Mains Topics

Child Care in India

Context

Recent national-level studies underline that **childcare is not merely a welfare measure** but a **key driver of economic growth, labour participation, and human capital formation** in India.

Key Trends of Child Care in India

- India operates around **1.4 million Anganwadi centres**, serving nearly **23 million children**, yet **significant coverage gaps** remain—especially in **urban and migrant-heavy areas**.
- Women spend **426 minutes per day on unpaid care work**, compared to **163 minutes by men**, reinforcing **gendered labour inequality**.
- Despite increasing **female workforce participation in cities**, only **about 10% of Anganwadis are fully functional in urban areas**.
- **Care workers are chronically undervalued**, earning **₹8,000–₹15,000 per month**, with limited training, job security, or career progression.

Why Childcare is Critical for India

- **Enhancing women's labour participation:** Inadequate childcare compels many mothers to **cut back work hours or exit the workforce**.
- **Human capital formation:** Nearly **80% of brain development occurs in the first 1,000 days**; quality childcare improves **cognitive, linguistic, and socio-emotional outcomes**.
- **Economic growth multiplier:** Childcare functions as **"soft infrastructure"**, essential for sustaining **8–10% annual economic growth** by expanding labour supply and productivity.
- **Support for vulnerable families:** Migrant and informal-sector households rely heavily on childcare to **maintain livelihood stability**.
- **Managing demographic transition:** With fertility rates falling below replacement in several states, **investing in early childhood** is vital to ensure a **skilled future workforce**.

Challenges Associated with Childcare in India

- **Underpaid and undervalued care workforce:** Care workers receive **low honorariums**, face **limited training opportunities**, lack **clear career pathways**, and often work in **poor conditions**, affecting service quality and morale.
- **Urban childcare shortfall:** Despite rapid urbanisation and rising female employment, **only about 10% of Anganwadi centres are fully functional in urban areas**, leaving migrant and working families underserved.
- **Fragmented governance framework:** Childcare responsibilities are spread across **multiple ministries and schemes**, resulting in **weak coordination**, policy overlap, and absence of a unified national strategy.

- **Infrastructure and quality deficiencies:** Many centres suffer from **overcrowding, restricted operating hours, inadequate learning materials**, and **insufficient monitoring and evaluation mechanisms**.
- **Persistent gender inequality:** The disproportionate burden of **unpaid care work on women** constrains their economic participation and reinforces **gender gaps in the labour market**.
- **Inadequate public investment:** India spends only **around 0.4% of GDP on early childhood care**, significantly lower than the **1–1.5% of GDP** invested by advanced welfare states such as Scandinavian countries.

Government Initiatives Related to Childcare in India

- **Integrated Child Development Services (ICDS), 1975:** The world's largest childcare programme, providing **nutrition, preschool education, and health services**.
- **Poshan Tracker:** A digital platform offering **guidance on nutrition and early childhood stimulation**.
- **Palna Scheme:** Provides **crèche facilities for working mothers**, though only **2,500 of the 10,000 sanctioned centres** are currently operational.
- **State-level innovations:**
  - **Tamil Nadu:** Introduction of **half-time preschool educators**, effectively doubling instructional hours.
  - **Telangana: Enhanced honorariums** for Anganwadi workers to extend service hours.

Way Forward

- **Professionalise the care workforce:** Introduce **living wages, structured training, certification, and career progression frameworks** for childcare workers to improve quality and retention.
- **Expand urban childcare infrastructure:** Establish **urban Anganwadis and crèches** near workplaces, construction sites, and migrant settlements through **public–private and employer-supported models**.
- **Create a unified childcare mission:** Integrate existing schemes under a **single national childcare and early learning mission** with clear accountability, outcomes, and inter-ministerial coordination.
- **Upgrade infrastructure and service quality:** Invest in **safe buildings, extended operating hours, age-appropriate learning materials**, and **robust digital monitoring systems**.
- **Redistribute care responsibilities:** Promote **shared caregiving norms**, incentivise **paternal leave**, and recognise unpaid care work in economic policymaking.
- **Increase public spending:** Gradually raise investment to **at least 1% of GDP**, recognising childcare as **productive social infrastructure** rather than mere welfare expenditure.

