

## DAILY CURRENT AFFAIRS (DCA)

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## GENDER GAP IN THE HIGHER JUDICIARY

### Context

- Despite significant progress in women's representation in various fields, the judiciary continues to lag behind, reflecting broader societal inequalities and systemic barriers.

### Current State of Gender Representation

- As per **"State of the Judiciary" report (2023)**, women account for **only about 14% of judges in High Courts**, and about **9.3% in the Supreme Court of India (only 4 out of 34 Supreme Court judges are women)**.
  - ♦ It is even more pronounced in certain states, where some High Courts have either no women judges or just one.
- It is **uneven across High Courts**, with States which include Bihar, Chhattisgarh, Jharkhand, Manipur, Meghalaya, Odisha, Tripura and Uttarakhand **having either no women judges or just one woman judge**.

### Global Perspective & Trends on Women in Judiciary

- **Overall Representation:** On average, women make up just over 25% of the world's judicial officers.
  - ♦ However, this figure varies widely by region and country. In some areas, women constitute less than 10% of the judiciary.
- **Progress in OECD Countries:** In many OECD countries, women make up more than 54% of professional judges.
  - ♦ It is partly due to the growing number of women entering the legal profession and judiciary over recent decades.
- **The Global Gender Gap Report of World Economic Forum (WEF)** highlighted the countries like the United States, the United Kingdom, and Canada have made progress in promoting female judges, but **gaps persist, particularly at the highest levels**.

### Why Gender Diversity in the Judiciary Matters?

- **Ensuring Diversity of Thought:** Women judges bring diverse perspectives that enrich judicial decision-making.
- **Promoting Gender-Sensitive Judgments:** Cases related to sexual violence, workplace

harassment, and family law benefit from having more women on the bench.

- **Enhancing Public Trust in the Judiciary:** Greater representation fosters confidence in the judicial system among female litigants.

### Factors Contributing to the Gender Gap in Higher Judiciary

- **Collegium System and Bias:** The judicial appointment process in India follows a collegium system, which tends to favor candidates from specific social and professional circles, often male-dominated.
  - ♦ Women judges, despite having the required credentials, are overlooked due to **implicit biases and lack of institutional support**.
- **Systemic Inequality:** While many women enter the legal profession, fewer advance to positions of authority **due to workplace discrimination, lack of mentorship, and biases in career progression**.
  - ♦ The challenges are **compounded by societal expectations** that place the burden of family responsibilities disproportionately on women.
- **Lack of Structural Support:** The absence of gender-friendly policies such as flexible work hours, and safety measures makes it difficult for women to sustain long legal careers.
- **Limited Role Models and Representation:** With fewer women in higher judicial positions, younger female lawyers lack role models, making it difficult for them to envision and pursue a path toward elevation to High Courts and the Supreme Court.

### Recommendations for Bridging the Gender Gap

- **Judicial Appointment Reforms:** The **collegium system** should adopt gender-sensitive policies to ensure that women judges receive fair consideration for appointments.
  - ♦ High Courts should actively recommend more women candidates for elevation to the Supreme Court.
- **Mentorship and Leadership Development:** Female legal professionals should be provided with mentorship programs to help them navigate judicial careers.
  - ♦ Senior judges should take the lead in advocating for institutional gender parity.
- **Workplace Policy Changes:** Family-friendly workplace policies, such as flexible working hours



and better maternity leave provisions, should be introduced.

- ♦ Gender-sensitization training should be conducted for judicial officers.
- **Encouraging Women in Litigation:** More women need to be encouraged to take up litigation, which is a primary pathway to judicial elevation.
  - ♦ The government can introduce incentives and fellowships for female advocates pursuing higher judicial positions.
- **Role of the Supreme Court and High Courts:** The Chief Justice of India (CJI) and High Court Chief Justices must take proactive measures to ensure gender inclusivity.
  - ♦ The judiciary should set diversity benchmarks and track progress.

### Conclusion

- The gender gap in the higher judiciary is a reflection of broader societal inequalities that require concerted efforts to address.
- By prioritizing transparency, mentorship, and policy reforms, India can work towards a judiciary that is not only more representative but also more just.
- Bridging this gap is essential for upholding the principles of equality and fairness enshrined in the Constitution.

Source: TH

## INDIA'S LEGACY IN UN PEACEKEEPING

### Context

- India actively participates in UN peacekeeping operations, emphasizing dialogue, diplomacy, and cooperation as key pillars of its foreign policy.

### What is UN Peacekeeping?

- UN Peacekeeping is a key mechanism used by the **United Nations** to maintain global peace and security.
- It operates alongside other UN efforts, including **conflict prevention, peacemaking, peace enforcement, and peacebuilding**.
- The UN Peacekeepers, known as **Blue Helmets**, get their name from the light blue of the United Nations flag.



