Today's Prelims Topics

Central American Integration System (SICA)

Context

The Ministry of External Affairs (MEA) organised a virtual dialogue between India and SICA countries.

About Central American Integration System (SICA)

- It is an institutional **regional integration framework** in Central American Isthmus region.
- **Aim:** Enable the Isthmus of Central America region to become a region of peace, freedom, democracy and development.
- **Establishment**: December **1991** by the signing of the **Protocol to the Charter of Organisation of the Central American States (ODECA) or Tegucigalpa Protocol.**
- **Current members: 8 countries** of Central Asia – Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Belize, Dominican Republic
- **Secretariat:** El Salvador.
- **Presidency**: Presidency of SICA rotates every six months.
- **Summits**: Held twice a year.

Source: DD News

INS Tamal

Context

The Indian Navy is set to commission INS Tamal, on July 1, 2025.

About INS Tamal

- It is a stealth multi-role frigate of the **Krivak class**, part of a series inducted from Russia over the last two decades.
- It is the **second ship** of the **Tushil Class**, an upgraded version of earlier **Talwar** and **Teg Class frigates** (each consisting of 3 ships).
- **Built at: Yantar Shipyard, Kaliningrad (Russia)**.
- Comprises **26% indigenous components**, including:
    - **BrahMos long-range cruise missile** (for land and sea targets).
- Enhanced weaponry and systems compared to predecessors:
    - **Vertically launched surface-to-air missiles (VLS SAMs)**.
    - **Improved 100 mm naval gun**.
    - **Modern EO/IR targeting systems**.
    - **30 mm Close-In Weapon Systems (CIWS)**.
    - **Heavyweight torpedoes** and **anti-submarine rocket systems**.
    - Advanced **fire control radars** and **surveillance systems**.

Source: TheHindu

Blowout

Context

A **blowout** occurred on **June 12 in Sivasagar, Assam**, causing an **uncontrolled gas leak**.

What is a Blowout?

- A **blowout** is a **dangerous and uncontrolled release of oil or natural gas** from a well. It happens when the **underground pressure** in a gas or oil well becomes **stronger than the equipment** designed to contain it.
- **How Does It Happen?**
    - **Drilling Process:** Workers drill into the earth to reach gas trapped under rock. They use **drilling mud** and **blowout preventers (valves)** to manage pressure.
    - **Pressure Overload:** If the underground pressure rises **faster** than the system can handle — due to **faulty valves** or **incorrect mud weight calculations** — gas rushes up through the bore.
    - **Uncontrolled Release:** The gas, mixed with sand, mud, and sometimes oil, shoots out at the surface in a **violent jet**.
- **Why It's Dangerous?**
    - **Natural gas is flammable**→ Even a spark can ignite it, causing **large fires or explosions**.
    - **Harms people and environment**→ It can **endanger workers**, **pollute the air**, and **force evacuations**.

Source: TheHindu

Critical and Emerging Technologies Index

Context

India ranks **10th** in the newly released **Critical and Emerging Technologies Index** by Harvard, showing it **lags behind** major powers like the U.S. and China.

What is the Critical and Emerging Technologies Index?

- A **global index** launched by **Harvard Kennedy School – Belfer Center**.
- It assesses **25 countries** on their performance in **five key technology sectors**:
    - **Artificial Intelligence (AI)** – 25%
    - **Biotechnology** – 20%
    - **Semiconductors** – 35%
    - **Space** – 15%
    - **Quantum Technology** – 5%
- **Purpose:** To help **policymakers understand** the **strengths and weaknesses** of nations in critical tech areas.
    - Combines **public and commercial data** to provide insights.
    - Measures **national power** using **six criteria**:
        - Research
        - Development
        - Talent
        - Commercial capacity
        - Geopolitical leverage
        - Dual-use potential (civil & military)
- **Top Performing Countries**
    - **United States**
    - **China**
    - **Europe** (as a bloc)
    - **Japan**
    - **South Korea**
    - **India's Position:** Ranks 10th.