Source: Indian Express

Parliamentary Standing Committee recommendations to curb pollution in Delhi

Context

A Parliamentary Standing Committee on Science, Technology, Environment, Forests and Climate Change has submitted a report on air pollution in Delhi–NCR.

Key Issues in Tackling Air Pollution in Delhi–NCR

- **Vehicular emissions remain a major source of pollution** due to rapid vehicle growth, diesel use, and insufficiently stringent emission standards.
- **Seasonal stubble burning** in neighbouring states significantly worsens winter air quality and is difficult to monitor and enforce.
- India's ambient air quality standards are **weaker than WHO norms**, requiring drastic PM2.5 reductions to achieve safe levels.
- **Children and patients face high indoor pollution** exposure due to the absence of air purification systems in public institutions.
- **Industrial units and thermal power plants around NCR** show poor compliance with pollution-control norms.
- **Fragmented governance** across multiple agencies weakens coordination and accountability in air pollution management.
- **Limited real-time and high-resolution pollution data** constrains evidence-based policymaking.

Key Recommendations by the Panel

- Consider **abolishing or reducing GST on air purifiers**.
- ISRO should **launch a dedicated high-resolution satellite for 24×7 farm fire monitoring**.
- **Review vehicular emission standards** to assess the impact of **ethanol blending on emissions**.
- Consider **income tax incentives**, such as **deductions on interest paid on EV loans**.
- Promote **green car loans** with **lower interest rates for EV purchases**.
- **Install air purifiers in all schools and hospitals**, and make them **mandatory in government offices**.
- **Expedite the revision of National Ambient Air Quality Standards (NAAQS)**.

Source: Indian Express

Prelims Topics

United Nations Environment Assembly (UNEA)

Context

India's resolution on 'Strengthening the Global Management of Wildfires' was adopted at the 7th Session of the United Nations Environment Assembly (UNEA-7) in Nairobi, Kenya.

About UNEA

- It is the **world's highest-level decision-making body on environmental matters.**
- **Established: 2012** following the **UN Conference on Sustainable Development (Rio+20).**
- **Governing body of: United Nations Environment Programme (UNEP).**
- **Headquarters: Nairobi, Kenya** — the only UN headquarters located in Africa.
- **Membership:** 193 UN member states
- **Frequency of meetings:** Convenes **biennially** (every two years); special sessions may be held when required.
- **Mandate and functions:**
  - Sets **global environmental priorities**
  - Provides **policy guidance** to UNEP
  - Reviews the **state of the global environment**
  - Strengthens **international environmental governance**

UNEA-7

- **Theme**: "Advancing sustainable solutions for a resilient planet."
- **Major Resolutions:**
  - Global wildfire management (India-led): Emphasis was placed on the **Integrated Fire Management approach with support from platforms like the Global Fire Management Hub.**
  - Coral reef protection.
  - Sound management of chemicals and waste.
  - Sustainable use and governance of digital/AI systems.
  - Environmental dimensions of antimicrobial resistance.
  - Protection of glaciers and addressing sargassum seaweed blooms.

Related Information

- UNEP's report *"Spreading Like Wildfire"*, noting projections that wildfire events could increase by **14% by 2030, 30% by 2050, and 50% by 2100** without action.

Source: The Hindu

National Technical Textile Mission (NTTM)

Context

The National Technical Textiles Mission (NTTM) is likely to be extended by two years beyond March 2026.

About NTTM

- **Launched: 2020**
- **Nodal Ministry: Ministry of Textiles**
- **Mission Period:** 2020–21 to 2025–26
- **Total Outlay: ₹1,480 crore**
- **Vision:** To position India as a **global leader in technical textiles**, reduce import dependence, and boost domestic manufacturing and exports.
- Key Components:

- **Research, Development and Innovation:** Supports R&D in **high-performance fibres and fabrics**
- **Market Development:** Promotion and wider **domestic adoption** of technical textiles across sectors.
- **Export Promotion:** Target to raise technical textile exports from **₹14,000 crore to ₹20,000 crore by 2021–22**, with **10% annual growth** thereafter.
  - Establishment of a dedicated **Export Promotion Council for Technical Textiles**.
- **Education, Training and Skill Development:** Promotion of **advanced technical education** in engineering and technology related to technical textiles and their applications.

