SOUTH KOREA'S POLITICAL CRISIS
- ▣ IRAN-US SET FOR 'NUCLEAR' TALKS
- ▣ SC'S RULING ON GOVERNOR POWERS
- ▣ DATA ACT DILUTING RTI?
- ▣ FAIR SEAT ALLOCATION

GS-III

- ▣ TRUMP'S RECIPROCAL TARIFFS
- ▣ INDIA'S STANCE ON ASEAN'S JOINT STRATEGY AGAINST US TARIFFS
- ▣ INDIAN STOCK MARKET
- ▣ RBI'S REPO RATE
- ▣ ARCTIC BOREAL ZONE (ABZ)

PRELIMS ARTICLE

GEOGRAPHY

- ▣ Monsoon Forecast 2025
- ▣ Kancha Gachibowli
- ▣ Ram Setu

HISTORY

- ▣ Iwo Jima
- ▣ Jyotirao Govindrao Phule (1827-1890)

INTERNATIONAL RELATIONS

- ▣ Israel controls 50% of Gaza
- ▣ India-UAE Defence Relation

POLITY & GOVERNANCE

- ▣ Kannadippaya & Warangal Chapata Chilli gets GI Tag
- ▣ NITI NCAER States Economic Forum Portal
- ▣ Samagra Shiksha Abhiyan (SSA)
- ▣ India-Nepal Judicial Cooperation
- ▣ World Health Day24
- ▣ UGC Notifies

New Rules for Recognising Foreign Degrees

ECONOMY

- ▣ Pamban Bridge
- ▣ Pusa-44
- ▣ Market-based Securitisation of Stressed Assets

ENVIRONMENT

- ▣ Salt Pan Lands
- ▣ West African Chimpanzee (*Pan troglodytes verus*)

SCIENCE & TECHNOLOGY

- ▣ Rafale M Fighter Jets
- ▣ ChaSTE (Chandra's Surface Thermophysical Experiment)
- ▣ Audible Enclave
- ▣ Semaglutide
- ▣ Axiom Mission 4 (Ax-4)
- ▣ Soyuz MS-27 Launch
- ▣ Military Space Doctrine
- ▣ Iron inside the Sun

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CONTENT

2nd WEEK - APRIL, 2025

SECTION - A

INTERNATIONAL RELATIONS (GS-II)

- 6th BIMSTEC Summit 01
- India ends Trans-shipment Facility for Bangladesh 02
- Tahawwur Rana extradition to India 03
- South Korea's Political Crisis 04
- Iran-US set for 'Nuclear' talks 04

POLITY & GOVERNANCE (GS-II)

- SC's Ruling on Governor Powers 05

- Data Act diluting RTI? 06
- Fair Seat Allocation 07

ECONOMY (GS-III)

- Trump's Reciprocal Tariffs 08
- India's Stance on ASEAN's Joint Strategy Against US Tariffs 09
- Indian Stock Market 10
- RBI's Repo Rate 11

ENVIRONMENT (GS-III)

- Arctic Boreal Zone (ABZ) 12

SECTION - B

GEOGRAPHY

- Monsoon Forecast 2025 14
- Kancha Gachibowli 17
- Ram Setu 17

HISTORY

- Iwo Jima 18
- Jyotirao Govindrao Phule (1827-1890) 20

INTERNATIONAL RELATIONS

- Israel controls 50% of Gaza 21
- India-UAE Defence Relations 22

POLITY & GOVERNANCE

- Kannadippaya & Warangal Chapata Chilli gets GI Tag 22
- NITI NCAER States Economic Forum Portal 23
- Samagra Shiksha Abhiyan (SSA) 24
- India-Nepal Judicial Cooperation 24
- World Health Day 24
- UGC Notifies New Rules for Recognising Foreign Degrees 25

ECONOMY

- Pamban Bridge 25
- Pusa-44 26
- Market-based Securitisation of Stressed Assets.. 26

ENVIRONMENT

- Salt Pan Lands 27
- West African Chimpanzee (*Pan troglodytes verus*) 28

SCIENCE & TECHNOLOGY

- Rafale M Fighter Jets 28
- ChaSTE (Chandra's Surface Thermophysical Experiment) 29
- Audible Enclave 29
- Semaglutide 29
- Axiom Mission 4 (Ax-4) 30
- Soyuz MS-27 Launch 31
- Military Space Doctrine 31
- Iron inside the Sun 31

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SECTION -A

MAINS ISSUES

6TH BIMSTEC SUMMIT

Context

Prime Minister Narendra Modi participated in the 6th BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Summit hosted by Thailand, the current chair. The theme of the Summit was - "BIMSTEC: Prosperous, Resilient and Open."

Key-highlights of the Summit

- Prime Minister Modi announced several India-led initiatives towards institution and capacity building in BIMSTEC:
 - Centre of Excellence: BIMSTEC Centres of Excellence in India on Disaster Management, Sustainable Maritime Transport, Traditional Medicine, and Research and Training in Agriculture.
 - BODHI (BIMSTEC for Organized Development of Human Resource Infrastructure): It is a new programme for skilling the youth. Under this programme, training and scholarships would be provided to professionals, students, researchers, diplomats and others.
 - BIMSTEC Chamber of Commerce: For greater regional economic integration, PM offered to establish BIMSTEC Chamber of Commerce and to organize BIMSTEC Business Summit every year in India.
 - UPI: He also proposed establishing connectivity between India's Unified Payments Interface (UPI) and the payment systems of BIMSTEC member states.

- The Summit adopted the following:
 - Summit Declaration
 - BIMSTEC Bangkok Vision 2030 document, which lays out the road map for the collective prosperity of the region.
 - Signing of the BIMSTEC Maritime Transport Agreement, which provides for – National Treatment and assistance to vessels, crew and cargo; mutual recognition of certificates/documents; Joint Shipping Coordination Committee; and dispute settlement mechanism.
 - Report of the BIMSTEC Eminent Persons Group constituted to make recommendations for future direction for the BIMSTEC.

What is the significance of BIMSTEC?

- BIMSTEC provides a common platform for countries in South Asia and Southeast Asia at a time when the SAARC is more or less defunct. While the Association of Southeast Asian Nations (ASEAN) is seen as one of more cohesive groupings in the world, the lack of forward movement in the fraught India-Pakistan relationship has left few options for South Asian countries.
- Landlocked countries, Nepal and Bhutan, may also benefit from access to the Bay of Bengal as a result of better ties with BIMSTEC countries.
- BIMSTEC could allow India to push a constructive agenda to counter Chinese investments, and the Bay of Bengal can be showcased as open and peaceful, contrasting with China's behaviour in the South China Sea.

How India is rewriting South Asia's regional diplomacy through BIMSTEC?

- **Moving Beyond SAARC:** India's increasing focus on BIMSTEC reflects its conscious move away from the SAARC framework, which has long been hindered by political tensions—particularly with Pakistan.
- **Anchoring BIMSTEC in India's Core Foreign Policy:** BIMSTEC now lies at the intersection of India's Neighbourhood First and Act East policies—making it central to India's regional and trans-regional outreach. The group connects South Asia with Southeast Asia, offering a platform to expand India's influence eastwards while reinforcing neighbourhood ties.
 - **PM Modi's articulation of BIMSTEC as a "natural platform" bridging the two regions aligns with India's maritime vision under the SAGAR (Security and Growth for All in the Region) doctrine, placing the Bay of Bengal at the heart of strategic cooperation.**
- **BIMSTEC Vision 2030:** India played a central role in adopting the Bangkok Vision 2030, which envisions BIMSTEC as a region of prosperity, security, and inclusivity. This long-term blueprint reflects India's commitment to shaping a rules-based, development-focused regional order that prioritises collective progress over bilateral frictions.

BIMSTEC

- BIMSTEC includes countries of the Bay of Bengal region (Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand) and seeks to act as a bridge between South and Southeast Asia.
- Originally formed as **BIST-EC (Bangladesh, India, Sri Lanka and Thailand Economic Cooperation)** in 1997, it became **BIMST-EC after Myanmar** joined, and **BIMSTEC** in 2004 with **Nepal and Bhutan**.
- The grouping was largely ignored until India gave it a renewed push in October 2016, a month after the terrorist attack in Uri.
- India revived the BIMSTEC grouping in 2016 after the SAARC summit was cancelled. India boycotted the SAARC summit after the Pakistan-sponsored terror attack in Uri.
 - Pakistan is not a member of the BIMSTEC grouping.

BIMSTEC

Bay of Bengal Initiative for Multi-Sectoral Technical & Economic Cooperation



Bangladesh



Sri Lanka



India



Nepal



Bhutan



Thailand



Myanmar

UPSC PYQ

Mains

- Q: Do you think that BIMSTEC is a parallel organisation like the SAARC? What are the similarities and dissimilarities between the two? How are Indian foreign policy objectives realized by forming this new organisation? (2022)

INDIA ENDS TRANS-SHIPMENT FACILITY FOR BANGLADESH

Context

India's customs department issued a circular withdrawing a trans-shipment arrangement that had been in place since June 2020. The move comes amid increasing diplomatic tensions, particularly following controversial remarks by Bangladesh's interim government chief Muhammad Yunus, who referenced the isolation of India's Northeast while seeking Chinese investments.

What is the Trans-shipment Facility?

- Trans-shipment refers to the movement of goods through a third country's port or airport before reaching their final destination.
- Under the 2020 arrangement, Bangladesh was allowed to:
 - Transport goods via Indian land customs stations.
 - Export them to third countries using Indian seaports and airports (e.g., Kolkata, Haldia, or Delhi airport).
- The facility had allowed Bangladeshi export cargo to pass through Indian ports and airports en route to third countries like those in Europe, West Asia, etc.

Current state of India-Bangladesh Relations

- The India-Bangladesh relationship, once marked by high levels of cooperation and strategic convergence under Sheikh Hasina's Awami League government, is currently undergoing a period of uncertainty and tension following major political changes in Bangladesh.
- Trade and Economic Partnership:
 - Bangladesh is India's biggest trade partner in South Asia and India is the second biggest trade partner of Bangladesh in Asia. In the fiscal year 2023-24, Bangladesh exported goods worth USD 1.97 billion to India, and the total bilateral trade for that year amounted to USD 14.01 billion.
 - India is Bangladesh's 2nd largest trading partner in Asia. It is one of the top 15 sources of FDI into Bangladesh.
 - Trade facilitation measures:
 - ◆ SAFTA duty-free access for Bangladeshi goods.

- ◆ Border haats and Integrated Check Posts (ICPs).
- ◆ Investment in logistics, power, and transport sectors.
- **Connectivity and Infrastructure**
 - ▶ **Rail connectivity:**
 - ◆ **Operational lines:** Agartala–Akhaura, Haldibari–Chilahati, Gede–Darshana, etc.
 - ◆ **Passenger trains:** Maitri Express, Bandhan Express, Mitali Express.
 - ▶ **Port access:** Under a 2023 agreement, India can use Chittagong and Mongla ports for Northeast cargo transit.
 - ▶ **Inland waterways** are covered under the Protocol on Inland Water Transit and Trade (PIWTT), enhancing cargo movement.
- **Energy Cooperation:** India-Bangladesh Friendship Pipeline (IBFPL), operational since 2023.
- **Multilateral and Regional Cooperation:**
 - ▶ Both countries are part of SAARC, BIMSTEC, BBIN, IORA, and SASEC.
 - ▶ Both the countries conduct joint exercises called Exercise Sampriti (for the army) and Exercise Bongo Sagar (for the navy).
- The India-Bangladesh relationship is currently fragile, marked by a strategic pause, mutual distrust, and increasing influence of third powers like Pakistan and China.
- The direction of ties will depend heavily on Dhaka’s foreign policy choices, India’s diplomatic engagement, and the resolution of internal political instability in Bangladesh.

Key Challenges

- **Border Security:** The 4,096.7 km border is prone to illegal migration, smuggling, and cross-border crime.
- **Management of transboundary river water:** The two countries share 54 common rivers which directly impact the livelihoods of people in both countries.
 - ▶ While both countries have signed major treaties related to river water sharing, such as the Ganga Waters Treaty and the Koshiyara River Treaty, negotiations are ongoing for other major rivers such as the Teesta.
- **China’s Growing Presence:** Bangladesh’s ties with China in infrastructure and defense are expanding. Recent outreach to Pakistan adds to India’s strategic concerns.
- **Cross-border Migration:** Sensitive issue in Indian states like Assam and West Bengal.
- **Minority Rights and NRC-CAA:** India is concerned about the safety of Hindus in Bangladesh. Bangladesh fears potential influx of Bengali-speaking Muslims due to India’s NRC and CAA.
- **Trade Imbalance:** Bangladesh complains of non-tariff barriers and slow progress on broader market access.

UPSC PYQ	
Prelims	
<p>Q: With reference to river Teesta, consider the following statements: (2017)</p> <p>(1) The source of river Teesta is the same as that of Brahmaputra but it flows through Sikkim.</p> <p>(2) River Rangeet originates in Sikkim and it is a tributary of river Teesta.</p> <p>(3) River Teesta flows into Bay of Bengal on the border of India and Bangladesh.</p> <p>Which of the statements given above is/are correct?</p> <p>(a) 1 and 3 only (b) 2 only (c) 2 and 3 only (d) 1, 2 and 3</p> <p>Solution: (b)</p>	
Mains	
<p>Q: Critically examine the compulsions which prompted India to play a decisive role in the emergence of Bangladesh. (2013)</p> <p>Q: The protests in Shahbag Square in Dhaka in Bangladesh reveal a fundamental split in society between the nationalists and Islamic forces. What is its significance for India? (2013)</p> <p>Q: Analyze internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also discuss the role played by various security forces in this regard. (2018)</p>	

**TAHAWWUR RANA
EXTRADITION TO INDIA**

Context

Tahawwur Hussain Rana, a key conspirator in the 26/11 Mumbai terror attacks that left 166 people dead, has been extradited from the United States to India. He will now face trial in a special National Investigation Agency (NIA) court.

What is Extradition?

