

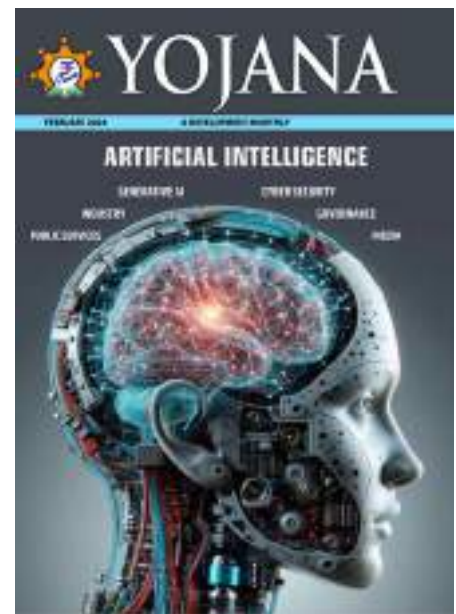
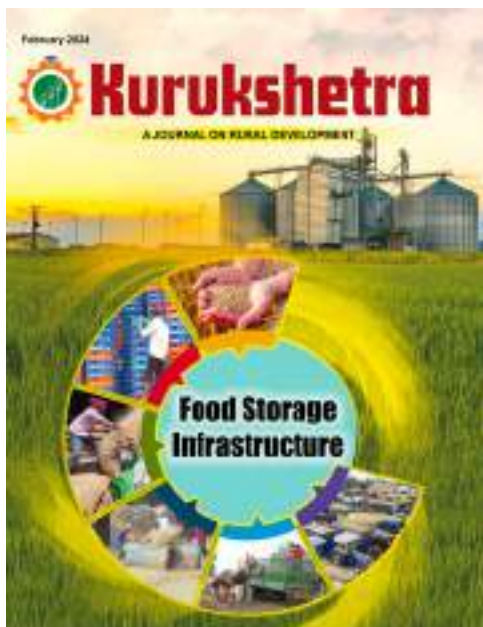
# OFFICERS' Pulse

## DIGEST

February 2024



DownToEarth Business Standard



**OFFICERS IAS ACADEMY™**

**Current Affairs Monthly**

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## Schemes

### 1) PM-Surya Ghar Muft Bijli Yojana

#### What's in the news?

- In a bid to boost solar power and sustainable progress, the Government of India has launched the PM-Surya Ghar Muft Bijli Yojana (PM-SGMBY) with a total outlay of ₹75,021 crore for **installing rooftop solar in one crore households nationwide.**
- The scheme aims to **provide free electricity up to 300 units every month to the one crore households of the country.**

#### About the Scheme

- Under the scheme, the **households who opt to install rooftop solar electricity units will get 300 units of electricity for free every month.**
- The scheme **focuses on the household segment with up to 3 kW systems**, which covers most of the residential consumers in India.
- The households will apply for subsidy through the **National Portal** (<https://pmsuryaghar.gov.in>) and will be able to select a suitable vendor for installing rooftop solar.

#### What is the amount of subsidy for households?

- The initiative offers a **subsidy of 60% of the solar unit cost for systems up to 2 kW capacity and 40% of the extra system cost for systems between 2 and 3 kW capacity.**
- The subsidy is **limited to systems up to 3 kW capacity.**
- Based on current benchmark prices, eligible beneficiaries will receive a subsidy of Rs 30,000 for 1 kW systems, Rs 60,000 for 2 kW systems, and Rs 78,000 for 3 kW systems or higher.

- Households will also be able to access **collateral-free low-interest loan products of around 7%** for installation of residential Rooftop Solar systems up to 3 kW.

#### Other Features of the Scheme

- A **Model Solar Village** will be developed in **each district** of the country to act as a role model for adoption of rooftop solar in rural areas.
- **Urban Local Bodies and Panchayati Raj Institutions** shall also benefit from incentives for promoting RTS installations in their areas.

#### Outcome and Impact

- Through this scheme, the households will be **able to save electricity bills** as well as **earn additional income through sale of surplus power to DISCOMs.**
- The proposed scheme will result in **addition of 30 GW of solar capacity** through rooftop solar in the residential sector, generating **1000 BUs (billion units) of electricity** and resulting in **reduction of 720 million tonnes of CO2 equivalent emissions** over the 25-year lifetime of rooftop systems.
- It is estimated that the scheme will create around **17 lakh direct jobs** in manufacturing, logistics, supply chain, sales, installation, O&M and other services.

#### Who is eligible for PM Surya Ghar Muft Bijli Yojana?

- Individuals must meet the following criteria to apply for the scheme:
  1. Indian citizenship.
  2. Ownership of a house with a suitable roof for solar panel installation.
  3. Possession of a valid electricity connection.

4. Absence of prior subsidies for solar panels.

## 2) Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana

### What's in the news?

- The Union Cabinet has approved the "Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)", a **Central Sector Sub-scheme under the Pradhan Mantri Matsya Sampada Yojana for formalization of the fisheries sector and supporting fisheries micro and small enterprises.**
  - *Refer Pulse June 2023 Digest edition for details about Pradhan Mantri Matsya Sampada.*
- The sub-scheme will be for **four years** from FY 2023-24 to FY 2026-27 in **all States/Union Territories.**
- **Note:** India is the **3rd largest fish producer, 2nd largest aquaculture producer and 4th largest exporter of fish and fisheries products.**

### Aims and objectives of PM-MKSSY

- **Gradual formalization** of fisheries sector and **enhanced access to institutional credit;**
- To create a **National Fisheries Digital Platform** to provide **40 lakh small and micro-enterprises work based identities** for improved service delivery;
- The program focuses on **improving value chain efficiency and ensuring safe, quality fish** by supporting 55,000 targeted micro and small enterprises;
- Address issues of aquaculture crop losses due to disease through **insurance coverage for aquaculture** to strengthen production, productivity;
- **Enhance export competitiveness** through value addition, value realization and value creation.

### Expenditure involved

- The sub-scheme will be implemented at an estimated outlay Rs.6,000 crore consisting of **50% public finance**, including the World Bank external financing, and **rest 50% being the anticipated investment from the private sector leverage.**

### Intended Beneficiaries:

- **Fishers, Fish (Aquaculture) Farmers, Fish workers, Fish Vendors or such other persons** directly engaged in fisheries value chain are expected to benefit from the scheme.
- The initiative will support **6.4 lakh micro-enterprises and 5,500 fisheries cooperatives**, providing access to institutional credit.

## 3) Other Notable Topics

### 3.1. VAIBHAV Fellowship Scheme About

- The **Ministry of Science & Technology** launched the **VAIBHAV Fellowship Scheme for the Indian Diaspora abroad** in 2023.
- The Fellowship aims at **improving the research ecosystem of India's Higher Educational Institutions** by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world through mobility of faculty/researcher from overseas institutions to India.
- The Scientists on Fellowship would identify an Indian Institution for collaboration and may spend **up to two months in a year for a maximum of 3 years.**
- The fellows would facilitate an **exchange of best practices**

between the two countries and attempt to address the areas of concern in collaborative research between the two countries.

### 3.2. Swadesh Darshan Scheme

#### About Swadesh Darshan

- The Swadesh Darshan Scheme was launched by the **Ministry of Tourism** in 2014.
- It aims to develop **theme-based tourist circuits** in the country. These tourist circuits will be developed on the principles of high tourist value, competitiveness and sustainability in an integrated manner.
- It is a **Central Sector Scheme** and **completely funded by the central government of India**.
- Efforts are made to achieve convergence with other schemes of Central and State Governments and also to leverage the voluntary funding available for Corporate Social Responsibility (CSR) initiatives of Central Public Sector Undertakings and Corporate Sector.

#### The scheme has following objectives:

- Position tourism as a major engine of economic growth and job creation;
- Develop circuits having tourist potential in a planned and prioritized manner;
- Promote cultural and heritage value of the country to generate

livelihoods in the identified regions;

- Follow community based development and pro-poor tourism approach;
- Create employment through active involvement of local communities;
- Projects under the scheme shall be under the following identified themes; **Eco-tourism, Wildlife, Buddhist, Desert, Spiritual, Ramayana, Krishna, Coastal, Northeast, Rural, Himalayan, Tribal and Heritage**.

#### Swadesh Darshan 2.0

- The Ministry of Tourism has revamped its Swadesh Darshan scheme as **Swadesh Darshan 2.0** for **development of sustainable and responsible tourist destinations**.
- The Swadesh Darshan 2.0 scheme envisages an **increase in private sector investment** in tourism & hospitality.
- It would help in **increasing Public Private Partnerships (PPP)** in the field of tourism and operation and maintenance of the created assets under the scheme.

# Initiatives

## 1) Mission Utkarsh

### What's in the news?

- The Centre has launched a new initiative - **Mission Utkarsh** - to focus on **nutritional improvement among adolescent girls in anaemia prone districts using Ayurveda**.
- The project for anaemia control under Mission Utkarsh will be a **joint public health initiative by the Ministries of Ayush and Women and Child Development** and would be launched in **five aspirational districts** first as a pilot project.
- In the first phase, the focus is on improving the anaemic status of adolescent girls (14-18 years) in **five aspirational districts of five states** namely Assam (Dhubri), Chhattisgarh (Bastar), Jharkhand (Paschimi Singhbhum), Maharashtra (Gadchiroli), and Rajasthan (Dhaulpur).
- Under Mission Utkarsh, 15 central ministries or departments will work to **elevate districts at the bottom, to State and national averages**. This project will cover approximately 10,000 Anganwadi Centres in the five districts.
- The **coordinating agency** for the project will be the **Central Council for Research in Ayurvedic Sciences (CCRAS)**.
  - *CCRAS is an **autonomous body of the Ministry of AYUSH**.*
  - *It is an apex body in India for the **formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine**.*

- **Classical Ayurveda medicines** (Drakshavaleha and Punarnavadi mandoor) for better nutrition to improve the health of the anemic adolescent girls will be provided for a period of 3 months.

### Related Information

#### About Anaemia

- Anaemia is a condition in which the **number of red blood cells or the haemoglobin concentration within them is lower than normal**.
- Haemoglobin is needed to **carry oxygen** and if one has too few or abnormal red blood cells, or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues.
- This results in symptoms such as **fatigue, weakness, dizziness and shortness of breath, among others**.
- Anaemia may be **caused by several factors**: nutrient deficiencies through inadequate diets or inadequate absorption of nutrients, infections, inflammation, chronic diseases, gynaecological and obstetric conditions, and inherited red blood cell disorders.
- The **most common nutritional cause** of anaemia is **iron deficiency**, although **deficiencies in folate, vitamins B12 and A** are also important causes.
- In India, **Anemia Mukt Bharat strategy** is implemented to reduce anaemia among **six beneficiaries age group** - children (6-59 months), children (5-9 years), adolescents (10-19 years), pregnant and lactating women and in women of reproductive age group (15-49 years) in **life cycle approach** through implementation

of **six interventions** via robust institutional mechanism.

## 2) Digital India futureLABS

### What's in the news?

- The government has launched Digital India futureLABS, a new platform to **strengthen research and development (R&D) and innovation** in areas such as automotive, computing, communication, strategic electronics, industrial electronics and internet-of-things in the country.
- The futureLABS will serve as a **platform for partnerships and strategic direction** in these areas.
- The initiative seeks to move up the value chain, fortify domestic R&D, and create a collaborative ecosystem for the development of IPs, standards, and the next-generation Electronics System Design in the country.
- The **Centre for Development of Advanced Computing in India (C-DAC)** will be the nodal agency to develop the overall plan, standard operating procedures and guidelines for startups and other private sector companies working in this space.
  - *C-DAC is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.*
  - *It was set up in 1988.*

## 3) Extension of Fisheries Infrastructure Development Fund

### What's in the news?

- The Union Cabinet has approved **extension of Fisheries Infrastructure Development**

**Fund (FIDF) for another 3 years upto 2025-26.**

- The fund was created in **2018-19** to **address the infrastructure requirement for the fisheries sector.**
- **National Fisheries Development Board (NFDB), Hyderabad**, is the Nodal Implementing Agency of FIDF.
  - *NFDB was established in 2006 as an autonomous organization under the administrative control of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying to enhance fish production and productivity in the country and to coordinate fishery development in an integrated and holistic manner.*
- Till now, a total 121 fisheries infrastructure projects with an investment cost of over Rs. 5000 crore have been approved for creation of various fisheries infrastructures.

### Benefits under FIDF

- Projects under are eligible for loan up to **80% of the estimated/actual project cost.**
- **Interest subvention of up to 3% per annum** is provided for development of identified fisheries-based infrastructure facilities.

### Eligible Entities

- The eligible entities under FIDF are State Governments / Union Territories, State Owned Corporations, State Government Undertakings, Government Sponsored, Supported Organizations, Fisheries Cooperative Federations, Cooperatives, Collective Groups of fish farmers & fish produces, Panchayat Raj Institutions, Self



Help Groups (SHGs), Non-Governmental Organisations (NGOs), Women & their entrepreneurs, Private Companies and Entrepreneurs.

#### **Nodal Loaning Entities**

- National Bank for Agriculture and Rural Development (NABARD)
- National Cooperatives Development Corporation (NCDC)
- All scheduled Banks.

#### **Significance**

- Extension of FIDF would **intensify development of various fisheries infrastructure** such as fishing harbours, fish landing centres, ice plants, cold storage and fish transport facilities.

### **4) SWAYAM Plus Platform**

#### **What's in the news?**

- The **Ministry of Education** has recently launched the SWAYAM Plus platform to offer programmes focused on **enhancing employability and professional development** through **partnerships with prominent industry players.**
  - SWAYAM Plus is an **expansion of the SWAYAM**, the Massive Open Online Course (MOOC) platform, launched by the **Ministry of Education** in 2017 to provide educational opportunities by bringing the best teaching and learning resources to everyone.
- Operated by the **Indian Institute of Technology (IIT)-Madras**, SWAYAM Plus platform aims to **extend educational opportunities to both traditional students and working professionals.**
- SWAYAM Plus also envisions bringing in features such as **access to mentorship, scholarships, and**

**job placements** as value-added services.

### **5) Other Notable Topics**

#### **5.1. National Technical Textile Mission**

##### **What are Technical textiles?**

- Technical textiles are textile materials and products **used primarily for their technical performance and functional properties** rather than their aesthetic or decorative characteristics. They are **engineered products with a definite functionality.**
- Technical textiles are manufactured using **natural as well as man-made fibres** such as Nomex, Kevlar, Spandex, Twaron that **exhibit enhanced functional properties** such as higher tenacity, excellent insulation, improved thermal resistance etc.
- These products find end-use application across multiple non-conventional textile industries such as healthcare, construction, automobile, aerospace, sports, defence, and agriculture.

##### **About NTTM**

- To position India as a global leader in Technical Textiles, the **Ministry of Textiles** launched the National Technical Textile Mission in **2020.**
- The Mission also supports the **'Make in India' initiative** promoting domestic manufacturing of related machinery and equipment.
- The Mission has a target to take the **domestic market size of the technical textile sector to \$ 40-50 Bn** by the year 2024 with an **average growth rate of 15-20% per annum.**

- The Mission comprise of the following **four components**:
  - **Research, Innovation and Development**
  - **Promotion and Market Development**
  - **Export Promotion**
  - **Education, Training, Skill Development.**

## 5.2. Digital India

### About

- In 2015, the Indian government launched the 'Digital India' initiative with an aim to transform India into a **knowledge-based economy** and a **digitally empowered society** by **ensuring digital services, digital access, digital inclusion, digital empowerment and bridging the digital divide.**
- The initiative encompasses the following three key objectives:
  - Establish a secure and stable digital infrastructure
  - Deliver digital services
  - Ensure that every citizen has access to the Internet.
- The programme is coordinated by the **Ministry of Electronics and Information Technology** with the Ministries and Departments in the Central and State Governments partnering it in their respective domain areas.

## 5.3. PM-WANI

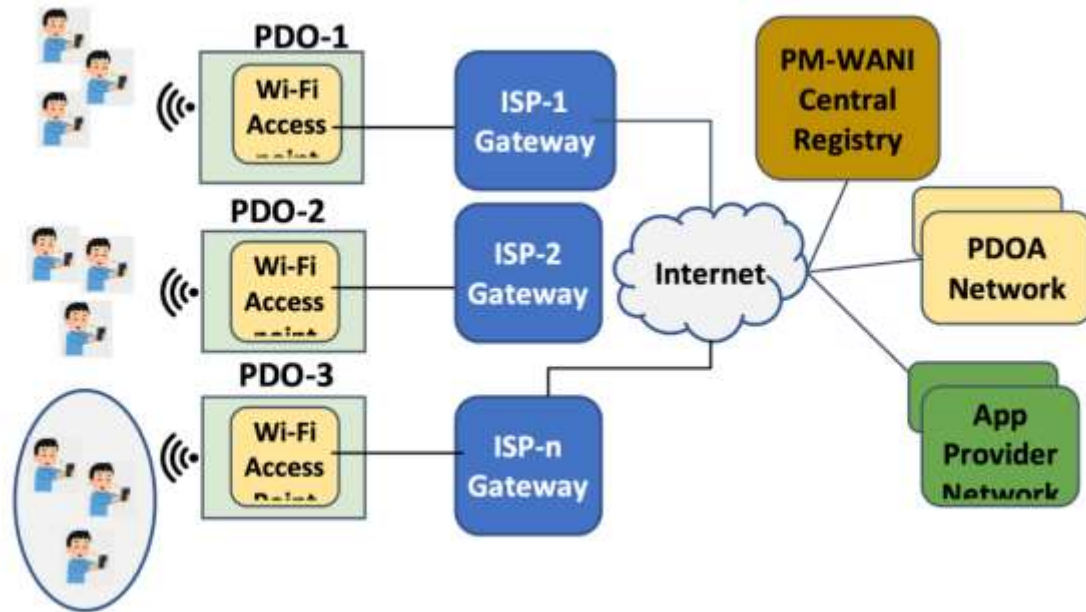
### About PM-WANI

- Prime Minister's WiFi Access Network Interface (PM-WANI) was launched by the **Department of Telecommunication** in **2020.**
- The scheme aims to **enhance the proliferation of public WiFi hotspots** to create robust digital communications infrastructure in the country, especially in rural areas.
- Through better access to public hotspots, the government aims to **increase employment** for small and micro-entrepreneurs and **provide low-cost internet** to the underserved urban poor and rural households.
- The scheme encourages **local shops and establishments** to provide Wi-Fi for **last-mile internet delivery** which **does not require a licence or charge a registration fee.**



### How can one access the PM-WANI internet?

- To access public hotspots under the PM-WANI scheme one needs to download a **relevant App** which shows the available networks.
- The user can then choose from a list of available connections and **make a payment to use the network.** The user can access the network till his/her balance is exhausted.



### PM-WANI ecosystem

- The PM-WANI ecosystem consists of **four parts: Public Data Office (PDO), Public Data Office Aggregator (PDOA), App Provider, and Central Registry.**
  - PDO establishes the Wi-Fi Hotspots and provides internet access to users.
  - PDOA provides authorisation and accounting services to PDOs.
  - The app provider displays the available hotspots in the phone's proximity.
  - The central registry, which is overseen by the **Centre for Development of Telematics (C-DOT)**, maintains details of App Providers, PDOs, and PDOAs.

