

Today's Prelims Topics

Aadi Vaani App

Context

- Aadi Vaani app was released by the union government.
 - The app will be piloted by the **Ministry of Tribal Affairs** under **Adi Karmayogi** initiative.

About Aadi Vaani App

- It is an AI-based **translation app for Adivasi languages**.
- **Developed by:** Tribal Affairs Ministry with IIT Delhi, BITS Pilani, and IIITs.
- **Languages covered (initially):** Bhili, Mundari, Gondi, Santali, Kui, and Garo.

About Adi Karmayogi Initiative

- A **National Mission for Responsive Governance** focused on tribal empowerment.
- Aims to build a **cadre of 20 lakh grassroots functionaries** and **village-level change leaders**.
- Seeks to **strengthen last-mile service delivery** and promote **inclusive development** in tribal regions.
- Linked with **PM JANMAN (Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyaan)** and **DAJGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan)**.
- Stresses on **convergence of departments, community participation, and capability enhancement**.
- **Objectives:**
 - **Develop Local Leadership:** Train State Master Trainers (SMTs), District Master Trainers (DMTs), and Block-level trainers.
 - **Improve Service Delivery:** Ensure effective execution of welfare schemes in remote tribal areas.
 - **Promote Community-Centric Governance:** Empower tribal communities with **dignity, empathy, and purpose**.

Source: [The Hindu](#)

APK Fraud Case

Context

APK fraud is one of the fastest-growing cybercrime threats in the country today.

Current Status of Cybercrime in India (2025)

- **12,47,393 cybercrime cases** reported on the National Cyber Crime Reporting Portal in the last 6 months.
- **900% rise in cybercrimes** between 2021 and 2025 (as per Parliament).

What is an APK (Android Package Kit)

- It is the **installation file format for Android apps**, similar to **.exe files** on Windows.
- It contains all the elements (code, resources, certificates, permissions) required to install and run an app on Android devices.

How is APK Misused in Cybercrime?

- Fraudsters build or source these apps to mimic the appearance and language of official portals, including government subsidy schemes like PM-Kisan, tax refund platforms, electricity boards, or banks asking for KYC updates.
- **Distribution:** Spread via **WhatsApp, Telegram, SMS, or social media** with urgent messages.
- **Permissions Abuse:** Once installed, the app requests multiple permissions (contacts, SMS, notifications, location, microphone).
- **Theft:**
 - Intercepts **banking OTPs**.
 - Accesses contacts, call logs, and location.
 - Harvests and transmits data to external servers in encrypted form.
- **Exploitation:**
 - Unauthorized money transfers.
 - Premature closure of fixed deposits.
 - Layered laundering of funds through **mule accounts** and conversion into **cryptocurrency**.

What are the Investigational Challenges Associated With It

- **Advanced Evasion Techniques:** Fraudulent APKs use encryption, hidden code, and minor rebranding to bypass detection.
- **Cross-Border Operations:** Servers and masterminds are often located abroad (U.S., U.K., China), limiting India's jurisdiction.
- **Complex Money Trails:** Funds move through mule accounts, layered transactions, and cryptocurrency, making tracking difficult.
- **Organised Crime Networks:** Developers, distributors, and handlers operate separately, diffusing accountability.
- **Delayed Reporting & Low Awareness:** Victims often realise late, by which time funds are irretrievable.

Different Initiatives By Indian Government To Tackle Cybercrime

- **Indian Cyber Crime Coordination Centre (I4C, 2020):** Nodal framework for nationwide coordination in cybercrime prevention and investigation.
- **National Cyber Crime Reporting Portal (2019):** Online platform + helpline **1930** for citizens to report cyber frauds.
- **Citizen Financial Cyber Fraud Reporting & Management System (2020):** Real-time system to block and recover stolen funds.
- **Cyber Swachhta Kendra (2017):** Provides free tools for malware/botnet cleaning and promotes safe digital practices.
- **CERT-In (2004):** National nodal agency for issuing cyber threat alerts, handling incidents, and strengthening cybersecurity.

Source: [The Hindu](#)



Advanced Ultra Supercritical (AUSC) Technology

Context

The government is reconsidering its plan to set up a power project based on **AUSC technology** due to its **high initial costs**.

