

Today's Prelims Topics

Digital Lending Directions, 2025

Context

The Reserve Bank of India issued consolidated 'digital lending directions' with two new sets of instructions.

More in News

1. Covers lending service providers (LSPs) working with regulated entities (REs).
2. Operationalizes a **Public Directory of Digital Lending Apps (DLAs)**.

What are the new Guidelines?

- **Digital View of Loan Offers:** Borrowers must be shown comparable loan offers from all eligible lenders, along with transparent details like interest rate, loan amount, tenure, penal charges, etc.
- **Cooling-off Period:** Allows borrowers to exit loans within a specified time.
- **Data Privacy & Consent:** Borrowers can revoke consent and request data deletion.
- **Public Registry of DLAs:** All digital lenders must now register their apps on the RBI's **Centralised Information Management System (CIMS)**.
 - A list of authorized lending apps will be published and regularly updated on RBI's website.
- **Accountability of REs:** REs are responsible for compliance by their partnered LSPs.
- **Grievance Redressal:** REs and LSPs must set up mechanisms to address borrower complaints efficiently.

WHY WERE THESE GUIDELINES NEEDED?

RBI flagged serious concerns:



Unregulated third-party involvement



Mis-selling and deceptive marketing (dark patterns)



Breach of data privacy



Exorbitant interest rates



Harsh or unethical recovery practices

Source: [RBI: Reserve Bank of India \(Digital Lending\) Directions, 2025](#)

Scientists Create First 'Pangenome' of Asian Rice

Context

Scientists have created a 'pangenome' by stitching together key parts of genomes from **144 varieties of wild and cultivated varieties of rice from Asia**.

What is a Pangenome?

- It is a complete collection of all the genes found in different types of a species.
- It includes:
 - **Core genes** – shared by all types (common genes)
 - **Unique genes** – found only in some types, like wild or special varieties.
- This gives a **full picture of genetic diversity**, unlike a single reference genome which shows only one version.

"Simplified"

- A **single reference genome** is like reading one book to understand a whole library — it gives you an idea, but misses many details.
- In contrast, a **pangenome** combines genetic data from many different varieties (both wild and cultivated). So instead of seeing just one version of the species, you see **all the differences and similarities** between them.

- **Development Process:**
 - Scientists used **144 varieties** of wild and cultivated **Asian rice** (*Oryza sativa* L.).
 - Sequencing was done using **PacBio HiFi** (High-Fidelity) technology.
 - **Computational methods** were used for deep genetic analysis.
 - Focus was on **gene flow within cultivars** and between **cultivated and wild rice**.
- **Significance:**
 - Enables development of **resilient, high-yielding rice varieties**.
 - Can incorporate **traits from wild rice**, improving:
 - Drought resistance
 - Disease tolerance
 - Climate change adaptability.

High-Fidelity (HiFi) Sequencing Technology

- It's a **single-molecule, real-time sequencing (SMRT) technology**.
- It's known for its exceptionally high accuracy in reading individual DNA molecules across long stretches.
- It falls under the **category of Long-read sequencing** methods used in genome sequencing.
 - Long-read sequencing, in general, allows for the sequencing of significantly longer DNA fragments compared to conventional short-read sequencing techniques.

Key Facts

- Rice is the **staple food for two-thirds** of the world's population.
- **India's Rice Production (2024–25):** 220 million tonnes.
- **Climate Change Impact:** Threaten yields, Increase arsenic uptake in rice varieties.
- **New Genome-Edited Varieties (ICAR):** Samba Mahsuri and MTU 1010.

Source: [The Hindu: Scientists create first 'pangenome' of Asian rice](#)

Territorial Army (TA)

Context

Central Government empowered the Chief of the Army Staff to call out every officer and personnel of the Territorial Army to provide for essential guard or for supporting and supplementing the regular army.

Rule 33 of the Territorial Army Rule 1948: It allows the Central Government to empower the Chief of Army Staff to take support of TA.

What is the Territorial Army (TA)?

