

## Madhya Pradesh to translocate 15 Tigers to Rajasthan, Odisha and Chhattisgarh

The tigers will be translocated from **Bandhavgarh, Panna, Kanha, and Pench tiger reserves**.

- Translocation would be done under the **animal exchange programme**.
- It would be the **biggest relocation** of big cats from any state.
- Madhya Pradesh is facilitating this project because it has the largest tiger population (785) in the country.

### About Inter-state Tiger Translocation Projects

#### ➤ Objective:

- ⊕ **Re-introduction** of a tiger population in an area once part of its historical range, but from which it has been extirpated or become extinct.
- ⊕ **Reinforcement/Supplementation** of tigers to an existing population to enhance its long-term viability.
- The **first tiger relocation project** was initiated in 2018 wherein two big cats, from Kanha Tiger Reserve and Bandhavgarh, were relocated to **Satkosia Tiger Reserve** (Odisha).
- **National Tiger Conservation Authority (NTCA)** plays key role in facilitating such projects.

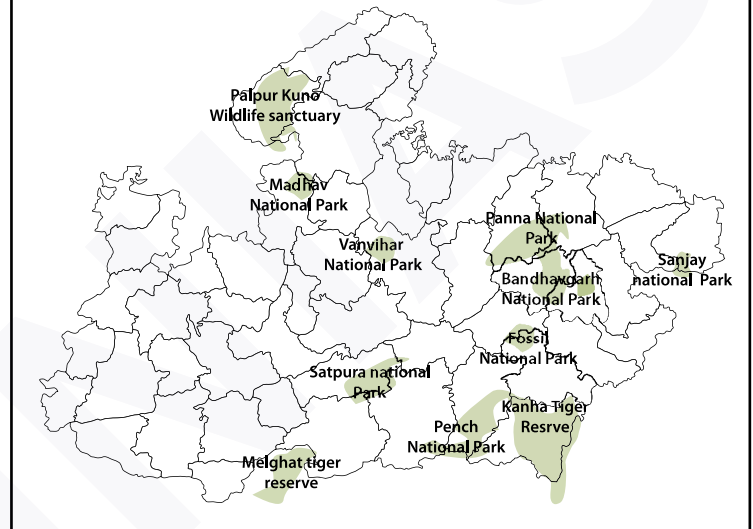
### Benefits of Translocation

- **Ecological Balance:** Restores **predator-prey dynamics** in underpopulated reserves.
- **Human-animal Conflict Mitigation:** Reduces human-tiger conflicts in overcrowded reserves.
- **Rewilding Landscapes:** Revives areas where tigers were locally extinct.

### Concerns associated with Translocation

- **Protests from local communities:** Villagers living near tiger reserves fear that the tiger will endanger their lives, etc.
- **Territorial disputes with existing Tigers:** This pushes new tigers into human-dominated areas.
- **Other:** Poor forest management such as **prey augmentation**, etc.

### Key Protected Areas of Madhya Pradesh



## Factsheet for Household Consumption Expenditure Survey (HCES), 2023-24

Released by **Ministry of Statistics and Programme Implementation (MoSPI)**, it provides results for second survey undertaken during August 2023 to July 2024 covering whole of India.

- Findings of the first one (2022-23) were released in February.

### Key Findings of the Survey

- **Average Monthly Per Capita Expenditure (MPCE):** Estimated to be Rs. 4, 122 (Rural) and Rs. 6,996 (Urban) for 2023-24.
- **Narrowing of Urban-Rural Gap in MPCE:** Declined to 70% (2023-24) from 71% (2022-23) confirming sustained momentum of consumption growth in rural areas.
- **Inequality among classes:** Bottom 5% of India's rural population (ranked by MPCE) has an average MPCE of Rs. 1,677 while it is Rs. 10, 137 for top 5%.
- **Inequality among States:** MPCE is highest in Sikkim and lowest in Chhattisgarh.
- **Consumption Behaviour:** Greater spending observed on non-food items in both rural (53%) and urban (60%) areas, with the major contribution from conveyance, clothing, etc.
  - ⊕ Rent constitutes a share of **7% of non-food expenditure** in urban areas.
  - ⊕ In food items, **beverages and processed food** stands as the major contributor.
- **Decline in Consumption inequality:** The Gini coefficient has shown decline in both rural and urban areas compared to previous year.
  - ⊕ Gini Coefficient measures the **extent of income inequality** among households. It ranges from 0 (perfect equality) to 1 (perfect inequality).