What are Technical Textiles: Textiles manufactured for **functional and performance-based applications** rather than aesthetics, e.g. geotextiles, medical textiles, protective clothing.

Source: The Hindu

Subarnarekha River

Context

Subarnarekha river features prominently as the symbolic setting of Ritwik Ghatak's film *Subarnarekha*, marking its 60th anniversary this year nationwide.

About Subarnarekha River

- **River System:** An **east-flowing inter-State river** of eastern India.
- **Origin:** Rises near **Nagri village, Ranchi district (Jharkhand)**, on the **Chota Nagpur Plateau**.
- **Course:** Flows through **Jharkhand ⟶ West Bengal ⟶ Odisha** before entering the sea.
- **Length:** Approximately **395 km**.

- **Major Tributaries: Kharkai** (largest and most important), **Kanchi**, **Raru**, **Karkari.**
- **Other Features:**
  - **Hundru Falls (Jharkhand)**
  - **Chandil Dam (Jharkhand)**

Source: Indian Express

Hydrogen Fuel Cell Passenger Vessel

Context

India launched its first fully indigenous hydrogen fuel cell-powered passenger vessel.

About Hydrogen Fuel Cell

- It is a **clean electrochemical energy device** that converts **hydrogen and oxygen into electricity**, producing **only water and heat** as by-products.
- **How a Hydrogen Fuel Cell Works:**
  - **Fuel Supply:** Hydrogen gas is fed into the **anode**, where it acts as the primary fuel.
  - **Electrochemical Reaction:** A **catalyst** at the anode splits hydrogen (H_2) into **protons (H^+)** and **electrons (e^-)**.
  - **Proton Movement:** The protons pass through the **proton exchange membrane (PEM)** towards the cathode.
  - **Electron Flow:** Electrons cannot cross the membrane and instead move through an **external circuit**, generating **electric current**.

- **Power Generation:** This controlled flow of electrons provides **usable electrical energy**.
- **Water Formation:** At the **cathode**, oxygen combines with protons and electrons to form **water**, releasing **heat**.

Source: PIB

Charaichung Festival

Context

Assam's Majuli island hosted the second edition of the Charaichung Festival.

About Charaichung Festival

- The festival marks the **392-year-old legacy** of **Asia's first protected Royal Bird Sanctuary, Charaichung**, established in **1633 AD by Ahom king Swargadeu Pratap Singha**.
- **Objective:** To revive Charaichung sanctuary, strengthen bird conservation and promote Majuli as a global tourism destination.
- Includes a special forest conservation exhibition showcasing biodiversity protection efforts.

Source: Livemint

Bluebird 6

Context

Indian Space Research Organisation (ISRO) will launch America's commercial satellite BlueBird-6.

About Bluebird 6

- **Type:** Commercial **communications satellite** for space-based cellular broadband.
- **Developer: AST SpaceMobile**, a Texas-based U.S. company.
- **Purpose:** To provide **direct-to-device cellular connectivity** from space, enabling ordinary smartphones to connect without specialised ground terminals.
- **Constellation:** Part of AST SpaceMobile's **Block-2 satellite constellation**.
- **Orbit: Low Earth Orbit (LEO)**.
- **Mass:** Approximately **6.5 tonnes** — the **heaviest U.S. commercial satellite launched by India** to date.

Source: TOI

Personality in News

Vinayak Damodar Savarkar

About Vinayak Damodar Savarkar

- **Birth**: Vinayak Damodar Savarkar was born on May 28, 1883, in Bhagur, a village near Nashik, Maharashtra.
- **Demise**: Passed away on February 26, 1966, following a fast unto death.
- **Contributions:**
  - **Abhinav Bharat Society**: Founded this secret society, initially called Mitra Mela, in 1904 along with his brother Ganesh Damodar Savarkar.
  - **International Involvement:** Engaged with India House and the Free India Society during his time in the United Kingdom.
  - **Hindu Mahasabha Leadership**: Served as the president of the Hindu Mahasabha from 1937 to 1943.
    - During his tenure he he **engaged in political negotiations** with the British during the **Cripps Mission and Wavell Plan discussions**
  - **Literary Works**: Authored 'The History of the War of Indian Independence', detailing guerrilla tactics in the 1857 Sepoy Mutiny, and **'Hindutva: Who is a Hindu?'**.