- The **Territorial Army (TA)** is a part-time, volunteer **reserve force** of the Indian Army, also known as the "**Citizens' Army**."
- It is made up of **gainfully employed civilians** who receive military training and can be **called up for active duty during emergencies**.
- They continue with their civilian jobs in peacetime and **serve when required**, such as during wars, natural disasters, or national emergencies.
- TA personnel hold **military ranks**, get **regular Army pay and perks** during training and active service.
- Many TA officers have received **gallantry awards** (e.g., Kirti Chakra, Vir Chakra, Shaurya Chakra).
- Besides infantry battalions, it includes '**Departmental Units**' linked to specific organizations (Railways, Posts, Telecom, ONGC, IOC) and **ecological battalions/task forces** funded by state governments.

BRIEF HISTORY OF THE TERRITORIAL ARMY (TA)

1857 – ROOTS IN THE FIRST WAR OF INDEPENDENCE
Volunteer forces were raised to assist British forces

1917 – INDIAN DEFENCE FORCE ACT
Universities contributed contingents to Indian Defence Force. Two branches were for
European branch → Auxiliary Force
Indian branch → Indian Territorial Force

NOTABLE MEMBERS IN EARLY YEARS



Netaji Subhas Chandra Bose
Joined Calcutta U-University Corps (198)



Jawahar Lal Nehru
Member of All-lahabad University Corps



Mahatma Gandhi
Served in South Africa Volunteer Force during Boer and Zulu Wars

What role does the Territorial Army play?

- Its primary role is to **relieve the regular Army from static duties**.
- It is meant to **assist the civil administration** in:
 - Dealing with natural calamities.
 - Maintaining essential services in situations affecting community life or national security.
- It is also intended to **provide units for the regular Army as and when required**.
- Departmental Units can **take over services** in their affiliated organizations during industrial unrest or natural disasters.
- Ecological battalions/task forces focus on **preserving and rejuvenating ecology** through reforestation.

Source: [Tribune India: Citizen's Army](#)

News in Short

Schuman Declaration

News? On 9 May 2025, the European Union celebrated the 75th Anniversary of Schuman's Declaration.

About Schuman Declaration

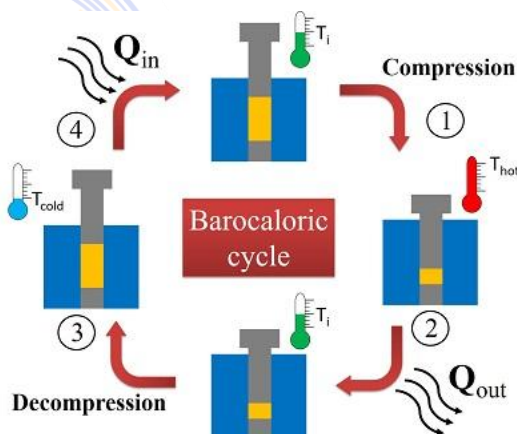
- **Date:** Announced on **9 May 1950** by French Foreign Minister **Robert Schuman**.
- **Proposal:** Called for **Franco-German coal and steel production** to be placed under a common authority.
- **Objective:** Prevent future wars between France and Germany by **integrating key industries**.
- **Foundation of EU:** Marked the beginning of **European integration** and led to the creation of the **European Coal and Steel Community (ECSC)** in 1951.
- **Members:** Initially included **France, West Germany, Italy, Belgium, Netherlands, and Luxembourg**.



Barocaloric Effect

What it Means?

- The barocaloric effect (BCE) refers to **thermal changes** in materials induced by **pressure variations**.
- **Mechanism:** Applying pressure **stops molecular rotation**, makes it heat up.
 - Releasing pressure **restores movement**, causing the material to **absorb heat and cool down** its surroundings.
- **Material Used:** Observed in **plastic crystals** – soft, waxy solid refrigerants **with spinning molecules**.
- **Temperature Range:** Vary over 50°C (90°F) with pressure changes.
- **Advantage:** **No greenhouse gas emissions** (unlike conventional refrigerants).
 - **No leakage** as the material is solid.
 - **More energy-efficient** than current gas-based cooling systems.