### About HCES

- **Objective:** Collects information on consumption and expenditure of the households on goods and services.
- ⊕ Uses MPCE as the **primary indicator**, used to measure poverty, inequality, and social exclusion.
- **Conducted by:** National Sample Survey Office (NSSO) under (MoSPI).

## Government to borrow Rs 3.94 lakh crore via Treasury bills (T-bills): Reserve Bank of India (RBI)

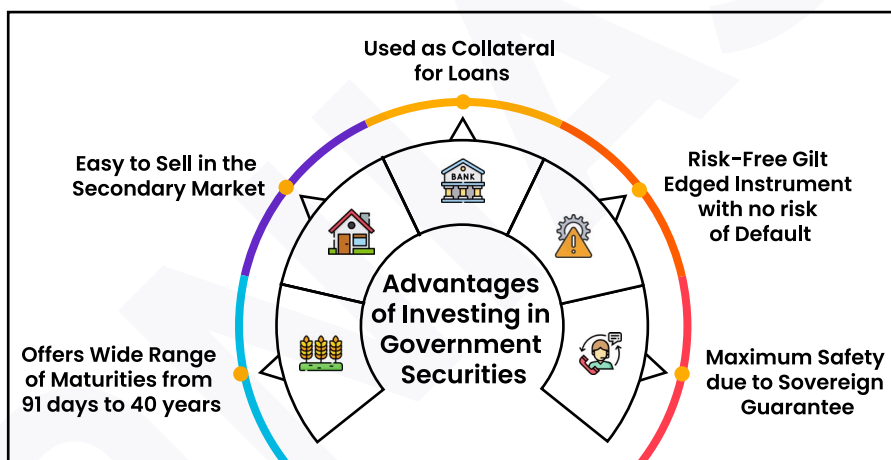
Recently, RBI notified the calendar for issuance of **T-Bills**, one of the types of **Government Securities (G-Sec)**.

### Government Securities Market in India

- **About:** It is a **tradeable instrument** issued by the **Central or State Governments** acknowledging the Government's **debt obligation**.
- **Issued by:** RBI through an auction on its electronic, **E-Kuber platform**.
  - ⊕ **RBI's Public Debt Office (PDO)** acts as its registry / depository.
- **Major Participants:** Commercial banks, Primary Dealers, Insurance companies, co-operative banks, regional rural banks, mutual funds, retail investors (non-competitive bidding section), etc.

### Types of G-Sec

- Short term with original maturities **less than a year**. E.g., T-Bills
  - ⊕ **Treasury Bills (T-bills)**
    - ◆ **Money market and short term debt instruments** issued by the Government of India (GOI)
    - ◆ **Zero coupon** securities and pay no interest.
      - » Issued at a **discount** and **redeemed at the face value** at maturity.
    - ◆ Issued in 3 tenors, namely, **91 day, 182 day and 364 day**.
  - ⊕ **Cash Management Bills (CMBs)**
    - ◆ **Short-term** (maturities less than 91 days) instrument introduced by the GOI in 2010 to meet the temporary mismatches in its cash flows.
- **Long Term**, with original maturity of **one or more year**. E.g., Government Bonds or Dated Securities.
  - ⊕ **Dated G-Sec:** They carry a **fixed or floating interest rate** paid on the face value, on half-yearly basis, with maturities ranging from 5 to 40 years.
  - ⊕ **SDLs: Dated securities** issued by State Governments with half-yearly interest payments.