### History of UN Peacekeeping

- UN Peacekeeping began in **1948** with the establishment of the **United Nations Truce Supervision Organization (UNTSO)** in the Middle East to monitor ceasefires.
- During the Cold War, missions remained limited due to geopolitical tensions, but the end of the Cold War in the **1990s** saw a **significant expansion** in both the number and scope of peacekeeping operations.

### India's Contribution to UN Peacekeeping

- India's UN peacekeeping role began with the **Korea** operation in **1953**.
- It has been a key contributor to global peace and security, with over **2,90,000** peacekeepers serving in more than **50 UN missions**.
- Currently, over **5,000** Indian peacekeepers are deployed in 9 active missions, working in challenging conditions to promote international peace.
- This commitment stems from India's ancient principle of "**Vasudhaiva Kutumbakam**" (the whole world is my family).

### Women in Peacekeeping

- In **2022**, women made up **7.9%** of all uniformed personnel in field missions - up from just **1%** in **1993**.
  - ♦ This included **5.9%** in military contingents, **14.4%** in police forces, and **43%** in justice and corrections roles. Among civilian personnel, **30%** were women.

- Recognizing the need for greater gender inclusivity, the UN has set ambitious targets under its **Uniformed Gender Parity Strategy**, aiming for **15%** women in military contingents and **25%** in police units by **2028**.
- Indian Contribution:** India pioneered female peacekeeping with deployment of women medical officers to Congo in the 1960s.
  - In **2007**, India deployed the first-ever all-female Formed Police Unit (FPU) to **Liberia**.
  - As of February **2025**, India continues this legacy with over **150** women peacekeepers serving across six critical missions, including those in the **Democratic Republic of Congo, South Sudan, Lebanon, Golan Heights, Western Sahara, and Abyei**.

#### Achievements of India

- In **2023**, India received the UN's highest peacekeeping honour, the **Dag Hammarskjöld Medal**, posthumously awarded to **Shishupal Singh** and **Sanwala Ram Vishnoi** and civilian UN worker **Shaber Taher Ali**.
- Major Radhika Sen** has been named the "**Military Gender Advocate of the Year 2023**" by the UN Headquarters.
- India's Centre for United Nations Peacekeeping (CUNPK)**, established by the Indian Army in New Delhi, serves as the nation's focal point for UN peacekeeping training.
- In February 2025, CUNPK hosted the '**Conference on Women Peacekeepers from the Global South**' at the Manekshaw Centre in New Delhi.

#### Concluding remarks

- India's role in UN peacekeeping reflects its deep commitment to global peace, security, and multilateralism.
- From its early involvement in the Korean War to its ongoing deployments in conflict zones worldwide, India has consistently upheld the principles of the UN Charter.

Source: PIB

## EAM VISIT UNITED KINGDOM (UK)

#### Context

- The External Affairs Minister (EAM) **paid an official visit to the United Kingdom**.

#### About

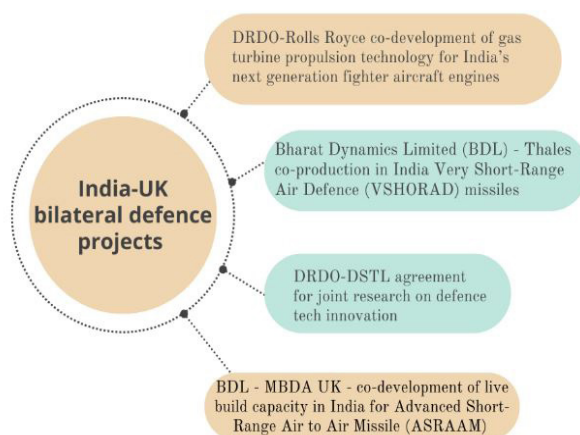
- Both leaders discussed **India-UK relations**, especially the **Free Trade Agreement (FTA)**,

technology cooperation, people-to-people ties, and global issues like the Ukraine conflict.

- Progress on Roadmap 2.0** to energize the Comprehensive Strategic Partnership was reviewed.
- Reaffirming India-UK Ties:** The visit reinforced the Comprehensive Strategic Partnership, focusing on political, economic, and people-to-people collaboration in a changing global landscape.

#### Brief on India-UK Relations

- India-UK Comprehensive Strategic Partnership:** Upgraded in 2021 with a 10-year Roadmap.
  - India-UK has 2+2 Foreign and Defence Dialogue.
- Trade Relations:** India is the UK's 11th largest trading partner, while the UK ranks 14th for India.
  - Currently, bilateral trade stands at GBP 42 billion, and the balance is in India's favour with Britain's trade deficit with India amounting to GBP 8.3 billion in 2023.
  - FTA negotiations started in **2022**, and aims to double bilateral trade by 2030.
- Defence and Security:** UK contributed only **3%** of India's defence imports in the last decade.
  - India aims to diversify from Russian defence imports & develop indigenous defence industries.
  - The UK can aid in technology transfers & advanced defence capabilities.
  - Open General Export Licence (OGEL) (2022) – UK's first such license for an Indo-Pacific country, easing military tech exports to India.