New doctrine of global war on terror

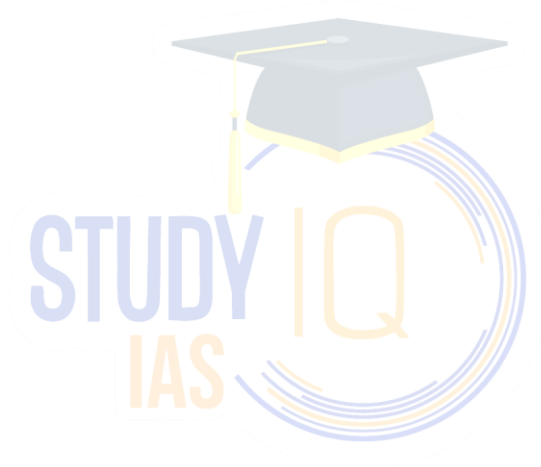
News? In his first address to the nation after Operation Sindoor, Prime Minister Narendra Modi declared new doctrines to fight against terrorism.

What are the new doctrines?

- **Firm and Decisive Retaliation:** India will respond **on its own terms**, without waiting or seeking validation from others.
 - The **threshold for military action has been lowered** in case of future terror strikes.
- **Zero Tolerance for Nuclear Blackmail:** India **rejects the idea that nuclear threats** can shield terror

actors or deter India's retaliation.

- Clear message: **nuclear posturing will not prevent India's counter-terror strike.**
- **No Distinction Between Terrorists and Their Sponsors:** Terror groups, their leaders, and the government/military supporting them (especially Pakistan) will be treated as one entity.
 - This includes targeting **state-sponsored terrorism** directly.
- **India's Fight = Global Fight:** Framed India's action as part of the **larger international war on terrorism.**
- **Measured but Open-Ended Response:** India has **"suspended" military action**, not ended it—keeps options open.
 - Will continue to **evaluate Pakistan's actions** and respond when necessary.
- **Showcasing Strategic Superiority:** Emphasized India's **technological and operational capability**, especially air defence and drone precision.
 - Signaled that future attacks can **strike deep** inside enemy territory.



Places in News

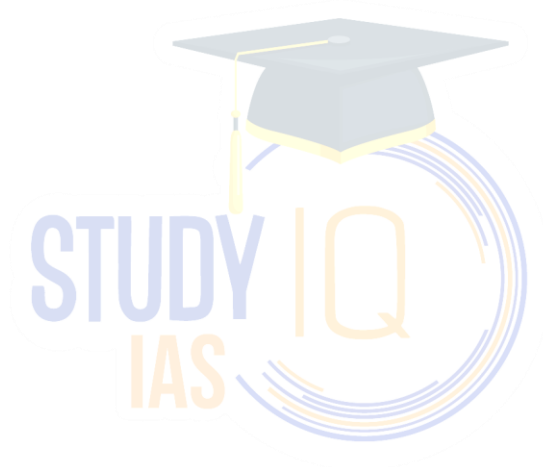
Krakov



News? Poland orders the closure of the Russian consulate in Krakow.

About Krakow

- It is a city in **southern Poland**.
- **Former capital** of the country (Current: **Warsaw**).
- Situated on the **Vistula River**.



Editorial Summary

Delhi's Unwillingness to accept external Mediation

Context

India declined the US call for an India-Pakistan meeting at a neutral venue to start “constructive talks” but India refused.

Why India Doesn't Need Third-Party Mediation in the India-Pakistan Conflict

- **Historical Betrayal at the UN:** When India referred the Kashmir issue to the **UNSC in 1948**, it expected a neutral, legal resolution.
 - Instead, **UK influenced the US** to adopt a **pro-Pakistan stance**.
 - India's legal arguments were **ignored**, and the UNSC **failed to curb aggression**.
- **Simla Agreement (1972): Bilateralism Is the Rule:** After the 1971 war, India and Pakistan signed the **Simla Agreement**, agreeing to resolve issues **bilaterally and peacefully**.
 - Though Pakistan points to a clause allowing “**other peaceful means**,” India insists this **does not imply third-party involvement**.
- **Repeated Failures of Third-Party Initiatives:** In 1962, after the war with China, **US-UK pushed Nehru** to talk to Pakistan. Talks happened but **failed**.
 - In 1965, **the US lost interest**, and talks didn't progress.
 - Such interventions **yielded no results** and often **avored Pakistan**, reinforcing Indian skepticism.
- **India's Consistent Stand: No Mediation:** Even when India was economically and militarily weaker, it **resisted external involvement**.
 - Today, as a **strong regional power**, India is even more assertive about handling matters **independently**.
- **Pakistan's Use of Terror and “Victim” Narrative:** Pakistan uses **proxy terrorism** and then seeks third-party help by **projecting itself as the victim**.
 - The goal: **internationalize Kashmir** and bring pressure on India.
 - India rejects this strategy and refuses to **reward bad behavior** with dialogue or mediation.
- **India's Global Standing:** India is now a **major global player**, and foreign powers (like the US) **lack leverage** to dictate terms.
 - India sees itself as a responsible actor that can **manage its conflicts**.
 - Third-party involvement is seen as **unnecessary and counterproductive**.