CHART 1: The chart assesses the national power of countries across key technology sectors such as Artificial Intelligence (AI), Biotechnology, Semiconductors, Space, and Quantum

	AI	Biotechnology	Semiconductors	Space	Quantum	Total
United States	22.7	17.2	26.4	13.8	4.2	84.3
China	14.5	16.8	22.1	8.4	3.8	65.6
Europe	11.6	11.6	8.3	6	3.6	41
Japan	3.3	4.7	10.5	3.3	2	23.8
South Korea	3.5	3.4	9.4	2.5	1.2	20
United Kingdom	4.7	4.6	3.8	3.7	2.4	19.1
Germany	4.7	4.3	3.8	3.6	2.2	18.6
Taiwan	2	1.7	10.1	1.6	0.6	16
France	4.6	3	1.9	3.8	2	15.3
INDIA	3.9	4	2.4	3.6	1.3	15.2
Russia	2	2.7	1.1	6.3	1.2	13.4
Canada	3.5	3.6	1.5	1.9	2.1	12.6
Australia	2.8	3.8	1.2	2.7	1.1	11.6
Italy	2.8	2.6	1.8	3.2	0.9	11.4
Netherlands	2.6	2.3	2.2	2.6	1.5	11.1
Spain	2.6	2.9	1.5	2.3	0.9	10.2
Singapore	2.8	1.7	2.6	1.1	0.8	9
Brazil	1.8	3.2	1.7	1.5	0.2	8.4
Israel	2.1	2	1	2.2	1	8.2
U.A.E	2.2	1.4	1	0.9	0.4	5.8
New Zealand	1.7	1.9	0	1.5	0.2	5.3
Turkey	1.7	1.8	0.1	1.6	0.2	5.3
Saudi Arabia	2.2	1.2	0.1	1.2	0.2	4.9
Iran	1.1	1.2	0.4	1.7	0.3	4.6
Ukraine	0.9	1.1	0	0.8	0	2.8
North Korea	0	0	0	0.8	0	0.8

Source: [TheHindu]

Expansionary Policies In A Slowing Economy

Context

The Reserve Bank of India (RBI) has cut key lending rates in two successive meetings, indicating a significant expansionary shift.

Instances of RBI Lending Rate Cuts in 2025:

- **April 2025:** RBI reduced the **repo rate** by **25 basis points (bps)**.
- **June 2025:** A further **50 bps cut** was announced.
    - **Current repo rate: 5.5%**

What is Expansionary Policy in India?

- Expansionary policy refers to the use of **fiscal** and **monetary tools** to **stimulate economic growth**, especially when the economy is facing low demand, low growth, or recessionary trends.
- **Types:**
- **Expansionary Monetary Policy (RBI):**
    - Reducing **repo rates** to lower the cost of borrowing.
    - Encourages **investment and consumption** by making loans cheaper.
    - Also includes increasing liquidity in the banking system.
- **Expansionary Fiscal Policy (Government):**
    - **Cutting income taxes** (as done in Feb 2025).
    - **Increasing public expenditure** to boost aggregate demand.
    - Providing incentives/subsidies for specific sectors.

Advantages of Expansionary Policy

- **Boosts Aggregate Demand:** Lower interest rates and tax cuts encourage households and firms to **spend and invest more**.
- **Revives Investment Activity:** Helps private sector, especially MSMEs, to access cheaper credit and **restart production**.
- **Reduces Unemployment:** Rising demand for goods and services increases the **demand for labour**, thereby reducing joblessness.
- **Counteracts Economic Slowdown:** Especially useful during **low inflation and low credit growth** (like in 2025), to **revive economic momentum**.
- **Supports Growth Projections:** Aims to maintain or enhance GDP growth (RBI projects **6.5%** for FY 2025–26).

Cons and Risks of Expansionary Policy

- **Inflationary Pressure:** Increased demand may lead to **higher prices**, especially if supply doesn't rise proportionately.
    - Could breach RBI's **targeted inflation band of 4% ± 2%**.
- **Fiscal Deficit Widening:** Tax cuts may reduce revenue without proportional increase in GDP, causing the **fiscal deficit to rise**.
    - May force the government to cut spending, especially on welfare schemes.
- **Policy Coordination Risk:** If both fiscal and monetary policies are expansionary without coordination, it may **destabilize macroeconomic balance**.
- **Delayed Impact:** Time lags in the transmission of monetary signals or implementation of fiscal measures may lead to **slow or uneven outcomes**.