# Environment

## 1) Lead Toxicity

### About

- Lead is a **naturally occurring toxic metal found in the Earth's crust.**
- Its widespread use has resulted in **extensive environmental contamination, human exposure and significant public health problems** in many parts of the world.
- Lead poisoning is a **serious and sometimes fatal condition** which occurs when lead builds up in the body.
- Sources of lead poisoning include **battery recycling, lead mining, smelting, welding, soldering, automobile repatriating, household paints, etc.**

### Impact of Lead Toxicity

- Exposure to lead can **affect multiple body systems** and is **particularly harmful to young children and women of child-bearing age.**
- Lead in the body is **distributed to the brain, liver, kidney and bones.** It is stored in the **teeth and bones**, where it can accumulate over time. Human exposure is usually assessed through the **measurement of lead in blood.**
  - There is **no known safe blood lead concentration;** even blood lead concentrations **as low as 3.5µg/dL** may be associated with decreased intelligence in children, behavioural difficulties and learning problems.
- Lead in bone is released into blood during **pregnancy** and becomes a **source of exposure to the developing foetus.**
- **Young children** are particularly vulnerable to the toxic effects of

lead and can suffer **profound and permanent adverse health impacts,** particularly on the development of the **brain and nervous system.**

- Lead also causes **long-term harm in adults,** including **anemia, hypertension, renal impairment,** and **toxicity to the reproductive organs.**
- Exposure of pregnant women to high levels of lead can cause **miscarriage, stillbirth, premature birth and low birth weight.**

### Why in News?

- Despite the awareness, lead toxicity continues to be a public health concern in India.
- **Half the children in India report high blood lead levels,** reveals a report by the **UN Children's Fund (UNICEF).**
- The report says **275 million children** in India record blood lead levels **beyond 5µg/dL.** Of these, **64.3 million children's blood lead levels exceed 10µg/dL.**

## 2) Other Notable Topics

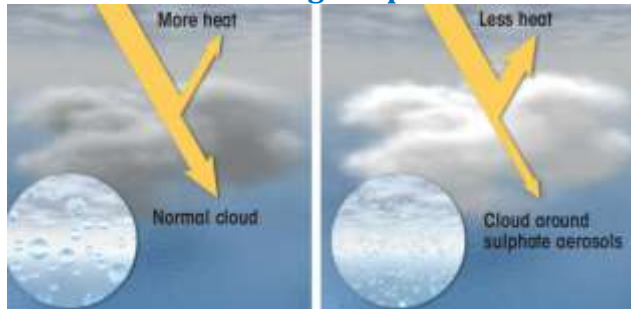
### 2.1. Sulphur dioxide

#### About

- Sulphur dioxide (SO<sub>2</sub>) is a **gaseous air pollutant composed of sulfur and oxygen.**
- SO<sub>2</sub> is a **colourless, soluble gas** with a **characteristic pungent smell** which forms sulphuric acid when combined with water.
- **Sulphur dioxide Emissions:**
  - **Anthropogenic sources** of sulphur emissions include, **burning of coal in power plants, oil refineries, motor vehicles, domestic boilers, etc.**

- **Natural sources** for the emission of Sulphur dioxides include **volcanic eruptions, forest fires, etc.**
- SO<sub>2</sub> emissions can cause **respiratory, cardiovascular and lung diseases** and can **induce acid rain**, which is a threat to crops, forests, and aquatic species.

### Role of SO<sub>2</sub> in cooling the planet



- SO<sub>2</sub> emissions cool the planet in two ways:
  - First is the **direct effect**, in which SO<sub>2</sub> in the atmosphere is converted into **sulphate aerosols** that **reflect solar radiation into space**.
  - The second, **indirect effect** is brought about by the **interaction between clouds and sulphate aerosols**. **Clouds** formed around sulphate aerosols have **more droplets**, and are **brighter** and **more reflective of sunlight** than normal clouds.

## 2.2 Soot

### About

- **Soot**, sometimes called **lampblack** or **carbon black**, is a fine black or brown powder that is a product of **incomplete combustion of fossil fuels**.
- At the elemental level, soot majorly contains **black carbon** in addition to **hydrogen, oxygen and sulfur**.
- Soot may also contain a number of **heavy metals**, including **arsenic, cadmium, and chromium**.
- Soot can come from a **wide variety of sources** such as **burning of fossil fuels** by coal-fired power plants, **industrial facilities**, and **combustion engines**. It is also emitted by **wildfires** and **volcanic eruptions**.
- Soot **absorbs solar radiation**, which **warms the atmosphere**.
- Soot can **penetrate deep into the lungs**, where it can cause a variety of health problems, including **respiratory infections, heart disease, and cancer**.

## Flora & Fauna

### 1) Black Necked-Crane

#### About

- Black-necked cranes (*Grus nigricollis*) are a **medium-sized member of the crane family**.
- Both male and female are almost of the same size but **male is slightly bigger than female**.
- They have a whitish-grey body with a black head, red crown patch, black upper neck and legs, and a white patch behind the eye.
- They are known for their **elaborate courtship displays**, which include jumping, bowing, and calling.
- The bird is considered sacred by **Monpas**, a buddhist ethnic group of **Arunachal Pradesh**, as an embodiment of the sixth Dalai Lama.



#### Geographical Distribution

- This species is found in **India, China and Bhutan** and breeds in **high altitude wetlands in the Tibetan plateau** at elevations of 2950-4900 m above mean sea level.
- A small wintering population is also found in **Sangti and Zimithang valleys of Arunachal Pradesh** in India.

#### Diet

- They are **omnivores** and feed on a variety of plants, including roots, tubers, and grains. They also eat insects, snails, shrimp, fish, frogs, lizards, and small mammals.

#### Threats

- The major threat to the successful breeding of black-necked cranes is the **damage to the eggs and chicks**, caused by **feral dogs**.
- Another threat to the bird is the **loss of habitat** due to increased **human pressure** on the wetlands.
- **Increased grazing pressure** on the limited pastures near the wetlands also affects the species.
- Some birds have been killed after striking **power-lines**, and **wind turbines**.

#### Protection Status

- IUCN Red List: **Near Threatened**; CITES: **Appendix I**; Wildlife Protection Act (2022): **Schedule I**.

#### Why in News?

- Recently, the Union Minister of State for Environment, Forest and Climate Change informed the Lok Sabha about the important steps taken by the government to protect Black-necked Cranes.

#### Efforts taken to conserve Black-Necked Cranes

- The important **habitats** of Black-necked Crane have been notified as **Protected Areas**, for example, **Changthang Sanctuary, Ladakh**.
- The **Tso Kar Wetlands Complex (Ladakh)**, an important foraging and breeding ground for Black-necked Crane, has been designated as a **Ramsar Site** in 2020.
- The Central Government provides **financial assistance** to State/Union Territory Governments under the **Centrally Sponsored Scheme 'Integrated Development of Wildlife Habitats' (IDWH)** for management of the species.
  - **IDWH** is an on-going **Centrally Sponsored Scheme** under which the Government of India

provides **financial and technical assistance** to the State/UT Governments for activities aimed at wildlife conservation.

- **Components of the scheme**
  - Support to **Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and**

**Community Reserves)**

- Protection of **Wildlife** Outside Protected Areas
- **Recovery programmes** for saving **critically endangered species** and **habitats**.

# Economy

## 1) Lithium Exploration & Mining Project in Argentina

### What's in the news?

- India's state-owned firm Khanij Bidesh India Ltd (KABIL) has signed a \$24 million **lithium exploration pact for five blocks in Argentina**.
- With this agreement, KABIL has received exploration and exclusivity rights for five blocks to evaluate, prospect and explore and subsequent to existence, discovery of lithium mineral, and exploitation right for commercial production.

### About Lithium

- Lithium is the **single most important critical mineral for the energy transition; a fundamental component of lithium-ion batteries**, which power electric vehicles and battery energy storage systems.



- Argentina is the part of the 'lithium triangle' along with Chile and Bolivia with more than half of the world's total lithium resources and having the distinction of having **second largest lithium resources, third largest lithium reserves and fourth largest production in the world**.

### Significance of the Pact

- **Processing of minerals like lithium in a few countries such as China** has led to **supply chain vulnerabilities**.
- **China tops in the processing of rare earth metals**—with 58% of the world's lithium processed in China, along with 35% of the world's cobalt, and 40% of the world's copper used in the manufacturing of battery cells.
- This strategic move will not only **strengthen the bilateral ties between India and Argentina** but also contribute to the **sustainable development of the mining sector**.
- The project will also help India strengthen lithium supplies, while developing lithium mining and downstream sectors of both the countries.

### Related Information

#### About KABIL

- Khanij Bidesh India Ltd. is a **joint venture company of three Central Public Sector Enterprises under Ministry of Mines** namely, National Aluminium Company Ltd. (NALCO), Hindustan Copper Ltd. (HCL) and Mineral Exploration and Consultancy Ltd.
- The company was set up in **2019** with an objective to **identify and acquire overseas mineral assets of critical and strategic nature**.



- The strategic and other minerals are intended to be supplied primarily to India to meet the domestic requirement due to its none or meager availability in the country and giving a big push to Make in India.
- The Company is **focusing on two prime critical and strategic mineral** i.e. **Lithium and Cobalt** in the present context of the Indian economy and linking it with creation of supply chain ecosystem in the country.

## 2) Payments Banks

### About Payments Banks

- Payments banks are the **new age banks with limited facilities**. These banks mostly operate through the **small vendors and shopkeepers**. It exists in between the **mobile wallet and regular banks**.
- Payments banks are **permitted to set up their own outlets** such as branches, Automated Teller Machines (ATMs), Business Correspondents (BCs), etc. to undertake **only certain restricted activities permitted to banks under the Banking Regulation Act, 1949**.
- A payments bank provides following services to its customers:
  - Accept demand deposits (restricted upto **Rs.2 lakhs**)
  - Remittance services
  - Mobile payments
  - Fund transfers
  - Debit card and associated services (**Payments banks, however, cannot issue credit cards**)
  - Net Banking services
  - Sell third-party financial products like insurance and mutual funds

- However, payments banks cannot undertake the following activities:
  - They **cannot undertake lending activities**
  - They **cannot set up subsidiaries to undertake non-banking financial services activities**
  - They are **not eligible to accept NRI deposits**.

### Objectives

- The main objective of payments banks is to **widen the spread of payment and financial services to small business, low-income households, and the migrant labour workforce** in a secured technology-driven environment.
- With payments banks, RBI seeks to **increase the penetration level of financial services to the remote areas** of the country.
- The Reserve Bank expects payments banks to **target India's migrant labourers, low-income households and small businesses**, offering savings accounts and remittance services with a low transaction cost.

### Eligible promoters

- Existing non-bank Pre-paid Payment Instrument (PPI) issuers authorised under the Payment and Settlement Systems Act, 2007.
- Other entities such as individuals / professionals; Non-Banking Finance Companies (NBFCs), corporate Business Correspondents (BCs), mobile telephone companies, supermarket chains, companies, real sector cooperatives; that are owned and controlled by residents; and public sector entities may apply to set up payments banks.

### Regulations

- Payments banks are registered as a **public limited company** under the **Companies Act, 2013**, and

licensed under Section 22 of the **Banking Regulation Act, 1949**.

- Deposits mobilised by the payments bank are covered under the **deposit insurance scheme of the Deposit Insurance and Credit Guarantee Corporation of India (DICGC)**.
- Apart from amounts maintained as **Cash Reserve Ratio (CRR)** with RBI on its outside demand and time liabilities, Payments banks are required to invest **minimum 75 per cent of its "demand deposit balances"** in Government securities/Treasury Bills with maturity up to one year for maintenance of **Statutory Liquidity Ratio (SLR)** and hold **maximum 25 per cent in current and time / fixed deposits** with other scheduled commercial banks for operational purposes and liquidity management.
- The **minimum paid-up equity capital** of the payments bank shall be **Rs. 100 crore**. The payments bank shall be required to maintain a **minimum capital adequacy ratio of 15 per cent of its risk weighted assets (RWA)** on a continuous basis.
- The **foreign shareholding** in the payments bank would be **as per the Foreign Direct Investment (FDI) policy for private sector banks** as amended from time to time. As per the current FDI policy, the aggregate foreign investment in a private sector bank from all sources will be allowed upto a maximum of **74 per cent** of the paid-up capital of the bank.

#### Why in News?

- The Reserve Bank of India has imposed restrictions on Paytm Payments Bank and barred the entity from offering banking services effective March 2024, due

to concerns regarding breach of and compliance with regulatory norms.

### 3) 100% FDI in space sector

#### What's in the news?

- The Centre has approved an amendment in the Foreign Direct Investment, FDI policy, allowing **100% foreign investment in the space sector**.
- **FDI up to 100% under the Automatic route** will be allowed for the manufacturing of components and systems or sub-systems for satellites, ground segments, and user segments.
  - *In India, FDI under sectors is permitted either through the Automatic route or Government route.*
  - *Under the Automatic Route, the non-resident or Indian company does not require any approval from the Government of India.*
  - *Whereas, under the Government route, approval from the Government of India is required prior to investment. Proposals for foreign investment under the Government route are considered by the respective Administrative Ministry/Department.*
- The liberalized entry routes under the amended policy are aimed to attract potential investors to invest in Indian companies in space.

### 4) Technical Recession

#### What is a recessionary phase?

- When the **overall output of goods and services** — typically measured by the GDP — **increases** from one quarter (or month) to

another, the economy is said to be in an **expansionary phase**. And when the **GDP contracts** from one quarter to another, the economy is said to be in a **recessionary phase**.

- Together, these two phases create what is called a **“business cycle”** in any economy. A full business cycle could last anywhere between one year and a decade.

#### How is a recession different?

- **When a recessionary phase sustains for long enough, it is called a recession.** In other words, when the GDP contracts for a long enough period, the economy is said to be in a recession.
- There is, however, **no universally accepted definition of a recession** — as in, for how long should the GDP contract before an economy is said to be in a recession.
- But most economists agree with the definition that the **National Bureau of Economic Research (NBER)** in the United States uses.
- According to NBER, “During a recession, a significant decline in economic activity spreads across the economy and can **last from a few months to more than a year**”.
- NBER typically looks at **various variables** — employment, consumption etc — apart from GDP growth to arrive at a decision.

#### What is a technical recession?

- A technical recession is a term used to describe **two consecutive quarters of decline in output**. In the case of a nation’s economy, the term usually refers to **back-to-back contractions in real GDP**.
- The most significant difference between a **‘technical recession’** and a **‘recession’** is that while the former term is mainly used to

**capture the trend in GDP**, the latter expression encompasses an **appreciably more broad-based decline in economic activity** that covers several economic variables including employment, household and corporate incomes and sales at businesses.

- Another key feature of a technical recession is that it is **most often caused by a one-off event** and is **generally shorter in duration**.

#### Why in News?

- **The UK** slipped into a **technical recession** in the second half of 2023.
- Britain’s GDP shrank by 0.3 percent in the last three months of 2023, after contracting 0.1 percent in the third quarter.
  - Using the above definition, **India** too was in a recession in the **first half of 2020-21**, when the GDP contracted in two consecutive quarters following the nationwide lockdown enforced to stop the spread of the coronavirus.

## 5) Other Notable Topics

### 5.1. India and UAE CEPA About Comprehensive Economic Partnership Agreement

- India and the United Arab Emirates (UAE)’ Comprehensive Economic Partnership Agreement (CEPA) entered into force in **2022**.
- The bilateral trade pact is **India's first in the region and the first comprehensive trade agreement with any country in a decade**.
- This landmark agreement has set out the **bilateral trade target of US\$100 billion**, to be achieved in the next five years.

## Features of CEPA

- CEPA covers **goods, services and digital trade**, among others, that allows **90% of India's exports a duty-free access to the Emirates**.
- Besides trade in goods, under CEPA, the **services sector** comprising computer-related services, health, tourism, travel, engineering, and accountancy also get **preferential market access to the UAE economy**.
- The agreement also provides for
  - An **open and non-discriminatory environment for cross-border trade** between the two countries;
  - The **removal of unnecessary technical barriers (TBT)** for UAE and Indian exporters.
  - A **Joint Committee** to assess, revise and propose amendments to the CEPA, including improving market access.
- India has **excluded certain goods** (such as Dairy, fruits, vegetables, cereals, tea, coffee, sugar, etc.) from the agreement through a "**sensitive list**" of products amounting to 10 per cent of tariff lines that are excluded completely from the agreement.
- The agreement contains **strict rules of origin provisions** to prevent other countries from using the agreement to reroute their exports through UAE to benefit from lower tariffs.
- The agreement also has **safeguard mechanisms** that would be triggered if there was a significant surge in imports of a specific product in either country.

## 5.2. HSN Codes

### About HSN Codes

- The Harmonized Commodity Description and Coding System generally referred to as "Harmonized System" or simply "HS" is a **multipurpose international product nomenclature** developed by the **World Customs Organization (WCO)** in 1988.
  - *WCO, established in 1952 is an independent intergovernmental body whose mission is to enhance the effectiveness and efficiency of Customs administrations.*
  - *WCO represents 185 Customs administrations across the globe (including India) that collectively process approximately 98% of world trade.*
- It is a **six-digit code** that classifies more than 5000 products, arranged in a legal and logical structure. To achieve uniform classification, the HS Nomenclature is supported by well-defined rules and is **accepted worldwide**.
- HSN code is used by customs authorities, statistical agencies, and other government regulatory bodies, to **monitor and control the import and export of commodities**.
  - **India** has been using HSN codes since 1986 to classify commodities for Customs and Central Excise.

# Organisations

## 1) Financial Action Task Force

### What is the FATF?

- The Financial Action Task Force (FATF) is an **intergovernmental organization** that designs and promotes policies and standards to combat financial crime.
- The FATF sets **standards or recommendations for countries to achieve in order to plug the holes in their financial systems and make them less vulnerable to illegal financial activities.**
- Recommendations of the FATF target
  - Money laundering
  - Terrorist financing
  - Other threats to the global financial system
- The FATF was created in **1989** by the **G7 countries** and is headquartered in **Paris**.
- There are **37 members**, including **India** and **two regional organisations - European Commission and the Gulf Cooperation Council.**
- The decision-making body of the FATF, known as its **plenary**, meets **thrice a year**. Its decisions are taken by **consensus**.

### What are FATF's 'grey' and 'black' lists?

- At the end of every plenary meeting, FATF comes out with two lists of countries.
- The **grey list countries** are designated as "**jurisdictions under increased monitoring**", working with the FATF to counter criminal financial activities.
  - For such countries, the watchdog does not tell other members to carry out due-diligence measures vis-a-vis the listed country but does tell them to consider the risks such countries possess.

Currently, more than **20 countries** such as Bulgaria, Cameroon, Democratic Republic of the Congo, Croatia, Philippines, South Africa, Vietnam, etc. are on the grey list.

- **Black list** means countries designated as '**high-risk jurisdictions subject to call for action**'.
  - In this case, the countries have **considerable deficiencies in their AML/CFT** (anti-money laundering and counter terrorist financing) regimens and the body calls on members and non-members to apply enhanced due diligence.
  - In the most serious cases, members are told to apply counter-measures such as sanctions on the listed countries. Currently, **North Korea, Iran and Myanmar** are on the black list.
- Being listed under the FATF's lists makes it **hard for countries to get aid from organisations** like the International Monetary Fund (IMF), Asian Development Bank (ADB), and the European Union. It may also **affect capital inflows, foreign direct investments, and portfolio flows.**

### Why in News?

- In its latest plenary session, FATF has added **Kenya and Namibia** to the list of "Jurisdictions under Increased Monitoring"-- better known as the grey list.
- FATF also removed **Barbados, Gibraltar, Uganda and UAE** from the grey list based on review by the watchdog.

## 2) Food Corporation of India

### About FCI

- The Food Corporation of India (FCI) is a **statutory corporation** under the **Department of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution**.
- It was setup in 1965 under the **Food Corporation's Act 1964** to fulfill following objectives of the Food Policy:
  - **Effective price support operations** for safeguarding the interests of the farmers,
  - **Distribution of foodgrains** throughout the country for public distribution system and
  - **Maintaining satisfactory level of operational and buffer stocks of foodgrains** to ensure national food security.
- FCI's foremost priority is to **ensure food security** for the nation by effectively managing the procurement, storage, and distribution of essential commodities, thereby providing a reliable and sufficient food supply to meet the needs of the population.