About the Technology

- It refers to **next-generation coal-based thermal power plants** that operate at **very high steam temperatures (~700°C)** and **pressures (above 300 bar)**.
 - It is more advanced than **Supercritical (SC)** and **Ultra-Supercritical (USC)** technologies.
- **Efficiency:** AUSC plants can achieve **~46% efficiency**, compared to:
 - Subcritical: ~38%
 - Supercritical: ~41%
 - Ultra-Supercritical: ~42–43%
 - Higher efficiency means **less coal required** for the same electricity output.
- **Environmental Benefits:** Reduces **CO₂ emissions by about 10–15%** compared to USC units.
 - Cuts other pollutants since fuel consumption is lower.
- **Technology Features:** Requires **special alloys (nickel-based, chromium-based)** to withstand high temperature and pressure.
 - Involves **advanced boiler, turbine, and heat exchanger designs**.

Source: **Economic Times**

Global Security Alliance

Context

Nepal PM expressed support for China's Global Security Initiative, while attending the Shanghai Cooperation Organisation summit in Tianjin.

What is Global Security Alliance?

- **Launch:** Proposed by **Chinese President Xi Jinping in April 2022** at the Boao Forum for Asia.
- **Aim:** To present an **alternative security framework** led by China, countering the **U.S.-led alliances** like NATO and AUKUS.
 - Promote what China calls “**common, comprehensive, cooperative, and sustainable security.**”
- **Core Principles:**
 - **Respect for sovereignty and territorial integrity** of all nations.
 - **Opposition to Cold War mentality** and bloc confrontations.
 - **Dialogue and consultation** over conflict.
 - **Addressing both traditional and non-traditional security threats** (terrorism, cybersecurity, pandemics, climate change).
 - **Indivisible security** — no country should pursue its own security at the expense of others.
- **Implementation:** Managed by the **Global Security Initiative Concept Paper (2023)** issued by China's Ministry of Foreign Affairs.
 - Promotes **Belt and Road Initiative (BRI)** linkages, multilateral dialogues, and greater role for the **Shanghai Cooperation Organisation (SCO)** and **BRICS**.

Source: **Indian Express**

Digital Postal Index Number (DIGIPIN)

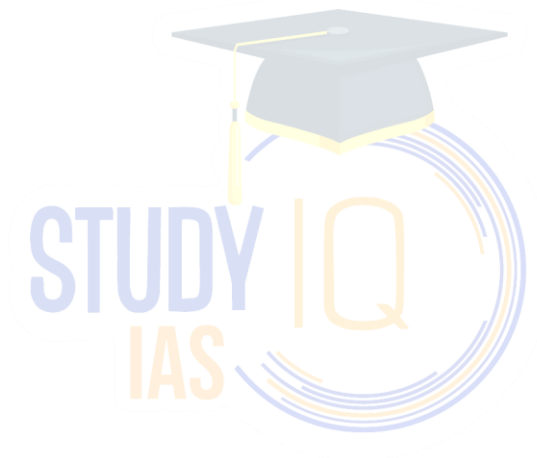
Context

The Department of Posts has signed a Memorandum of Understanding with MAp My India for utilising the company's mapping platforms and products to support DIGIPIN.

About DIGIPIN

- DIGIPIN is a unique **ten-character alphanumeric code** that can be generated for any property that is approximately 4 by 4 square meters on Indian land.
- **Developed by:** Department of Posts, Indian Institute of Technology (IIT) Hyderabad and National Remote Sensing Centre (ISRO).
- **Features:**
 - DIGIPIN is an open-source, interoperable, and privacy-focused system.
 - Each DIGIPIN is encoded with the geographic coordinates of that property so it does not store any personal information.
 - It will not replace the traditional six-digit PIN system. Instead, it is intended to act as an extra layer of precision built on top of existing postal addresses.

Source: [Indian Express](#)



New Revised Policy under GCP (Green Credit Programme)

Context

Green credits for tree plantation will now be awarded **only after 5 years**.

More in News

- Credits will be based on:
 - Minimum canopy density of 40%
 - Tree survival rates, not just number of trees planted.

What is the Green Credit Programme (GCP)?