**NOTE:** In India, the **Central Government** issues both T-Bills and bonds or dated securities while the **State Governments** issue only bonds or dated securities, called the **State Development Loans (SDLs)**.

## Parker Solar Probe becomes the first human-made object to fly close to the Sun

NASA's Parker Solar Probe performed solar fly at **perihelion** point.

- **Perihelion** refers to the point in the orbit of a planet or other astronomical body, at which it is closest to the sun.
  - ⊕ The opposite of **Perihelion** is **Aphelion**.
- Also, it traveled at a speed of approximately 700,000 kilometers per hour, making it the fastest human-made object in history.
- Spacecraft used flybys of Venus to gravitationally direct it ever closer to the Sun.

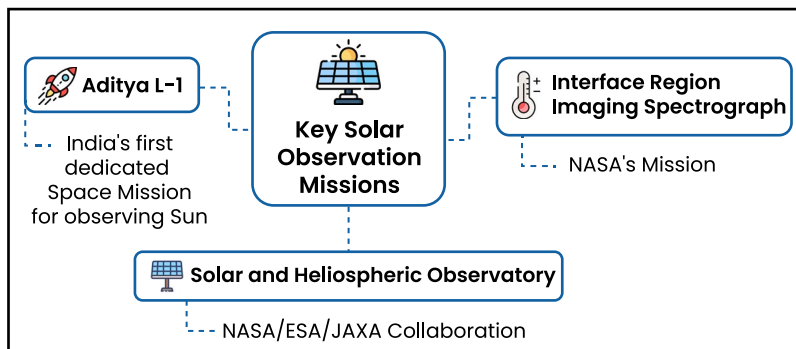
### About Parker Solar Probe (2018)

- **Objective:** Launched to fly into the **outermost part of the Sun's atmosphere, the corona**, to improve the **understanding of solar wind**.
  - ⊕ **Solar wind** is a continual stream of protons and electrons from the corona.

- **Key Scientific Instruments:** Fields Experiment (FIELDS), Integrated Science Investigation of the Sun (ISOIS), etc.

### Why it is important to study Solar Activity?

- **Understanding Space Weather:** Solar activity, such as solar flares and **coronal mass ejections (CMEs)**, produces space weather events that can disrupt satellite operations, etc.
- **Electric Grid and Technology Safeguards:** Geomagnetic storms caused by solar activity can induce currents in power grids, leading to blackouts or equipment damage.
- **Other:** Protection of Astronauts etc.



## 5,000-year-old Water Management Techniques unearthed at Harappan site, Rakhigarhi

The discovery made during an ongoing excavation identified a **water storage area** between mounds, with an estimated depth of 3.5 to 4 feet depicting their **advanced water management techniques**.

- A dried riverbed of the **Chautang (or Drishavati) River**, was also discovered.

### Water management practices of the Harappan Civilization

- **Elaborate Drainage:** Underground drains build with precisely laid bricks, connecting houses to wider public drains were found for **sewage disposal** in major cities.
- **Small Bunds:** Built by the local people to store rain water for irrigation and drinking in **Lothal**, Gujarat.
- **Dockyard:** At Lothal, near Sabarmati River, is a remarkably lined structure with evidence of channels for inlet and outlet of water.
- **Channels and Reservoirs:** At Dholavira, Gujarat, built completely of stone for storing fresh water brought by the rains or to store water diverted from the nearby rivulets.
  - ⊕ They were an example of **advanced hydraulic engineering** for conservation, harvesting and storage of water.
- **Tanks and Wells:** At Mohenjodaro, where rainwater harvested in tanks was brought to the wells of each house through efficient drainage system.
  - ⊕ The **"Great Bath"** at Mohenjodaro was a large tank made of brick floor, probably for mass bathing during religious functions, is a remarkable example of ancient large water tanks.