- Joint Exercises: Ex Ajeya Warrior, Exercise Konkan, Ex Cobra Warrior.**

- **Multilateral Collaboration:** Indian Ocean Rim Association (IORA) (India - Member, UK - Dialogue Partner).
  - ♦ Indian Ocean Naval Symposium (IONS) (Both UK & India - Members).
  - ♦ Indo-Pacific Oceans Initiative (IPOI) (India & UK co-lead Maritime Security pillar).
  - ♦ The UK supports India's bid for a permanent seat in the UN Security Council (UNSC).
  - ♦ India and the UK cooperate within the G20 on global trade, economic stability, and climate change.
- **People-to-people ties:** Rise of Indian-origin politicians.
  - ♦ Indian Diaspora considered a "model minority", excelling in multiple fields.
  - ♦ **British Indian Community:** Over 1.6 million (2.5% of UK's population).

#### Challenges:

- **Key Issues in FTA Negotiations:** India's demands greater mobility & visa access for skilled professionals.
  - ♦ The UK demands Lower tariffs on automobiles and alcohol and Greater access for the services sector.
  - ♦ UK's carbon tax and India's FDI restrictions & regulatory complexities.
- **Geopolitical Differences:** India's neutral stance on Russia-Ukraine war vs UK's strong opposition to Russia.
- **Khalistan & Extremism Concerns:** Attacks on the Indian High Commission in London in 2023.
- **Visa & Immigration Policies:** Strict UK visa policies for Indian professionals and students. Also concerns over illegal immigration and overstaying visas.
- **Illegal immigration:** Over 100,000 illegal Indian immigrants remain unresolved due to the lack of a migration agreement.

#### Way Forward

- Expediting Free Trade Agreement (FTA).
- Agreement on Migration and Mobility.
- Enhancing Strategic Ties in the Indo-Pacific.
- Strengthening Defense & Security Cooperation.

Source: PIB

## PLATFORM WORKERS TO REGISTER ON E-SHRAM PORTAL FOR FORMAL RECOGNITION

#### In News

- The Union Ministry of Labour and Employment has **urged gig and platform workers** to register on the **e-Shram portal** for **formal recognition** and access to benefits under the **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)**.

#### About

- India is witnessing a **gig economy revolution** due to its large workforce, rapid urbanization, smartphone penetration, and digital technology adoption.
- Recognizing the contribution of the **gig and platform workers to the nation's economy**, the **Union Budget 2025-26** has made the announcement for the provisions of
  - ♦ registration of online platform workers on e-Shram portal,
  - ♦ issue of identity cards, and
  - ♦ healthcare coverage under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).
- **AB-PMJAY** provides a cover of **Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization** across over 31,000 public and private empanelled hospitals in India.

#### What is Gig and Platform economy?

- **Definition:** The Gig Economy refers to a labor market characterized by **short-term, flexible jobs** where workers are hired on a **contractual or freelance basis** rather than traditional full-time employment. These workers, called **gig workers**, **take up tasks (gigs)** on-demand without long-term commitments.
  - ♦ The Platform Economy is a **subset of the gig economy** where digital platforms (websites, apps like Zomato, Ola etc) connect workers with customers or employers.
- **Projected Growth:** NITI Aayog has projected that the gig economy in India will employ over 1 crore workers in 2024-25, subsequently reaching 2.35 Crores by 2029-30.
- **Trend:** Medium-skilled jobs are decreasing, while low and high-skilled jobs are increasing.

### What major challenges Gig workers are facing?

- **Lack of job security:** no fixed salary or long-term contracts.
- **Limited social security benefits:** Not covered under EPFO, ESIC, or other welfare schemes.
  - ♦ No health insurance, paid leave, or retirement benefits.
- **Unregulated work conditions:** Long hours, inconsistent pay, and potential exploitation.
- **Dependence on platform algorithms:** Earnings and visibility depend on platform policies.

### Recommendations for Strengthening the Gig & Platform Economy

- **Boosting Platform Economy:** Launch “Platform India” initiative for funding, skilling, and financial inclusion.
  - ♦ Connect street vendors, small businesses to digital platforms.
- **Financial Inclusion:** Provide loans without collateral for gig workers.
  - ♦ Priority lending for first-time gig entrepreneurs.
- **Skill Development:** Government & platform collaboration for training.
  - ♦ Skill certification & career progression for gig workers.
- **Social Security:** Health insurance, accident coverage, paid sick leave.
  - ♦ Retirement plans, income support during low work periods.