### Why in News?

- The government has increased the **authorised capital of state-run Food Corporation of India** from ₹10,000 crore to **₹21,000 crore** to enhance the operational capabilities and fulfill its mandate effectively.
  - FCI is the **central government's nodal agency** that undertakes the **procurement of foodgrains at a minimum support price (MSP)** to protect the interest of farmers.
  - It also maintains strategic stocks and distributes the

grains under different welfare schemes.

- With this infusion of capital, the FCI should also embark upon modernising its storage facilities, improving transportation networks, and adopting advanced technologies.
- These measures are essential not only for reducing post-harvest losses but also for ensuring efficient distribution of food grains to consumers.

## 3) Other Notable Topics

### 3.1. Interpol

#### About

- Founded in **1923**, Interpol is an **international police organisation** made up of 196 member countries (including **India**).
- It is **not a police force in the traditional sense**—its agents are not able to arrest criminals. Instead, it is more of an **information-sharing network**, providing a way for national police forces to co-operate effectively and tackle international crime ranging from human trafficking and terrorism to money laundering and illegal art dealing.
- The organisation, based in **Lyon, France**, operates **centralized criminal databases** that contain fingerprint records, DNA samples and stolen documents.
- Interpol's other main function is to issue **notices**: alerts to member states for missing or wanted persons.
  - The best-known of these is the **"Red Notice"**, a notification that a member state would like someone arrested.
  - A special category of notices known as the **"Interpol —**

**United Nations Security Council Special Notice”** is issued for entities and individuals who are the targets of UN Security Council Sanctions Committees.

- **States are not obliged** to follow these notices, but will often treat them as a warrant for someone’s arrest and extradition.

### 3.2. Bureau of Civil Aviation Security

#### About

- The Bureau of Civil Aviation Security (BCAS) was initially set up as a **Cell in the Directorate General of Civil Aviation (DGCA)** in 1978 on the recommendation of the **Pande Committee**.
  - *DGCA is the regulatory body in the field of Civil Aviation, primarily dealing with safety issues. It is an attached office of the Ministry of Civil Aviation.*
  - *It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety, and airworthiness standards.*
- The BCAS was reorganized into an **independent department** under the **Ministry of Civil Aviation** in 1987.
- The main responsibilities of BCAS include **laying down standards and measures with respect to security of civil flights at international and domestic airports** in India.
- BCAS Headquarter is located in **New Delhi**.

### 3.3. Prasar Bharati

#### About

- Prasar Bharati is a **statutory autonomous body** established under the **Prasar Bharati Act** and came into existence in **1997**.
- It is the **Public Service Broadcaster** of the country.
- The objectives of public service broadcasting are achieved in terms of **Prasar Bharati Act** through **All India Radio and Doordarshan**.

### 3.4. Geological Survey of India

#### About

- The Geological Survey of India (GSI) was set up in **1851** as a Government of India organization under the **Ministry of Mines** primarily to **find coal deposits for the Railways**.
- Over the years, GSI has grown into a **repository of geo-science information** required in various fields in the country.
- Its main functions relate to **creating and updating of national geoscientific information and mineral resource assessment**.
- GSI’s chief role includes providing objective, impartial and up-to-date geological expertise and geoscientific information of all kinds, with a focus on policy making decisions, commercial and socio-economic needs.
- GSI also emphasises on **systematic documentation** of all geological processes derived out of surface and subsurface of India and its offshore areas.
- GSI, headquartered in **Kolkata**, has **six regional offices** located in Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata.

# Science and Technology

## 1) INSAT 3D-S Meteorological Satellite

### What's in the news?

- The Indian Space Research Organisation (ISRO) has successfully launched the INSAT-3DS meteorological satellite into space aboard the **GSLV-MkII**.
- The three-stage GSLV deployed INSAT-3DS into **geosynchronous transfer orbit (GTO)** about 18 minutes after liftoff. The satellite will now make its own way to **geostationary orbit**, which lies 22,236 miles (35,786 kilometers) above Earth.
  - *At this altitude, satellites complete one orbit in the same amount of time it takes our planet to spin once around its axis (one Earth day).*
  - *Geostationary spacecraft therefore seem to "hover" over the same patch of ground, making this a popular orbit for telecommunications and weather satellites.*
- The mission, **designed to operate in space for 10 years, aims to boost India's environment monitoring, oceanic observations, weather forecasting, and disaster relief operations.**
- The mission was **fully funded by the Ministry of Earth Sciences (MoES).**

### What is INSAT-3DS?

- The INSAT-3DS, a **state-of-the-art meteorological satellite**, is the latest addition to India's third-generation satellites in geostationary orbit.
- It follows the successful deployment of its predecessors,

INSAT-3D (launched in 2013) and INSAT-3DR (2016), which have been instrumental in **enhancing weather observation and analysis** since their respective launches.

### Objectives of the Mission

- The satellite's primary objectives are multifaceted and crucial for **environmental monitoring and safety.**
- It is equipped to **monitor the Earth's surface and carry out oceanic observations** in various spectral channels that are vital for meteorological analysis.
- The satellite is equipped with **advanced payloads designed to provide more accurate and timely data on atmospheric conditions.**
- This enhancement in meteorological services is expected to **significantly benefit various sectors**, including agriculture, aviation, and disaster management, by enabling better preparedness for weather-related challenges.
- It will provide **vertical profiles of atmospheric parameters** such as temperature and humidity, which are **essential for accurate weather predictions.**
- INSAT-3DS will also offer **Satellite Aided Search and Rescue services**, contributing to emergency response efforts.

### Related Information

#### About GSLV Mk II

- Geosynchronous Satellite Launch Vehicle Mark II (GSLV Mk II) is the launch vehicle developed by **India**, to **launch communication satellites in geo transfer orbit using cryogenic third stage.**
- This operational **fourth generation launch vehicle** is a



**three stage vehicle with four liquid strap-ons.**



- The **indigenously developed Cryogenic Upper Stage (CUS)**, forms the third stage of GSLV Mk II.
- Payload to GTO (Geosynchronous Transfer Orbit): **2,250 kg**
- Payload to LEO (Low Earth Orbit): **6,000 kg**.

## 2) Cervical Cancer

### What is Cervical Cancer?

- It is a type of cancer that **develops in the cells of the cervix** — the **lowermost part of the uterus**.
- Cervical cancer is caused by **chronic infection with human papillomavirus (HPV)**, which is a **sexually transmitted virus**.
- One can prevent getting this virus by taking **vaccination**. If the vaccine is given to girls before sexual exposure between **9-14 years**, it is **more than 99% effective** in preventing cervical cancer.
- The vaccine also protects against genital warts and some other cancers also like anal, vulval vaginal, penile, oropharyngeal cancers as well some cancers of head and neck.

### Why in News?

- In a bid to reduce cases of cervical cancer, the Indian government is likely to roll out an **immunisation campaign against Human Papillomavirus (HPV)** in the second quarter of the year.
- **Girls between the ages of 9 and 14 years** across India will be **vaccinated for free** in three phases under the government's programme over the next three years.
- After the "catch-up" is completed, the HPV vaccine will be included in the **government's routine immunisation programme for 9-year-old girls**.

### Why is a HPV vaccination campaign important?

- More than 95% of all cervical cancer cases are linked to persistent infection with certain high-risk strains of HPV.
- What this essentially means is **vaccination can be effectively used to prevent the infection** and thereby cervical cancer cases.
- This is especially necessary in a country like **India that accounts for nearly a fifth of the cervical cancer cases globally**. India reports around 1.25 lakh cases and about 75,000 deaths each year.
- It is the **fourth most prevalent cancer amongst women worldwide** and in **India, it is the second most common cancer among women**.

## 3) New Findings from Ryugu Samples

### Hayabusa-2 Mission

- The Hayabusa-2 mission was launched in 2014 when the spacecraft was sent on a six-year voyage to study **Ryugu, a near earth asteroid**. It was launched by

the **Japan Aerospace Exploration Agency's (JAXA)**.

- The spacecraft arrived at the asteroid in mid-2018. In 2019, the spacecraft fired an impactor into the asteroid's surface to create an artificial crater with a diameter of a little more than 10 metres, which allowed it to collect the samples.
- In **2020**, Hayabusa-2 delivered a small capsule that contained the rock and dust samples, which safely landed in the South Australian outback.
- Hayabusa-2's predecessor, the **Hayabusa Mission**, brought back samples from the **asteroid Itokawa** in 2010.

### Why in News?

- Since the capsule landed on Earth, scientists have been studying the material — weighing merely a few grams, but approximately 4.6 billion years old — in order to explore the foundations of the solar system.
- Recent analysis of Ryugu's samples supports the hypothesis that **organic matter**, potentially the very seeds of life, **could have been delivered to Earth from space**.
- This ongoing research could provide further insights into the influx of primitive space materials to Earth. It not only deepens our understanding of asteroids like Ryugu but also sheds light on the complex journey of organic materials through the solar system.

### Related Information

#### What is an asteroid?

- Asteroids are **small, rocky objects that orbit the sun**. Although asteroids **orbit the sun like planets**, they are **much smaller than planets**.
- Most of them live in the **main asteroid belt—a region between the orbits of Mars and Jupiter**.

- Some asteroids are found in the **orbital path of planets**. This means that the asteroid and the planet follow the same path around the sun.
- Most asteroids are **irregularly shaped**, though a few are nearly spherical, and they are **often pitted or cratered**.
- As they revolve around the Sun in elliptical orbits, the asteroids also **rotate**, sometimes quite erratically, tumbling as they go.
- More than 150 asteroids are known to have a **small companion moon** (some have two moons).
- There are also **binary (double) asteroids**, in which two rocky bodies of roughly equal size orbit each other, as well as **triple asteroid systems**.

#### Types of Asteroid

- **Main Asteroid Belt:** The majority of known asteroids orbit within the asteroid belt **between Mars and Jupiter**, generally with not very elongated orbits.
- **Trojans:** These asteroids **share an orbit with a larger planet**, but do not collide with it because they gather around special places in the orbit where the gravitational pull from the Sun and the planet are balanced by a trojan's tendency to otherwise fly out of orbit.
- **Near-Earth Asteroids:** These objects have **orbits that pass close by that of Earth**. Asteroids that actually cross Earth's orbital path are known as **Earth-crossers**. More than 10,000 such asteroids are known, out of which over 1,400 are classified as **potentially hazardous asteroids (PHAs)**.
  - **Ryugu is also classified as a PHA** and was discovered in 1999 and was given the name by the Minor Planet Center in 2015. It is 300

million kilometres from Earth and it took Hayabusa-2 over 42 months to reach it.

#### Why do scientists study asteroids?

- Since asteroids are one of the oldest celestial bodies in the Solar System, scientists study them to look for **information about the formation and history of planets and the sun.**
- Another reason for tracking them is to **look for asteroids that could possibly crash into Earth**, leading to potentially hazardous consequences.

### 4) Genome India Project

#### What is Genome sequencing?

- The **human genome** is the **entire set of deoxyribonucleic acid (DNA) residing in the nucleus of every cell of each human body.**
- It carries the **complete genetic information** responsible for the development and functioning of the organism.
  - The DNA consists of a **double-stranded molecule** built up by four bases – **adenine (A), cytosine (C), guanine (G) and thymine (T).** Every base on one strand pairs with a complementary base on the other strand (A with T and C with G).
- In all, a **complete human genome is made up of approximately 3.05 billion such base pairs.**
- The process of **deciphering the order of base pairs, to decode the genetic fingerprint of a human** is called genome sequencing.

#### Applications of Genome sequencing

- The process of genome sequencing facilitates the **reading of a person's individual genome to identify differences from the average human genome.** These

**differences or mutations can tell about each human's susceptibility or future vulnerability to a disease, their reaction or sensitivity to a particular stimulus, and so on.**

- Genome sequencing is used to **evaluate rare disorders, preconditions for disorders, even cancers.**
- Nearly **10,000 diseases** — including **cystic fibrosis and thalassemia** — are known to be the **result of a single gene malfunctioning.**
- It is used as a **tool for prenatal screening**, to investigate whether the foetus has genetic disorders or anomalies.

#### Genome India Project

- The Genome India Project (GIP) is a **national genome sequencing project to sequence 10,000 Indian genomes and create a database.**
- The **Ministry of Science and Technology** approved the gene mapping project in **2020.**
- This is a **mission-mode, multi-institution consortium project**, the first of its kind in India supported by the **Department of Biotechnology.**

#### Significance

- The aim is creating a **comprehensive catalogue of genetic variations found in the Indian population.**
- A map of genetic diversity is essential for **understanding the history of our evolution, discovering the genetic basis for various diseases, and creating therapies of the future.**
- This cannot be done using data available in existing international databases, as Indian genomes are likely to be different from that of other populations.

### Why in News?

- The government's Genome India initiative announced the **successful sequencing of 10,000 whole genomes** of healthy persons from across the country, creating a genetic map of the population.
- With each sequence requiring 80 GB storage space, the huge dataset of 8 Petabytes (*1 PB is equal to 1,000 Terabytes (TB)*) will be stored at the **Indian Biological Data Centre (IBDC) in Faridabad**.
- This dataset will be made available to researchers as "**digital public good**." The data can be utilized to develop new diagnostics, targeted therapies, identify new rare diseases, and cure existing ones.
  - *Digital Public Goods refer to digital resources, software, data, and platforms that are freely available and accessible to all individuals and communities. They are designed to empower, serve, and benefit society as a whole.*

### Related Information

#### Human Genome Project

- In **1990**, an international team of researchers began to work on determining the **whole sequence of the human genome** under the **Human Genome Project**. The first results of the complete human genome sequence were given in **2003**.
- The Human Genome Project released the **latest version** of the complete human genome in **2023**, with a **0.3% error margin**.
- All human beings are 99.9 percent identical in their genetic makeup. Differences in the remaining 0.1 percent hold important clues about the causes of diseases.

### About IBDC

- Indian Biological Data Center (IBDC) is an effort by the Government of India for the purpose of **deposition, storage, annotation and sharing of biological data**.
- IBDC is mandated to archive all publicly funded life science data generated at national level.
- The data center is supported by the Government of India through the **Department of Biotechnology (DBT)**.

## 5) Other Notable Topics

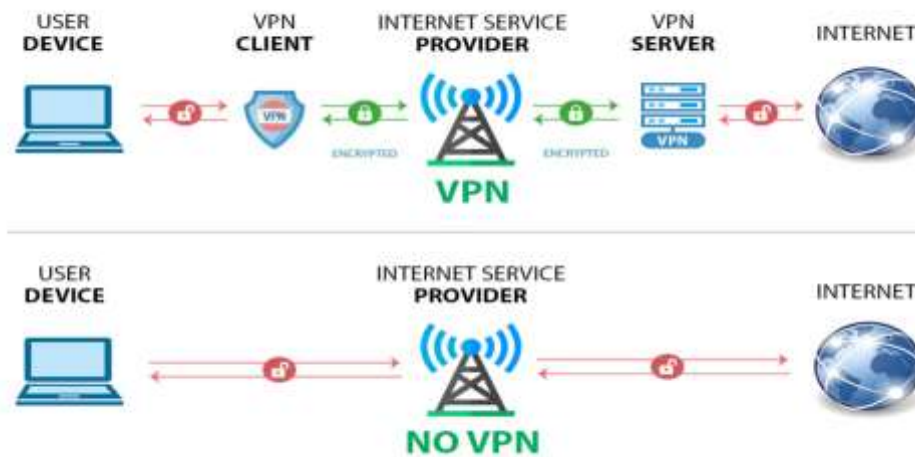
### 5.1. Virtual Private Network

#### What is a Virtual Private Network?

- A virtual private network, or VPN, is an **encrypted connection over the Internet from a device to a network**.
- The encrypted connection helps **ensure that sensitive data is safely transmitted**.
- It **prevents unauthorized people from eavesdropping** on the traffic and allows the user to conduct work remotely.
- VPN technology is widely used in corporate environments.

#### How does VPN work?

- Data traffic on the virtual network is sent securely by establishing an **encrypted connection across the Internet known as a tunnel**.
- VPN traffic from a device such as a computer, tablet, or smartphone is encrypted as it travels through this tunnel.
- Because the traffic is **encrypted between the device and the network, traffic remains private as it travels**.



- When the VPN server does this, our **IP address**, which is the online equivalent of a user-specific postal code, is **changed** — and thus websites are unable to accurately track our location.
- This private network **enhances overall privacy on the Web**. It is also used to **get around geo-restrictions and online censorship**.

## Reports and Indices

### 1) Household Consumption Expenditure Survey

#### What's in the news?

- The **National Statistical Office (NSO)** under the **Ministry of Statistics and Programme Implementation** has released the Household Consumption Expenditure Survey (HCES) conducted during August 2022 to July 2023.
- The survey results, which shows **what Indian households are consuming and spending on**, was the first such data to be released in over 11 years since the last exercise was conducted in 2011-12.
- The data will play a key role in reviewing critical economic indicators, including the Gross Domestic Product (GDP), poverty levels, and the Consumer Price Inflation (CPI).

#### Highlights of the Report

##### Average MPCE

- **Household spending increased 2.6 times in rural areas and 2.5 times in urban areas** since the last survey, conducted in 2011-12.
- In 2022-23, the **average Monthly Per Capita Consumption Expenditure (MPCE) in rural areas was ₹3,773, compared with ₹6,459 in urban areas.**
- The latest results showed that **rural households spent 46% on food** and the rest on non-food

items, whereas **urban households spent 39% on food** in 2022-23.