- **Launched:** By PM Narendra Modi at the **UN Climate Conference in Dubai (Nov 2023)**.
- **Nodal Ministry:** Union Ministry of Environment, Forest and Climate Change (MoEFCC).
- **Legal Basis:** Notified under the Environment Protection Act, 1986.
- **Purpose:** To create a **market-based trading mechanism** that incentivises individuals, companies, and communities to undertake **environment-friendly activities** by rewarding them with *Green Credits*.
- **Scope:** Includes activities like tree plantation, afforestation, water conservation, waste management, sustainable agriculture, and restoration of degraded lands.
- Green credits can be bought, sold, or exchanged on a **market platform**, encouraging private sector and community participation.
- **Progress:** So far, **57,986 hectares** of degraded land registered under GCP.

Source: [Indian Express](#)

News In Short

Indian Rosewood (*Dalbergia latifolia*)



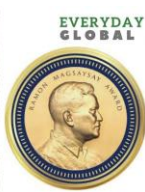
News? The Indian Rosewood faces heightened threat after the expiration of Tamil Nadu Rosewood Conservation Act (1995–2025).

About it

- **Distribution:** Native to the Nilgiris, Anamalai, and Parambikulam ranges of Tamil Nadu, and also found in parts of Southeast Asia.
- **Characteristics:**
 - A tall deciduous or semi-evergreen tree that can grow up to 40 metres in height.
 - Thrives in tropical monsoon climates and is considered drought hardy.
 - Heartwood ranges from golden brown to purplish-brown with darker streaks, giving off a rose-like scent when worked.
 - Fine-grained, durable, and resistant to rot and insects, often called the “ivory of the forests.”
 - Used for premium furniture, cabinetry, decorative veneers, and musical instruments.
- **Conservation Status:** Classified as **Vulnerable** by the IUCN since 2018 and listed under **CITES Appendix II**, requiring permits for international trade.
- **Legal Protection:** Protected under the **Indian Forest Act, 1927**, which regulates felling, harvest, and transport of timber.
 - In Tamil Nadu, the 1995 Rosewood Trees (Conservation) Act prohibited cutting without government permission; it was extended in 2010 but lapsed in February 2025, exposing privately owned rosewood trees, especially in Nilgiri tea plantations, to risk of felling.

Source: [The Hindu](#)

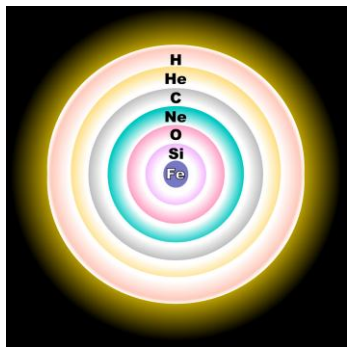


Ramon Magsaysay Award



News? The Indian NGO Educate Girls has won the Ramon Magsaysay Award 2025 for its transformative role in girls' education.

What is the Ramon Magsaysay Award?

- Established in **1958**, it is often called the “**Nobel Prize of Asia**”.
- Named after **Ramon Magsaysay**, the former President of the Philippines, celebrated for his **integrity, courage, and transformative leadership**.
- The award recognises individuals and organisations in Asia who demonstrate **greatness of spirit and selfless service to people**.
- Over **300 awardees from Asia** have received it so far, across areas like **leadership, social justice, human rights,**

	<p>education, and community empowerment.</p> <ul style="list-style-type: none"> • Previous Indian recipients: Mother Teresa, Vinoba Bhave, M. S. Subbulakshmi, Satyajit Ray, Kiran Bedi, Arvind Kejriwal, P. Sainath. <p>Source: The Hindu</p>
<p>Shell Structure</p> 	<p>News? A new study in Nature has provided direct observational evidence of shell structure.</p> <p>What is meant by Shell Structure?</p> <ul style="list-style-type: none"> • The shell structure of stars describes how massive stars fuse progressively heavier elements in concentric layers as they age. • It is often compared to an onion, with each layer dominated by a different element: Outer layers: Hydrogen → Helium → Carbon & Oxygen → Neon & Magnesium → Silicon & Sulphur <ul style="list-style-type: none"> ◦ Innermost core: Iron (inert, no further fusion possible) • Once iron accumulates, fusion stops, and the star collapses, often leading to a supernova explosion. • This is a cornerstone of stellar evolution theory, now confirmed with observational evidence. <p>Source: The Hindu</p>
 <p>Vrindavani Vastra</p>	<p>News? The British Museum has agreed to transfer the 16th-century Vrindavani Vastra to Assam in 2027 for an 18-month public exhibition.</p> <p>About it</p> <ul style="list-style-type: none"> • It is a 16th-century textile created under the guidance of Srimanta Sankardeva, a saint-reformer from Assam, at the request of Koch king Nara Narayan. • It depicts scenes from the life of Lord Krishna, especially his Vrindavan episodes. • Woven using the traditional Satra institution looms and techniques. <p>Source: New Indian Express</p>
<p>Blue Dragon</p> 	<p>News? Several beaches closed in Spain due to blue dragon.</p> <p>About it</p> <ul style="list-style-type: none"> • Small sea slugs, about 4 cm long, that floats on the surface of the ocean. • Found mainly in warm tropical waters of the Pacific, Atlantic, and Indian Oceans. • Their sting can cause severe pain, redness, swelling, nausea, and vomiting in humans, but is not fatal. <p>Source: Indian Express</p>