#### Initiatives for Gig and Platform Workers

- **Legal Framework for Gig Workers:** Code on Social Security, 2020 formally defined:
  - ♦ Aggregator
  - ♦ Gig Worker
  - ♦ Platform Worker
- First-time legal provisions introduced to include gig workers in social security measures.
- **Union Budget 2025-26 Announcement:** Over 1 crore gig workers to receive identity cards, e-Shram registration, and healthcare coverage under PM Jan Arogya Yojana.

Source: PIB

## INDIA'S SHARE IN SPICES MARKET

### Context

- The World Spice Organisation (WSO) is working with FPOs (Farmer Producer Organizations) to

enhance safety, quality, and sustainability in spice cultivation by training farmers in quality control.

#### World Spice Organisation (WSO)

- It is a not-for-profit organisation registered under the **Travancore Cochin Literary, Scientific And Charitable Societies Act, 1956** with the primary objective of facilitating the Spice Industry in dealing with issues of **“Food Safety & Sustainability”**.
- It involves all its stakeholders—the general public, the industry, the academia and the end-users.

### Spices Market In India

- India is known as the **‘Spice Bowl’ of the world**. It produces a number of quality, rare and medicinal spices.
- India is the **world’s largest spice producer**. It is also the **largest consumer and exporter of spices**.
- India holds only **0.7% of the \$14 billion global seasoning market in 2024**, compared to China’s 12% and the USA’s 11%.
- India **exports 1.5 million tonnes of spices** worth \$4.5 billion, capturing a quarter of the \$20 billion global spice market.
- **Only 48% of India’s spice exports** are value-added products and to meet the Spices Board of India’s \$10 billion export target by 2030, the share of value-added spices should rise to 70%.
- The largest spice-producing states in India are Madhya Pradesh, Rajasthan, Gujarat, Andhra Pradesh, Telangana, Karnataka, Maharashtra, Assam, Orissa, Uttar Pradesh, West Bengal, Tamil Nadu and Kerala.

### Challenges in the Spices Sector

- **Impact of Climate Change on production:** Erratic rainfall, droughts, and rising temperatures affect spice production. India’s current spice production is insufficient for meeting export demands.
  - ♦ **Example:** Cardamom cultivation in Kerala has suffered due to irregular monsoons and extreme heat.
- **Pests & Diseases:** Spices are highly vulnerable to fungal infections, pests, and viral diseases.
  - ♦ **Example:** Black pepper vines in Karnataka have been affected by quick wilt disease, reducing yield.



- **Quality Control & Adulteration:** Adulteration in spices reduces export credibility and poses health risks.
  - ♦ **Example:** Turmeric adulteration with metanil yellow (a toxic dye) has raised food safety concerns.
- **Export Restrictions & Global Standards:** Stricter pesticide residue limits (MRLs) by countries like the EU & US hinder exports.
  - ♦ **Example:** Chili exports to the EU faced rejection due to high pesticide residue levels.
- **Low Farmer Income & Market Fluctuations:** Price volatility and middlemen dominance reduce farmers' profits.
  - ♦ **Example:** Cumin farmers in Gujarat struggle with price crashes due to oversupply.
- **Global cotton prices are weak**, making imports more attractive.
- **Indian cotton prices are higher than those of key exporters** like Brazil, U.S., Australia, and Africa.
  - ♦ **Example:** Indian cotton costs 80-85 cents per pound, while Brazilian cotton is 60-65 cents per pound.
- **Export demand for garments & home textiles** is rising (over 60% of India's textile exports are cotton-based).
- Mills imported cotton despite an **11% duty as international prices were lower.**

#### Key Facts About Cotton Cultivation

#### Suggestions

- India should explore the nutraceutical and pharmaceutical value of spices, which are already used in Ayurveda and other forms of medicine.
- To boost exports, production needs to increase, and focus should be on reducing production costs, improving quality, and increasing value-added spice exports.
- There is a need to develop high-yielding and climate-resistant spice varieties, with organizations like ICAR and National Research Centre on Seed Spices already working on this.
- **About Cotton:**
  - ♦ One of India's most important commercial crops, contributing 25% of global cotton production.
  - ♦ Known as **"White-Gold"** due to its economic importance.
- **Growing Conditions:**
  - ♦ Cotton is chiefly a **tropical and sub-tropical crop**. It requires uniformly high temperatures (21°C to 30°C) and grows well within the average annual rainfall range of 50-100 cm.
  - ♦ Most of the irrigated areas under cotton are in **Punjab, Haryana, Gujarat, and Rajasthan**.
  - ♦ **Grows in varied soil types:** Alluvial soils (Northern region), Black clayey soils (Central region), Mixed black and red soils (Southern region).

Source: TH

## SURGE IN INDIA'S COTTON IMPORTS

#### In News

- India's cotton imports have significantly increased in recent months, with imports reaching \$104 million in August 2024 and rising to \$184.64 million in January 2025, compared to \$19.62 million in January 2024.