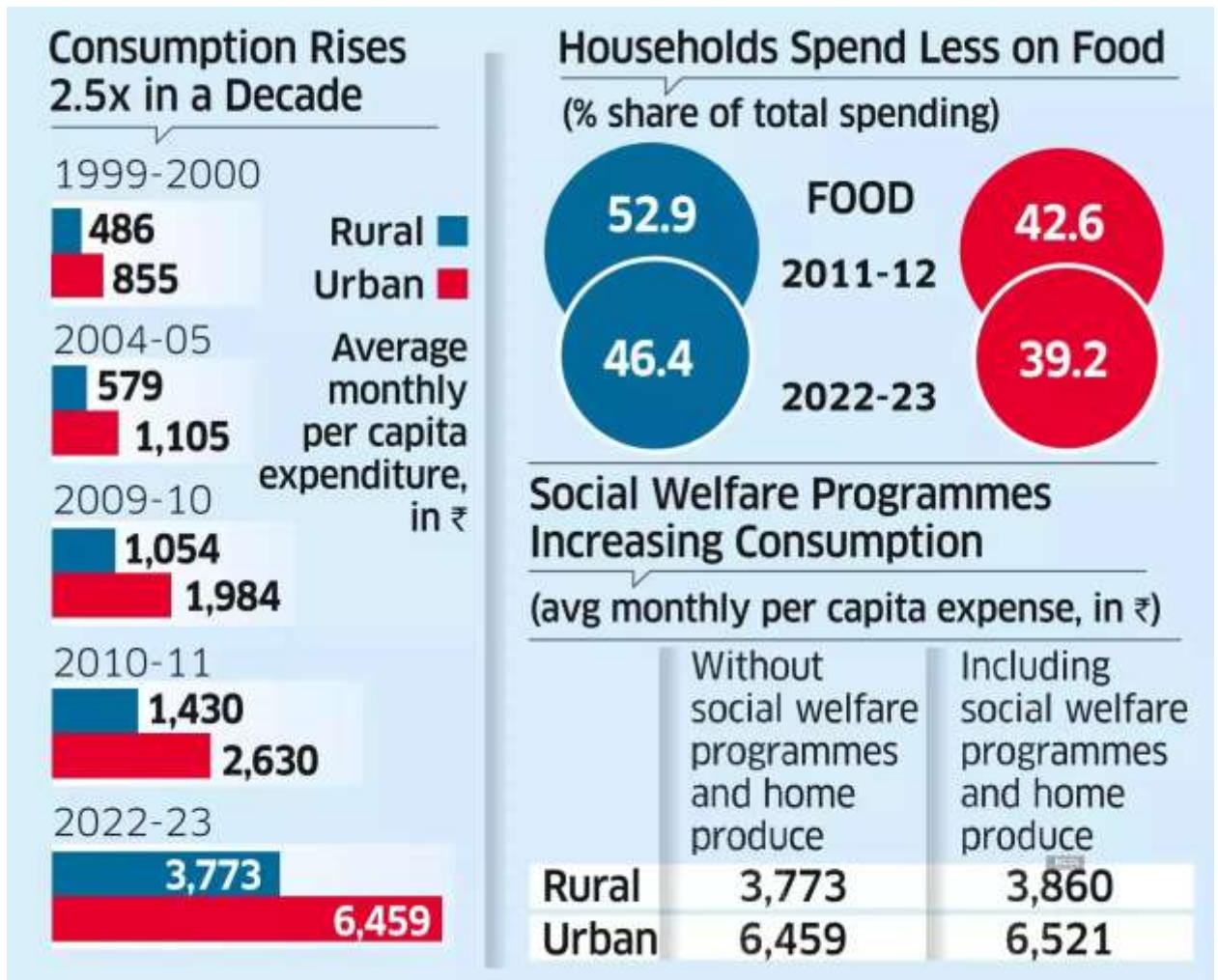
- This marks a shift from 2011-12, when nearly 53% was spent on food in rural areas and 42.6% in urban areas.
- The share of conveyance, for instance, has increased to 7.6% from 4.2% earlier, whereas that of durable goods has risen to 6.9% from 4.9% earlier.

#### Imputed Values

- The survey also found that **rural and urban areas' consumption was even higher if one imputes the value of items that households receive for free via social welfare programmes.**
- These include ration and non-food items like laptops, mobile, bicycle, motorcycle, school uniform, footwear, etc.
- While the average MPCE stands at ₹3,773 in rural India and ₹6,459 in urban India, when **considering imputed values of these free items**, these figures **increase to ₹3,860 and ₹6,521, respectively.**

#### State specific data

- Among the States, the **MPCE is the highest in Sikkim** for both rural (₹7,731) and urban areas (₹12,105). It is the **lowest in Chhattisgarh**, where it was ₹2,466 for rural households and ₹4,483 for urban household members.



#### Analysis of the Trend

- Analysing the trend from 1999-2000 to 2022-23 reveals a **significant transformation in MPCE composition** in rural and urban areas.
- There is a **noticeable decline in the percentage share of expenditure on food items** (especially cereals), accompanied by an **increase in the share of spending on fresh fruits and processed foods**.
- There is a **surge in non-food expenditures' share**, particularly on durable goods, indicating an **improved standard of living** and a **growing preference for lifestyle enhancements**.
- The **gap between urban and rural consumption has narrowed to 1.71 times** in 2022-23 from 1.8 times in 2011-12.
- The analysis also shows that the **gap between the earnings of the bottom 5% and top 5% of the population was 7.3 times in rural areas and 9.9 times in urban areas**.
- The data is essential not only for **updating the consumer price inflation (CPI) baskets** but also gives policymakers and experts an assessment on the income and expenditure levels of households and how and where they are spending their money and gauge the efficacy of policy measures.

## 2) AISHE Survey

### What's in the news?

- The **Ministry of Education** has released the **All India Survey on Higher Education (AISHE) 2021-2022**.

### About AISHE

- The Ministry of Education has been conducting AISHE since **2011**, covering all **Higher Educational Institutions (HEIs)** in the country collecting detailed information on different parameters such as student enrollment, teachers, infrastructural information, etc.

### Highlights of the 2021-22 survey:

- The total enrolment in higher education has increased to nearly **4.33 crore** in 2021-22 from 4.14 crore in 2020-21.
- **Gross Enrollment Ratio (GER)** for the age group 18-23 years has increased to **28.4** in 2021-22 from 23.7 in 2014-15. **Female GER** has increased to **28.5** in 2021-22 from 22.9 in 2014-15.
  - GER indicates how many students are part of the higher education system in a given population.
  - In terms of state-wise data, **Chandigarh**, at 64.8%, boasts of the highest GER, followed by **Puducherry** at 61.5%, **Delhi** at 49%, and **Tamil Nadu** at 47%.
- **Gender Parity Index (GPI)**, the ratio of female GER to male GER, is **1.01** in 2021-22. GPI has continued to be above 1 since 2017-18 i.e.,

**female GER continues to be more than male GER for the fifth consecutive year.**

- A GPI of 1 indicates parity between the two genders; any number between 0 and 1 shows a disparity in favour of males, whereas a GPI greater than 1 indicates a disparity in favour of females.
- Among disciplines at **undergraduate level**, in 2021-22, the enrollment is highest in **Arts** (34.2%), followed by science (14.8%), commerce (13.3%) and engineering and technology (11.8%).
- Similarly, the **social science** stream has the highest number of **postgraduate students** enrolled at 10.8 lakh. At **PhD level**, however, **social sciences** stood at third spot after **engineering and science**.
- **Government Universities** constituting 58.6% of total Universities, contribute **73.7% of total enrolment**, Private Universities account for 26.3% of total enrolment.
- Availability of different infrastructural facilities in university in 2021-22:
  - Libraries (99%)
  - Laboratories (88%)
  - Computer centers (93%)
  - Skill Development Centre (71%)
  - Play Ground (91%).



# Polity

## 1) SC strikes down electoral bonds scheme

### What are Electoral Bonds?

- An electoral bond is designed to be an **interest-free bearer instrument** like a **Promissory Note** — in effect, it will be similar to a bank note that is payable to the bearer on demand.
- It can be purchased by any **citizen of India or a body incorporated in India**. A person being an individual can buy Electoral Bonds, either singly or jointly with other individuals.
- The electoral bonds were announced in the **2017 Union Budget**.
- The bonds will be issued in multiples of ₹1,000, ₹10,000, ₹1 lakh, ₹10 lakh and ₹1 crore and will be available at specified branches of **State Bank of India**. SBI is the only authorised bank to issue such bonds.
- They can be bought by the donor with a **KYC-compliant account**.

### Features

- The bonds will be available for purchase for a period of **10 days** each in the **beginning of every quarter**, i.e. in January, April, July and October as specified by the Central Government.
- The donor will remain **anonymous**. The electoral bonds will **not bear the name of the donor**. The intention is to ensure that all the donations made to a party will be accounted for in the balance sheets **without exposing the donor details to the public**.
- Political parties are allotted a verified account by the Election Commission and all the electoral bond transactions are done through this account only.

- Only political parties registered under **Section 29A of the Representation of the Peoples Act, 1951** and have **secured no less than one per cent votes** in the last General Election to the House of the People or the Legislative Assembly of the State, are eligible to receive electoral bonds.
- A donor will get **tax deduction** and the recipient, or the political party, will get **tax exemption**, provided returns are filed by the political party.
- The information furnished by the buyer shall be treated confidential by the authorised bank and shall not be disclosed to any authority for any purposes, except when demanded **by a competent court or upon registration of a criminal case by any law enforcement agency**.

### Why in News?

- In a unanimous judgment, a five-judge Bench the Supreme Court has struck down the electoral bonds scheme as **“unconstitutional and manifestly arbitrary”**.
- The apex court held that the electoral bonds scheme, and preceding amendments made to the Representation of the People Act, the Companies Act, and the Income Tax Act, **violated the voters’ right to information about political funding under Article 19(1)(a) of the Constitution**.
- The Court also directed all donor and donee information (collected from 2019) to be made public within a month.

### Other Provisions

- Along with the Electoral Bonds Scheme, the Supreme Court **struck down several amendments** that

the government made in key laws to facilitate corporate donations to political parties.

- These include: **Section 29C of the Representation of People Act, Section 13A of the Income Tax Act, and Section 182 of the Companies Act.**
- The court said that prior to the amendments, **these provisions had maintained the needed balance between donors' privacy and voters' right to know.**
  - The original **Section 29C** required political parties to **publicly disclose contributions in excess of ₹20,000**, received even through cheques and the electronic clearing system. The **amendment**, however, allowed a **complete exemption** for political parties to publish contributions received through **electoral bonds**.
  - The amended **Section 13A** freed parties from the obligation of **keeping a detailed record of contributions** received through electoral bonds.
  - Before the amendment, **Section 182** had mandated that companies could donate **only up to 7.5% of three years of their net aggregate income**. The **amendment lifted this cap** and made room for unlimited and anonymous corporate donations to political parties.

### Proportionality Test

- The court noted that for the scheme to be considered legitimate, the government scheme would have to **essentially satisfy four aspects.**

- This was based on the **court's proportionality test**, laid down in its **2017 verdict** in the **KS Puttaswamy case over the right to privacy.**
- This test requires that the **measure taken to restrict a fundamental right**
  - (a) has a **legitimate goal**,
  - (b) is a **suitable means of reaching that goal**,
  - (c) creates the **least amount of restriction possible on the fundamental right**, and
  - (d) **does not have a disproportionate impact on the right holder.**
- The court held that an infringement of the right to information is **not proportionally justified** to curb black money in electoral financing.
- It also said that in implementing the electoral bonds scheme the **state did not adopt the least restrictive method**. It noted that mechanisms such as electronic transfers and electoral trusts offer less restrictive alternatives.

## 2) VVPAT

### What is an Electronic Voting machine?

- Electronic Voting Machine (EVM) is an **electronic device for recording votes**. An Electronic Voting Machine consists of **two Units** – a **Control Unit** and a **Balloting Unit** – joined by a five-meter cable.

### When was the EVM first introduced in elections?

- EVMs were first used in 70-Parur Assembly Constituency of Kerala in the year **1982**.

### How can EVMs be used in areas where there is no electricity?

- **EVMs do not require electricity.** EVMs run on an **ordinary battery** assembled by Bharat Electronics

Limited/Electronics Corporation of India Limited.

#### What is VVPAT?

- Voter Verifiable Paper Audit Trail (VVPAT) is an **independent system attached with the Electronic Voting Machines** that allows the voters to **verify that their votes are cast as intended**.
- When a vote is cast, a **slip is printed containing the serial number, name and symbol of the candidate** and remains exposed through a transparent window for **7 seconds**.
- Thereafter, this printed slip automatically gets cut and falls in the sealed drop box of the VVPAT.



#### Whether VVPAT runs on electricity?

- **No.** VVPAT runs on a power pack Battery.

#### Where were VVPATs used for the first time in India?

- VVPATs with EVMs were used for the first time in a **bye-election from 51-Noksen Assembly Constituency of Nagaland in 2013**, after which the Election Commission (EC) decided to introduce VVPATs in a phased manner.
- From 2017, 100% of VVPATs began to be used in polls, and the 2019 Lok Sabha elections became the

first general election to have 100% of EVMs being attached to VVPATs.

#### Why in News?

- A plea has been filed in the Madras High Court to count 100% of the Voter Verifiable Paper Audit Trail (VVPAT) machine printout slips attached to the Electronic Voting Machines (EVMs) in the upcoming general elections.
- As of now, the EC mandates the **counting of all VVPAT slips in five randomly selected polling stations per Assembly constituency**.
- Last year, the EC told the Supreme Court that pressing for 100% verification was a regressive thought and tantamount to going back to the days of manual voting using a ballot system.
- It said manual counting of all VVPAT slips would take time and introduce the potential of human error.

### 3) Disqualification of convicted legislators

#### Context

- A writ petition has been filed in the Supreme Court challenging the constitutional validity of Section 8 of Representation of the People Act, 1951 which confines the period of disqualification of elected representatives (MPs/MLAs) to contest elections **for a period of six years since his release**.
- The petition has sought for debarment for life in cases of conviction.

#### When does conviction attract disqualification?

- **Section 8 of the Representation of the People Act (RPA), 1951**, contains provisions aimed at decriminalising electoral politics.

- There are **two categories of criminal cases** that attract disqualification upon conviction.
- In the first category are **offences that entail disqualification for a period of six years upon any conviction.**
  - **Major IPC offences** are included under this head: making speeches that cause enmity between groups (Sec.153A) and doing so in a place of worship (Sec.505), bribery and personation during elections and other electoral offences, offences relating to rape and cruelty to women by husband and latter's relatives.
  - Besides, **serious provisions of special laws** such as the Protection of Civil Rights Act, Customs Act, Unlawful Activities (Prevention) Act etc are among the category of offences that **entail disqualification regardless of the quantum of punishment.**
    - Laws for prevention of Sati, corruption, terrorism and insult to national flag and national anthem etc are also part of this group.
- All other criminal provisions form a separate category under which **mere conviction will not entail disqualification. A sentence of at least two years in prison** is needed to incur such disqualification.
  - A person sentenced to imprisonment of two years or more under this category shall be **disqualified from the date of such conviction and remain disqualified**

**for another six years after serving time.**

#### **Is there legal protection for legislators against disqualification?**

- **Under Section 8(4) of the RPA**, legislators could avoid immediate disqualification **until 2013**. The provision said that with respect to a Member of Parliament or a State legislator the disqualification **will not take effect for three months.**
- If within that period, the convicted legislator files an appeal or revision application, it will not take effect until the disposal of the appeal or application. In other words, the mere filing of an appeal against conviction will operate as a stay against disqualification.
- In **Lily Thomas vs. Union of India**, the **Supreme Court struck down clause (4) as unconstitutional**, thus removing the protection enjoyed by lawmakers.

#### **4) Law Commission recommends retaining criminal defamation**

##### **Defamation in India**

- Any false statement published or spoken deliberately, intentionally, knowingly with the **intention to damage someone's reputation is defamation.**
- It can be by **spoken words** (slander) or **written words** (libel) or **visual representation** (posters/banners).
- In **India**, defamation is categorized as either **criminal or civil**, and both types are covered by the **Indian Penal Code (IPC) and the Code of Civil Procedure (CPC).**
- Under **criminal defamation**, individuals can be charged with an offense punishable by **imprisonment or a fine.**
  - **Section 499 of IPC** defines defamation as **any statement or**

**representation that harms a person's reputation** by lowering them in the eyes of the public or causing them to be ridiculed, hated or despised.

- A complaint can be filed with the police, and if the complaint is found to be true, the accused can be punished with **imprisonment for up to two years or a fine.**
- **Civil defamation**, on the other hand, involves filing a lawsuit **seeking compensation** for damages caused by defamatory statements.
  - The CPC defines defamation as **any statement that harms a person's reputation or lowers them in the eyes of others.**

#### Why in News?

- The 22nd Law Commission has recommended that criminal

defamation should be retained within the scheme of criminal laws in India.

- The Law Commission argued that the **right to reputation is derived from Article 21 of the Constitution** that guarantees the right to life and personal liberty and that is why it has to be protected.
- Noting that it could be argued that criminal prosecution for defamatory statements stands **opposed to the freedom of speech and expression**, the Law panel **advised exercising caution.**
- The panel cautioned that **speech ought to be illegal only where it is meant to do substantial harm and when such harm materialises.**
- *Refer Pulse June 2023 Digest edition for details about Law Commission.*

# International Relations

## 1) Red Sea Crisis

### Context

- A spate of attacks on cargo ships in the **Red Sea** since November by the **Houthi militia of Yemen** has turned the quickest marine route linking Asia with Europe through the Suez Canal unsafe.
- It has forced freighters to take a longer transit around the Cape of Good Hope in Africa's southern tip, making shipments both dearer and longer to deliver.

### Who are the Houthis and why are they attacking now?

- The Houthis are a **Yemeni rebel group** who **control the west of the country, including its Red Sea coast**.
- They are aligned with and supplied by **Iran**, but are politically independent.

- Houthi have significantly stepped up attacks on commercial shipping vessels travelling through the lower Red Sea since mid-November in **response to Israel's bombardment of Gaza**.

### Why is the Red Sea route important?

- The Red Sea, which provides access to the **southern entrance to the Suez Canal**, is the **world's main East-West trade route**.
- It serves an important role in the global economy, with about 19,000 vessels traveling between the **Indian Ocean and the Mediterranean Sea** every year. The canal reduces the shipping distance between Asia and Europe almost by half.
- About **12% of global trade passes through the Red Sea**, including 30% of global container traffic and \$1 trillion worth of goods each year.



- At the southern end of the Red Sea is a **narrow strait of water between Djibouti and Yemen: the Bab el-Mandeb Strait (32km)**. This is the area that the Houthi rebels in Yemen have been targeting.

### Consequences

- An immediate consequence of the Red Sea conflict has been that major container and oil carriers have been forced to **re-route shipments via the Cape of Good Hope**.
- The re-routing has led to **rising ocean freight, inflated insurance costs, and longer voyage times** leading to delays and shortage of products. It has also **driven up transportation costs**.

### How has it affected India?

- **India's trade with European and North African countries flows entirely through the Red Sea route** which is almost **24% of its exports and 14% of its imports**.
- Rising threats have prompted Indian exporters to hold back around 25% of their cargo ships transitioning through the Red Sea.

## 2) India-Japan Act East Forum

### About Act East Forum

- **India and Japan** established the Act East Forum (AEF) in **2017** for
  - **Development of the Northeastern Region of India** and
  - To **promote connectivity within this region and between this region and South-East Asia**.

- AEF reflects the synergy between **India's Act East Policy and Japan's vision for a free and open Indo-Pacific.**

#### Why in News?

- India and Japan held the seventh meeting of the India-Japan Act East Forum in New Delhi.

### 3) MoU between India and Guyana

#### Background:

- In recent times, Guyana has gained significant salience in the oil & gas sector becoming the **world's newest oil producer.**
- The new discoveries of 11.2 billion barrels of oil equivalent, amounts to **18% of total global Oil & Gas discoveries and 32% of discovered oil.**
- **India is the world's 3rd largest energy consumer, 3rd largest consumer of oil and 4th largest refiner and the fastest-growing major economy** with rising energy needs.
- India is likely to account for approximately 25-28 per cent of the global energy demand growth between 2020-2040.
- With a view to ensure energy security of the country, India is focusing on fostering new partnerships in the hydrocarbon sector, both through diversification of crude oil sources and through acquiring quality overseas assets.

#### Why in News?

- The Union Cabinet has approved the signing of Memorandum of Understanding (MoU) between the Ministry of Petroleum & Natural Gas, Government of India and the Ministry of Natural Resources, Republic of Guyana on **cooperation in the hydrocarbon sector.**

- Under the agreement, both countries will collaborate across the entire hydrocarbon value chain.

#### Guyana's Location

- Guyana is located in the **northeastern corner of South America.**



- Since Guyana gained its independence in 1966, the country's chief economic assets have been its **natural resources**, mainly its pristine rainforests, sugarcane plantations, rice fields, and bauxite and gold reserves.
- The capital and chief port of Guyana is **Georgetown.**
- Guyana is bordered by the **Atlantic Ocean** to the north, by **Suriname**, by **Brazil** to the south and southwest, and by **Venezuela** to the west.