- Extradition is the formal process where one country hands over a person to another country so they can be tried or punished for a crime committed there.
- This is usually done through bilateral treaties (agreements between two countries) or multilateral agreements. Without such a treaty, extradition is extremely rare.

- The Ministry of External Affairs (MEA) is the Central Authority in Extradition matters, including processing of extradition requests.

How Do Extradition Treaties Work?

- India has extradition treaties with 48 countries, and non-binding arrangements with 12 more.
- Old treaties listed specific crimes (like murder, terrorism, etc.).
- However, the newer treaties follow the “dual criminality” principle, meaning the act must be a crime in both countries. Treaties also include exceptions, such as:
 - Political offences
 - Cases not filed in good faith
 - Concerns about unfair treatment or rights violations
- India makes a formal request to the country where the person is staying.
- The foreign court reviews the request, based on the treaty, charges, and evidence. If approved, the person can appeal the decision.
- Once all legal routes are exhausted, India can bring the person back.

Why Are Extraditions So Complicated?

- Even with treaties, countries can reject requests using exceptions.
- Legal, political, and diplomatic factors all play a role. Some cases are resolved quickly; others take years.
- Example:
 - Tahawwur Rana (accused in 26/11 attacks) — India requested extradition over 10 years ago, approved only in 2023.
 - David Headley — another 26/11 accused, cannot be extradited due to a plea deal in the U.S.
- Subject: International Relations (GS-II)
 - Sub-topic: Effects of Policies & Politics of Countries on India’s Interests

SOUTH KOREA’S POLITICAL CRISIS

Context

South Korea is going through a major political shift after President Yoon was impeached for misusing martial law. With elections approaching, the focus is now on restoring stability and dealing with both internal and external challenges.

Why Was President Yoon Impeached?

- In December 2024, President Yoon declared martial law, claiming it was to protect the country from “anti-state forces” and “pro-North Koreans.”

- This was the 17th martial law in South Korea’s history, but it shocked many as it was seen as extreme and politically motivated.
- Just six hours later, the National Assembly voted to cancel martial law.
- A few days later, the Assembly voted to impeach him. He lost support even from within his own government.

What’s next?

- Presidential elections are scheduled for June 2025. Lee Jae-Myung, the opposition leader from the Democratic Party, is currently the leading candidate.
- The ruling party, People’s Power Party (PPP), is in crisis after Yoon’s removal.
- Meanwhile, the country also faces economic challenges, including 25% tariffs by the U.S., which the next president will have to deal with.
- Subject: International Relations (GS-II)
 - Sub-topic: Effects of Policies & Politics of Countries on India’s Interests

IRAN-US SET FOR ‘NUCLEAR’ TALKS

Context

Tensions between Iran and the United States over Tehran’s nuclear programme have resurfaced with renewed diplomatic activity. Now recently, Iran confirmed that indirect talks with the US will take place, mediated by Oman. This follows a public announcement by former US President Donald Trump, who claimed direct talks were already underway—claims later refuted by Iranian sources.

Background

- In 2015, Iran agreed a deal with the US, UK, France, Germany, Russia and China. It was called the Joint Comprehensive Plan of Action (JCPOA).
- Under its provisions, Iran would limit its nuclear ambitions - and allow in international inspectors - in return for getting economic sanctions lifted.
- But Trump pulled the US out of the deal in 2018, claiming it rewarded terrorism by funding Iran’s proxy militias such as Hamas and Hezbollah. The US re-imposed sanctions.
- Iran subsequently ignored some of the deal’s restrictions and enriched more and more uranium nuclear fuel.
 - Iran could soon have enough weapons’ grade uranium to make a nuclear warhead.
 - The International Atomic Energy Agency estimates Iran’s stockpile of uranium enriched to 60% purity had increased sharply since December.
 - Reaching 90% enrichment – the threshold for weapons-grade material – is relatively easy from that point.

Uranium

- Uranium can have nuclear-related uses once it has been refined, or enriched.
- Uranium ore is enriched to power nuclear reactors or build nuclear warheads.
- This is achieved by increasing the content of its most fissile isotopes, U-235, through the use of centrifuges - machines which spin at supersonic speeds.
 - ▶ Low-enriched uranium, which typically has a 3-5% concentration of U-235, can be used to produce fuel for commercial nuclear power plants.
 - ▶ Highly enriched uranium has a purity of 20% or more and is used in research reactors. Weapons-grade uranium is 90% enriched or more.

SC’S RULING ON GOVERNOR POWERS

Context

The Supreme Court of India has ruled that the Governor of Tamil Nadu, RN Ravi, acted illegally by withholding assent to 10 Bills passed by the State Assembly, instead of forwarding them to the President or returning them for reconsideration in due time. This ruling clarifies the limited role of the Governor in the legislative process and reasserts the primacy of the elected State Government in a parliamentary democracy.

Key Points from the Supreme Court Judgment

- **No Discretion Under Article 200:** The Governor must act on the aid and advice of the Council of Ministers. Article 200 does not grant discretion to the Governor beyond the limited constitutional options.
 - ▶ **Governor’s Options Under Article 200:** When a Bill is presented, the Governor can:
 - ◆ Give assent.
 - ◆ Withhold assent.
 - ◆ Return it to the Assembly for reconsideration (if not a Money Bill).
 - ◆ Reserve it for the President’s consideration.
 - ▶ Once the same Bill is passed again by the Assembly, the Governor must give assent (unless the Bill is materially different).
- **Withholding Assent Indefinitely is Unconstitutional:** The Court said “pocket veto” (delaying assent indefinitely) or “absolute veto” (refusal without reason) is not permitted under the Constitution.
- **Timelines Set by Court:**

- ▶ **1 month:** If the Governor withholds assent in accordance with the State Government’s advice.
- ▶ **3 months:** If the Governor withholds or reserves a Bill against the advice of the State Government.
- ▶ **1 month:** If the Assembly passes the Bill again after reconsideration, the Governor must give assent.
- **Judicial Remarks on Governor’s Role:** The Governor must respect constitutional conventions. The office should act as a “friend, philosopher and guide”, not as a source of conflict or delay. The role is to facilitate governance, not obstruct it.

What is the process of granting assent?

- **Assent of the Governor or the President is necessary** for a Bill passed by the legislature to become law. After a Bill is passed by both Houses of the State Legislature, it is presented to the Governor for assent.
- **Governor’s Options (Article 200):** The Governor has the power to:
 - **Grant Assent:** The Bill becomes law.
 - ▶ **Withhold Assent:** The Governor can withhold assent, but it must be returned to the Legislative Assembly for reconsideration.
 - ▶ **Return for Reconsideration (except Money Bills):** If the Governor returns the Bill, the Legislature can amend it. If re-passed, the Governor must assent.
 - ◆ **Money Bills** are automatically deemed assented to by the Governor.

Key Constitutional Provisions

- **Article 200:** Governor’s discretion in assenting to Bills.
- **Article 201:** Governor can reserve Bills for the President.
- **Article 163:** Governor’s discretionary powers are limited by the advice of the Council of Ministers, except in specific cases.
- **Article 361:** Immunity for the Governor, but actions may be reviewed for mala fide conduct.
- **Reserve for President’s Consideration (Article 201):** If the Governor believes the Bill affects the Constitution or has national importance, it can be reserved for the President’s consideration.
- **Discretionary Powers:** The Governor can withhold assent if the Bill is against national interests, violates the Constitution, or conflicts with Union laws, though this power is not absolute.
- **Article 167:** The Governor may require the Chief Minister to communicate decisions of the Council of Ministers, including Bills pending for assent.

- **No Timeline for Decision:** There is no specified timeline within which the Governor must act, often leading to delays or a “pocket veto.”
 - **The Sarkaria Commission (1988) and the National Commission to Review the Working of the Constitution (2000)** recommended time limits for granting assent (e.g., 6 months for assent, 3 months for President’s decision). There are ongoing debates on enforcing such timelines.
 - **Judicial Review:** The Supreme Court has held that if the Governor’s decision to withhold assent is found to be mala fide (in bad faith), it can be subject to judicial scrutiny and struck down. Courts can review such actions for constitutionality (Rameshwar Prasad, 2006).

About Governor

- A Governor is appointed by the President of India under Articles 155 and 156 of the Indian Constitution.
- The Governor serves “during the pleasure of the President,” meaning that the President has the power to remove the Governor at any time before the completion of their five-year term.
- The President typically works in consultation with the Prime Minister and the Council of Ministers, and this process governs the appointment and removal of the Governor.
- Article 153 of the Constitution mandates that there shall be a Governor for each state. However, a 1956 amendment allowed the same person to be appointed as Governor for two or more states.
- Article 163 establishes that there shall be a Council of Ministers, headed by the Chief Minister, to assist and advise the Governor in the exercise of his functions. The Governor, however, can act in his discretion in certain matters as outlined in the Constitution.
- **Qualifications of a Governor:** As per Articles 157 and 158 of the Indian Constitution, the qualifications for the office of Governor are:
 - The person must be an Indian citizen.
 - The person must be at least 35 years of age.
 - The person must not be a Member of Parliament or a member of any state legislature.
 - The person must not hold any other office of profit.

UPSC PYQ

Prelims

Q: Which of the following are the discretionary powers given to the Governor of a State? (2014)

- (1) Sending a report to the President of India for imposing the President’s rule

- (2) Appointing the Ministers
- (3) Reserving certain bills passed by the State Legislature for consideration of the President of India
- (4) Making the rules to conduct the business of the State Government

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

Solution: (b)

DATA ACT DILUTING RTI?

Context

The Digital Personal Data Protection Act, 2023, meant to protect personal data, has led to concerns that it weakens the RTI Act, especially provisions that allow public access to personal data of officials if it is in public interest.

What are the concerns pertaining to the Act?

Key Technical Concerns:

- **No “public interest” clause:** The clause removes the RTI safeguard that allowed sharing personal info if it served greater good.
 - **No journalistic exemption:** Journalists can now be treated as “data fiduciaries” (entities handling personal data) and **penalised** if they publish data without consent.
 - **Centralised control:** The **Data Protection Board’s appointments and powers** are controlled by the **executive**, raising concerns about **bias**.
 - **Rule 22:** Allows government to **demand user data from platforms** without judicial oversight.
 - **Rule 16:** Further reduces autonomy of the Data Protection Board.
- **Section 44(3) of the DPDP Act amends Section 8(1) (j) of the RTI Act.**
 - **Earlier, personal information of public officials could be disclosed under RTI if:**
 - It related to public activity, or
 - There was a larger public interest.
 - **Now, both these conditions have been removed. The new clause simply states:**
 - **“Information which relates to personal information” – making it broadly exempt from RTI.**

- This change is seen as a blanket ban on personal data disclosure, even if it relates to government corruption, public works, or misuse of funds.
- The amendment shields public officials and reduces accountability. It may hinder investigative journalism and citizen-led scrutiny.
- The Data Act looks like a conflict between two fundamental rights, that is, the right to information, part of Article 19 (1) and Article 21 of the Constitution of India, protection of life and personal liberty.
- The number of seats in the Lok Sabha based on the 1951, 1961 and 1971 Census was fixed at 494, 522 and 543, when the population was 36.1, 43.9 and 54.8 crore respectively.
- According to Articles 81 and 82, Lok Sabha seats should be revised after every Census.
- However, to encourage population control, Parliament froze seat allocation based on the 1971 Census — extended till 2026.
 - This was done through the 42nd Amendment Act till the year 2000 and was extended by the 84th Amendment Act till 2026.

What does the government say?

- Union IT Minister Ashwini Vaishnaw defends the Act, saying:
 - It balances privacy and transparency.
 - Any personal data that must be made public under existing laws (e.g., MGNREGA details) will still be available.
 - The Act respects the Supreme Court’s Puttaswamy judgment (2017) which made privacy a part of Right to Life (Article 21).
- He cited Section 3(c)(ii)(B) of the DPDP Act, which exempts data from the law if it is already required to be publicly disclosed by other laws.
- This helped avoid punishing states (mainly southern) that had effectively controlled population growth.
- However, it led to massive population imbalance.
 - Population has grown unevenly since 1971.
 - ◆ Northern States (e.g., UP, Bihar, MP, Rajasthan) saw rapid growth.
 - ◆ Southern States (e.g., Kerala, Tamil Nadu, Karnataka, Andhra Pradesh) managed to stabilize their populations.
- As per current projections (2026), if seats are redistributed based on population, northern states will gain significantly, and southern/smaller states may lose out in terms of representation.
- This raises concerns of northern domination and southern under-representation in Parliament. This disparity means northern states may gain disproportionate seats, while southern states get very little or none.

RTI Act

- The RTI Act came into force in **October 2005**.
- It was seen as a significant development towards freedom of information.
- It gave ordinary citizens the right to request information from government bodies, making authorities accountable for their actions and decisions.
- As a result, RTI is seen as a tool for citizens’ empowerment, promoting democratic participation, and improving the transparency and accountability of public officials.

FAIR SEAT ALLOCATION

Context

As India approaches 2026, the freeze on Lok Sabha seat redistribution (based on population) — enforced since 1971 — is set to end. This has triggered intense debate, especially in southern states, over fears of losing political representation in Parliament.

What is the issue (Seat freeze since 1971)?

- ‘Democracy’ means ‘rule or government by the people’. It follows that the government is elected by a majority with the broad principle of ‘one citizen-one vote-one value’.

What is Delimitation vs Readjustment (Two proposal)?

- There are two proposals being debated:
 - Delimitation = Redrawing of constituency boundaries (not increasing seats).
 - Readjustment = Recalculation of total seats allotted to each state based on new population data (Article 82).
- In both cases, southern and smaller states like Kerala, TN, Punjab, and the Northeast would be at a disadvantage.

Violation of Federalism

- It potentially violate Federalism as,
 - It may dilute the voice of states that succeeded in population control.
 - It could shift political power unfairly to a few high-growth states.
 - It creates tensions in centre-state relations and may lead to regional alienation.