#### Reasons for High Cotton Imports

##### Import woes

An increase in the import of cotton in the last two years has brought to fore the urgent need for measures to improve cotton productivity in India



Cotton and raw cotton imports (in \$ million)

Month	2023	2024
January	28.99	19.62
February	34.69	31.43
March	55.01	48.8
April	45.3	37.91
May	58.09	43.88
June	95.1	70.22
July	88.72	86.29
August	74.9	104.89
September	39.91	134.2
October	36.68	127.71
November	30.61	170.73
December	29.47	142.89
Month	2024	2025
January	19.62	184.64

- **India's Cotton Scenario:**
  - ♦ India is the **only country in the world that grows all four species of cotton**. These species are:
    - *Gossypium arboreum* (Asian Cotton),
    - *Gossypium herbaceum* (Asian Cotton),
    - *Gossypium barbadense* (Egyptian cotton), and
    - *Gossypium hirsutum* (American Upland cotton).
  - ♦ It is a **crucial fiber and cash crop in India**, significantly contributing to both the industrial and agricultural economy.
  - ♦ It provides the primary raw material for the cotton textile industry.
  - ♦ **Gujarat, Maharashtra and Telangana** are the major cotton producing states which

produce about 65% of cotton production in the country.

- **Hybrid & Bt Cotton:**

- ♦ **Hybrid Cotton:** Cross of two parent strains with different genetic traits, often formed through natural cross-pollination.
- ♦ **Bt Cotton:** Genetically modified, pest-resistant variety designed to combat bollworms.

### Importance of Cotton

- The importance of cotton crop is as follows:
  - ♦ **Economic Significance:** Cotton is a major cash crop in India, providing livelihoods to millions of farmers and supporting the country's large textile industry.
  - ♦ **Global Position:** India is the largest producer of cotton globally, playing a crucial role in the international cotton market.
  - ♦ **Textile Industry Backbone:** Cotton is the primary raw material for the textile industry, which is a significant contributor to India's GDP and export earnings.
  - ♦ **Employment Generation:** The cotton industry, from farming to textiles, creates employment opportunities across various sectors, including agriculture, manufacturing, and trade.
  - ♦ **Cultural Importance:** Cotton has historical and cultural significance in India, being central to traditional clothing and crafts.

### Union Budget

- The Union Budget for February 2025 introduced a **Cotton Mission** to improve cotton productivity and address the challenges faced by farmers.

Source: TH

## BOOMING DEMAND FOR WAREHOUSES IN INDIA

### Context

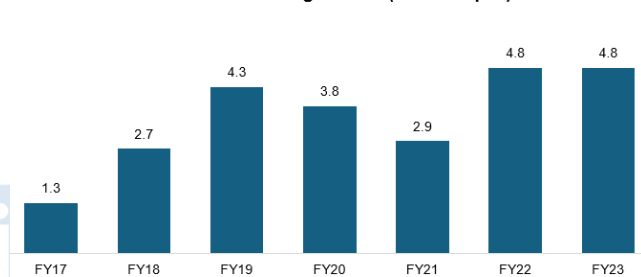
- Warehousing, once perceived as a mere storage function, has now emerged as a crucial pillar of India's supply chain infrastructure.

### Factors Driving the Demand for Warehousing in India

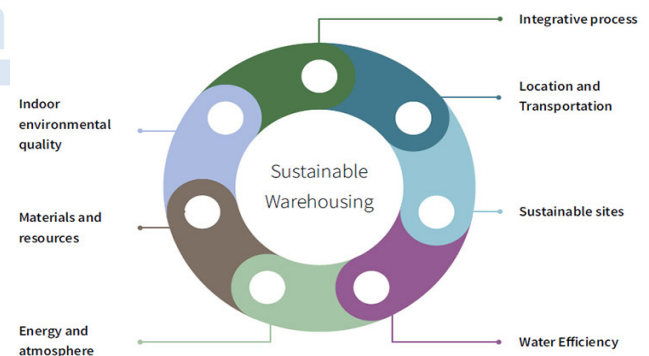
- **E-commerce Boom:** India's e-commerce sector is projected to reach **\$350 billion by 2030**.
  - ♦ The need for fast and efficient deliveries requires expansive warehousing networks close to consumption hubs.

- **Growth of Cold Chain Logistics:** Rising demand for fresh food, pharmaceuticals, and vaccines has led to increased investment in temperature-controlled warehousing.
- **Initiatives like 'Make in India' and Production-Linked Incentive (PLI)** schemes boost the demand for warehousing to store raw materials and finished goods.
- **By 2026**, India is projected to be among the **top 6 users of warehouse automation systems worldwide**, with the market expected to reach **USD 2 billion** annually.
- **Third-Party Logistics (3PL) Services:** The rise of 3PL providers is increasing demand for Grade A warehouses with higher efficiency and better technology integration.