### 4) 9th edition of Raisina Dialogue About

- The Raisina Dialogue is **India's flagship conference on geopolitics and geoeconomics**, held annually since **2016.**
- The conference is hosted by the **Observer Research Foundation (ORF)** in collaboration with the **Ministry of External Affairs.**
  - *ORF is an independent global think tank based in Delhi.*



- It is a multilateral conference committed to addressing the most challenging issues facing the global community.
- Every year, global leaders in policy, business, media and civil society are hosted in **New Delhi** to discuss cooperation on a wide range of pertinent international policy matters.
- The Dialogue is structured as a **multi-stakeholder, cross-sectoral discussion**, involving heads of state, cabinet ministers and local government officials, as well as major private sector executives, members of the media and academics.
- The Raisina Dialogue has grown in stature and profile to emerge as a **leading global conference on international affairs**. It attracts leading minds from the global strategic and policy-making community to discuss broader foreign policy and strategic issues facing the world.

#### Why in News?

- The 9th edition of Raisina Dialogue was recently held in New Delhi.
- **Prime Minister of Greece H.E. Mr. Kyriakos Mitsotakis** joined the inaugural session as the **Chief Guest** which witnessed participation of representatives from over 100 countries including Ministers, former Heads of State and Heads of Government, Military Commanders, Captains of Industry, Technology Leaders, Academics, Journalists, Scholars on Strategic Affairs, Experts from leading Think Tanks, and Youth.
- The theme for this year's edition is **"Chaturanga: Conflict, Contest, Cooperate, Create"**.

## 5) Other Notable Topics

### 5.1. Pancheshwar Multipurpose Project

#### About

- Pancheshwar Multipurpose Project (PMP) is a **bi-national hydropower project** to be developed on the **Mahakali River** bordering **Nepal and India**.
- The development of the project is covered under the **integrated Mahakali Treaty** signed between Nepal and India in **1996** under underground powerhouses of will be constructed on each side of the Mahakali river in India and Nepal.
- Apart from generating around 6,480 MW electricity, the project will provide irrigation to 130,000 hectares of land in Nepal and 240,000 hectares in India in addition to other incidental benefits including flood protection.
- However, a mutually acceptable detailed project report (DPR) of the Pancheshwar Project could not be finalised due to differences on certain contentious issues.

### 5.2. G33 Grouping

#### About

- The G33 (or Friends of Special Products in Agriculture) is a **forum of developing and least developed countries** including India, Brazil, South Africa etc. formed during the **Cancun Ministerial Conference (2003)** of the World Trade Organization (WTO), to **protect the interest of the developing countries in agricultural trade negotiations**.
- It was created in order to help group countries which were all facing similar problems. The G33 has proposed special rules for developing countries at WTO

negotiations, like allowing them to continue to restrict access to their agricultural markets.

- The group, despite its name, has more than **40 members currently**.



## Art & Culture

### 1) Bharat Ratna Awards

#### About

- 'Bharat Ratna', the **highest civilian Award** of the country, was instituted in the year **1954**.
- **Any person** without distinction of race, occupation, position or sex is eligible for these awards.
- It is awarded in **recognition of exceptional service/performance of the highest order in any field of human endeavour**.
- The **recommendations** for Bharat Ratna are made by the **Prime Minister himself to the President**. **No formal recommendations** for this are necessary.
- The **number of annual awards is restricted to a maximum of three** in a particular year.
- On conferment of the award, the recipient receives a **Sanad (certificate) signed by the President and a medallion**. The **Award does not carry any monetary grant**.



- Those honored with the Bharat Ratna hold the esteemed **seventh position in the Indian order of precedence**.
- The first recipients of the Bharat Ratna were **scientist C. V. Raman, philosopher Sarvepalli Radhakrishnan, and politician**

**Rajagopalachari**, who were awarded on January 26, 1955.

- The award was **suspended from 1977 to 1980**, and was **revived in 1980**. The award was also **briefly abolished in 1992**, following a Supreme Court case that challenged its constitutional validity, but was **restored in 1995** after the court upheld its legality.
- In terms of **Article 18 (1)** of the Constitution, the **award cannot be used as a prefix or suffix to the recipient's name**.
  - However, should an award winner consider it necessary, he/she may use the following expression in their **bio-data/letterhead/visiting card etc.** to indicate that he/she is a recipient of the award:
    - 'Awarded **Bharat Ratna** by the **President**' or 'Recipient of **Bharat Ratna Award**'.

#### Why in News?

- Prime Minister Narendra Modi has announced that former Prime Ministers **PV Narasimha Rao and Chaudhary Charan Singh**, alongside agricultural scientist **MS Swaminathan**, Veteran leader **LK Advani** and Socialist icon **Karpoori Thakur** will be awarded the Bharat Ratna, India's highest civilian honour.
- This year's five recipients surpass the four awarded in 1999, marking the **highest number of Bharat Ratnas awarded in a single year**.

#### List of Bharat Ratna awardees this year

1. **Karpoori Thakur (Posthumous) (politician and former Bihar chief minister):**

- Karpoori Thakur, a well-known socialist leader from Bihar and former chief minister of the state, will be posthumously honoured with Bharat Ratna.
- Fondly referred to as '**Jan Nayak (people's leader)**', Thakur will become the 49th recipient of this prestigious award.

#### 2. Lal Krishna Advani (politician and former deputy prime minister):

- Veteran leader Advani served as both the **home minister and deputy Prime Minister** under the leadership of Atal Bihari Vajpayee from 1999 to 2004

#### 3. PV Narasimha Rao (Posthumous) (former Prime Minister of India):

- PV Narasimha Rao, a respected leader, served a full five-year term as Prime Minister from 1991 to 1996 and is widely lauded for his **pivotal role in introducing economic reforms.**

#### 4. Chaudhary Charan Singh (Posthumous) (former Prime Minister of India):

- Singh, a prominent leader hailing from western Uttar Pradesh, served as **Prime Minister during 1979-80.**
- Renowned as the **chief architect of land reforms in Uttar Pradesh**, Charan Singh spearheaded **significant legislative initiatives aimed at agricultural reforms.**

#### 5. Mankombu Sambasivan Swaminathan (Posthumous) (agriculture scientist):

- Swaminathan, who is known as the **father of the 'Green Revolution'**, is known for his **significant contributions to agriculture and the welfare of farmers.**
- He revolutionized Indian agriculture, ensuring both food security and prosperity for the nation.

## 2) Sangeet Natak Akademi Fellowships and Awards

### About Sangeet Natak Akademi

- Sangeet Natak Akademi is the **apex body in the field of performing arts** in India. It is an **autonomous body of the Ministry of Culture.**
- The Akademi was set up in **1953** for the **preservation and promotion of the vast intangible heritage of India's diverse culture** expressed in forms of music, dance and drama.
- The management of the Akademi vests in its **General Council.**
- The **Chairman** of the Akademi is appointed by the **President of India** for a term of **five years.**
- Its headquarters is located in **New Delhi.**



### Sangeet Natak Akademi Fellowships and Awards

- The **Sangeet Natak Akademi Awards** are the **highest national recognition conferred on practising artists.**
- Akademi Awards may be conferred on **eminent practitioners, gurus and scholars of music, dance and theatre** for sustained individual achievement of high professional order.
  - The **Akademi Awards** have been conferred since **1952.**
- The Akademi also confers **Fellowships (Akademi Ratna) on eminent artists and scholars of music, dance and drama.** It is considered as the **highest honour given to an eminent artist in the field of performing arts** for

his/her exceptional contribution to his/her performing art form.

- The Fellowship of the Akademi is a most prestigious and rare honour, which is **restricted to 40 at any given time**.
- The first Fellow of the Akademi was elected in **1954**.
- The award of Akademi Fellow carries a prize money of Rs 3 lakh, while the Akademi award carries a prize money of Rs 1 lakh, besides a 'tamrapatra' (inscriptions on copper plates) and 'angavastram' (a traditional shoulder cloth).

#### Why in News?

- The President of India Droupadi Murmu presented Sangeet Natak Akademi Fellowships and Awards for the year 2022 and 2023.

### 3) Jnanpith Award

#### About

- The Jnanpith Award is the **oldest and the highest Indian literary award** presented to authors for their "**outstanding contribution towards literature**."
- Instituted in **1961**, the award is **bestowed only on Indian writers** writing in **Indian languages included in the Eighth Schedule to the Constitution of India and English**, with **no posthumous conferral**.
- The **first recipient** of the award was **Malayalam writer G Sankara Kurup** in 1965 for his novel 'Odakkuzhal' meaning 'The Bamboo Flute'
- The award carries a **cash prize of Rs. 11 lakhs**, a **citation**, and a **bronze replica of Vagdevi** (Saraswati - the Hindu goddess of learning).
- The Award is presented annually by the **Bharatiya Jnanpith**, a literary

and research organization, based in New Delhi.

#### Why in News?

- Renowned Urdu poet **Gulzar** and Sanskrit scholar **Jagadguru Rambhadracharya** have been named as the recipients of the 58th Jnanpith Award.
- Gulzar is known for his works in Hindi cinema and is considered one of the finest Urdu poets of this era. Jagadguru Rambhadracharya is the founder and chief of Tulsi Peeth in Chitrakoot and is a renowned Hindu spiritual leader, educator, and writer of more than 240 books and texts.

### 4) Other Notable Topics

#### 4.1. Kartarpur Corridor

##### About

- The Kartarpur Corridor, also known as the **corridor of 'international peace and harmony'**, is a 4.2-km-long passage which facilitates travel of **Indian Sikh pilgrims** to the **Gurdwara Darbar Sahib in Kartarpur, Pakistan**.
- The Kartarpur Corridor was first proposed in early 1999 by Atal Bihari Vajpayee and Nawaz Sharif, the Prime Ministers of India and Pakistan respectively.
- The corridor was inaugurated in **2019** to **commemorate the 550th birth anniversary celebrations of Guru Nanak Dev**.
- The gurdwara is located on the right bank of the **Ravi River**.
- It is in Kartarpur Sahib that **Guru Nanak Dev** had spent the last 18 years of his life. The gurdwara is built where Guru Nanak is said to have died.



### About Guru Nanak (1469–1539)

- **Founder** of Sikhism and is the **first of the ten Sikh Gurus**.
- He advocated a form of **nirguna bhakti** (devotion to and worship of the Divine as formless).
- He **rejected the external practices** of the religions he saw around him. He **rejected sacrifices, ritual baths, image worship, austerities and the scriptures** of both Hindus and Muslims.
- Nanak's teachings can be found in the Sikh scripture **Guru Granth Sahib**.

## 4.2. Subika Painting

### About

- It is an **early visual art** from **Manipur**.
  - *Visual arts refer to art forms that express their **message, meaning, and emotion** through **visual means**.*
  - *Visual arts may be categorized as **decorative, commercial, or fine arts**, such as **painting, photography, or sculpture**.*
- The **Subika painting style** is intricately linked to the **Meitei community's cultural history**.
- It is surviving through **six manuscripts** — **Subika, Subika Achouba, Subika Laishaba, Subika Choudit, Subika Cheithil** and **Thengrakhel Subika**.
- Although there is no mention of a specific founder, in **Cherithol Kumbada**, it is said that these paintings came into prominence around the **18th or 19th century**.
  - *Cheitharol Kumbaba, also known as the "**Royal Chronicle of Manipur**," contains accounts of the history and events of the **Manipuri kings** and the **Manipur region**.*
- The visual images of subhika paintings found in manuscripts are **painted on handmade paper or barks of trees**.
- The inks were produced by using **indigenous materials** like **green tea, burnt rice** as well as **sodium liquid, copper sulphate**, etc.
- For writing purposes, the stalks of **bird feathers** or **small bamboo twigs** were used.



# Defence

## 1) AKASH-NG Missile

### What's in the news?

- The Defence Research and Development Organisation (DRDO) has conducted a successful flight test of the **New Generation AKASH (AKASH-NG) missile** from the Integrated Test Range (ITR), Chandipur off the coast of Odisha.
- The test has **validated the functioning of the complete weapon system** consisting of a missile with an indigenously developed radio frequency seeker, launcher, multi-function radar and command, control and communication system.

### About the Missile



- Akash-NG is a new generation **state-of-the-art surface-to-air missile (SAM)** with an **active electronically scanned array (AESA) multi-function radar** that features all three functions - search, track and fire control in one platform.
- Akash is **India's first indigenously designed, developed and produced air defence system**. It also is the **cheapest surface-to-air missile** ever produced in the world with **supersonic powered intercept**.
- The new Akash system can **defend an area 10 times better compared to any short-range SAM** and is **capable of engaging up to 10 targets simultaneously**.

- It can **strike targets up to 40 km** as against the earlier variant's maximum range of 30 km.

## 2) MH 60R Seahawk

### What's in the news?

- The Indian Navy has commissioned the first squadron of its newly-inducted **MH 60R Seahawk multi-role choppers** that is expected to significantly bolster the force's surveillance and combat capabilities in the strategic waters.
- The helicopters are a part of the contract **signed with the US government** in 2020.
- MH-60R helicopter, produced by **US defence giant Lockheed Martin Corporation**, is an all-weather helicopter designed to support multiple missions with state-of-the-art avionics and sensors.
- The helicopter is designed for anti-submarine warfare, anti-surface warfare, search and rescue and medical evacuation among other operations.



- The Seahawk's deployment in the Indian Ocean Region would strengthen the Indian Navy's maritime presence, dissuading potential threats and ensuring a secure and safe environment in this strategically crucial region.

### 3) INDUS-X Summit

#### What's in the news?

- The second edition of the INDUS-X Summit, jointly organized by **Innovations for Defence Excellence (iDEX)** under the Ministry of Defence, India, and **Department of Defence (DoD), United States** was recently held in **New Delhi**.
  - *Refer Pulse May 2023 Digest edition for details about iDEX.*
- The summit is a pivotal event **driving strategic technology partnerships and defence industrial cooperation** between India and the USA.
- Since its launch in **June 2023** during the State Visit of Prime Minister Narendra Modi to the US, the India-U.S. Defence Acceleration Ecosystem (INDUS-X) has been at the forefront of **expanding bilateral ties in defence innovation**.

### 4) Exercise MILAN

#### What's in the news?

- India recently hosted the 12th edition of MILAN, a **biennial multinational naval exercise**, at Visakhapatnam.
- The exercise witnessed participation of around 50 friendly foreign navies.
- MILAN exercise was conceived in **1995** as a biennial multinational event which flourished under the aegis of **Andaman and Nicobar command** till its 10th edition and later shifted to **Visakhapatnam** with 11th edition.
- The exercise resonates with India's international diplomatic efforts namely '**Act East policy**' and '**Security And Growth for All in the Region (SAGAR)**'.

### 5) Other Notable Topics

#### 5.1. DRDO

##### About

- Defence Research & Development Organisation (DRDO) is the **R&D wing of Ministry of Defence**.
- Headquartered in **New Delhi**, DRDO was formed in **1958** by amalgamating the Defence Science Organisation and a few technical development establishments.
- DRDO has a network of laboratories engaged in developing defence technologies covering various fields, like aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems.

##### Achievements of DRDO

- Since being set up, DRDO has achieved many successes in developing major systems and critical technologies like aircraft avionics, UAVs, small arms, artillery systems, tanks and armoured vehicles, sonar systems, command and control systems and missile systems.
- In 2016, DRDO successfully tested its **first indigenously developed heavy-duty drone, Rustom 2**, which is an unmanned armed combat vehicle developed on the lines of the US's Predator drone.
- DRDO co-developed **INS Arihant, India's first nuclear ballistic missile submarine**, which became operational in 2018.
- In 2019, DRDO developed India's **first anti-satellite system** that made India one of the space superpowers.
- DRDO has developed several **ballistic missiles** under its **Integrated Guided Missile Development Programme**, which includes missiles like **Prithvi, Trishul, Agni, Akash and Nag**.



- DRDO also played a key role in the indigenous development and production of strategic systems and platforms **light combat aircraft, Tejas; multi-barrel rocket**

**launcher, Pinaka;** a wide range of radars and electronic warfare systems; etc.,

## Miscellaneous

### 1) Royal Indian Naval Mutiny

#### About RIN

- The Royal Indian Navy (RIN) Mutiny, also known as the 1946 Naval Uprising, was a significant rebellion against the British Raj in India.
- The RIN revolt started on **18 February 1946** in **Bombay**. Sailors employed on **HMIS Talwar** protested against the **poor quality of food and racial discrimination** by British officers.
- The protest spread rapidly to 22 ships in **Bombay harbour**.
- By the following evening, a **naval central strike committee** had been elected. The mutineers took out a procession in Bombay, holding aloft a portrait of **Subhas Bose**. Their ships also raised the flags of the **Congress, Muslim League** and **Communist Party**.
- Ratings (soldiers) in striking naval establishments outside Bombay echoed the themes of **release of INA (Indian National Army) personnel** and other **political prisoners; withdrawal of Indian troops from Indonesia**; and the acceptance of **Indian officers only** as **superiors**.
- The strike spread to **other naval establishments around the country**. At its height, **78 ships, 20 shore establishments, and**

**20,000 ratings** were involved in the uprising.

- The revolt at various locations was coordinated by **signal communication equipment** on board **HMIS Talwar**.
- The British authorities swiftly responded with military force, suppressing the rebellion within a few weeks.
- Following assurances of sympathetic treatment from **Vallabhbhai Patel** and **M.A. Jinnah**, the ratings in Bombay surrendered on 23 February.

#### Why in News?

- The Maritime History society hosted a seminar to commemorate the historic 1946 Royal Indian Naval RIN Mutiny.
  - *The Maritime History Society is an **initiative of the Indian Navy's, Western Naval Command**.*
  - *It was founded in 1978 to evolve into a body of eminence in the field of Maritime History through nurturing of historical research among young mariners and showcasing India's rich Maritime Heritage.*

# SUMMARY OF UNION BUDGET 2024 FROM THE PERSPECTIVE OF UPSC CSE

## Introduction

- Finance Minister Nirmala Sitharaman presented India's Interim Budget 2024 in the Parliament.
- The Interim Budget took on the **Viksit Bharat theme**, with the government visualising a **developed India by 2047**.
- **'Garib' (Poor), 'Mahilayen' (Women), 'Yuva' (Youth) and 'Annadata' (Farmers)** are the four-pillars of the Viksit Bharat Budget 2024.

## What is an Interim Budget?

- As per **Article 112** of the Indian Constitution, a statement of the estimated receipts and expenditure of the Government of India for a specific financial year— referred to as **'annual financial statement'** — is laid before both Houses of Parliament.
- However, in an **election year**, the **incumbent Government cannot present a full Budget** as there may be a change in the executive after the polls. Hence, the need for an **interim budget**.
- The Interim Budget outlines the **government's expenditure and revenue proposals until a full-fledged budget is presented by the new government**.
- A crucial aspect of the interim budget is the **"Vote on Account."** This essentially **authorizes the government to withdraw funds** from the treasury for **essential expenses** like salaries, debt servicing, and ongoing programs. It ensures the administration can function smoothly until the new government takes charge.

## Can major schemes or tax changes be announced?

- While there is **no Constitutional bar** on the government to make changes in the tax regime in the interim budget, the **precedence has been to desist from such measures**.

## HIGHLIGHTS OF THE INTERIM BUDGET: Part A

### Welfare

- The government has said that **around 25 crore people have been brought out from multi-dimensional poverty** in the pursuit of **"Sabka Sath, Sabka Vikas"** ("**striving together for inclusive growth**") in the last 10 years.

### PM Awas Yojana (Gramin)

- In order to achieve the target of **'Housing for All' in rural areas**, the **Ministry of Rural Development** is implementing Pradhan Mantri Awas Yojana-Gramin (PMAY-G) with effect from 1st April 2016 to provide **assistance to eligible rural households**.
  - India is close to achieving the **target of three crore houses** under PMAY-G.
  - **Two crore more houses** will be taken up in the next five years to meet the requirement arising from an increase in the number of families.

### Rooftop Solarization and Muft Bijli

- Through **rooftop solarization**, **one crore households will be enabled to obtain up to 300 units of free electricity every month**.