### About Rakhigarhi

- **Location:** One of the oldest and largest cities of Harappan Civilization located in the **Hissar district of Haryana** on the **Ghaggar-Hakra river plain**.
- **Key Findings:** Number of **Archaeological mounds, skeletal remains** which has yielded the only DNA evidence from the Harappan era.
  - ⊕ Evidence of craft activity areas, residential structures, streets, drainage systems, burial grounds, etc. has also been obtained.

## Rupee faced its sharpest depreciation in last two years

Recently, the Indian rupee's **exchange rate** against the US dollar has breached the 85 mark.

- **Exchange rate** represents the **value of one currency relative to another**, essentially serving as the price of one currency expressed in terms of another.

### Key Factors Responsible for Rupee's Depreciation

- **Strengthening of the US Dollar:** US Federal Reserve's aggressive monetary tightening has promoted capital outflows from emerging markets.
  - ⊕ **E.g.** Outflow of Foreign Portfolio Investment (FPI) from India
- **Widening Trade Deficit:** Driven by higher crude oil imports
- **Other:** High Inflation in India (when inflation rates are high, the value of the currency typically depreciates), etc.

### Impact of Rupee's Depreciation

- **Negative Impact**
  - ⊕ **Higher Import Costs:** A weaker rupee makes imports more expensive, particularly for crude oil.
    - ◆ It further leads to the **widening of Trade Deficit**.
  - ⊕ **Others:** Increased cost of foreign debt, pressure on inflation etc.
- **Positive Impact**
  - ⊕ **Boost to Exports:** Goods and services become **more competitive in international markets due to lower prices in dollar terms**.
  - ⊕ **Higher Remittance Value:** NRIs sending money back home benefit from higher rupee value.

### Measures can be taken to Stabilise the Rupee

- **Direct Dollar Sales:** To increase the supply of USD in the market, thereby supporting the rupee's value.
- **Foreign Exchange Swaps:** RBI can use **buy-sell swaps to inject or absorb dollar liquidity** without depleting forex reserves significantly.
- **Attract Foreign Investments:** Policy incentives, such as tax benefits, can encourage FDI and portfolio inflows.

## Also in News



### PM CARES Funds

**PM CARES (Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund)** Funds received Rs 912 crore in 2022-23, as per the latest audited accounts.

#### About PM CARES Funds

- It is a **Public Charitable Trust under Registration Act, 1908**.
  - ⊕ It **does not use government budget allocations**.
- **Purpose:** To provide relief and assistance during emergencies or calamities.
- **Chairperson and Members:** **Prime Minister** is the ex-officio Chairperson, and members include the **Defence Minister, Home Minister, and Finance Minister**.
- **Tax Benefits:** Donations are eligible for **100% tax exemption** under Section 80G of the Income Tax Act.
  - ⊕ Donations to fund will also qualify to be counted as CSR expenditure under the Companies Act, 2013.
- It is **not** subject to **Right to Information (RTI) scrutiny**.



### SVAMITVA Scheme

Recently, Prime Minister distributed over 50 lakh property cards under the SVAMITVA Scheme.

#### SVAMITVA Scheme

- **About:** **SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas)** is a **Central Sector Scheme**.
- **Ministry:** Ministry of Panchayati Raj.
- **Objective:**
  - ⊕ Establish **clear property ownership** in rural inhabited ("Abadi") areas.
  - ⊕ Issues **legal ownership cards** (Property cards/Title deeds) to property owners.
  - ⊕ Provide a **Record of Rights** through the latest surveying drone technology.
- **Potential Benefits:** **Monetization of properties** and enabling **institutional credit** through bank loans; reducing property-related disputes, etc.
- **Progress**
  - ⊕ **92%** of targeted villages surveyed using drones.
  - ⊕ **2.2 crore** property cards prepared.



### E-Way Bill

Recently, Freight operation information system of the Indian Railways has been integrated with the **E-Way Bill (EWB) system of the Goods and Services Tax (GST)**.

#### E-way bill

- It is a **document** required to be carried by a **person in charge of the conveyance** carrying goods of **value exceeding Rs. 50,000/-**.
- Mandated by **section 68 of the Goods and Services Tax Act**.
- It is generated from the **GST Common Portal** by the registered persons or transporters, before commencement of movement of goods.