- **Dependence on External Conditions:** Global headwinds (e.g. **Trump's tariff wars**, **Middle East conflict**) may offset domestic policy gains.
- **Uneven Benefits:** Expansionary policies may **disproportionately benefit corporates and high-income groups**, while vulnerable sections may lose out if government cuts revenue spending.

Source: TheHindu

Terms in News

Strait of Hormuz

News? Iran's parliament has voted to **close the strategically vital Strait of Hormuz** in retaliation to recent U.S. strikes on its nuclear facilities.

About Strait of Hormuz

- It is a **narrow waterway** between **Iran** (north) and the **Arabian Peninsula**, specifically the **UAE and Musandam (Oman)** (south).
- It **connects the Persian Gulf** (to the west) with the **Gulf of Oman** (to the east).
- Notable **islands in the strait** include **Hengam, Hormuz, and Qishm**.
- Approximately **30% of the world's liquefied natural gas (LNG)** and **25% of global oil supply** passes through the strait daily.

Source: IndianExpress

Editorial Summary

Steering the Indian Economy Amidst Global Troubles

Context

Trade wars, tariff reviews and new bilateral deals are reshaping global commerce. For an export-oriented India, this turbulence is both a near-term issue and an opportunity to lock itself into the new supply-chain geography.

Current Situation in Global Trade

- **Resurgence of Trade Wars:** Countries are imposing or reviewing tariffs, especially the U.S. on strategic imports.
- **Proliferation of Bilateral Trade Agreements (BTAs):** Shift from multilateralism to **mini deals and FTAs**, making trade rules more fragmented.
- **Geopolitical Tensions:** Conflicts (e.g., U.S.-China, Middle East) are disrupting supply chains and raising shipping costs.
- **Supply Chain Realignment:** Global firms are adopting **'China +1' or 'friend-shoring'** strategies to diversify manufacturing bases.
- **India's Trade Exposure:** The U.S. is India's largest export market (~20% of merchandise exports).
    - Sectors like **gems & jewellery, pharma, auto parts, textiles** are highly dependent on the U.S.

Why This Can Be a Problem

- **Uncertainty in Tariff Regime:** Unclear U.S. trade policy disrupts planning and pricing for Indian exporters.
- **Threat to MSMEs:** Tariff increases could make Indian exports **unviable**, especially for smaller firms.
- **Dumping Risk in India:** Countries like China may divert excess output to India, **hurting domestic industries**.
- **Delayed Investment & Export Orders:** Businesses delay capital investment and orders due to **uncertain returns**.
- **Muted Export Gains Despite Tax Cuts:** Income tax cuts haven't spurred consumption significantly, affecting demand.

Opportunities for India

- **Supply Chain Diversification:** India can emerge as a **key alternative manufacturing base** for global companies.
- **First-Mover in U.S. BTA:** Early conclusion of a trade deal with the U.S. can offer **competitive edge**.
- **Robust Services Sector:** India's IT and digital exports remain resilient and continue to grow.
- **Expanding FTA Network:** FTA with the **U.K. concluded**; talks with **EU and Australia** ongoing.
- **Potential to Anchor Global FDI:** India can attract companies **relocating from China, Vietnam, etc.**

Source: The Hindu

A need to revisit food and fertiliser subsidies

Context

As Prime Minister Narendra Modi completes 11 years, India's macroeconomic indicators reflect significant growth and reduced poverty, yet challenges of inequality, subsidy inefficiency, and environmental sustainability persist.