- The **following benefits** are expected:
  - **Savings of up to fifteen to eighteen thousand rupees annually** for households from free solar electricity and selling the surplus to the distribution companies;
  - **Charging of electric vehicles;**
  - **Entrepreneurship opportunities** for a large number of vendors for supply and installation;
  - **Employment opportunities** for the youth with technical skills in manufacturing, installation and maintenance.

#### **Housing for Middle Class**

- Government will launch a scheme to **help deserving sections of the middle class “living in rented houses, or slums, or chawls and unauthorized colonies” to buy or build their own houses.**

#### **Health**

- Government will encourage **vaccination for girls in the age group of 9 to 14 years** for the prevention of cervical cancer.
- **Various schemes for maternal and child care** will be brought under **one comprehensive programme** for synergy in implementation.
- **Upgradation of anganwadi centres** under **“Saksham Anganwadi and Poshan 2.0”** will be expedited for improved nutrition delivery, early childhood care and development.
  - *Saksham Anganwadi and Poshan 2.0 is an **Integrated Nutrition Support Programme.***
  - *It seeks to **address the challenges of malnutrition in children, adolescent***

*girls, pregnant women and lactating mothers through a strategic shift in nutrition content and delivery and by creation of a convergent eco system to develop and promote practices that nurture health, wellness and immunity.*

- The newly designed **U-WIN platform** for managing immunization and intensified efforts of Mission Indradhanush (*Refer Pulse October 2023 Digest edition*) will be rolled out expeditiously throughout the country.
  - *The U-WIN portal, the **programme to digitise India's Universal Immunisation Programme (UIP)** presently is being run in a pilot mode in two districts of each state and union territories.*
- Healthcare cover under **Ayushman Bharat scheme** (*Refer Pulse May 2023 Digest edition*) will be **extended to all ASHA workers, Anganwadi Workers and Helpers.**

#### **Agriculture and Food Processing**

- A strategy will be formulated to **achieve ‘Atmanirbharta’ for oil seeds** such as mustard, groundnut, sesame, soybean, and sunflower.
  - This will cover **research** for high-yielding varieties, **widespread adoption** of modern farming techniques, **market linkages, procurement, value addition,** and **crop insurance.**
- **India is the world’s largest milk producer** but with **low productivity of milch animals.** A **comprehensive programme** for

supporting dairy farmers will be formulated.

### SHGs

- Eighty-three Lakh SHGs with nine crore women are transforming the rural socio-economic landscape with empowerment and self-reliance. Their success has assisted nearly **one crore women** to become **Lakhpati Didi** already.
- It has been decided to **enhance the target for Lakhpati Didi to 3 crore households** from the existing 2 crore.
  - *Lakhpati Didi scheme under the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) aims to encourage women to start micro-enterprises. It was announced in 2023.*
  - *The scheme aims to train women in self-help groups and enable them to earn an income of at least Rs 1 lakh per annum per household.*
  - *Each SHG household is encouraged to take up multiple livelihood activities coupled with value chain interventions, resulting in a sustainable income of Rs 1 lakh or more in a year.*

### Research and Innovation

- A corpus of **INR 1 Lakh Crore** will be established with a **fifty-year interest-free loan**. The corpus will provide **long-term financing or refinancing with long tenors and low or nil interest rates to encourage the private sector to scale up research and innovation significantly in sunrise domains**.
- A **new scheme** will be launched for **strengthening deep-tech technologies for defence purposes and expediting 'Atmanirbharta'**.

### Infrastructure

- The interim budget 2024-25 has set a fresh record for infrastructure outlay by earmarking **Rs 11,11,111 crore**, topping the existing high of Rs 10 lakh crore allocated during fiscal 2023-24. This would be **3.4% of the GDP**.

### Railways

- **Three major economic railway corridor programmes** will be implemented. These are:
  - **Energy, mineral and cement corridors**
  - **Port connectivity corridors**
  - **High-traffic density corridors.**
- The projects have been identified under the **PM Gati Shakti** (Refer Pulse September 2023 Digest edition) for enabling multi-modal connectivity. They will improve logistics efficiency and reduce costs.
- Together with **dedicated freight corridors**, these three economic corridor programmes will **accelerate our GDP growth and reduce logistic costs**.

### Aviation

- The rollout of **air connectivity to tier-two and tier-three cities** under the **UDAN scheme** (Refer Pulse July 2023 Digest edition) has been widespread which has helped to **double the number of airports to 149**.
- **Five hundred and seventeen new routes** are carrying 1.3 crore passengers.

### Green Energy

- Towards meeting India's commitment for **'net-zero' by 2070**, the following measures will be taken.
  - **Viability gap funding** will be provided for **harnessing offshore wind energy**

- potential for an **initial capacity of one giga-watt**.
- **Coal gasification and liquefaction capacity of 100 MT** will be set up by 2030. This will also help in reducing imports of natural gas, methanol, and ammonia.
- **Phased mandatory blending of Compressed Biogas (CBG) in Compressed Natural Gas (CNG) for transport and piped natural gas (PNG) for domestic purposes will be mandated.**
- **Financial assistance** will be provided for the **procurement of biomass aggregation machinery** to support collection.

### Electric Vehicle

- Government will expand and strengthen the e-vehicle ecosystem by **supporting manufacturing and charging infrastructure**.
- **Greater adoption of e-buses for public transport networks** will be encouraged through payment security mechanisms.

### Bio-manufacturing and Bio-foundry

- A **new scheme of bio-manufacturing and bio-foundry** will be launched.
  - This will provide **environment friendly alternatives such as biodegradable polymers, bio-plastics, bio-pharmaceuticals and bio-agri-inputs**.
  - This scheme will also help in **transforming today's consumptive manufacturing paradigm to one based on regenerative principles**.

### Blue Economy 2.0

- For promoting climate resilient activities for Blue Economy 2.0, a **scheme for restoration and adaptation measures, and coastal aquaculture and mariculture** with an integrated and multi-sectoral approach will be launched.

### Tourism

- States will be encouraged to take up **comprehensive development of iconic tourist centres, branding and marketing them at a global scale**.
- A framework for **rating of the centres based on the quality of facilities and services** will be established.
- **Long-term interest free loans** will be provided to States for financing such development on a matching basis.
- To address the emerging fervour for domestic tourism, **projects for port connectivity, tourism infrastructure, and amenities** will be taken up on our islands, including Lakshadweep.

### Promoting Investments

- The **FDI inflow during 2014-23 was \$596 Billion**.
- To encourage sustained foreign investment, India is negotiating **bilateral investment treaties** with foreign partners, in the spirit of **'First Develop India'**.

### Reforms in the States for 'Viksit Bharat'

- The Union government will provide **Rs 75,000 crore as interest-free loan for 50 years to support milestone-linked reforms by states** for realising the vision of 'Viksit Bharat'.

### Societal Changes

- The Government will form a **high-powered committee** for an extensive consideration of the **challenges arising from fast population growth and demographic changes**.

### Revised Estimates (RE) 2023-24

- **RE of the total receipts other than borrowings is Rs.27.56 lakh crore**, of which the **tax receipts are Rs.23.24 lakh crore**.
- **RE of the total expenditure is Rs.44.90 lakh crore**.
- **Revenue receipts at Rs.30.03 lakh crore are expected to be higher than the Budget Estimate**, reflecting strong growth momentum and formalization in the economy.
- **RE of the fiscal deficit is 5.8 per cent of GDP for 2023-24**.

### Budget Estimates 2024-25

- **Total receipts other than borrowings and the total expenditure are estimated at Rs.30.80 and Rs.47.66 lakh crore respectively**.
- **Tax receipts are estimated at Rs.26.02 lakh crore**.
- **Scheme of fifty-year interest free loan for capital expenditure to states to be continued this year with total outlay of Rs.1.3 lakh crore**.
  - *Introduced in FY2021, the interest-free loan scheme is aimed at boosting capital expenditure by states.*

- *The scheme has been highly successful in creating capital investment projects in states covering health, education, irrigation, water supply, power, roads, and railways.*
- **Fiscal deficit in 2024-25 is estimated to be 5.1 per cent of GDP**.

### Part B

#### Direct taxes

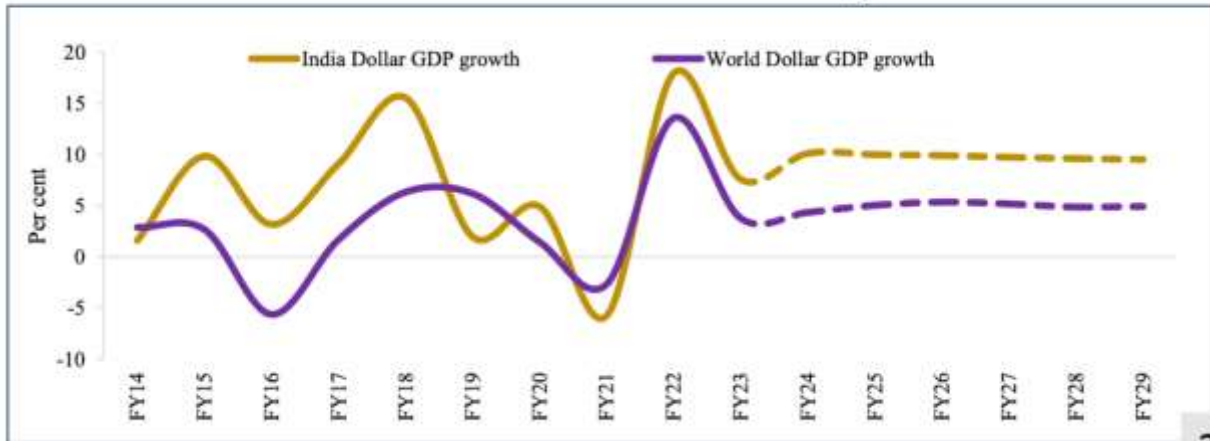
- The Finance Minister proposed to **retain the same tax rates for direct taxes**.
- Direct tax collection has tripled, return filers increased to 2.4 times, in the last 10 years.

#### Indirect taxes

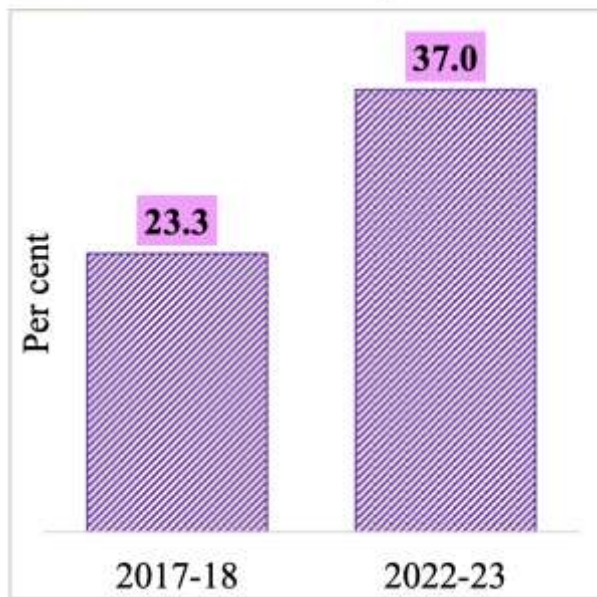
- The Finance Minister proposed to **retain the same tax rates for indirect taxes and import duties**.
- GST has unified the highly fragmented indirect tax regime in India:
  - **Average monthly gross GST collection doubled to Rs 1.66 lakh crore this year;**
  - **GST tax base has doubled.**

Other Key Figures

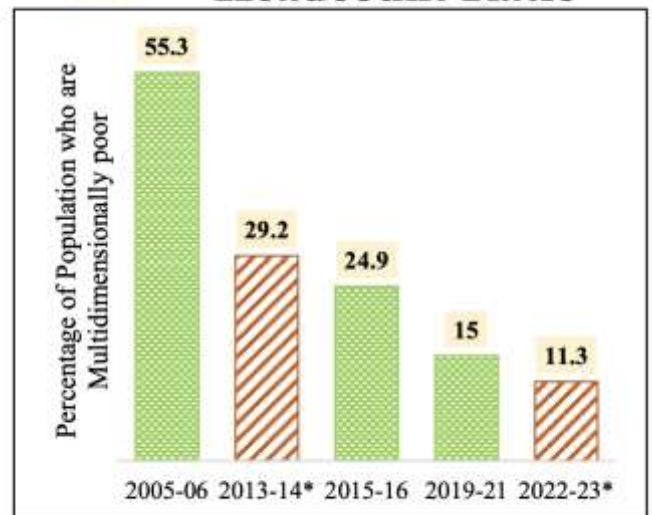
**India and World Dollar GDP growth**



**Rise in Female Labour Force Participation Rate**



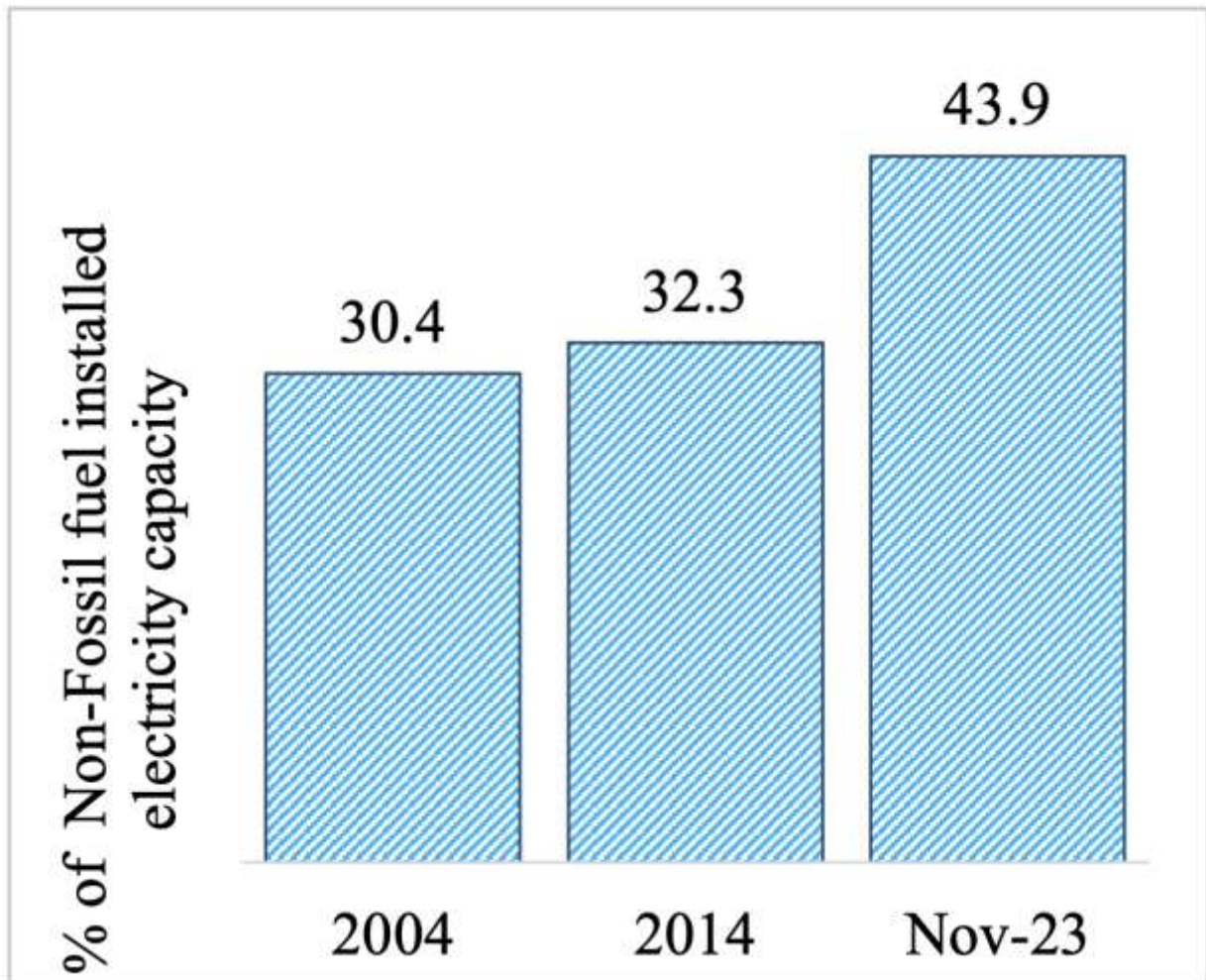
**Decline in Headcount Ratio**



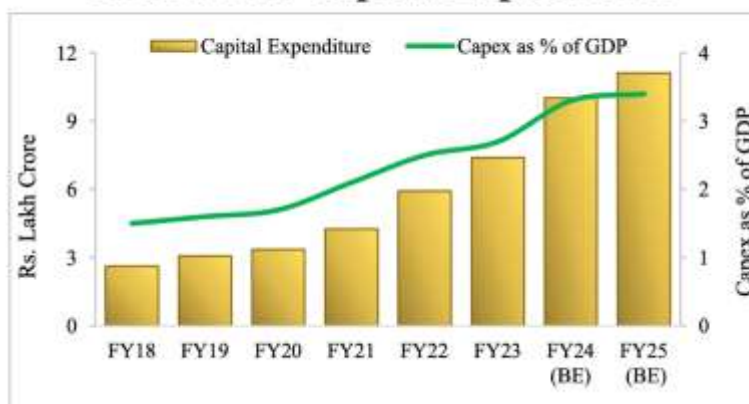
\* Projections



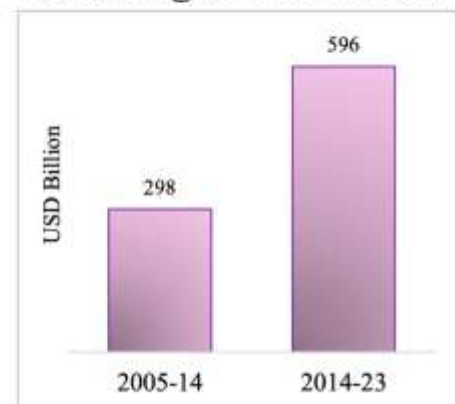
## Per cent increase in Non-Fossil Fuel installed electricity capacity