Warehouse leasing volume (million sq. m)



Sustainable Warehousing - Parameters



### Challenges in warehousing development

- **High Land Acquisition Costs:** Limited availability of affordable land in key logistics corridors affects expansion.
- **Policy Constraints:** Complex land use regulations and inconsistent state policies hinder smooth development.
- **Infrastructure Gaps:** Inadequate road connectivity and power supply in certain regions slow down warehouse efficiency.
- **Skill Shortages:** The demand for skilled labor in warehouse management and logistics is increasing, necessitating workforce training.



**Government steps**

- **National Logistics Policy (NLP)** aims to reduce logistics costs to **10% of GDP**, thereby improving cost efficiency.
- **PM Gati Shakti Programme:** It focuses on integrated infrastructure planning and multimodal connectivity.
- **Development of Multimodal Logistics Parks (MMLPs):** It improves logistics efficiency, reduces costs, and facilitates seamless movement of goods across various transportation modes (**rail, road, air, and sea**).

**Way Forward**

- **Smart Warehouses:** Adoption of AI, IoT, and robotics is enhancing warehouse efficiency, inventory tracking, and order processing.
- **Regulatory Reforms:** Streamlining state-wise policies to ensure uniformity in warehouse development.
- **Sustainable Warehousing Practices:** Promoting green warehousing with energy-efficient storage systems and renewable energy integration.

Source: BL

**NEWS IN SHORT****UNICEF'S KINSHIP AND COMMUNITY-BASED CARE PROGRAMME (KBCBP)****In News**

- India is moving away from institutional child care to **family-based solutions like kinship care, foster care, and community support**.

**About**

- Seasonal migration forces families to leave children behind or take them to work, disrupting education and exposing them to child labor.
- **UNICEF's Kinship and Community-Based Care Programme** aims to keep children with relatives instead of institutions, with initiatives like **Mission Vatsalya**, which has increased non-institutional care fourfold since 2021-22.
- The focus is on preventing family separation, strengthening care systems, and ensuring mental health support for children and caregivers.

Source: BS

**HANTAVIRUS****In Context**

- According to the U.S. Centers for Disease Control and Prevention (CDC), **hantaviruses** are a family of viruses that can cause severe, potentially fatal illnesses.

**What is Hantavirus?**

- A family of viruses that cause **severe respiratory and renal illnesses**.
- It causes **Hantavirus Pulmonary Syndrome (HPS)**, which starts with flu-like symptoms such as fever, chills, and muscle aches. In severe cases, it leads to respiratory distress, fluid buildup in the lungs, and can be fatal.

**How Does Hantavirus Occur?**

- Carried by rodents (deer mice, rice rats, white-footed mice, cotton rats).
- Transmission methods: Inhalation of virus particles from rodent droppings, or saliva.
  - ♦ Touching contaminated materials and then the eyes, nose, or mouth.

**Treatment & Prevention**

- No specific antiviral treatment or cure.

Source: TH

**ISOLATIONISM****Context**

- US President Donald Trump's 'America First' policy reignited debates on isolationism, as his administration prioritized national interests over global commitments.

**What is Isolationism?**

- Isolationism is a foreign policy doctrine that emphasizes **avoiding political, military, and economic entanglements** with other countries.
- The idea dates back to **President George Washington**, who warned against "entangling alliances."
  - ♦ Throughout the 19th century, the US largely avoided European conflicts while expanding its influence in the Western Hemisphere.
- The US rejected the **League of Nations** and **passed Neutrality Acts in the 1930s** to stay out of foreign conflicts.
- Recently, the concept of "**restraint**" has gained popularity as an alternative to both isolationism and excessive military intervention.

Source: DTE

## GEO-MAPPING OF RUBBER PLANTATIONS

### In News

- The Rubber Board will begin geo-mapping of rubber plantations in Kerala.

#### Natural Rubber

- It is a versatile industrial raw material derived from the **rubber tree *Hevea brasiliensis***, native to the **Amazon river basin**.
- It was introduced to **tropical Asia and Africa** by the British in the late 19th century.
- The rubber tree thrives in various agro-climates and soil conditions with an **annual rainfall of about 200 cm**.

### The Geo-mapping initiative

- It is part of certifying natural rubber under the **Indian Sustainable Natural Rubber (iSNR) framework**, aligning with the **EU Deforestation Regulation (EUDR)**.
- The project will record details such as land ownership, area, and plantation boundaries, initially focusing on 10 key rubber-growing districts in Kerala.
- Partnership:** The Rubber Board has partnered with Trayambu Tech Solutions Pvt. Ltd (TRST01) for the geo-mapping process.

### Importance

- It is aiming to improve market access and prices for rubber growers.
- It is aimed at establishing a deforestation-free supply chain for rubber, enhancing global marketability and ensuring compliance with EUDR.

#### EU Deforestation Regulation (EUDR).

- The EUDR mandates that all commodities entering the EU market must be deforestation-free after December 2020.
- iSNR certification ensures compliance.