Mains Topics

India - Japan Relations

Context

Prime Minister Narendra Modi recently travelled to Japan, for the **15th India-Japan Annual Summit**, his first with **PM Shigeru Ishiba**.

Background (India-Japan Relations)

- India and Japan share a **special strategic and global partnership** (2014), reflecting converging economic, political, and security interests.
- Historically, ties have been marked by **civilizational goodwill** (Buddhism, post-WWII support, Japan's aid in India's early industrialization).
- Over the years, the partnership has evolved:
 - **2000**: "Global Partnership."
 - **2006**: "Strategic and Global Partnership."
 - **2014 onwards**: "Special Strategic and Global Partnership."
- In the 21st century, their relationship has been redefined by the **China factor, Indo-Pacific geopolitics, and economic complementarity**.

Symbolism in Relations

- **Buddha & Vivekananda** → Spiritual & Cultural roots.
- **Justice Radhabinod Pal** → Political Trust.
 - Justice Radhabinod Pal - Only judge at Tokyo War Crimes Tribunal to dissent against convicting Japanese leaders.
- **Maruti-Suzuki & Bullet Train** → economic & technological partnership.
- **Quad & Indo-Pacific** → shared strategic vision.

Current Drivers of Cooperation

- **Economic & Investment Cooperation:**
 - Japan is India's **5th largest investor**, Over **USD 38 bn FDI inflows** (2000–2023).
 - **Trade**: \$22.8 bn in 2023–24; \$21 bn (Apr–Jan 2024–25).
 - **India exports**: chemicals, vehicles, aluminium, seafood.
 - **Imports**: machinery, steel, copper, reactors.
 - **Key sectors**: infrastructure, steel, automobiles, semiconductors, renewables, and real estate.
 - Japanese ODA (Official Development Assistance) has funded mega projects like **Dedicated Freight Corridors, industrial corridors, and connectivity projects in Northeast India**.
- **Technology & Innovation:**
 - **Digital Partnership (2018)** → now upgraded to **Digital Partnership 2.0**.
 - Focus on AI, semiconductors, rare earths, IoT, cybersecurity, and start-up linkages.
 - Japanese firms like Fujitsu, Tokyo Electron, and Suzuki are integrating Indian SMEs into **global supply chains**.
- **Defence & Security:**
 - **Key Agreements**:

- Joint Declaration on Security Cooperation (2008)
 - Defence Cooperation & Exchanges MoU (2014)
 - Information Protection Agreement (2015)
 - Reciprocal Supplies & Services Agreement (2020)
 - Co-development of **UNICORN naval mast (2024)**
- **Exercises:** Malabar, Milan, JIMEX, Dharma Guardian, Coast Guard drills.
- **Dialogue mechanisms:** Defence Ministers' meets, Service Chiefs' visits, Joint Staff Talks (2024).
- **Green Energy & Sustainability:**
 - Collaborations on **clean hydrogen, ammonia, biogas, sustainable fuels, and battery supply chains.**
 - Japanese investments in rural biogas projects (e.g., Suzuki–NDDDB in Gujarat).
- **People-to-People & HR Exchange:**
 - **Tourism:** 2023–24 celebrated as **Year of Tourism Exchange** (“Connecting Himalayas with Mount Fuji”).
 - **Diaspora:** 54,000 Indians in Japan, mostly IT professionals & engineers.
 - **Demographic complementarity:** Japan's aging population ↔ India's young workforce.
 - **India–Japan Talent Bridge:** Target of **5 lakh exchanges in 5 years**, with focus on semiconductors, AI, robotics, and IT.
 - Career events at IITs, BITS, IISc, DU → direct recruitment by Japanese firms.
- **Regional & Global Cooperation:**
 - Cooperation through **Quad (India, US, Japan, Australia).**
 - Coordination in **Asia–Africa Growth Corridor** and TICAD (Tokyo International Conference on African Development).
 - Japan strongly supports India's role in the **United Nations Security Council reform.**