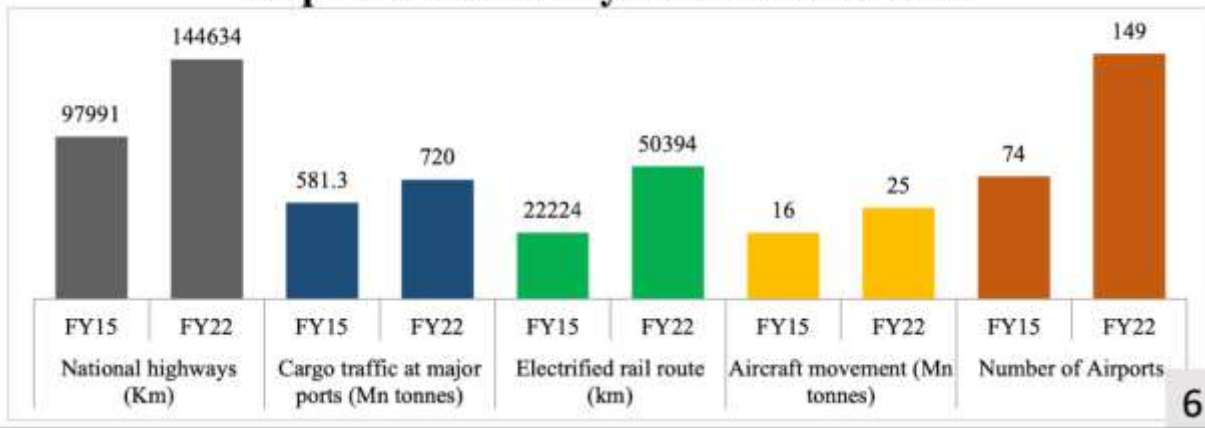
### Increase in Capital Expenditure



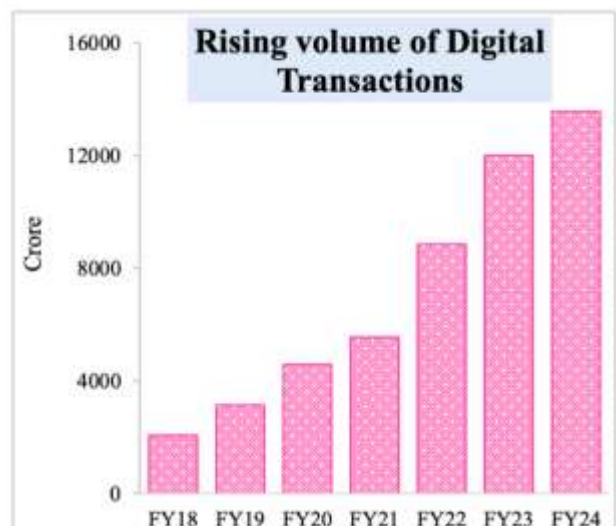
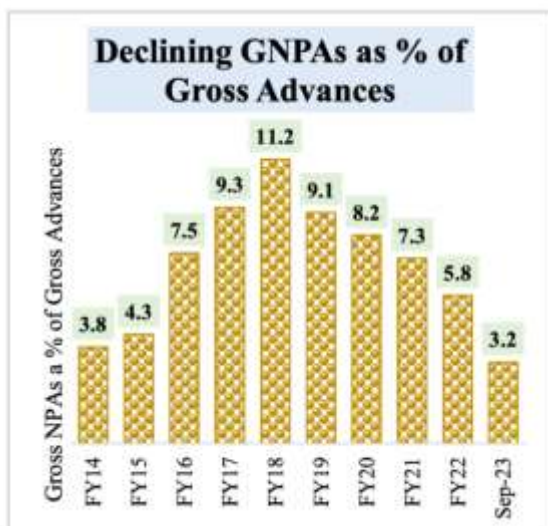
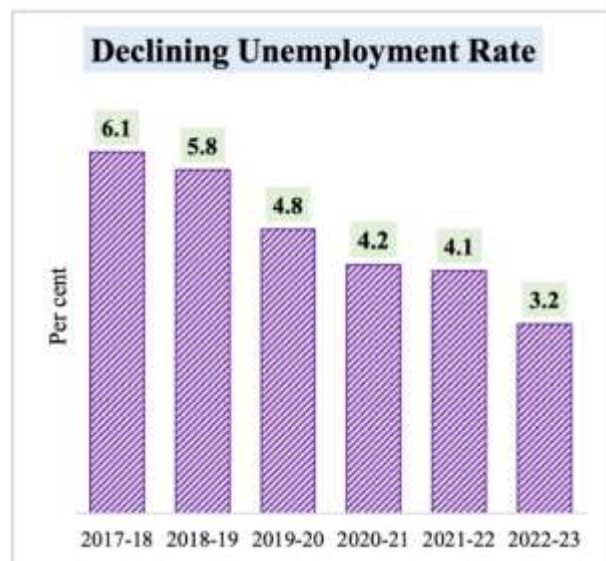
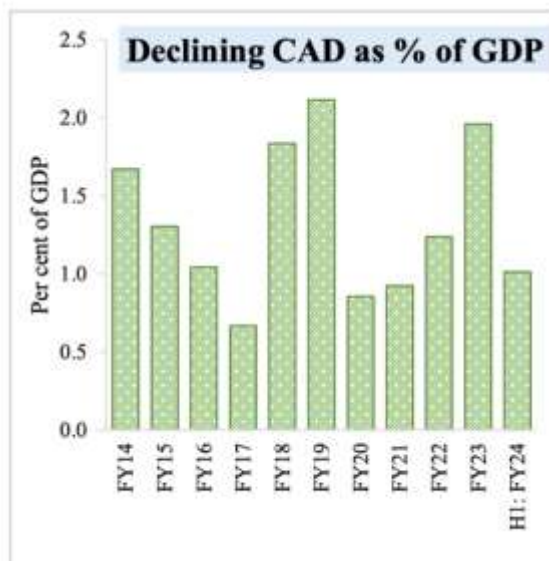
### Doubling of FDI Inflow

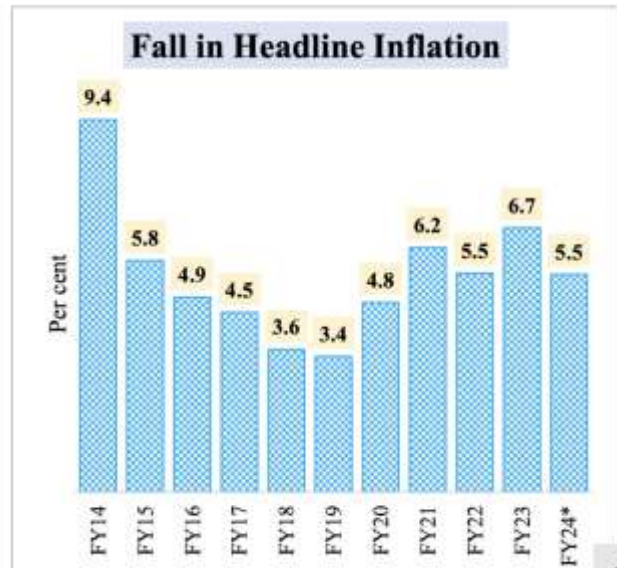
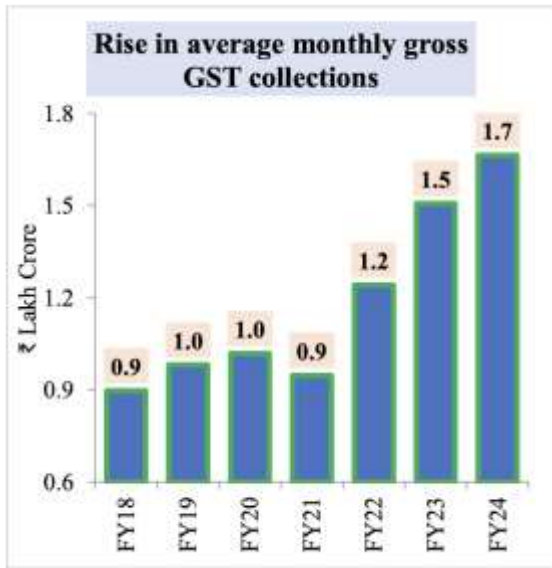


### Improvement in Physical Infrastructure



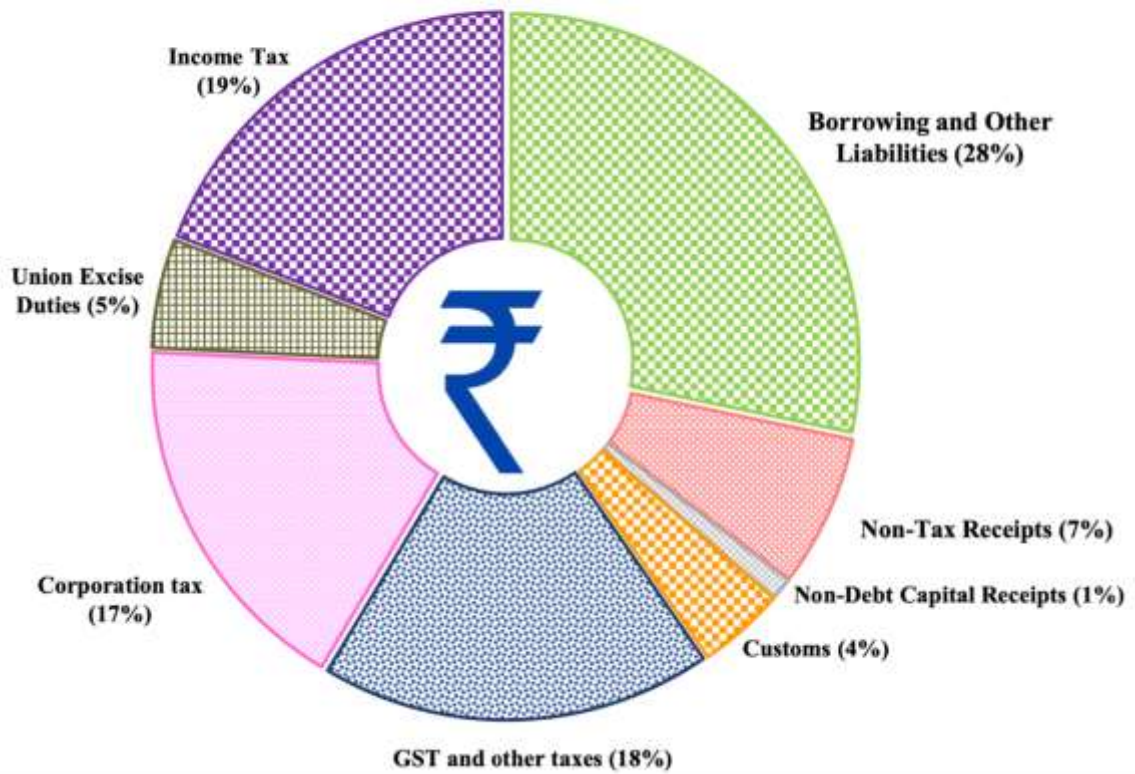
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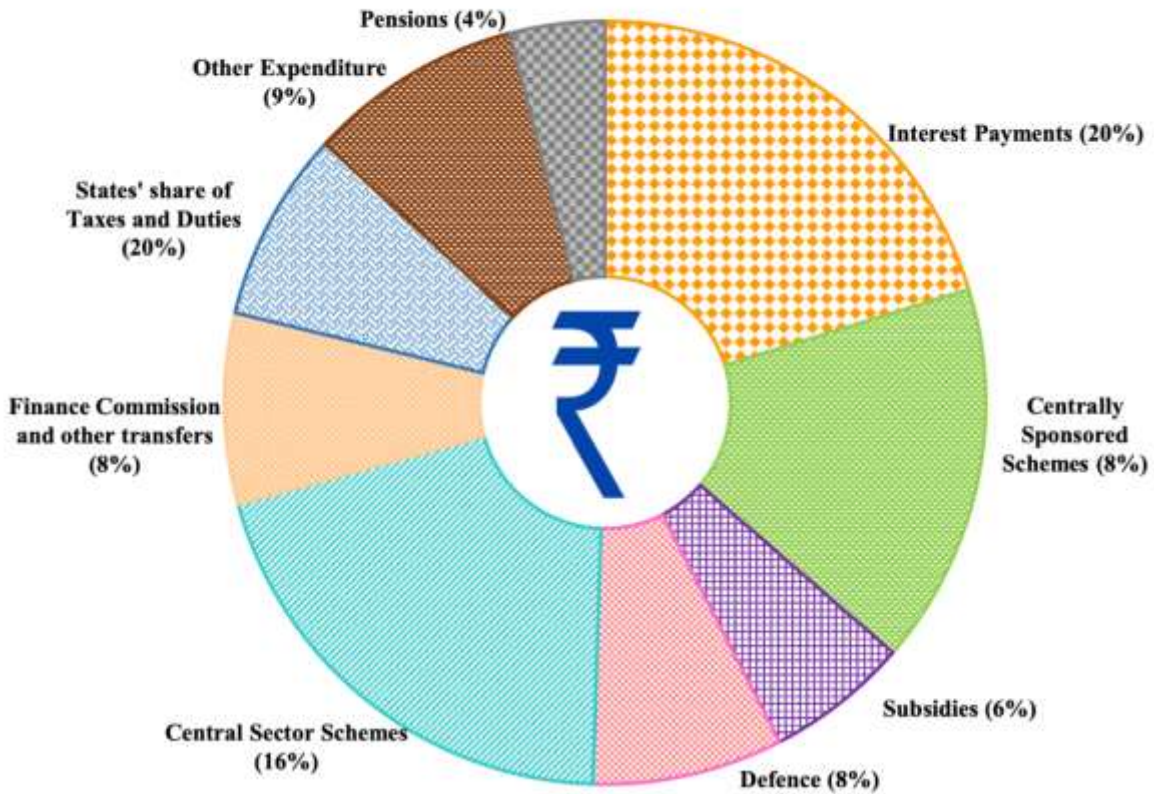


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## Rupee Comes From



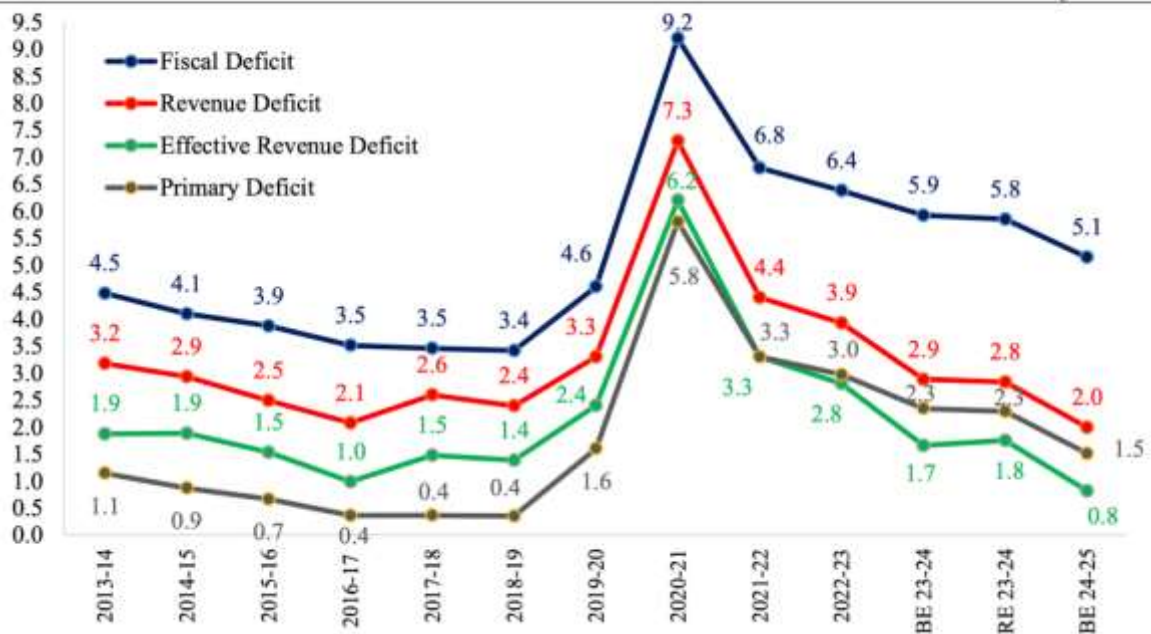
# Rupee Goes To



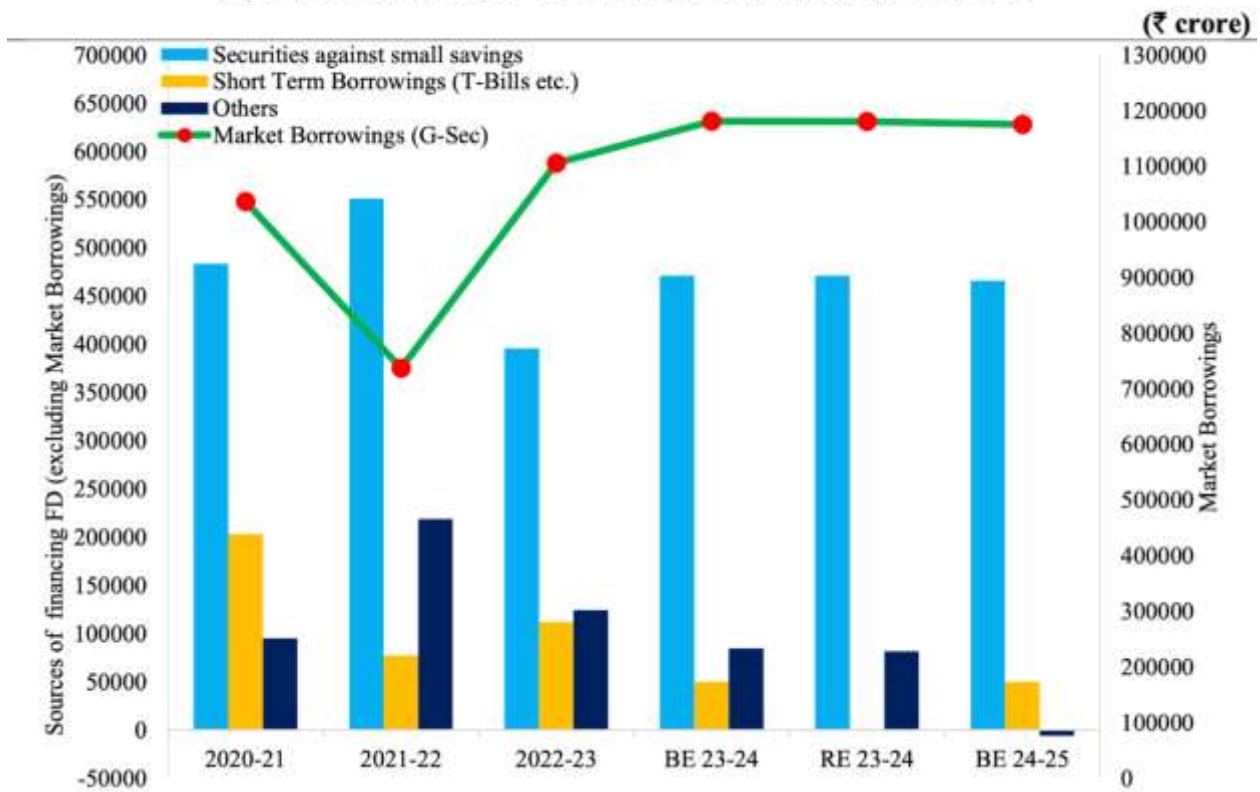
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## DEFICIT TRENDS

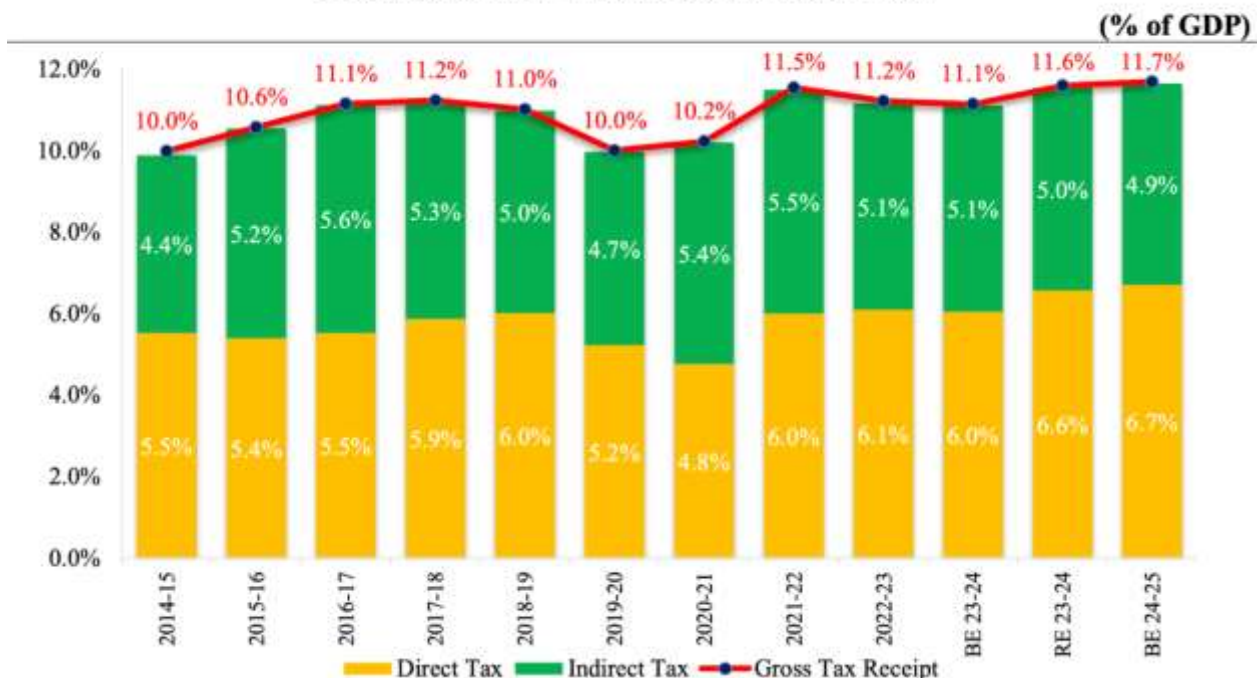
(% of GDP)