#### About Rubber Board of India

- Statutory body** established under the Rubber Act, 1947.
- Functions under:** Ministry of Commerce and Industry.
- Headquarters:** Kottayam, Kerala.

- Functions:** Development of the rubber industry through research, training, and extension activities.
  - Maintains statistical data on rubber production and trade.
  - Promotes marketing of rubber and ensures labor welfare.
  - Issues licenses for rubber producers, manufacturers, exporters, and traders (Rubber Board License).

Source: TH

## HYDROGEN-POWERED FUEL CELLS

### Context

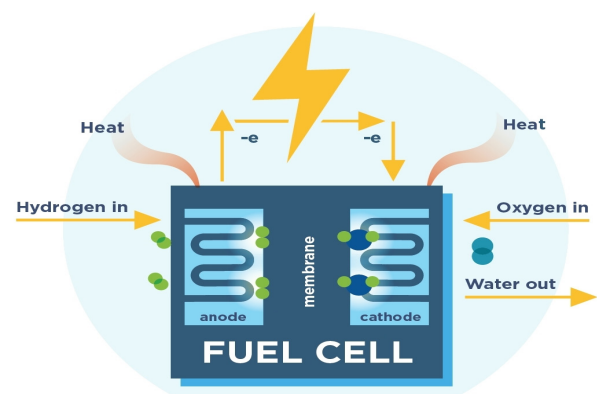
- Recently the hydrogen-powered fuel cells have been successfully demonstrated as a reliable backup power solution for telecom towers.

### Hydrogen Fuel cells

- Hydrogen fuel cells produce electricity by combining **hydrogen and oxygen** atoms.
- A fuel cell consists of an **anode** (negative electrode) and **cathode** (positive electrode) sandwiched around an electrolyte.
  - Hydrogen is fed to the anode and air is fed to the cathode.

### Working of Fuel Cell

- At the anode**, a catalyst separates the hydrogen molecules into protons and electrons and both **subatomic particles** take different paths to the cathode.
- The electrons go through an **external circuit**, creating a **flow of electricity** that can be used to power electric motors.
- The protons**, on the other hand, move to the cathode through the **electrolyte**. Once there, they unite with oxygen and electrons to produce water and heat.



**What is hydrogen**

- Hydrogen is the chemical element with the **symbol H** and **atomic number 1**.
- Hydrogen is the **lightest element** and the most abundant chemical substance in the universe, **constituting roughly 75%** of all normal matter.
- It is colorless, odorless, tasteless, non-toxic, and highly combustible gas.

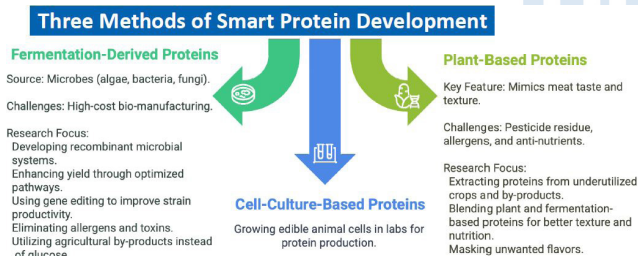
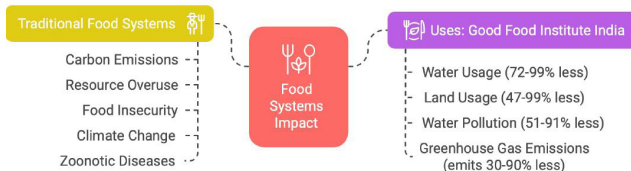
Source: AIR

**SMART PROTEINS****Context**

- The government, under the BioE3 initiative, is funding research to develop smart proteins as sustainable alternatives to traditional protein sources.

**About Smart Proteins**

- Also known as alternative proteins.
- They mimic the taste and texture of traditional proteins.
- They can be produced using
  - Fermentation,
  - Plant-based, or
  - Cell-culture methods.

**Smart Proteins- Why ?****BioE3 (Biotechnology for Economy, Environment and Employment) Initiative**

- Launched:** 2024
- Implemented By:** Department of Biotechnology, Ministry of Science & Technology
- Significance:**
  - Boosts technology development through Biomanufacturing & Bio-AI hubs and Biofoundry.

- Supports Net Zero carbon economy, Lifestyle for Environment, and Green Growth.
- Promotes Circular Bioeconomy for sustainable development.