Changes in India's Economy (2014–2025)

- **Nominal GDP Growth:**
  - 2014: **$2.04 trillion**
  - 2025: **$4.19 trillion** (nearly doubled in 11 years)
- **PPP-based GDP Expansion:**
  - 2004: **$2.75 trillion**
  - 2014: **$6.45 trillion**
  - 2025: **$17.65 trillion** (3rd largest globally)
- **Per Capita Income in PPP terms improved:**
  - 2004: **$2,424.2**
  - 2014: **$4,935.5**
  - 2025: **$12,131.8**
- **Significant Poverty Reduction:** Extreme poverty (at $3/day) reduced from **27.1% in 2011 to 5.3% in 2022**.
  - Poverty at $4.20/day dropped from **57.7% to 23.9%** during 2011–2022.
- **Agriculture Sector Resilience:** Average agricultural growth (2015–2025): **4% per annum** (previously 3.5% under UPA).

Persistent Issues

- **Income Inequality:** Gini coefficient stable (~0.33–0.35), showing only moderate improvement.
- **Low Per Capita Income Globally:** India ranks lowest among G20 nations, below Sri Lanka and Bhutan in PPP per capita terms.
- **Subsidy Inefficiencies:** Large spending on **food subsidy (Rs 2.03 lakh crore)** and **fertiliser subsidy (Rs 1.56 lakh crore)**, yet facing significant leakages and inefficiencies.
- **Environmental Concerns:** Imbalanced use of fertilisers causing soil, water, and air degradation.
  - Rising dependence on fertiliser imports.
- **Identification Challenges:** Difficulty in accurately identifying and supporting **tenant farmers**.

Measures for Addressing Issues

- **Subsidy Rationalisation (Food & Fertiliser):** Shift from free grains distribution to targeted **digital food coupons** for nutritious foods (milk, pulses, eggs).
  - Replace fertiliser subsidy with **digital fertiliser coupons**, promoting balanced fertiliser use and natural farming.
- **Boost Inclusive Growth:** Accelerate reforms for job creation, especially in rural and informal sectors.
  - Enhance social infrastructure (health, education) to reduce inequality.
- **Environmental Sustainability:** Deregulate fertiliser markets to encourage innovation in eco-friendly products and methods.
  - Promote organic and natural farming through targeted incentives.

- **Improve Farmer Identification:** Use advanced data triangulation to accurately identify tenant farmers.
    - Extensive outreach to earn farmer trust prior to policy implementation.
- **Political Communication:** Leverage strong political leadership and effective communication strategies by the Prime Minister to ensure smooth policy transitions and gain public trust.

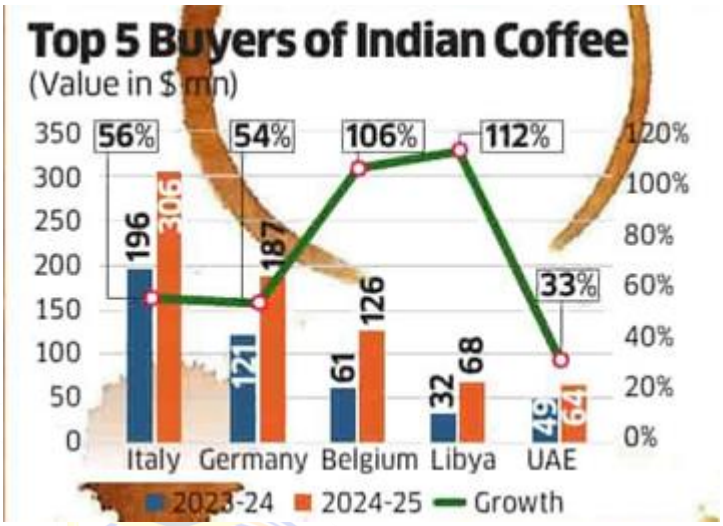
Source: Indian Express

India's Robusta Beans Export

Context

The country's coffee exports have **increased by about 125%** to $1.8 billion over the last 11 years, according to government data.