Way Forward

The upcoming delimitation exercise involves a difficult balancing act between:

- Democratic principles (equal representation based on population), and
- Federal values (equal voice to all states regardless of size).

India must adopt a fair, sensitive, and inclusive approach that respects both numerical strength and policy success in population control.

Delimitation

- Delimitation means the process of fixing the number of seats and boundaries of territorial constituencies in each State for the Lok Sabha and Legislative assemblies.
- It also includes determining the seats to be reserved for Scheduled Castes (SC) and Scheduled Tribes (ST) in these houses.
- **Article 82 and 170 of the Constitution** provide that the number of seats in the Lok Sabha and State Legislative assemblies as well as its division into territorial constituencies shall be readjusted after each Census.
- This 'delimitation process' is performed by the '**Delimitation Commission**' that is set up under an act of Parliament.
- Such an exercise was carried out after the **1951, 1961 and 1971 Census**.

TRUMP'S RECIPROCAL TARIFFS

Context

US President Donald Trump declared April 2 as "Liberation Day" and announced sweeping tariffs under a new policy of "reciprocal tariffs"—a base tariff of 10% on all imports and country-specific additional tariffs based on what the US perceives as unfair trade practices. However, in a significant development, the US administration has now paused the implementation of these additional tariffs for 90 days for most countries, following diplomatic engagement and restraint from retaliation. The only exception to this pause is China.

Why is this significant?

Country-wise Tariff Snapshot		
Country	Tariff Imposed	Share in US Trade Deficit
Cambodia	39%	1%
Bangladesh	37%	<0.5%

China	34%	25%
EU	20%	20%
India	26%	Moderate
UK, Brazil	10–20%	US enjoys trade surplus

- This marked one of the most aggressive shifts toward protectionism since the Great Depression-era Smoot-Hawley Tariff Act.
- It challenges the foundations of multilateral trade, especially under the World Trade Organization (WTO), and signals a "go-it-alone" approach in US trade policy.

90-Day Pause and Recalibration

- In response to overtures from over 75 countries and their decision not to retaliate, President Trump announced a 90-day pause on the reciprocal tariffs, along with a temporary reduction in tariff rates. This move is intended to create room for negotiations and prevent a rapid escalation into a trade war.
- **What Remains in Effect**
 - The 10 percent base tariff remains in place for all countries, except those in the US-Mexico-Canada Agreement (USMCA).
 - Reciprocal tariffs are suspended for all countries except China, which now faces a raised total tariff rate of 125 percent.

Impact on India

- India, which has been engaging the US in trade talks since the early days of the Trump administration, is directly impacted.
 - The 26 percent reciprocal tariff on India is paused, offering temporary relief to major Indian export sectors. However, the 10 percent baseline tariff still applies.
 - India is pushing for a complete exemption, including from the baseline tariff.
- The United States (US) is the top destination for India's exports, accounting for 18% of the total cargo shipped.
- Electric machinery and equipment goods, including mobile phones, are the top exports from India, followed by pearls, gems and jewellery, pharmaceutical products, nuclear reactors and equipment, and petroleum products.
- **Impact on Key Sectors**
 - **Electronics and Mobile Phones:** India's mobile phone exports, particularly due to the assembly of iPhones, have grown steadily and now stand at around \$6 billion. However, many of the components used are imported from tariff-hit countries like China and Taiwan. This could affect margins and growth.

- ◆ On the positive side, the higher tariffs imposed on Vietnam and Thailand may open a window for India to attract more electronics manufacturing investment.
- ▶ **Gems and Jewellery:** This sector forms about 13% of India's total exports to the US. It is expected to be among the most affected due to the direct impact of the 27% tariff. The industry may need to focus more on value addition and product differentiation to stay competitive in the US market.
- ▶ **Textiles and Apparel:** This is an area where India could benefit. Countries like Bangladesh, Vietnam, and Sri Lanka — all major competitors — now face higher tariffs. This could provide an opportunity for Indian exporters to gain market share, provided they focus on improving quality, scale, and timely delivery.
- ▶ **Pharmaceuticals:** At present, pharmaceutical products have been exempted from the new tariffs. India is one of the largest suppliers of generic medicines to the US, and this exemption is a relief for the sector. However, experts caution that sector-specific tariffs could still be introduced in the future.
- ▶ **Auto Parts, Steel, and Aluminium:** These products will face a 25% tariff. This will affect several Indian manufacturers, though those with production facilities in countries like Mexico — which enjoys a free trade agreement with the US — may be better positioned to manage the impact.

- ▶ **Ad valorem tariffs:** A fixed percentage of the item's value (e.g., 10 per cent on imported cars)
- ▶ **Specific tariffs:** A fixed charge per unit (e.g., USD 5 per kilogram of imported sugar)
- ▶ **Compound tariffs:** A combination of ad valorem and specific tariffs (e.g., 5 per cent of the car's value plus USD 500 per vehicle)
- ▶ **Anti-dumping tariffs:** Levied on imports sold below fair market value to prevent undercutting domestic producers
- ▶ **Countervailing duties:** Imposed to offset foreign government subsidies to exporters
- ▶ **Reciprocal tariffs:** Levied in direct response to tariffs imposed by another country, often in trade disputes
- **Reciprocal tariffs** are imposed by countries in order to counter the increase in tariffs by trading partners. Informally, a reciprocal tariff is a **'tit-for-tat' tax**.
 - ▶ Reciprocal tariffs are calculated as the tariff rate necessary to balance bilateral trade deficits between the US and each of their trading partners.
 - ▶ This calculation assumes that persistent trade deficits are due to a combination of tariff and non-tariff factors that prevent trade from balancing. Tariffs work through direct reductions of imports.
 - ▶ Reciprocal tariff rates range from 0 percent to 99 percent, with unweighted and import-weighted averages of 20 percent and 41 percent.
 - ▶ To conceptualize reciprocal tariffs, the tariff rates that would drive bilateral trade deficits to zero were computed.

Economic Issues

- **Higher Prices and Inflation in the US:** Tariffs mean higher import prices. Unless the US dollar strengthens sharply, consumers will bear the cost, leading to inflation.
- **Slower Global Growth:** Tariffs act like friction in trade. They reduce volume, distort supply chains, and dampen investor sentiment.
- **Retaliation Risks:** If affected countries impose counter-tariffs, a full-blown trade war could erupt, further hurting global economic prospects.
- **Stagflation in the US:** The worst-case scenario is stagflation—rising prices (inflation) combined with stagnant growth. This is politically and economically damaging.

About

- **Tariff:** A tariff is a **custom duty, or an import duty**, imposed on the import of goods into a country. The importer has to pay this tax to the home country's government.
- Governments use various types of tariffs depending on trade objectives:

INDIA'S STANCE ON ASEAN'S JOINT STRATEGY AGAINST US TARIFFS

Context

India has declined to participate in the ASEAN-led effort to develop a joint response strategy against the reciprocal tariffs policy of former US President Donald Trump. New Delhi is instead prioritizing bilateral trade negotiations with Washington, signaling a strategic and competitive approach to trade diplomacy.

ASEAN's Approach

- **The United States announced "reciprocal tariffs" against all major trading partners**
 - ▶ **Reciprocal tariffs refer to imposing the same level of tariffs on countries that impose high tariffs on US exports.**
- **Trump's trade policy was based on the idea that the US should not allow countries to enjoy low-tariff access to its markets while they impose higher barriers on American goods.**

- ASEAN member countries, particularly export-driven economies like Vietnam, Malaysia, and Thailand, have been disproportionately affected by such tariffs.
- ASEAN is considering a joint strategy to counter US pressure and negotiate collectively.
- However, this also reflects their own internal competition for US market access.

Why India is not joining ASEAN's effort?

- **Competitive Trade Interests:** India sees ASEAN economies as direct competitors in sectors like textiles, electronics, and agriculture. Joining their bloc could undermine India's own negotiating space.
- **Bilateral Focus with the US:** India is already engaged in bilateral trade agreement (BTA) talks with the US. On a recent visit, EAM S. Jaishankar and US Secretary of State Marco Rubio discussed fast-tracking the BTA, indicating high-level political will.
- **Global Diversification Strategy:** India is also pursuing Free Trade Agreements (FTAs) with:
 - EU, UK, Australia, New Zealand
 - Exploring pacts with Latin American and West Asian nations.
 - The goal is to diversify export markets and reduce over-dependence on a few countries.

Strategic Implications for India

- **Maintaining Autonomy in Trade Policy:** India prefers bilateral arrangements that allow for customized benefits, rather than multilateral pressure groups.
- **Geoeconomic Positioning:** By independently negotiating with the US and other major economies, India aims to strengthen its leverage in global trade.
- **Indo-Pacific Dynamics:** India's trade policy is part of a broader strategic vision for the Indo-Pacific, balancing both security and economic interests.

INDIAN STOCK MARKET

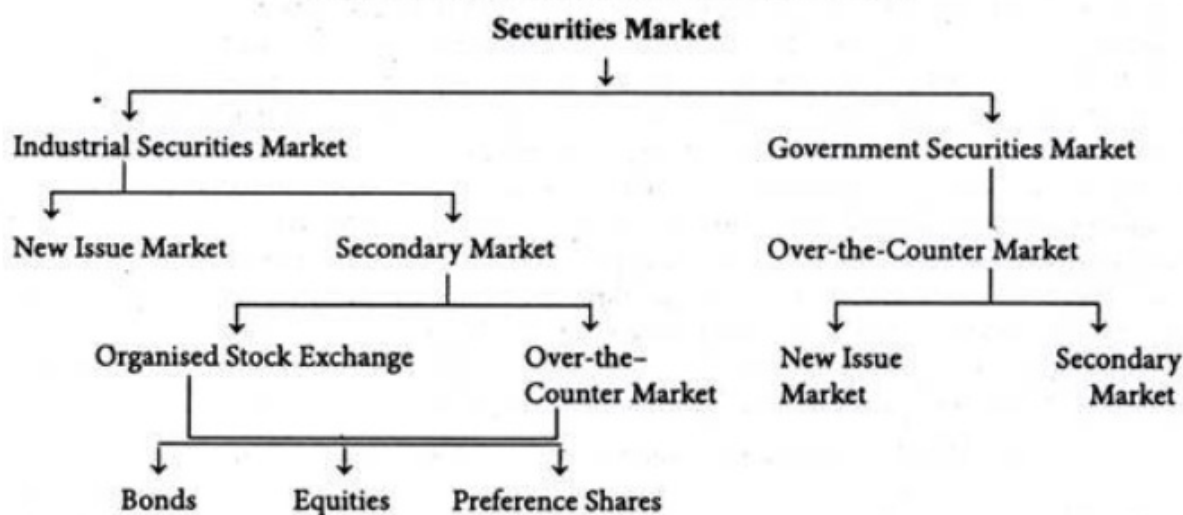
Context

The Indian stock markets suffered a sharp crash due to global tensions triggered by US President Donald Trump's tariff hikes and retaliatory steps by China. This has been one of the steepest intraday drops since the COVID-19 pandemic crash of 2020.

What is Indian Stock Market?

- The Indian Stock Market is a financial market wherein many securities, including equities, bonds, ETFs and derivatives, trade on exchanges at prices determined by demand and supply.
- The Securities Exchange Board of India (SEBI) regulates the Indian stock markets.
- There are two major stock markets in India-
 - **National Stock Exchange of India (NSE):** The NSE was established in 1992. It offers investments in equities, indices, initial public offerings, mutual funds, exchange-traded funds, and derivatives. Trading on the NSE occurs via electronic limit orders, which are matched through a trading computer. That allows for anonymity and transparency.
 - **Bombay Stock Exchange (BSE):** The BSE is India's oldest and first functional stock exchange in Asia. It was established in 1875 and is headquartered in Mumbai. When the stock exchange started, it followed a floor trading system. Since then, it has advanced. Today, financial transactions on the BSE are done through an electronic trading system.
- The share market is an organised, regulated and centralised forum that brings together investors and companies. Its primary purpose is to raise finances for business expansion through the sale of shares.

Table 40.1. The Structure of Securities Market



Black Monday

- Black Monday is the term used for **October 19, 1987** — a day when the U.S. stock market suffered its largest single-day percentage loss ever.
- The Dow Jones Industrial Average dropped a staggering 22.6 percent in one trading session.
- The unexpected collapse sent global markets into a tailspin.
- Stock markets in Australia, Hong Kong and Mexico also saw brutal declines.
- Billions of dollars in market value were wiped out globally in one of the worst stock market crashes of all time.

RBI'S REPO RATE

Context

The Reserve Bank of India (RBI) has cut the repo rate by 25 basis points (bps), from 6.25% to 6%, in its latest policy review. The monetary policy stance has been shifted from neutral to accommodative, meaning the RBI may cut rates further if needed to support growth.

What is the Repo Rate?

- Repo stands for "Re Purchase Option".
- It is the rate at which the central bank (Reserve Bank of India) lends to other banks by buying the securities with an agreement that the bank will buy back on a certain date.
- Repo lending is a short-term lending option to meet the liquidity requirements of commercial banks.
- It is a part of the Liquidity Adjustment Facility (LAF) of the RBI.
- Impacts of repo rate:

Increased repo rate	Decreased repo rate
<ul style="list-style-type: none"> It will discourage banks to borrow from the RBI and lending to the customers. This in turn will reduce the liquidity and demand in the market. It is part of the contractionary monetary policy. 	<ul style="list-style-type: none"> It will encourage banks to borrow and lend to customers increasing the liquidity and demand in the market. This is a part of the Expansionary Monetary Policy.

Why has the RBI cut the repo rate?

- Falling Inflation:** Jan-Feb 2025 inflation averaged 3.9%, lower than expected. RBI's CPI projection for Q4 FY25 is 4.8%, and for FY26 it is 4%. Lower inflation gives RBI space to reduce rates to spur demand.

- Slowing Growth:** RBI revised GDP growth forecast for FY26 to 6.5%, down from 6.7%. Global economic uncertainty (including US tariff increases) is creating downside risks to growth.
- External Factors:** Global trade tensions and geopolitical anxieties have increased.