## SOURCES OF DEFICIT FINANCING

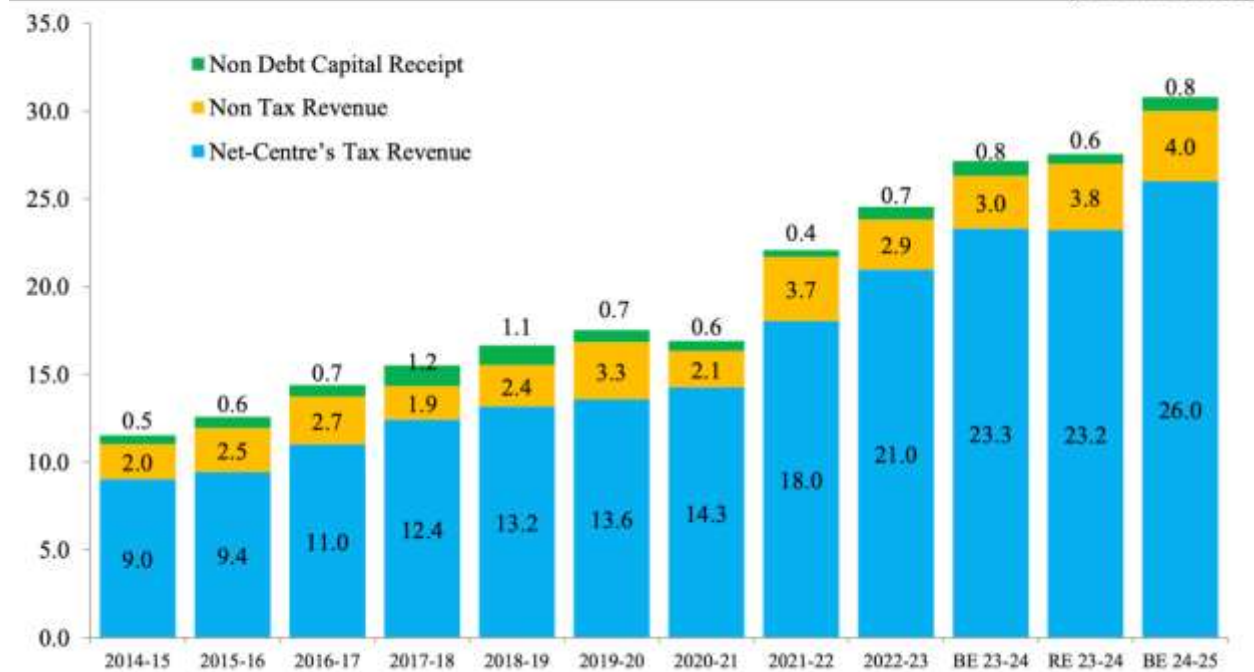


## TREND IN TAX RECEIPTS



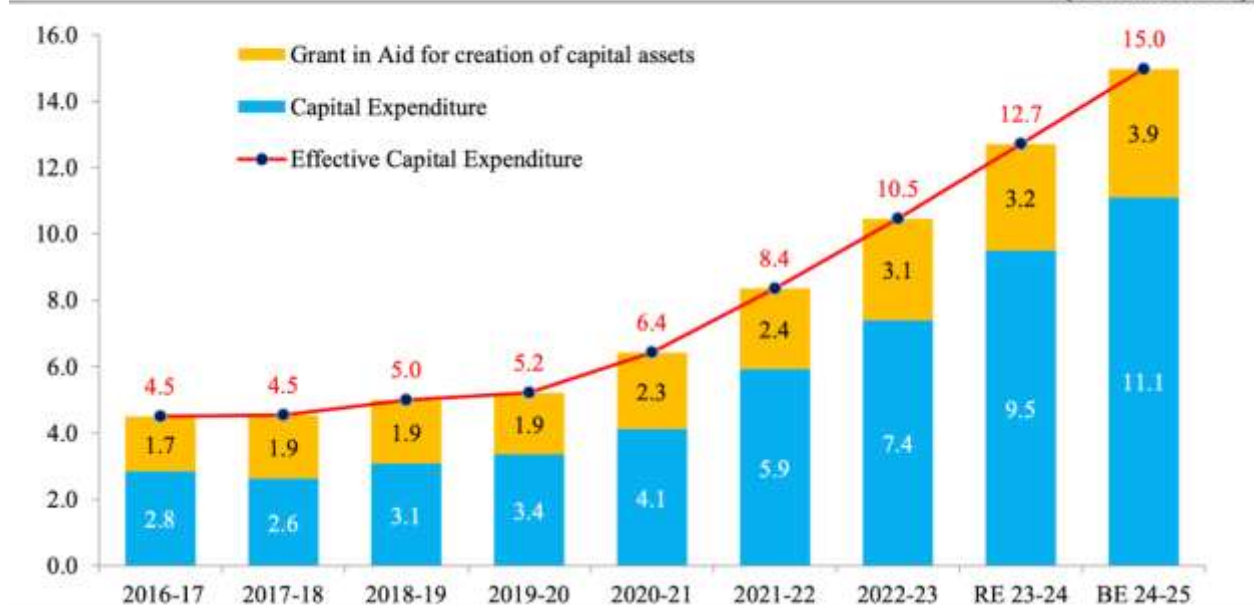
## TREND IN NET RECEIPT OF THE CENTRE

(₹ in lakh crore)

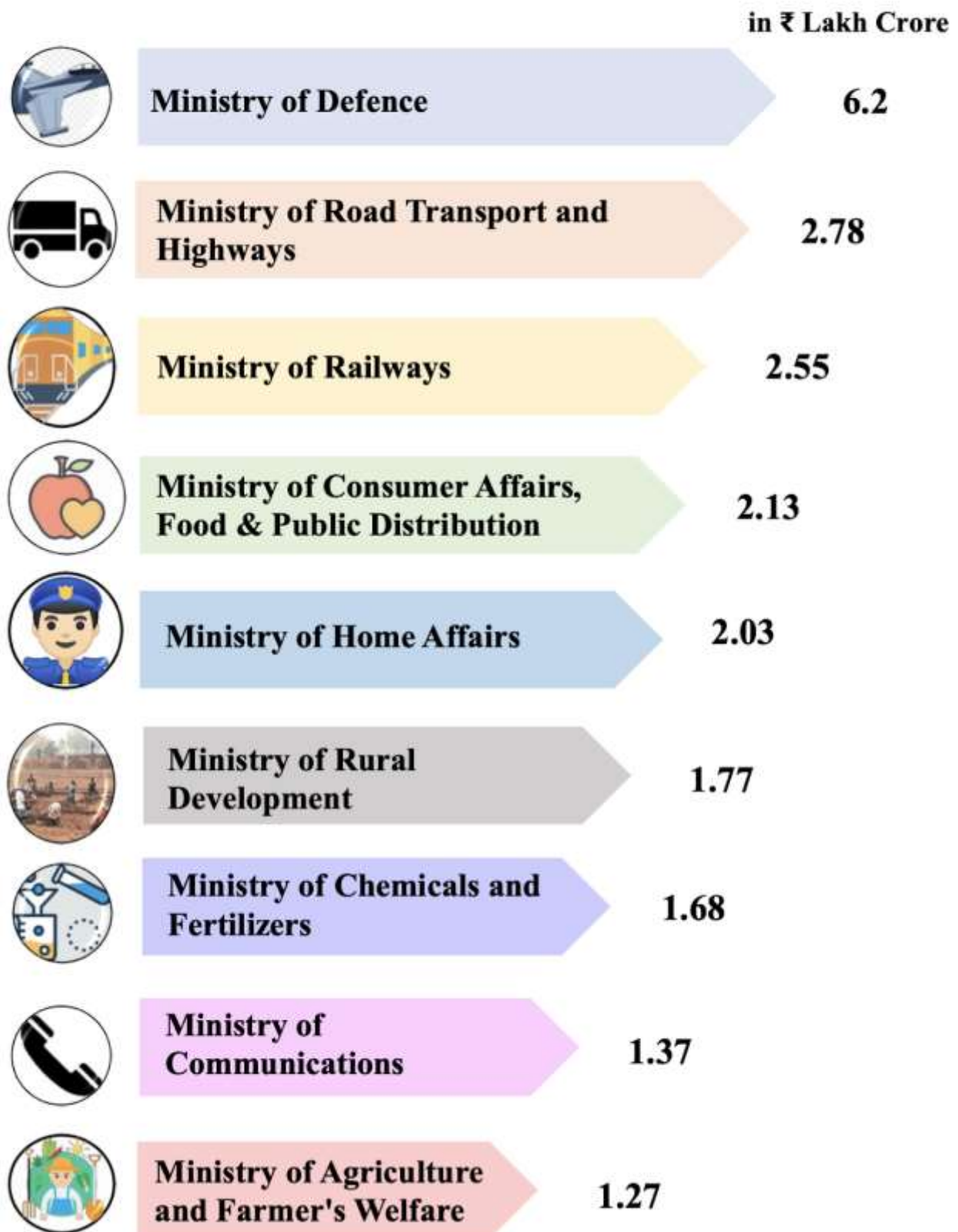


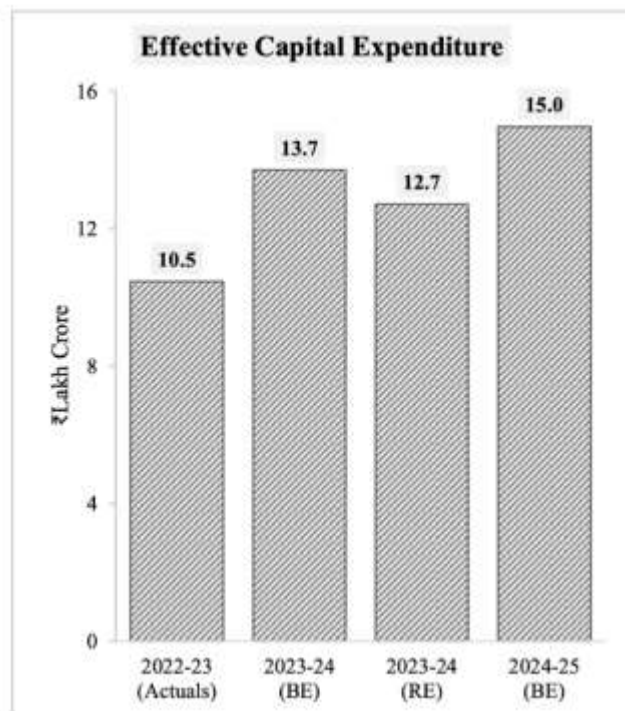
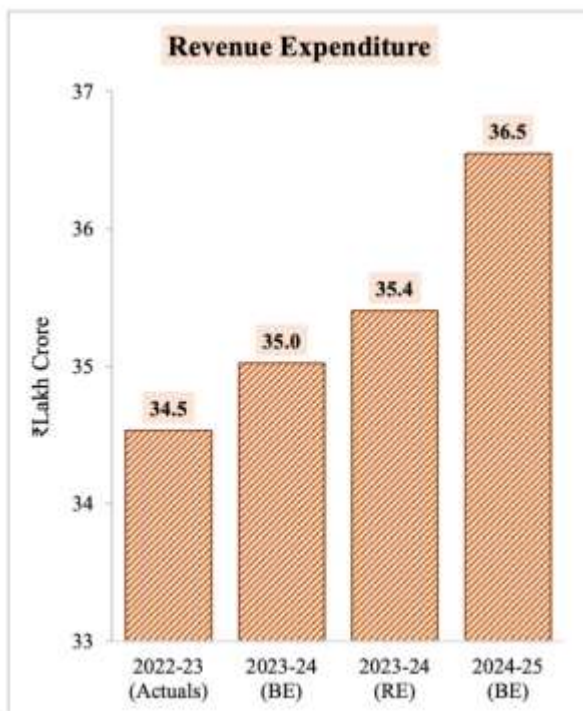
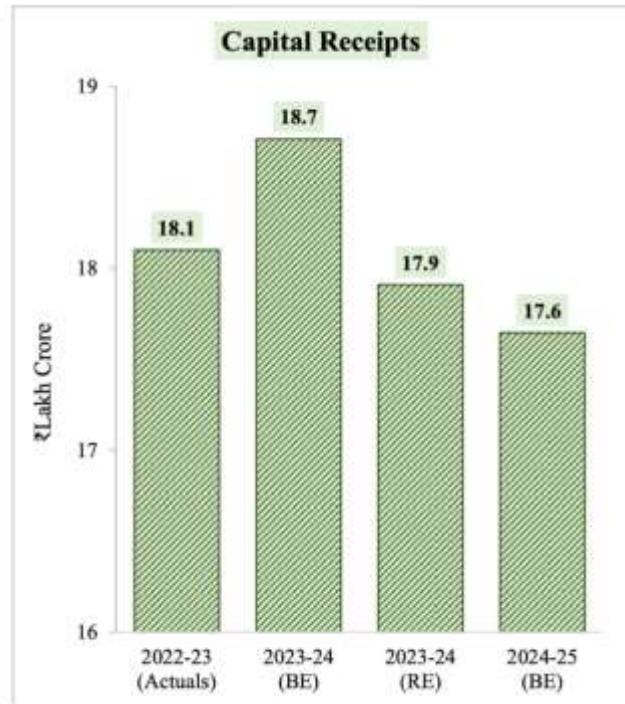
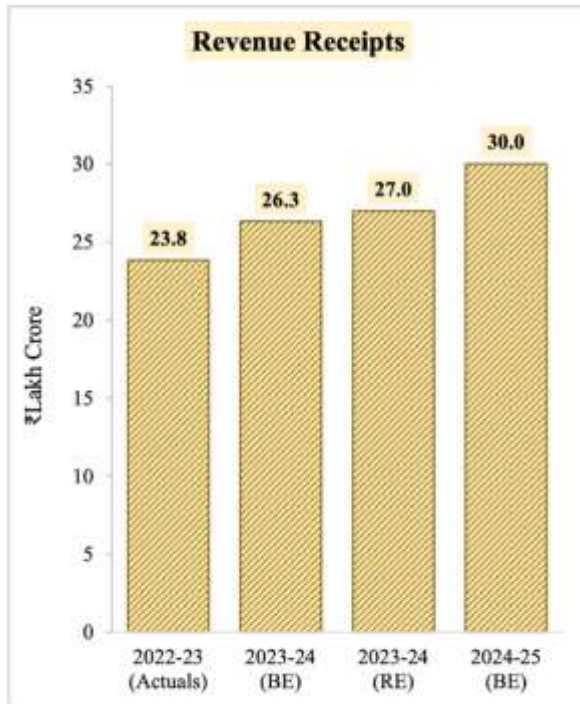
## TREND IN CAPITAL EXPENDITURE

(₹ in lakh crore)



## Allocation for Specific Ministries







## Key Takeaways From Other Articles

### 1) India's largest Battery Energy Storage System

#### News:

- The **Solar Energy Corporation of India Limited (SECI)** has commissioned **India's largest Battery Energy Storage System (BESS)**, which stores energy using **solar energy**.
  - *SECI is a Central Public Sector Undertaking (CPSU) under the administrative control of the Ministry of New and Renewable Energy. It is the only CPSU dedicated to the renewable energy sector.*
- The 40 megawatts (MW) / 120MWh BESS with a solar photovoltaic (PV) plant which has an installed capacity of 152.325 megawatt hour (MWh) and dispatchable capacity of 100MW AC is located in **Rajnandgaon, Chhattisgarh**.

### 2) Rhodamine B

#### News:

- The Tamil Nadu government has banned cotton candy as a large number of cotton candy samples collected from the state were identified with the industrial dye Rhodamine B.
- Rhodamine B (RhB) is a **chemical compound commonly employed in synthetic dyes** for colouring silk, jute, leather, cotton, and wool, as well as in the cosmetics and plastics industries.
- This compound is frequently used as a **food colourant**, particularly in items like chilli powder, chilli oil, cotton candy etc.
- It is known to cause **potential health hazards**, including skin and

eye irritation, respiratory issues, and **debated carcinogenicity**.

- Rhodamine B is considered **substandard and unsafe under the Food Safety and Standards Act, 2006**.
- Although **banned by the Food Safety and Standards Authority of India (FSSAI)**, the presence of this chemical has been found in foods including the fruits and vegetables sold in the market to the dishes served by street vendors.

### 3) Starlink Project

#### About

- Starlink is the **world's first and largest satellite constellation using a low Earth orbit** to deliver broadband internet capable of supporting streaming, online gaming, video calls and more.
- It is a project by **SpaceX**, an American aerospace company founded by Elon Musk, to provide high-speed internet access to anywhere on the planet using a constellation of thousands of satellites.
- Starlink aims to offer broadband service that is faster, cheaper, and more reliable than existing options, especially in rural and remote areas where connectivity is limited or nonexistent.

### 4) Engel Curve hypothesis

#### About

- Named after the 19th century German statistician Ernst Engel, the hypothesis broadly states that **as incomes grow, households spend a smaller proportion of that on food**.

- Even within food, they would **buy more of “superior” and less of “inferior” items.**

## 5) Women in Food Processing Sector

### News:

- Out of more than **3.13 crore registered micro, small, and medium enterprises** in the country, as many as **19 lakh are in the food processing sector**, of which **33% are owned by women entrepreneurs.**
- As per the Ministry of Food Processing Industries’ Annual Report, 2022–23, **11.18% of total 20.32 lakh registered employment is that of women workers** and out of **51.11 lakh employees in the unincorporated non-agricultural enterprises in the food processing sector**, **25% are women.**

## 6) Egg freezing

### About

- Egg freezing is a **process in which a woman's eggs (oocytes) are extracted, frozen and stored as a method to preserve reproductive potential in women of reproductive age.**

- It is also called egg banking, egg cryopreservation, and oocyte cryopreservation.

### Who Needs Egg (oocyte) Freezing?

- Women with **cancer requiring chemotherapy** and/or pelvic radiation therapy that may affect fertility.
- Women who undergo surgery that may cause damage to the ovaries.
- Risk of **premature ovarian failure** because of chromosomal abnormalities or family history of early menopause.
- Women with any **ovarian disease** with risk of damage to the ovaries.
- Fertility preservation for **social or personal reasons to delay childbearing.**

### How Will Eggs be used in the Future?

- When the woman is ready to use the frozen eggs to achieve pregnancy, these cryopreserved eggs are placed in a warming solution and assessed.
- **Those eggs that survived the freezing process are fertilized by injecting a sperm directly into the egg**, and the fertilized eggs will grow in culture until the embryo(s) are ready to be transferred into the uterus to achieve pregnancy, typically 3-5 days after fertilization.