Source: [Indian Express: Three's a Crowd](#)

India's rising e-waste, the need to recast its management

Context

With the rapid digital transformation in India needs to manage its e- waste.

Current Volume of E-waste

India

- **Massive Increase in E-waste:** India's e-waste generation rose **151.03%** in 6 years — from **7.08 lakh metric tonnes (MT)** in 2017–18 to **17.78 lakh MT** in 2023–24.
- **Global Rank:** India is **one of the top 5 e-waste generators**, behind China, the US, Japan, and Germany.
- **Informal Sector Dominance:** Around **95% of e-waste** is handled by the **informal sector**, using crude, hazardous methods.
- **Poor Formal Recycling:** Only **~10% of e-waste** reaches formal recycling facilities.

Global

- **Mounting E-waste:** The world generated **57.4 million tonnes** of e-waste in 2021 and is projected to exceed **74 million tonnes by 2030**.
- **Low Recycling Rate:** Only **~17.4%** of global e-waste is officially collected and recycled.
- **Precious Resource Loss:** E-waste contains valuable metals (gold, copper, rare earths), but poor recycling means **billions of dollars** are lost annually.

Why India Must Urgently Manage its E-waste

- **Environmental Risks:** E-waste contains **hazardous materials** like lead, mercury, cadmium, and flame retardants.
 - Improper disposal leads to **air, water, and soil pollution**, affecting ecosystems and human health.
- **Public Health Crisis:** Informal processing often employs **women and children**, exposing them to toxic chemicals.
 - **Average lifespan** of workers in this sector is reportedly **less than 27 years**.
- **Economic Losses:** India loses:
 - **\$10 billion annually** in environmental damage (pollution).
 - **₹80,000 crore+ annually** in critical metal value due to inefficient recycling.
 - **\$20 billion+ annually** in unaccounted tax revenue from informal operations.
- **Missed Opportunities:** E-waste is a **potential goldmine** for resource recovery and **circular economy**.
 - Formal recycling could create **green jobs**, stimulate **technological innovation**, and reduce import dependency on rare materials.

What Needs to Be Done

- **Strengthen Extended Producer Responsibility (EPR):** Enforce strict EPR targets for producers, importers, and brand owners.
 - Expand the list of covered products beyond IT and telecom to include **household electronics, EV batteries, etc.**
- **Implement Floor Pricing for EPR Certificates:** Ensure **fair compensation** to formal recyclers to counter the cost advantage of the informal sector.
 - Encourage investment in **safe, advanced recycling technologies**.
- **Formalise and Regulate the Informal Sector:** Integrate informal workers into formal systems via **training, certification, and safety standards**.
 - Provide **financial and policy incentives** for informal recyclers to transition.
- **Expand Infrastructure and Capacity:** Set up **more formal recycling facilities** with regional access.

- Provide **low-cost financing**, **tech transfer**, and **public-private partnerships** for infrastructure development.
- **Raise Public Awareness:** Launch nationwide campaigns on **safe disposal and take-back programs**.
 - Encourage **consumer responsibility** and participation in buy-back schemes.
- **Create a National E-waste Monitoring System:** Use **digital platforms and AI tools** for real-time tracking of e-waste generation, collection, and recycling.
 - Improve **data transparency** and inter-agency coordination.

Conclusion

India's digital rise must not come at the cost of environmental collapse. A robust e-waste management framework — built on **EPR reforms, pricing stability, infrastructure, and integration of informal workers** — is essential. With the right policies and public support, India can turn its e-waste crisis into an opportunity for **green growth and global leadership in sustainable innovation**.

Source: [The Hindu: India's rising e-waste, the need to recast its management](#)