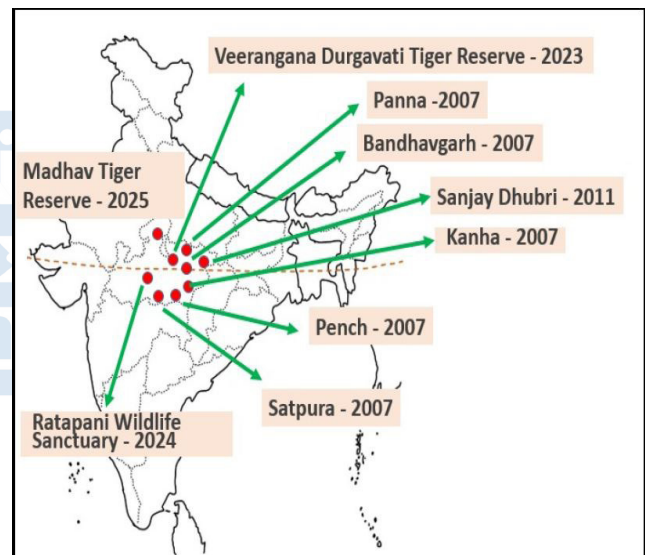
Source: TH

**MADHAV NATIONAL PARK 58TH TIGER RESERVE****Context**

- The Centre declared the **Madhav National Park in Madhya Pradesh** as the country's **58th tiger reserve**.

**About**

- It has become the ninth tiger reserve in the state, the highest in any state.

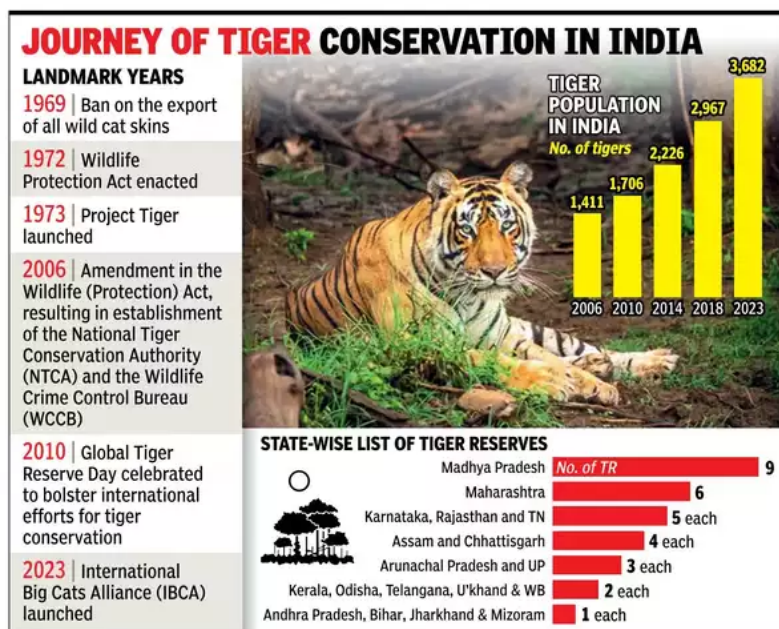
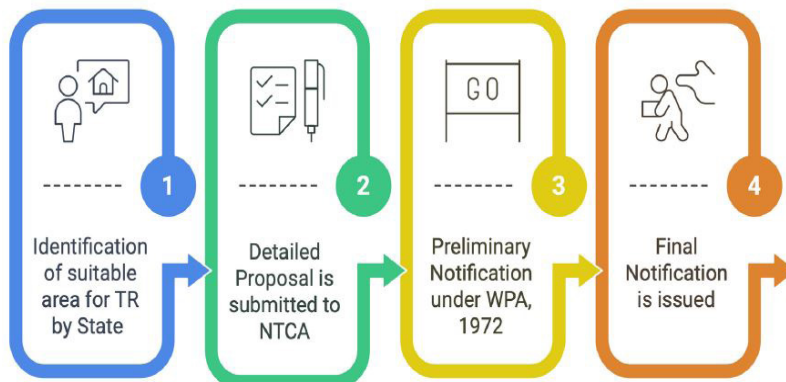


- Location:** It is situated near Shivpuri town in Madhya Pradesh and is a part of the upper Vindhyan hills.
- Lakes:** Sakhya Sagar (**Ramsar site, in 2022**) and Madhav Sagar.
- Rivers:** Manier and Sind river.
- Vegetation:** Tropical dry deciduous forests and Dry Thorn Forests.
- Flora:** Kardhai, Salai, Dhaora and Khair.
- Fauna:** Nilgai, Chinkara and Chowsinga and Deer including Chital, Sambar and Barking Deer.
- It was the hunting ground of **Mughal emperors and Maharaja of Gwalior**.
- It got the status of a **National Park in 1958**.



## Declaration of Tiger Reserve

Section 38 V of Wildlife Protection Act, 1972



Source: TH

## EXERCISE KHANJAR-XII

### In News

- The 12th edition of Exercise Khanjar-XII is set to take place in Kyrgyzstan.

### About

- It is a joint special forces exercise.
- It is held annually and conducted alternatively in both the countries.
- Aim: to exchange experiences and best practices in Counter Terrorism and Special Forces Operations in urban and mountainous high altitude terrain scenarios.

Source: PIB