RBI's Monetary Policy

- Monetary Policy** refers to the actions taken by a country's central bank (in India, the RBI) to control the money supply, manage inflation, and stabilize the economy.
- It influences economic activity by adjusting interest rates and regulating the supply of money.
- There are two main types of monetary policy:

Expansionary Monetary Policy (Loose Policy)

Contractionary Monetary Policy (Tight Policy)

- It is aimed at **stimulating the economy**.
- It is used when the economy is slowing down or facing a recession.
- The central bank **lowers interest rates** to make borrowing cheaper, which encourages businesses to invest and consumers to spend.
- It **increases the money supply**, making it easier for people to borrow money and spend it.
- Example:** If the RBI lowers the repo rate, it makes loans cheaper and encourages investment and spending, boosting the economy.
- It is aimed at **controlling inflation** or an overheating economy.
- It is used when the economy is growing too quickly, and prices are rising too fast (inflation).
- The central bank **raises interest rates** to make borrowing more expensive and to reduce the money supply in the economy.
- It aims to **reduce inflation** by discouraging excessive borrowing and spending.
- Example:** If the RBI raises the repo rate, loans become more expensive, and people borrow less, which helps slow down inflation.

Important rates

- Reverse repo rate:** The interest rate that the RBI pays commercial banks when they park their excess cash with the central bank is called the reverse repo rate
- Bank rate:** It is the rate charged by the central bank for lending funds to commercial banks.

- ▶ **Statutory Liquid Ratio:** A commercial bank must retain a percentage of liquid cash, gold or other securities as deposits. This is known as Statutory Liquid Ratio or SLR.
- ▶ **Cash Reserve Ratio (CRR):** It is a percentage of deposits required by commercial banks to be maintained in the form of liquid cash with the RBI as reserves.
- ▶ **Marginal Standing Facility Rate (MSF):** It is a facility extended to commercial banks by the RBI in the event of an emergency to obtain liquidity overnight.

ARCTIC BOREAL ZONE (ABZ)

Context

In early 2025, multiple regions across the world — from Texas and California in the United States to Ofunato in Japan — witnessed devastating wildfires. These fires were not only destructive in scale but also released massive amounts of carbon dioxide into the atmosphere. Now, a new study has confirmed that over 30 percent of the Arctic Boreal Zone (ABZ) — previously a major carbon sink — has begun releasing more carbon than it absorbs, turning it into a net carbon source.

Key Findings of the Study

- Between 2001 and 2020, the Arctic region absorbed carbon dioxide during summer months. But this absorption was cancelled out by rising emissions during the colder seasons.
- As a result, one-third of the ABZ has shifted from being a carbon sink to a carbon source.
- Alaska alone accounts for 44 percent of the net emissions, while Siberia and northern Europe contribute 13 and 25 percent, respectively.
- The carbon released during longer non-summer periods (due to thawing and fires) is now exceeding the amount absorbed during the brief growing season.
- The study also cites two key historical fire events — Russia's Eastern Siberia fire in 2003 and Canada's Timmins fire in 2012 — as critical moments when emissions overwhelmed the region's carbon sequestration capacity.

What is the Arctic Boreal Zone (ABZ)?

- Arctic Boreal Zone (ABZ) spans the northern latitudes across Alaska, Canada, Siberia, and Scandinavia.
- It includes tundra, coniferous (taiga) forests, permafrost, and wetlands.
- It is the largest terrestrial carbon sink on Earth, having stored massive amounts of organic carbon for centuries in frozen soils and plant biomass.

Significance:

- ▶ The ABZ stores carbon in permafrost, which is permanently frozen ground composed of decomposed organic matter.
- ▶ It absorbs atmospheric carbon dioxide during brief summer periods, when plant growth is active.
- ▶ Its frozen state ensures slow decomposition, preventing large-scale carbon release.



Why Has It Become a Carbon Source?

- Thawing of Permafrost: As global temperatures rise, permafrost is melting, exposing organic material to decomposition. This decomposition releases carbon dioxide and methane, both greenhouse gases.
- Increased Wildfires: More frequent and intense wildfires destroy vegetation and peat layers, reducing the region's carbon-absorbing ability and releasing previously stored carbon.
- Changing Vegetation and Soil Moisture: Arctic warming is altering plant types, with fire-prone or less carbon-efficient vegetation replacing older species.
- Longer Warm Seasons and Shorter Winters: The ABZ is experiencing longer non-summer seasons with higher temperatures, leading to year-round carbon release. These emissions now exceed the summer gains, pushing the biome into a net emission status.

Relevance to India

- Indian Forest Fires: According to the India State of Forest Report 2024, over 5,300 fires were recorded in Uttarakhand alone. Forest fires in India already contribute around 69 million tonnes of CO₂ annually.
- Rising Land Temperatures: Indian regions like the northwest and central India are warming by 0.2–0.4°C per decade.
- Climatic Risk: India's agriculture, water systems, and monsoons are highly sensitive to global climate feedbacks, making Arctic emissions a critical external factor.

Carbon Sink And Source

- A carbon sink is anything that absorbs more carbon from the atmosphere than it releases – for example, plants, the ocean and soil.
- A carbon source releases carbon dioxide into the atmosphere. Examples of carbon sources include the burning of fossil fuels like gas, coal and oil, deforestation and volcanic eruptions.

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SECTION - B

QUICK BYTES

MONSOON FORECAST 2025

Context

Private weather agency Skymet has released its first official forecast for the 2025 southwest monsoon, predicting 'normal' rainfall at 103% of the Long Period Average (LPA).

What is Monsoon?

- The term **monsoon** refers to a **seasonal reversal of winds**, typically associated with **heavy rainfall**.

- In India, the **Southwest Monsoon (June–September)** is the main rainy season, contributing **80–90% of the country's annual rainfall**.

Onset & Progress of Monsoon

- ▶ The monsoon **starts in Kerala** around **June 1st**.
- ▶ It then **advances northwards**, reaching **Mumbai** in **~10 days**, **Delhi** by **end of June**, and **entire India** by **mid-July**.

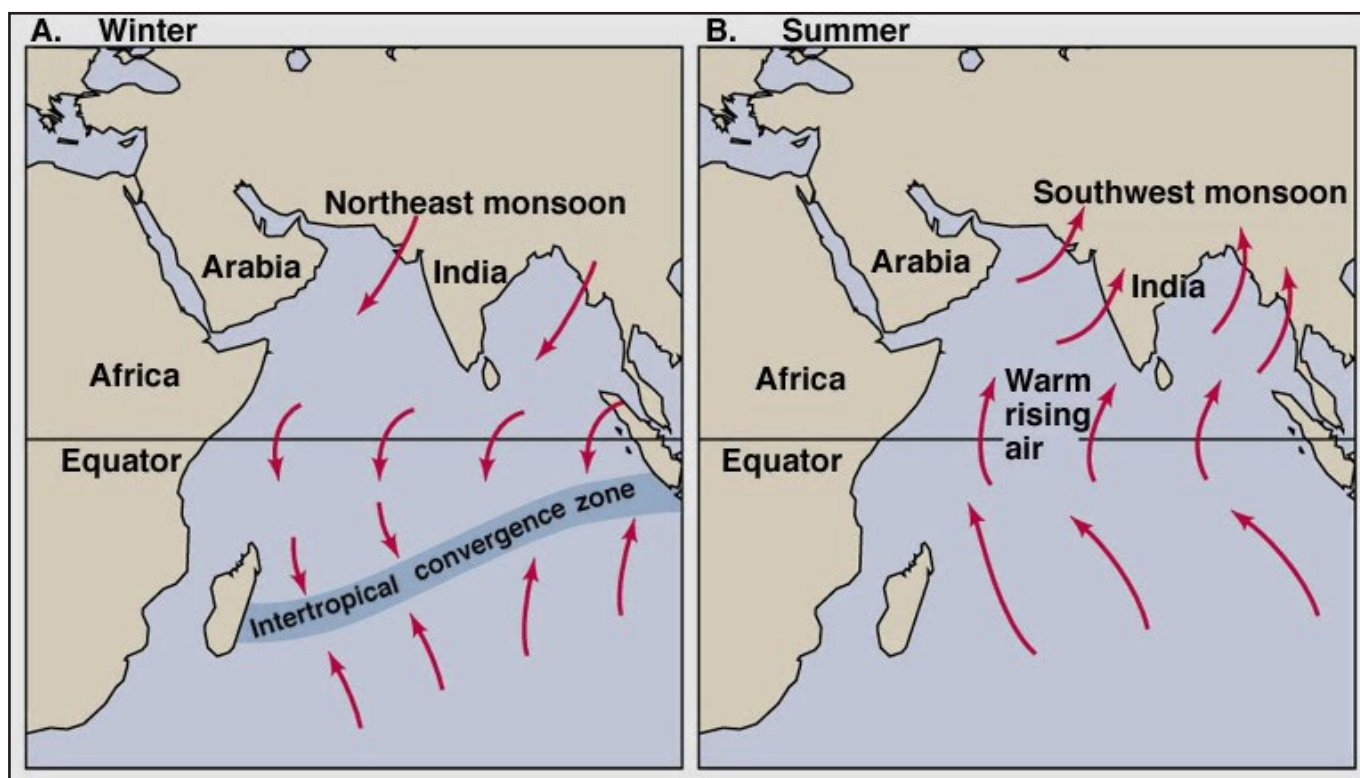


Figure No. 01

- ▶ The **retreating monsoon** (also called **Northeast Monsoon**) starts withdrawing from **Rajasthan** around **September**, fully withdrawing by **mid-October**.

Why Does the Monsoon Occur?

- **Differential Heating of Land and Sea:** During summer, the land (especially North India) heats up faster than the sea. This creates a low-pressure zone over land and high pressure over the Indian Ocean. Moisture-laden winds from the ocean move toward the land to fill this void.
- **Inter-Tropical Convergence Zone (ITCZ):** The ITCZ is a belt of low pressure near the equator where trade winds converge. In Indian summer, the ITCZ shifts northward (near the Tropic of Cancer) because the northern hemisphere is tilted toward the Sun. This pulls monsoon winds deep into the Indian subcontinent.
- **Coriolis Force:** Due to Earth’s rotation, the winds deflect to the right in the northern hemisphere. This turns the southeast trade winds into southwest monsoon winds over India.
- **Other Climatic Factors Affecting Monsoon**
 - ▶ **El Niño:** Warming in central/east Pacific Ocean → Weakens Indian monsoon (can cause droughts)

- ▶ **La Niña:** Cooling in the Pacific → Strengthens monsoon
- ▶ **Indian Ocean Dipole (IOD):** Positive IOD (warmer west Indian Ocean) → Enhances monsoon
- ▶ **Equatorial Indian Ocean Oscillation:** Affects monsoon build-up and variability
- ▶ **Western Disturbances:** Interact with monsoon and winter weather over North India

Branches of Southwest Monsoon		
Branch	Path	Impact
Arabian Sea Branch	Hits Western Ghats	Heavy rainfall in Kerala, Karnataka, Maharashtra, Goa
Bay of Bengal Branch	Moves toward Northeast and Indo-Gangetic Plains	Rain in Assam, West Bengal, Bihar, UP

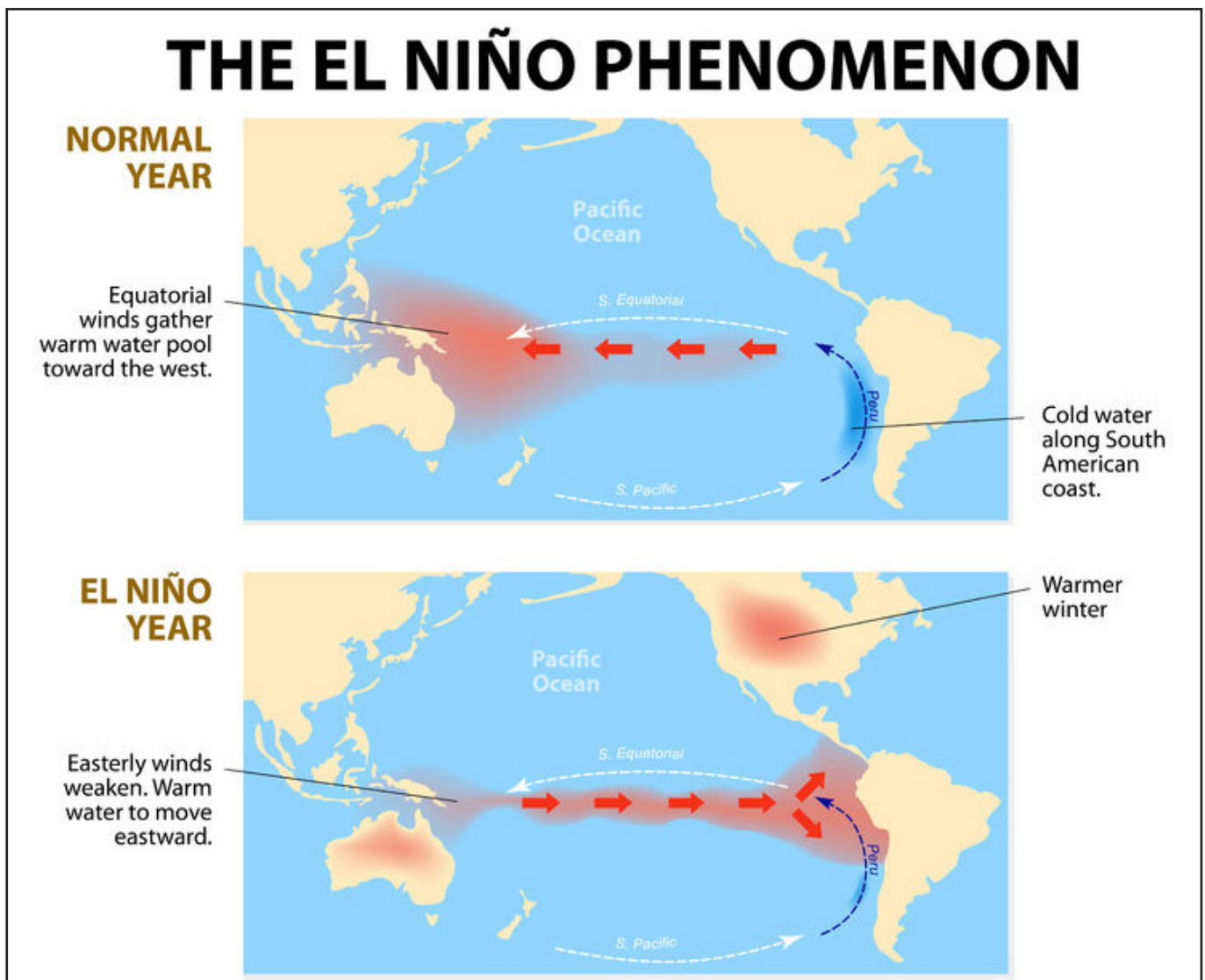


Figure No. 01



FACT BOX

Key-Concepts

- **Long Period Average (LPA):** LPA is the average rainfall India receives during the monsoon (June to September) over a long period — usually 50 years.
 - ▶ For India, LPA is 868.6 mm.
 - ▶ When rainfall is:
 - ◆ 96% to 104% of LPA: It's called a normal monsoon
 - ◆ Above 104%: Above normal/excess
 - ◆ Below 96%: Below normal
 - ◆ Below 90%: Drought year
- **El Niño and La Niña (ENSO Phenomenon):** El Niño-Southern Oscillation is a Pacific Ocean phenomenon that affects weather worldwide.

- ▶ **El Niño:** Warm waters in the Pacific = Weak Indian monsoon = Less rainfall
- ▶ **La Niña:** Cold waters in the Pacific = Strong monsoon = More rainfall
- ▶ **Neutral:** No significant warming or cooling = Monsoon behaves more naturally

(See Figure No. 02 on previous page)

- **Indian Ocean Dipole (IOD):** It is the difference in sea surface temperatures between Western Indian Ocean (near Africa) and Eastern Indian Ocean (near Indonesia)
 - ▶ Positive IOD: Warmer west = Pulls moisture towards India = Good rainfall
 - ▶ Negative IOD: Warmer east = Moisture diverted away from India = Poor rainfall
 - ▶ Neutral IOD: No major impact

(See Figure No. 03 given below)

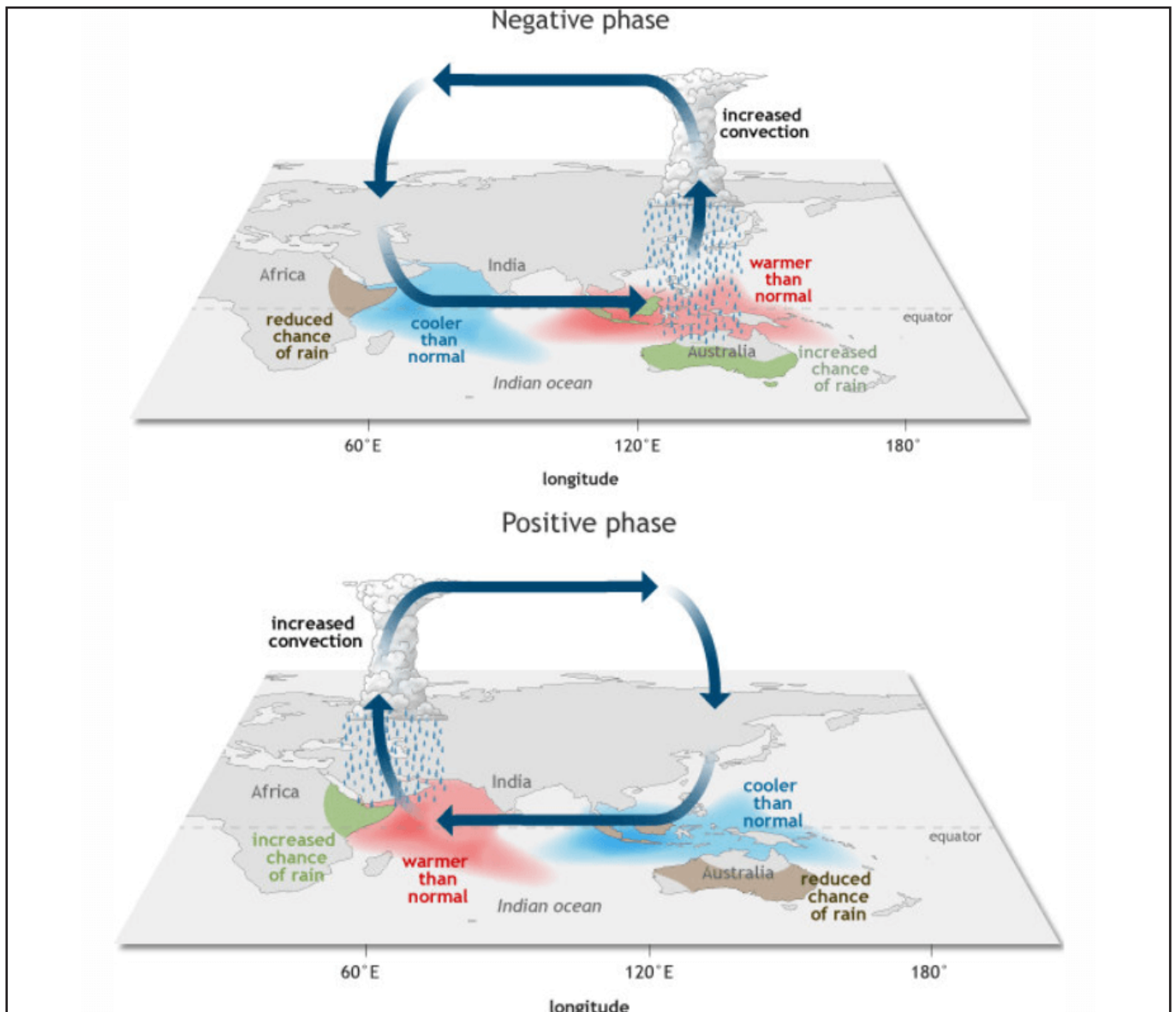


Figure No. 03

KANCHA GACHIBOWLI

CONTEXT

Kancha Gachibowli, a 400-acre parcel of land, is once again at the heart of a controversy in Telangana's capital Hyderabad.

About Kancha Gachibowli

- Kancha Gachibowli is home to over 700 plant species, including thousands of trees and shrubs that act as the city's green lungs.
- The land is undisturbed for over 20 years, developing into a rich natural habitat. It hosts:
 - ▶ 237 bird species – more than **Kasu Brahmananda Reddy (KBR) and Mrugavani National Parks**.
 - ▶ **Murricia hyderabadensis** – a unique, endemic spider species found only here.
 - ▶ Wild animals such as **spotted deer, wild boars, Indian star tortoises, monitor lizards, and snakes like the Indian rock python**.
 - ▶ 27 bird species under **Schedule-I of the Wildlife Protection Act, 1972**.
 - ▶ 3 reptile species and 72 species of trees.
- The area also features two lakes—**Peacock Lake and Buffalo Lake**.
- Kancha Gachibowli falls under the western part of Hyderabad, an area well-known owing to the presence of the city's financial district, a concrete jungle with little green space left.

(See Figure No. 04 below)

Historical & Legal Background:

- The disputed parcel of land covers **400 acres**.
- The **University of Hyderabad** was granted **2,324 acres in 1974** as part of the **Six-Point Formula** to address regional concerns post the **Telangana agitation (1969)**.
- However, **formal title transfer** was not completed.
- Over the years, **over 800 acres** were taken away by the government for various public institutions.
- The 400-acre plot was among **534 acres transferred in 2004** under the then **TDP government**, in exchange for **396 acres elsewhere**.
- The land was part of a larger **850-acre allotment to IMG Academies Bharata** for sports infrastructure.
- The land deal was **cancelled in 2004** after the Congress government came to power, leading to **prolonged litigation**.
- The **Supreme Court** recently **dismissed the Special Leave Petition**, clearing the way for the **Telangana government** to reclaim and auction the land.

RAM SETU

CONTEXT

As PM Modi inaugurated Pamban Bridge in Tamil Nadu, attention also turns to the nearby Ram Setu.

About

- Ram Setu, also known as the Adams Bridge, is a chain of shoals linking India and Sri Lanka.



Figure No. 04



Figure No. 05

- It connects Rameswaram to the **Mannar island** of Sri Lanka
- The bridge is a 48 km long chain of natural limestone shoals.
- It separates the **Gulf of Mannar (south)**, an inlet of the Indian Ocean, from the **Palk Strait (north)**, an inlet of the Bay of Bengal.
- The structure is a natural formation and that the bridge is a large tombolo, which is a coastal formation of sandbars that connects an island across the sea to the mainland.
- Ram Setu was completely above sea level till 1480. It was submerged in the shallow sea due to natural calamities.
- **Mythology:** Ram Setu is mentioned in the epic Ramayana, as the bridge constructed by Lord Rama and his vanara (monkey) army.
 - ▶ The bridge was constructed to cross over to Lanka to rescue Goddess Sita from the clutches of the demon king Ravana.
 - ▶ In Valmiki's Ramayana, the bridge is described as Sethubanthan.

IWO JIMA

CONTEXT

Japan's Emperor Naruhito and Empress Masako made a rare visit to the tiny Pacific island of Iwo Jima to mark the 80th anniversary of the end of World War II.

The Battle of Iwo Jima (1945)

- **Duration:** February 19 to March 26, 1945.
- **Operation Objective:** To seize the island and use it as a base for bombing mainland Japan.
- Forces Involved (Combatants):
 - ▶ **United States:** Around 70,000 Marines, supported by 450 naval ships, Army units, and Navy Seabees (combat engineers).
 - ▶ **Imperial Japan:** Approximately **21,000 soldiers**, deeply entrenched in bunkers and tunnels.
- **Key Events:**
 - ▶ **Feb 23, 1945:** American Marines raised the **U.S. flag** atop **Mount Suribachi**, symbolizing a major milestone in the battle.
 - ▶ **US Casualties:** Over **25,000**, including **6,800+** deaths.

- ▶ **Japanese Casualties:** Nearly all 21,000 soldiers killed; only 216 taken prisoner.

About Iwo Jima

- The Japanese island of Iwo Jima is part of the **Volcano Islands archipelago**, or group of islands.
- It lies in the **western Pacific Ocean**, about 760 miles (1,220 kilometers) **south-southeast of Tokyo, Japan**.
- This small volcanic island is a site of a strategic air base located between the Mariana Islands and Japan.
- **Area:** Just 8 square miles in size.
- Today the island is off-limits for civilians and decayed warship parts litter its brown beaches, while rust-covered abandoned tanks sit in lush greenery.



FACT BOX

World War II (1939-1945)

- **Factors Responsible for World War II:**
 - ▶ **Treaty of Versailles:** harsh conditions imposed on Germany after World War I led to resentment and economic hardship

- ▶ **Rise of Fascism and Nazism:** Dictatorial regimes in Germany (under Hitler) and Italy (under Mussolini) sought expansionist policies.
- ▶ **Economic Turmoil:** The Great Depression exacerbated tensions and weakened international cooperation.
- **Participating Countries:**
 - ▶ **Axis Powers:** Germany, Italy, Japan (later joined by others like Hungary, Romania, and Bulgaria).
 - ▶ **Allied Powers:** United States, United Kingdom, Soviet Union (after being invaded by Germany in 1941), China, France (after its liberation). **India (as a part of the Allied Nations)**, sent over two and a half million soldiers to fight under **British command** against the Axis powers.
- **Important Locations:**
 - ▶ **Europe:** Major battles were fought in France (Normandy, Battle of the Bulge), Germany (Berlin), Italy (Anzio, Monte Cassino), and Eastern Europe (Stalingrad).
 - ▶ **Pacific Theater:** Significant battles occurred in Pearl Harbor, Midway, Guadalcanal, Iwo Jima, and Okinawa.
 - ▶ **North Africa:** Key battles were fought in El Alamein and Tobruk.



Figure No. 06

Outcome:

- ▶ **Allied Victory:** The Allies emerged victorious, leading to the defeat of Nazi Germany and Fascist Italy in Europe, and Imperial Japan in the Pacific.
- ▶ **Formation of the United Nations:** The war led to the creation of the United Nations, aimed at preventing future conflicts through international cooperation.
- ▶ **Cold War:** Tensions between the Soviet Union and Western Allies escalated, leading to the Cold War, characterized by ideological and political rivalries.
- ▶ **Decolonization:** The war hastened the decline of European colonial empires, leading to the independence movements in Asia and Africa.

JYOTIRAO GOVINDRAO PHULE (1827–1890)

CONTEXT

Mahatma Phule Jayanti 2025 is observed on April 11 to pay tribute to one of India's most influential social reformers, Mahatma Jyotirao Phule.

About Jyotirao Govindrao Phule:

- **Jyotirao Govindrao Phule (11 April 1827 – 28 November 1890)** was an Indian social activist, thinker, anti-caste social reformer and writer from Maharashtra.
- His work extended to many fields, including
 - ▶ eradication of untouchability and the caste system
 - ▶ educating women and exploited caste people
- He and his wife, **Savitribai Phule (1831 –1897)**, were pioneers of women's education in India.
- Phule started his **first school for girls in 1848** in Pune at **Tatyasaheb Bhide's residence or Bhidewada**.
- He, along with his followers, formed the **Satyashodhak Samaj (Society of Truth Seekers)** to attain equal rights for people from exploited castes.
 - ▶ People from all religions and castes could become a part of this association which worked for the upliftment of the oppressed classes.
 - ▶ Phule is regarded as an important figure in the social reform movement in Maharashtra.
 - ▶ He was bestowed with honorific 'Mahatma' title by Maharashtrian social activist **Vithalrao Krishnaji Vandekar in 1888**.
- He undertook a systematic deconstruction of existing beliefs and history, only to reconstruct an equality promoting version.
- Jyotirao vehemently condemned the Vedas, the ancient holy scriptures of the Hindus.
- He traced the history of Brahmanism through several other ancient texts and held the Brahmins responsible for framing the exploitative and inhuman laws in order to maintain their social superiority by suppressing the "shudras" and "atishudras" in the society.

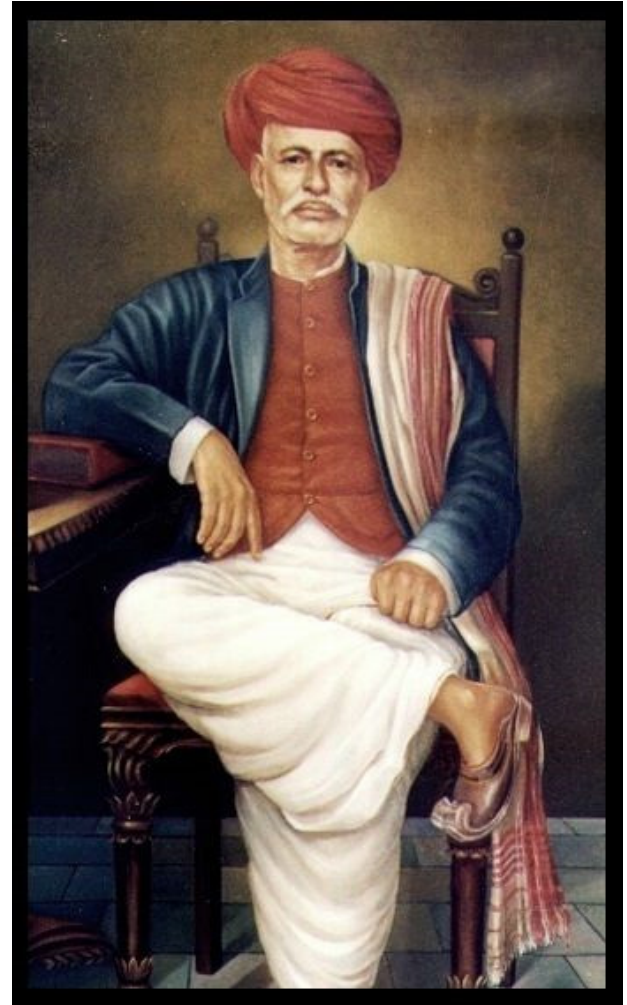


Figure No. 07

His famous works:

- ▶ Tritiya Ratna (1855)
- ▶ Gulamgiri (1873)
- ▶ Shetkarayacha Aasud, or Cultivator's Whipcord (1881)
- ▶ Satyashodhak Samajok Mangalashthakasa Sarva Puja-vidhi (1887)

About Satya Shodhak Samaj:

- Satya Shodhak Samaj (Society of Seekers of Truth) was formed in 1873 by Jyotiba Phule.
- **Purpose:** To decontaminate the society from caste discrimination and liberate the oppressed lower-caste people from the stigmas inflicted by the **Brahmins**.
- Jyotirao Phule was the first person to coin the term '**Dalits**' to apply to all people considered lower caste and untouchables by the Brahmins.
- Membership to the Samaj was open to all irrespective of caste and class.
- In 1868, Jyotirao decided to construct a **common bathing tank** outside his house to exhibit his embracing attitude towards all human beings and wished to dine with everyone, regardless of their caste.



Figure No. 08

ISRAEL CONTROLS 50% OF GAZA

CONTEXT

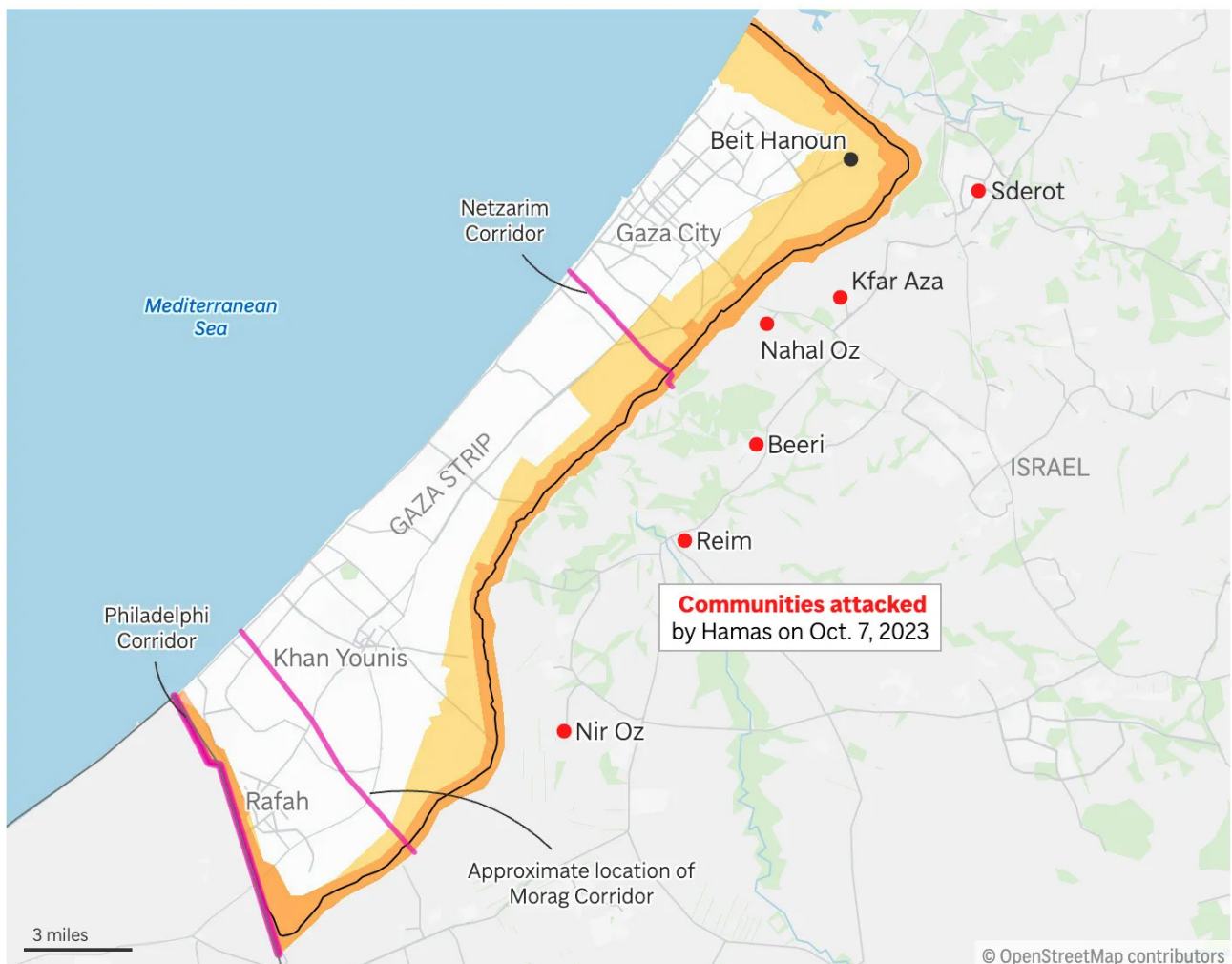
Israel has dramatically expanded its footprint in the Gaza Strip since relaunching its war against Hamas last month. It now controls more than 50% of the territory and is squeezing Palestinians into shrinking wedges of land.

Where is Gaza?

- The Gaza Strip is a small coastal territory located along the Mediterranean Sea.
- It is around 40 km long and 5 to 12 km wide.
- It borders Israel to the east and north, Egypt to the southwest, and the Mediterranean Sea to the west.

Israel’s expanding footprint in Gaza

Israeli military holds more than half of Gaza, isolating Palestinians and razing large areas.



— Gaza border ■ Buffer zone as of Jan. 2025 ceasefire agreement ■ Expanded buffer zone as of March 18

Source: Buffer zone perimeters by Garb, Yaakov, 2025, Harvard Dataverse Geospatial dataset



Figure No. 09

- Gaza is densely populated, with over 2 million Palestinians living there.
- **Earlier Situation:**
 - ▶ Before the recent conflict, Israel maintained a **narrow buffer zone**—roughly **1 km wide**—along Gaza’s eastern border.
 - ▶ This area had several Palestinian towns and villages, **fertile farmland**, and was crucial for **local food production**.
 - ▶ Though access was often restricted, many Palestinians still lived and farmed close to this zone.
- **What has changed now?**
 - ▶ After the **latest phase of the conflict resumed** in late 2023, Israel began expanding this buffer zone significantly.
 - ▶ **As of now:**
 - ◆ The buffer zone has been **expanded to up to 3 km** in some areas.
 - ◆ It is estimated that **over 50% of Gaza’s land** is now controlled or inaccessible due to Israeli military operations.
 - ◆ Areas like **northern Gaza**, parts of **central Gaza**, and surroundings of **Khan Younis** have seen heavy destruction.
 - ▶ Israel also controls buffer zones in **Lebanon and the Golan Heights (Syria)**.
 - ▶ Proposals have been made to split Gaza into different zones—like the **Netzarim Corridor (already active)** and a proposed **Morag Corridor** in the south—to divide Palestinian regions further.
- **Background:** The Defence Cooperation MoU with the UAE was signed in 2003, and an MoU on Defence Industry Cooperation was signed in 2017. Over the years, the bilateral defence relationship has evolved to include regular high-level exchanges, naval visits, and training programmes.
 - ▶ Both countries played active roles in the **UN Security Council** during their respective terms, with India chairing the **Counter-Terrorism Committee** in 2022 and the UAE in 2023.
 - ▶ **Landmark contributions** include the adoption of the **Delhi Declaration** on the misuse of emerging technologies for terrorism and the **Abu Dhabi Guiding Principles** addressing threats from unmanned aerial systems.
- India and UAE share a Comprehensive Strategic Partnership. Their cooperation covers a wide range of sectors: **trade, technology, energy, defence, and people-to-people ties**.

INDIA-UAE DEFENCE RELATIONS

CONTEXT

During Sheikh Hamdan’s visit to India (his first as **Dubai’s Crown Prince**), both countries decided to deepen their defence and Coast Guard collaboration.

Defence and Security Cooperation

- Both sides agreed to **scale up defence cooperation** to match growing trade ties.
- **Key focus on:**
 - ▶ Joint training programs
 - ▶ Defence manufacturing and innovation
 - ▶ Co-production and co-development projects
- India and the UAE agreed to formalise their Coast Guard-to-Coast Guard cooperation through a dedicated Memorandum of Understanding (MoU).
- Both side emphasised on **India-UAE Defence Partnership Forum** and participation in each other’s defence expos.

KANNADIPPAYA & WARANGAL CHAPATA CHILLI GETS GI TAG

CONTEXT

In a major stride towards conserving India’s rich tapestry of traditional knowledge and local expertise, two culturally significant products—**Kannadippaya**, a tribal handicraft from Kerala, and the **Warangal Chapata chilli**, a distinctive variety of chilli from Telangana—have recently been granted the **Geographical Indication (GI) tag**.

About Kannadippaya

- **Kannadippaya**, literally translating to “mirror mat”, derives its name from the distinct reflective patterns woven into its surface.
- It is crafted using the inner layers of **reed bamboo**.
- The mat is known for its **thermo-regulating properties**, offering warmth during colder months and a cooling effect in the summer.
- The use of species such as ***Teinostachyum wightii*** and ***Ochlandra spp.***, highlights the community’s intimate ecological knowledge and sustainable harvesting practices.



Figure No. 10

- **Custodians of Tradition:** The craft is preserved and practiced by a number of tribal communities, including the **Oorali, Mannan, Muthuva, Malayan, and Kadar**, as well as the **Ulladan, Malayarayan, and Hill Pulaya artisans**.
- Traditionally, *Kannadippaya* held ceremonial significance and was once offered to royalty as a token of respect and esteem.

About Warangal Chapata Chilli

- **Warangal Chapata Chilli**, also known locally as the **Tomato Chilli**, is a traditional variety of chilli cultivated primarily in the **Warangal region of Telangana**, India.
- It is known for its **distinct tomato-like shape and bright red colour**, which gives it its popular name.
- It is mildly pungent, less spicy than many other Indian chillies—but rich in flavour.
- It is high in **capsicum oleoresin**, which is a natural extract used in the food industry for adding colour and spice.
- **Types** (three fruit types): Single Patti, Double Patti and Odalu
- It is well-suited to the dry, red soil regions of northern Telangana.



Figure No. 11

Geographical Indication (GI tag)

- A Geographical Indication or GI tag is a certification given to products that have origin and inherent qualities, reputation, or characteristics that contribute to their origin.
- A GI tag is used on products with specific geographic origins and its quality and reputation are attributed to it.
- It is registered and guarded under the **Act of Registration and Protection of Geographical Indications of Products, 1999** in India.
- The **Geographical Indication Registry (GIR)**, under the **Department for Promotion of Industry and Internal Trade (DPIIT)**, issues **Geographical Indication (GI) tags** in India.

- **Validity:** After a GI tag is granted, the same is valid for **10 years**, after which the registration must be renewed.

UPSC PYQ

Q: Which of the following has/have been accorded 'Geographical Indication' status? (2015)

- (1) Banaras Brocades and Sarees
- (2) Rajasthani Daal-Bati-Churma
- (3) Tirupathi Laddu

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Solution: (c)

Q: India enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999 in order to comply with the obligations to (2018)

- (a) ILO
- (b) IMF
- (c) UNCTAD
- (d) WTO

Solution: (d)

NITI NCAER STATES ECONOMIC FORUM PORTAL

CONTEXT

The government launched the "NITI NCAER States Economic Forum" portal.

About

- The portal is a comprehensive repository of data on social, economic and fiscal parameters, research reports, papers, and expert commentary on State Finances for a period of about 30 years (i.e 1990-91 to 2022-23).
- It has been developed by **NITI Aayog**, in collaboration with the **National Council of Applied Economic Research (NCAER)**.
- **Components:** The forum consists of four primary components:
 - **State reports**, which offer in-depth analysis of various fiscal and economic indicators at the state level
 - **Data repository**, a consolidated database of social, economic, and financial parameters providing historical trends and patterns
 - **State fiscal and economic dashboard**, a visual and analytical representation of state finances to allow easy comparisons and insights

- ▶ **Research and commentaries**, featuring expert insights, academic research, and policy discussions focused on state-level economic and fiscal issues.

Significance:

- ▶ NITI NCAER States Economic Forum will be beneficial in the availability of authentic data.
- ▶ The portal will help States to make more meaningful interventions, raising revenues, managing debts and learning from peer experiences.

SAMAGRA SHIKSHA ABHIYAN (SSA)

CONTEXT

Kerala, Tamil Nadu, and West Bengal have received zero funds from the Centre's share under the Ministry of Education's flagship Samagra Shiksha scheme (SSA) for the financial year 2024-25.

What is Samagra Shiksha Abhiyan (SSA)?

- **Launched in:** 2018
- Samagra Shiksha Abhiyan (SSA) is a flagship programme aimed at transforming the school education landscape across the country.
- It integrates three previously existing schemes into a single comprehensive initiative.
 - ▶ Sarva Shiksha Abhiyan (SSA)
 - ▶ Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
 - ▶ Teacher Education (TE)
- The programme covers the **entire educational spectrum** from pre-school to class 12, making it a holistic approach to school education.
- The primary objective of SSA is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all children.
- The scheme also prioritizes quality improvement through teacher training, better infrastructure, integration of digital technology in classrooms and the introduction of vocational education at school secondary level.
- By promoting a well-rounded educational approach, SSA aims to equip students with the necessary skills and knowledge to succeed in a rapidly evolving world.
- The scheme is in accordance with Sustainable Development Goal for Education (SDG-4).
 - ▶ **Goal SDG-4.1** states that "By 2030, ensure that all boys and girls complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes".
 - ▶ **Goal SDG 4.5** states that "By 2030, eliminate gender disparities in education and ensure equal access to all levels of Education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations"

INDIA-NEPAL JUDICIAL COOPERATION

CONTEXT

The Supreme Courts of India and Nepal signed a **Memorandum of Understanding (MoU)** to enhance judicial cooperation. This marks a significant step in strengthening bilateral legal and constitutional ties between the two neighbouring democracies.

Key Highlights of the MoU

- The agreement provides a **structured framework** for collaboration through:
 - ▶ **Judicial exchanges**
 - ▶ **Joint research initiatives**
 - ▶ **Capacity-building programmes and training**
 - ▶ **Seminars and official visits**
- The initiative aims to address shared judicial challenges such as:
 - ▶ **Delays in justice delivery**
 - ▶ **Limited access to justice**
 - ▶ **Need for digitisation**
 - ▶ **Protection of constitutional and fundamental rights**

Mutual Learning in Jurisprudence

- India and Nepal have often drawn inspiration from each other's judicial decisions.
- India's Supreme Court has previously acknowledged Nepal's judgments, particularly in cases related to **privacy and LGBTQ+ rights**.
- Similarly, Nepal has adopted key Indian constitutional doctrines like the **Basic Structure Doctrine** to guide its constitutional interpretation.
- Both countries share a commitment to democratic values, environmental rights, and evolving legal systems.

WORLD HEALTH DAY

CONTEXT

On April 7, the world observes **World Health Day** as a way to raise awareness of important health challenges and motivate group efforts to address them.

About

- The idea for World Health Day originated from the **first World Health Assembly**, which was held in Geneva, Switzerland, in 1948.
- At this assembly, the WHO constitution was adopted, and the organisation was charged with the responsibility of promoting health and preventing disease worldwide.
- **Theme 2025:** "Healthy Beginnings, Hopeful Futures"

UGC NOTIFIES NEW RULES FOR RECOGNISING FOREIGN DEGREES

CONTEXT

The **University Grants Commission (UGC)** has issued new rules – called the “**Recognition and Grant of Equivalence to Qualifications Obtained from Foreign Educational Institutions Regulations, 2025**” – to make it easier and more transparent for students with foreign qualifications to get them recognised in India.

Key-highlights of the Regulations

- These rules explain **how to get an equivalence certificate**, which is a document confirming that a degree, diploma, or certificate earned abroad is considered **equal to an Indian qualification**.
- The equivalence certificate will be valid for:
 - ▶ Admission to Indian higher education institutions (like universities and colleges)
 - ▶ Jobs where a UGC-recognised qualification is required
 - ▶ Research purposes in India
- **But**, the regulations **do not apply** to professional courses regulated by other statutory bodies like: **Medicine, Pharmacy, Nursing, Law and Architecture**. These areas continue to follow the norms of their respective councils (like NMC, BCI, COA, etc.).
- **Qualifications to be Considered for Equivalence:** For a foreign qualification to be accepted:
 - ▶ The foreign institution must be recognised in its home country.
 - ▶ The course must have similar admission and academic standards as those in India. This includes credit requirements, internship or thesis components, etc.
 - ▶ The student must have completed the course according to the foreign institution’s norms.
 - ◆ Even degrees from **offshore campuses** of foreign universities can be recognised, **if they follow proper academic standards** in both the host country and the institution’s home country.
 - ◆ The regulations also apply to **school-level qualifications** (e.g. Class 12 from abroad) when applying for undergraduate courses in India — **as long as the student has completed at least 12 years of schooling**.
- **Process for Getting an Equivalence Certificate:** The UGC will set up an **online portal** where students can apply. A **standing committee of experts** will review each application.
- **Current System:** Until now, this job was mainly done by the Association of Indian Universities (AIU). The AIU is a registered body that issued equivalence certificates for foreign degrees for education and jobs in India.
 - ▶ Now, the UGC will take over this role through a dedicated regulatory framework.

- ▶ This is the first time UGC has formally defined the process of recognising foreign qualifications through notified regulations.
- The move supports the **National Education Policy (NEP) 2020**, which promotes **internationalisation of Indian education**.

PAMBAN BRIDGE

CONTEXT

Prime Minister Narendra Modi inaugurated the New Pamban Bridge, India’s first **vertical sea-lift railway bridge**, built at a cost of **over Rs 550 crore**. It is seen as a major engineering achievement and will boost rail connectivity to **Rameswaram**, a major pilgrimage town.

About the Pamban Bridge

- **The bridge** connects **Mandapam** (mainland Tamil Nadu) to **Rameswaram Island** across the **Palk Strait**, in **southern Tamil Nadu**.
- **Purpose:** It enables **train movement** to Rameswaram and allows **ships to pass underneath** via a lift mechanism.
- **Length:** **2.08 km** long.
- **Design Features:**
 - ▶ **99 fixed spans** and **one 72.5-metre vertical lift span** (can be raised up to 17 metres).
 - ▶ The lift span allows **large ships** to pass without disturbing rail traffic.
- **Speed & Safety:**
 - ▶ Trains can run safely at **80 kmph** (designed for up to 160 kmph).
 - ▶ **Lifespan:** It is designed for **100 years** of operation.
 - ▶ It is built to withstand **wind speeds up to 230 kmph** and **seismic activity**.
- **Durability Enhancements:**
 - ▶ **Stainless steel reinforcement** and **fully welded joints**.
 - ▶ **Polysiloxane paint** used to resist corrosion from marine conditions.
 - ▶ **333 piles and 101 piers** support the foundation.
 - ▶ **Robust surface protection** system offers a lifespan of up to 58 years with minimal maintenance.
- The Pamban Bridge is being compared to famous ones like the **Golden Gate Bridge in the USA**, **Tower Bridge in the UK**, and the **Oresund Bridge between Denmark and Sweden** because of its modern design and technology.
- The old Pamban Bridge was built in 1914 by British engineers. It used a manually **operated Scherzer’s span (a type of rolling lift bridge)**. The pass over was shut to rail traffic due to safety concerns.



Figure No. 12

PUSA-44

CONTEXT

Punjab has once again **banned the sale and sowing of Pusa-44 paddy**, a water-intensive rice variety, along with several other hybrid types, for the **upcoming Kharif season**. The ban is aimed at **conserving groundwater**, as the state faces serious risks of desertification in the next two decades due to over-extraction.

Why is Pusa-44 a problem?

- Pusa-44, also known as **Peele Pusa**, is a long-duration water-guzzler paddy variety.
- **Issues:**
 - ▶ **Takes longer to mature:** Around **143 days**, compared to 110-120 days for other varieties.
 - ▶ **Needs more water:** Around **50 extra days of puddling**, meaning more groundwater is used through tubewells.
 - ▶ **Poor milling quality:** High **moisture content**, **broken grains (up to 50%)**, and **more straw** make it **less profitable**.
 - ▶ **Harder to sell at MSP:** Due to high moisture and broken grains, farmers **struggle to get the minimum support price**.
 - ▶ **Energy consumption:** Last year, banning it **saved electricity worth Rs 477 crore** that would have powered water pumps.
- Most farmers are likely to shift to: **PR-126** and **PR-131**. These varieties are **shorter duration, less water-intensive**, and preferred by rice millers.

MARKET-BASED SECURITISATION OF STRESSED ASSETS

CONTEXT

The RBI has proposed to allow securitisation of stressed assets through a market-based mechanism, not just through **Asset Reconstruction Companies (ARCs)** as is currently done.

Asset Reconstruction Companies (ARCs)

- In India, the **SARFAESI Act, 2002** enabled setting up **Asset Reconstruction Companies (ARCs)**, which buy stressed assets from banks and try to recover them.
- **Limitations of ARC-driven model:**
 - ▶ Limited number of players
 - ▶ Low recovery rates in many cases
 - ▶ Market concentration (few large ARCs dominate)
- The RBI now plans to open securitisation of stressed assets to a broader market-based mechanism, rather than restricting it to ARCs.
- This change is expected to:
 - ▶ Increase participation from mutual funds, private investors, and financial institutions,
 - ▶ Create a secondary market for distressed debt, improving pricing and efficiency,
- It aligns with global best practices (like **US and UK models**).

What Are Stressed Assets?

- **Stressed assets** are loans where repayment is delayed or doubtful. They include:
 - ▶ **Non-Performing Assets (NPAs):** Loans overdue >90 days.
 - ▶ **Restructured Loans:** Modified repayment terms due to borrower difficulty.
 - ▶ **Written-off Assets:** Deemed irrecoverable by the bank.
- These assets affect banks’ balance sheets and limit their capacity to lend.
- **Securitisation:** It is a financial process in which banks convert their **loan assets** (including stressed assets) into **marketable securities**, which are then sold to investors.
 - ▶ Banks pool loans (e.g., housing loans, or stressed corporate loans),
 - ▶ Package them into financial instruments,
 - ▶ Sell them to investors to **transfer the risk and unlock capital.**

Benefits of Securitisation	Risks
<ul style="list-style-type: none"> ◦ Frees up capital for banks. ◦ Distributes credit risk across the market. ◦ Helps clean up balance sheets without waiting for slow recovery processes. 	<ul style="list-style-type: none"> ◦ Can create complex and opaque instruments (as seen in 2008 crisis). ◦ Poor risk assessment can affect investor confidence.

SALT PAN LANDS

CONTEXT

The Maharashtra government has sanctioned the development of approximately 256 acres of **decommissioned salt pan land** in Mulund, Kanjurmarg, and Bhandup for the **Dharavi Redevelopment Project (DRP)** to relocate inhabitants who are not eligible for rehabilitation within Dharavi.

What Are Salt Pan Lands?

- **Salt pans** are flat, low-lying lands where seawater is evaporated to extract salt.
- In Mumbai, many such lands were under the control of the **Salt Commissioner** (a Central Government authority).
- With Mumbai’s salt-making activity declining, large tracts have been **decommissioned** for non-agricultural use.
- Salt pans are ecologically sensitive due to their **hydrological role**—they absorb excess rainwater, help

prevent flooding, and may support biodiversity.

- Some critics worry about disrupting local **micro-ecosystems** and **flood patterns**.
- **Government’s Stand:** The land parcels selected in **Mulund, Kanjurmarg, and Bhandup:**
 - ▶ Are **outside the CRZ** (Coastal Regulation Zone),
 - ▶ Are **not wetlands or bird habitats**,
 - ▶ Were **decommissioned nearly a decade ago**.
 - ▶ Don’t fall under **Coastal Regulation Zone (CRZ) limits**.

What is a Coastal Regulation Zone (CRZ)?

- The **Coastal Regulation Zone (CRZ)** refers to specific areas along the coastline that are regulated to protect coastal ecosystems from harmful activities.
- The **CRZ rules** were first established under the **Environment Protection Act of 1986** and officially notified in **February 1991** by the **Ministry of Environment, Forests, and Climate Change (MoEFCC)**.
- These regulations are aimed at conserving the environment, preventing over-exploitation of natural resources, and protecting the livelihoods of coastal communities.
- The rules have been updated several times, with the **2011 CRZ Notification** and the **2018 CRZ Notification** being the most recent changes.
- **Four Types of Coastal Regulation Zones (CRZ):**
 - ▶ **CRZ-I (Ecologically Sensitive Areas):** This zone includes **mangrove swamps, coral reefs, sand dunes, maritime parks, wildlife sanctuaries, and reserve forests**. These areas are highly sensitive and have the highest level of protection. No construction is allowed except for **defense, strategic, or public utility projects**.
 - ▶ **CRZ-II (Urban Areas):** These are **built-up** areas within **municipal boundaries** that are already developed. This zone permits construction but only **authorized projects**. **Unauthorized construction** is strictly prohibited in this zone.
 - ▶ **CRZ-III (Rural Areas):** These are **undeveloped rural areas**, including agricultural and **natural spaces**. Limited development is allowed, primarily for **agriculture** and **essential public utilities** (e.g., schools, hospitals).
 - ▶ **CRZ-IV (Water Bodies):** This zone includes the **tidally-influenced areas of water bodies** such as **rivers, lakes, and seas** extending up to the territorial waters. It is important for **fishing** and **marine life** and is subject to regulations regarding pollution and development activities.