Journey of Coffee Plantation in India



- **Origin (17th Century)**: Introduced around 1670 by **Baba Budan**, who smuggled seven coffee seeds from Yemen and planted them in the hills of **Chikmagalur, Karnataka**.
- **British Expansion (19th Century)**: British planters systematically expanded coffee cultivation in Karnataka (especially Kodagu and Chikmagalur), Tamil Nadu (Nilgiris), and Kerala (Wayanad).
- **Post-Independence Scenario (1950s-1980s)**: Coffee plantations gradually expanded to other southern states, stabilizing India as a key global exporter.
- **Crisis and Transition (1990s)**: Severe **white stem borer** infestations destroyed high-quality **Arabica** coffee plantations, especially in Karnataka.
    - Farmers transitioned from **Arabica** (high-quality, sensitive, premium-priced) to **Robusta** (hardy, lower-priced).
- **Recent Boom (Post-2020)**: Robusta coffee prices surged globally, driven by global shortages, positioning Indian coffee (especially from Kodagu) favourably in international markets.
    - Exports reached record levels ($1.2 billion in FY2024-25), despite modest volume growth.

Major Regions of Coffee Plantation in India

- **Karnataka** (Largest producer ~70% of India's coffee):
    - **Kodagu (Coorg)**: Robusta-dominated, largest contributor.
    - **Chikmagalur**: Traditionally Arabica-dominant but increasingly shifting to Robusta.
    - **Hassan**: Mixed Arabica and Robusta.
- **Kerala**: **Wayanad** (Predominantly Robusta).
- **Tamil Nadu**: **Nilgiris, Yercaud, Shevaroys, Palani Hills** (Mostly Arabica).
- **Andhra Pradesh**: **Araku Valley**→ High-quality, exclusively Arabica.
- **Northeast India**: Parts of Assam, Meghalaya, Mizoram, Tripura, Nagaland.

Requirements for Coffee Plantation

- **Climate**:
    - Moderate rainfall (150–250 cm/year).
    - Cool to moderate temperatures (15–28°C).

    - Frost-free environment.
    - High humidity and misty conditions ideal.
- **Altitude**:
    - **Arabica**: Higher altitudes (600–2200 meters above sea level).
    - **Robusta**: Lower elevations (300–800 meters above sea level).
- **Soil**: Rich, well-drained loamy soils with organic matter.
    - Slightly acidic (pH around 6.0 to 6.5).
- **Shade & Canopy**: Indian coffee predominantly grown under shade (shade-grown), creating natural habitat that preserves biodiversity and moisture.
    - Trees such as Jackfruit, Silver Oak, Teak, and Pepper vines are common shade-providers.
- **Labour Intensive**:
    - Primarily hand-picked, ensuring higher quality.
    - Labour cost is a significant portion (~60%) of production expenses.

Recent Trends and Challenges

- **Shifts in Coffee Varieties**: Once 70% Arabica and 30% Robusta, the ratio has reversed. Now India exports premium-quality Robusta globally.
- **Labour Shortage**:High wages, welfare schemes, and urban migration causing persistent labour shortages.
- **Environmental Concerns & Sustainability**: Elephant-human conflicts due to plantation encroachment on elephant corridors.
    - Indian coffee cultivation's shade-grown method positions India advantageously under new EU deforestation regulations (EUDR, effective Dec 2025).
- **Market Volatility**: Recent price fluctuations due to changing global supplies.
    - Increasing formation of farmer-producer companies to leverage better pricing power.

Coffee Board of India

- **Established**: 1942 under the Coffee Act of 1942.
- **Headquarters**: Bengaluru, Karnataka.
- **Ministry**: Ministry of Commerce and Industry, Government of India.
- **Primary Functions**:
    - **Promotion of coffee production** through research and development.
    - **Quality assurance and grading**.
    - **Market promotion** of Indian coffee globally.
    - **Export facilitation**.
    - **Supporting growers** through training, guidance, and subsidies.
    - **Providing market intelligence and price information**.
- **Recent Initiatives**:
    - Encouraging sustainability practices.
    - Assisting farmers in transitioning to profitable Robusta.
    - Promoting value-added coffees like organic, specialty, and eco-friendly produce.

Conclusion

India's coffee industry has traversed multiple phases—from the initial high-value Arabica dominance, through pest-driven challenges, to successfully leveraging robusta's global demand surge. Strategic interventions by the Coffee Board, sustainability initiatives, and adaptability to global market changes hold promise, though labour availability remains a critical issue moving forward.

Source: Economic Times