Key Takeaways from PM Modi's 2025 Visit to Japan

- **Investment Pledge:** Japan to invest **JPY 10 trillion (~USD 68 bn)** in India over the next decade, doubling the earlier commitment.
- **Economic Security Initiative:** Strengthening **supply chain resilience** in semiconductors, critical minerals, clean energy, and telecom.
- **AI & Digital Cooperation:** Launch of **India-Japan AI Initiative** and Digital Partnership 2.0.
- **Defence & Security:**
 - **Joint Declaration on Security Cooperation** signed.
 - Institutionalised NSA-level dialogue for the first time.
- **Space Collaboration:** ISRO-JAXA agreement on **Chandrayaan-5 (Joint Lunar Polar Exploration Mission).**
- **Green Energy:** Sustainable Fuel Initiative, Battery Chain, Clean Hydrogen & Ammonia partnerships.
- **Human Resource Exchange:** Action plan for **500,000 exchanges**; 50,000 skilled Indians to work in Japan.
- **Northeast Focus:** MoU with Assam–ASEAN Holdings → investments in infrastructure, agro-industries, logistics.
- **Make in India, Make for the World:** Japanese JVs (Toyota–Suzuki, Nippon Steel, Tata–Fujifilm) will boost exports of EVs, specialty steel, and semiconductors to Africa, ME, and SE Asia.

Challenges in India-Japan Relations

- **Economic Delivery Gap:** Despite high pledges, actual investment inflows are sometimes slower than commitments due to regulatory hurdles.
- **China Factor:** While both share concerns, Japan remains economically tied to China; balancing between Beijing and New Delhi creates policy caution.
- **Trade Imbalance:** Bilateral trade (~USD 21 bn, 2023) remains below potential; heavily tilted in Japan's favour.
- **Labour & Cultural Barriers:** Indian workers in Japan face language, cultural, and visa challenges.
- **Project Delays:** Flagship projects like the bullet train face cost overruns, land acquisition issues, and delays.
- **Geopolitical Divergences:** While Japan aligns closely with the US, India seeks strategic autonomy in energy (e.g., imports from Russia), occasionally causing policy mismatches.

Way Forward

- **Deepening Economic Integration:**
 - Expand beyond infrastructure to **supply chain resilience partnerships, digital economy, and startup ecosystems (As agreed during latest summit).**
 - Accelerate high-profile projects (bullet train) to signal credibility in bilateral cooperation.
- **Strategic Coordination:**
 - Align Indo-Pacific strategies-India should integrate **Act East** with Japan's **FOIP vision**.
 - Strengthen defense cooperation through **joint production, technology transfer, and cyber security partnerships.**
- **Balancing China Factor:**
 - Work on **issue-based coalitions** (maritime domain awareness, resilience in rare earth supply) without over-dependence on US alignment.
 - Use Japan's economic leverage and India's strategic weight to **balance China without direct confrontation.**
- **Bridging Russia Divergence:**
 - **Create space for dialogue:** Japan can understand India's Russian dependence; India can align selectively with G7+Japan on **humanitarian and global governance issues.**
- **Cultural Diplomacy & Human Capital**
 - Scale up **academic exchanges, skill mobility, and language training.**
 - Harness **soft power (Buddhism, Yoga, Anime diplomacy)** to strengthen societal connect.
- **Third-Country Cooperation**
 - Expand India-Japan collaboration in **Africa, Southeast Asia, and Indian Ocean Region** for infrastructure and capacity building.
 - **Eg: Asia-Africa Growth Corridor (AAGC)** could be revived to counter China's BRI.

India-Japan relations are anchored in **shared democratic values, complementary economies, and converging security interests in the Indo-Pacific.** A stronger partnership between the two is not just bilateral - it is pivotal for shaping a **multipolar, stable, and rules-based Indo-Pacific order**