WEST AFRICAN CHIMPANZEE (PAN TROGLODYTES VERUS)

CONTEXT

A recent study published in *Cell* has documented how chimpanzees in West Africa use **unique mating dialects** — a form of cultural behaviour — and how **human impacts are causing the loss of these dialects**. This raises a broader question about **conservation of animal cultures**, not just species.

Key Findings from the Study

- Chimpanzees exhibit culture through learned and shared traditions, like humans.
- Scientists identified **four distinct 'dialects'** used by **male chimpanzees** to signal mating interest:
 - Heel-kick** (stomping to make noise)
 - Knuckle-knock** (soft tapping on surfaces)
 - Leaf-clip** (ripping leaves to produce sound)
 - Branch-shake** (vigorous shaking of branches)
- These gestures are **community-specific** and **learned**, not genetically inherited.
- Demographic collapse** (loss of adult males in some groups) led to the **loss of specific dialects** (e.g., knuckle-knock in the North group).
- Even after the population recovered, the lost dialect didn't return — suggesting **cultural knowledge was not passed on**.

About the Species

- West African Chimpanzee is a subspecies** of the **common chimpanzee**, found in **West Africa**, including **Côte d'Ivoire (also called the Ivory Coast)**.
- These primates live in social structures formed by multiple males and females.
- They are very active and communicative with each other, with many vocalisations, sounds and gestures to interact.
- They are **highly intelligent**.
- IUCN Red List:** Critically endangered

RAFALE M FIGHTER JETS

CONTEXT:

India has finalised a landmark deal to procure **26 Rafale M fighter jets** from France in a government-to-government agreement estimated at over **Rs 63,000 crore**. The Rafale M is the **naval variant** of the Rafale aircraft, designed for carrier-based operations.

What is Rafale M?

- The **Rafale M (Marine)** is a **twin-engine, multi-role fighter jet**, adapted specifically for operations from aircraft carriers.
- The '**M**' in **Rafale-M** stands for **Marine**, as this version is specially designed to operate from aircraft carriers.
 - Unlike regular fighter jets, these naval aircraft have specific modifications that allow them to take off and land on ships at sea.



- It is fitted with **reinforced landing gears, folding wings,** and a **tailhook system,** making it compatible with **short runway and arrested landings** on carriers.
- Built by **Dassault Aviation,** it has proven operational performance with the French Navy and is regarded as one of the most advanced naval fighters globally.
- The Rafale M will replace and supplement the ageing fleet of **MiG-29K** fighters.
- The Navy currently operates the **MiG-29K fighter jets** for its two aircraft carriers - **INS Vikrant and INS Vikramaditya.**



FACT BOX

- India's Air Force already operates 36 Rafale jets, which were delivered between 2020 and 2022 in two squadrons:
 - The 17 Squadron (the Golden Arrows),** based in Ambala.
 - The 101 Squadron (The Falcons),** based in Hashimara.

CHASTE (CHANDRA'S SURFACE THERMOPHYSICAL EXPERIMENT)

CONTEXT

India's Chandrayaan-3 mission successfully deployed **ChaSTE** (Chandra's Surface Thermophysical Experiment) near the Moon's **south pole** in **2023.** **ChaSTE** became the **first instrument** to measure **in-situ temperatures** beneath the lunar surface in this region, helping confirm the **presence of water ice.**

What is ChaSTE?

- ChaSTE is a** scientific instrument onboard Chandrayaan-3's **Vikram lander.**
- It is designed to **measure thermal properties** (like temperature gradients) of the lunar soil. It focused on **subsurface temperature** up to a depth of **10 cm.**
- The instrument was designed by the Physical Research Lab and the Space Physics Lab.

How it works?

- It uses a **rotating mechanism** (not hammering) to **gently push** the probe into the lunar soil.
- It contains **10 temperature sensors,** each spaced ~1 cm apart.
- It measures resistance during insertion and temperature at different depths.

Significance:

- First-ever successful deployment** of a thermal probe into the soil of any celestial body.

- Provided critical data about **thermal conductivity** and **water ice presence** near the south pole.
- Outperformed previous international missions that failed to gather similar data:
- ESA's MUPUS (2014)** on Comet 67P (failed due to faulty landing).
- NASA's HP3 "Mole" (2018)** on Mars (failed to dig and collect data).

Lunar regolith

- Lunar regolith is the unconsolidated surface layer of the Moon.
- It is made up of rock chips, mineral fragments, impact and volcanic glasses and a peculiar component only found on the Moon called "agglutinates".

AUDIBLE ENCLAVE

CONTEXT

A recent study demonstrated a new method of producing **"audible enclaves"** — focused sound zones audible only at specific points, using intersecting ultrasonic beams.

What is an Audible Enclave?

- An **audible enclave** is a small, confined zone in space where sound is clearly audible to a person within it — but completely undetectable to those outside.
- The sound is audible only to people inside that specific area, while remaining inaudible to others around.

Technology used:

- Sound is a wave, it moves through a medium (like air) by vibrating the particles back and forth.
- The audible enclave technology is based on non-linear acoustics and sound wave modulation.
- It uses two high-frequency (ultrasonic) sound waves of different frequencies. These waves are inaudible individually.
- When they intersect, they create an audible sound at that point through non-linear interaction.
- The sound is confined to a narrow area — the audible enclave.

SEMAGLUTIDE

CONTEXT:

A recent global **phase 3 trial** (SOUL trial) showed that **oral semaglutide** — a drug for **type 2 diabetes** — **reduced the risk of heart attacks, strokes, and cardiovascular deaths by 14%,** highlighting the need for **cardio-renal protection** in diabetes management.

What is Semaglutide?

- Semaglutide** is a **GLP-1 receptor agonist (GLP-1RA)** used to:

- ▶ Treat **type 2 diabetes**
- ▶ Manage **long-term weight loss** in people with obesity or related conditions
- It was **approved in India in June 2021** for weight management alongside diet and exercise.
- Semaglutide addresses **both diabetes and cardiovascular**
- **risk** — tackling India's **dual burden** of diabetes and CVD.



FACT BOX

About Diabetes

- Diabetes mellitus, also known as diabetes, is a metabolic disease marked by consistently elevated blood sugar levels.
- Diabetes is a chronic illness in which the body either produces insufficient amounts of insulin or is unable to use the insulin that it does produce efficiently.
- The pancreas secretes the hormone insulin, which is crucial for controlling blood sugar levels. Blood sugar levels can rise and cause issues with the heart, kidneys, feet, and eyes if insulin is not functioning properly.
- **Types:**
 - ▶ **Type 1 diabetes:** This type of diabetes is also called insulin-dependent diabetes. People with Type 1 diabetes must take insulin and also may take other medications daily. This makes up for the insulin not being produced by the body.
 - ▶ **Type 2 diabetes:** Type 2 diabetes is the most common form of diabetes. Type 2 diabetes has historically been diagnosed primarily in adults. But adolescents and young adults are developing Type 2 diabetes at an alarming rate because of family history and higher rates of obesity and physical inactivity.

AXIOM MISSION 4 (AX-4)

CONTEXT

Indian astronaut Shubhanshu Shukla, a seasoned Indian Air Force test pilot, is set to make history as the first Indian to travel to the International Space Station (ISS) as part of the Axiom Mission 4 (Ax-4) in May this year.

About Axiom Mission 4 (Ax-4)

- Axiom Mission 4 (Ax-4) is a **private astronaut mission** organized by **Axiom Space** in collaboration with **NASA and SpaceX**.
- The mission is designed to carry international astronauts to the **International Space Station (ISS)** aboard a SpaceX Crew Dragon spacecraft, launched from **NASA's Kennedy Space Center, Florida**.

- The Ax-4 mission will be the most research-intensive Axiom mission to date, conducting around 60 scientific studies from 31 countries, covering biology, human physiology, materials science, and educational outreach.

◦ Mission Highlights:

- ▶ **Spacecraft:** SpaceX Crew Dragon.
- ▶ **Launch Vehicle:** Falcon 9 rocket.
- ▶ **Crew Composition:**
 - ◆ **Commander:** Peggy Whitson (former NASA astronaut).
 - ◆ **Pilot:** Shubhanshu Shukla (India) – First Indian to travel to ISS.
 - ◆ **Mission Specialists:** Astronauts from Hungary and Poland.
- **ISRO's Role & Experiments:** ISRO is sending six experiments aboard this mission, aimed at advancing space biology, biotechnology, and human spaceflight preparedness. These include:
 - ▶ **Voyager Displays** – Understanding cognitive and visual performance in microgravity using screens.
 - ▶ **Voyager Tardigrades** – Studying survival mechanisms of tardigrades (microscopic animals) to unlock genes linked to resilience in space.
 - ▶ **Crop Seeds on ISS** – Analyzing spaceflight's impact on six crop varieties for future space farming.
 - ▶ **Cyanobacteria Growth Study** – Investigating their role in life-support systems and oxygen generation.
 - ▶ **Myogenesis Study** – Exploring muscle loss and potential therapies for astronauts and Earth-based muscle diseases.
 - ▶ **STEMonstrations & Sprouts** – Promoting student engagement in space research and studying plant growth in space.



FACT BOX

International Space Station

- The International Space Station is a large spacecraft in orbit around Earth.
- It is a **permanently crewed on-orbit laboratory** that enables scientific research supporting innovation on Earth and future deep space exploration.
- It serves as a home where crews of astronauts and cosmonauts live.
- The ISS is equipped with various spaces for daily activities, including six sleeping quarters, two bathrooms, a gym, and a unique 360-degree view bay window.
- It orbits Earth at an average altitude of approximately 250 miles. It travels at 17,500 mph. This means it orbits Earth every 90 minutes.

- The ISS is equipped with various spaces for daily activities, including six sleeping quarters, two bathrooms, a gym, and a unique 360-degree view bay window.
- The first part of the International Space Station (ISS), called '**Zarya**', was launched by Russia on November 1998. It provided fuel, power, and a docking zone for other spacecraft.
- A month later, in December 1998, the United States launched the **Unity Node 1 module**.
- Together with Zarya, they formed the beginning of the ISS.

SOYUZ MS-27 LAUNCH

CONTEXT

NASA astronaut **Jonny Kim** and two **Russian cosmonauts—Sergey Ryzhikov** and **Alexey Zubritskiy**—successfully launched to the **International Space Station (ISS)** aboard **Russia's Soyuz MS-27 spacecraft**. The launch took place from the **Baikonur Cosmodrome in Kazakhstan**, a facility leased by Russia.

About the Mission

- **Spacecraft:** Soyuz MS-27
- **Launch Vehicle:** Soyuz booster rocket
- **Launch Site:** Baikonur Cosmodrome, Kazakhstan
- **Expedition:** Part of the **73rd long-term ISS expedition**
- The spacecraft, **Soyuz MS-27**, was launched atop a **Soyuz booster rocket**—a workhorse of Russian space missions.
- The launch was carried out from **Baikonur Cosmodrome**, a major spaceport leased by Russia.
- The mission is part of **routine crew rotation and scientific research programmes** conducted aboard the ISS.
- **Crew Composition:** The mission includes three members:
 - ▶ **Jonathan Yong "Jonny" Kim** – A NASA astronaut with a diverse background as both a **naval aviator** and **flight surgeon**. He holds the rank of **Lieutenant Commander** in the U.S. Navy.
 - ▶ **Sergey Ryzhikov** – Veteran cosmonaut representing **Roscosmos**, Russia's space agency.
 - ▶ **Alexey Zubritskiy** – A fellow Roscosmos cosmonaut joining his first long-duration mission.
- Upon arrival, they are expected to join the current ISS crew, which includes astronauts from **NASA**, **JAXA** (Japan), and **Roscosmos**.

Objectives of the Mission

- ▶ The primary goal is to support ongoing **scientific investigations** and **technology demonstration experiments** aboard the ISS.

- ▶ Research conducted will contribute to preparations for **future deep-space missions**, including planned crewed missions to the **Moon and Mars**.
- ▶ Some experiments are designed to yield **practical benefits for Earth**, especially in fields such as **medicine, materials science**, and **climate studies**.

MILITARY SPACE DOCTRINE

CONTEXT

India is preparing to release its first Military Space Doctrine within the next few months, marking a significant step in its defence strategy.

About

- The doctrine is being developed by the **Defence Space Agency (DSA)** and will be accompanied by a broader **National Military Space Policy**.
- India's doctrine aims to define and develop military operations in space, particularly in key orbital zones —
 - ▶ low Earth orbit (LEO)
 - ▶ medium Earth orbit (MEO)
 - ▶ geostationary orbit (GEO)
- These are vital for communications, surveillance, navigation, and targeting support.
- The doctrine will focus on how to protect Indian space assets, detect threats, and possibly conduct operations in disrupted or hostile space environments.

IRON INSIDE THE SUN

Context

Scientists have discovered that **iron inside the Sun is far more opaque (blocks more light)** than previous models predicted. This was found through new experiments using advanced technology.

Key Findings

- **Iron in the Sun absorbs more energy** (is more opaque) — up to **30% to 400%** more than expected, depending on the type of radiation hitting it.
- The new measurements were done by **recreating Sun-like conditions** in a lab using X-rays, iron samples, and ultrafast detectors.
- These findings show that **our theoretical models are underestimating iron's opacity**, which means they **may be miscalculating how energy moves through the Sun**.
- This solves an old puzzle: earlier, scientists noticed a mismatch between models and actual solar data (like sound waves inside the Sun), but couldn't explain it. This new research explains the mismatch.



FACT BOX

About Sun

- The Sun is a **giant ball of gas (mostly hydrogen and helium)** with layers where energy is produced and transported.

- It contains more than 99.8% of the total mass of the Solar System with only Jupiter having the remaining 1.2%.
- Iron, though present in small amounts, plays a major role in controlling how energy moves from the Sun's core to its surface.
- Accurate knowledge of opacity (how much elements absorb energy) is crucial to modeling the Sun's structure, temperature, and behavior.





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