### Prepaid Payment Instruments (PPI)

RBI has allowed **Prepaid Payment Instruments (PPIs)** holders to make and receive **Unified Payments Interface (UPI)** payments through **third-party mobile applications**.

#### About PPI

- PPIs are instruments that facilitate the **purchase of goods and services**, conduct of financial services, enable remittance facilities, etc., against the value stored therein. E.g. Mobile wallets, digital wallets, gift cards
- PPIs can be **issued by banks and non-banks**.
  - Classified under two types: **small PPIs** (issued after obtaining minimum details of the PPI holder) and **Full KYC PPIs**.

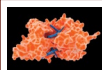


### Manufactured Sand (M-Sand)

Recently, Rajasthan government introduced the M-Sand, 2024 policy for sustainable construction and infrastructure.

#### About M - Sand

- About:** It is **produced by crushing rocks or quarry stones**, serving as a **substitute for river sand in concrete construction**.
- Advantages:**
  - Better Workability:** It **does not contain organic and soluble compounds** that affect the setting time and properties of cement.
  - Higher Strength:** It does not have the presence of impurities such as clay, dust and silt coating.
  - Eco-Friendly:** Prevents dredging of river beds leading to environmental disaster like ground water depletion, water scarcity, etc.



### Enzymes

The **Department of Biotechnology (DBT)** hosted a webinar series on bio-manufacturing and biofoundry initiatives, with the theme **"biomanufacturing of enzymes"**.

- It is a critical domain under the **BioE3 (Biotechnology for Economy, Environment & Employment) Policy**.

#### Enzymes

- It is a **biological catalyst (usually a protein)** that accelerates the rate of a specific chemical reaction in the cell.
- They are continuously used and **not destroyed during the reaction**.
- Example:** lipases, amylases, proteases, etc.
- Applications:** **Industrial** (Fermenting of wine, curdling of cheese, etc.); **Pharmaceutical** (Manufacturing of drugs), etc.



### Asbestos

U.S. Food and Drug Administration proposes new testing rules to ensure cosmetics are asbestos-free.

#### About Asbestos

- Asbestos is a group of naturally occurring mineral fibres.
  - There are six main forms of asbestos, and the main form in current use is **chrysotile** (white asbestos).
- Key Property:** Resistant to heat and corrosion.
- Application:** Used as building materials, automobile industry etc.
- Health Concern:** Exposure to asbestos, causes cancer of the lung, larynx and ovaries, and mesothelioma (a cancer of the pleural and peritoneal linings).



### Western Disturbances (WD)

Recently, **strong Western Disturbances** brought snow to parts of Himachal Pradesh, Uttarakhand causing changes in weather.

#### Western Disturbances

- About:** **Extra-tropical storms** (Low pressure systems) **originating in the Mediterranean region** that bring winter rain to the north-western parts of the Indian subcontinent.
- Movement:** Eastward, carried by **westerly winds** (Subtropical Jet).
- Weather Impact:** **Rain, snow, or hailstorms** in the northern and north-western parts of India.
- Significance for India:** Crucial for **Rabi crops** (e.g., wheat, mustard), **replenishing glaciers** in the Himalayan region, etc.

## Places in News



### Somalia (Capital: Mogadishu)

The **UN Security Council** authorizes a new Somalia peacekeeping mission.

#### Political Features

- Located on **Horn of Africa**, it is the **Easternmost country in continental Africa**.
- Bordering countries:** Djibouti (Northwest), Ethiopia (West), and Kenya (Southwest).
- Bordering water bodies:** Gulf of Aden and Indian Ocean.

#### Geographical Features

- Highest Peak:** Mount Shimbiris, also known as Mount Surud Cad.
- Major Rivers:** Jubba and Shabele
- Coastal plains** parallel to Gulf of Aden are known as **Guban**.



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI