



DAILY CURRENT AFFAIRS 28-05-2025

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Madhubani and Gond Art

Syllabus: GS-1: Indian Art and Culture – Folk Paintings.

Context:

Artists of Madhubani and Gond art met President Droupadi Murmu under the *Artists-in-Residence Programme – Kala Utsav* at Rashtrapati Bhavan.

Madhubani Art (Mithila Art)

- **Region:** Originates from the *Mithila* region of Bihar; also known as Mithila painting.
- **Nature:** A traditional *folk art* form, historically created by women on walls and floors during auspicious occasions.

Key Features:

- **Mediums Used:** Now practiced on *cloth, canvas, and handmade paper*.
- **Materials:** Natural, eco-friendly materials like:
 - Plant-based pigments
 - Cow dung-treated paper
 - Bamboo pens
- **Style:**
 - Bold black outlines made using *cow dung and charcoal*.
 - Bright *natural colors* used for filling.
- **Themes:**
 - **Religious:** Radha-Krishna, Shiva, Saraswati, Ramayana scenes.
 - **Social:** Marriage rituals, festivals, daily village life.
 - **Nature:** Birds, animals, sacred trees (Tulsi, Banyan), sun and moon.
- **Cultural Relevance:**
 - *A symbol of female creativity.*
 - Passed down generations as part of rural tradition and identity.

Gond Art

- **Region:** Practiced by the *Pardhan Gond* tribe in *Madhya Pradesh* and surrounding Central Indian states.
- **Nature:** A *tribal art form* rooted in oral tradition, storytelling, and ritualistic practices.

Key Features:

- **Origins:** Traditionally drawn on the *walls of homes* to depict myths and local tales.
- **Themes:**
 - *Mythical narratives*, animist beliefs, and village folklore.
- **Technique:**
 - Intricate *patterns* using *fine dots and lines* to add texture and rhythm.
- **Nature-centric:** Shows deep connection between *humans, animals, and trees*.
- **Color Palette:** Bright, vivid colors used in *innovative compositions*.
- **Global Recognition:**
 - Gained international attention with works like *"The Night Life of Trees"* (Tara Books).

Significance:

- Both art forms reflect India's *diverse intangible cultural heritage*.
- Promote *sustainability, community identity, and female empowerment*.
- Their recognition at national events like *Kala Utsav* helps preserve and promote traditional Indian arts globally.

Bharat Forecast System

Syllabus: GS-1: Geography: Indian Climate – Weather Forecast.

Context:

- The Bharat Forecast System was launched by Union Minister of Earth Sciences Dr. Jitendra Singh in 2025.

Bharat Forecasting System (BFS)

Overview:

- Launched on **May 26, 2025** by the **Union Ministry of Earth Sciences**.
- World's **highest-resolution weather prediction model**.
- Uses **6 km x 6 km grid** for ultra-localized forecasts.
- Powered by India's high-performance **supercomputer Arka**.

What is BFS?

- India's most advanced **Numerical Weather Prediction (NWP)** system.
- Provides **short-term, highly localized forecasts** up to the **panchayat level**.
- Enables **nowcasting** (forecasts for the next 2 hours).

Developed By:

- Developed by **Indian Institute of Tropical Meteorology (IITM), Pune**.
- Led by **Parthasarathi Mukhopadhyay**.

How It Works:

- Powered by **Supercomputer Arka**:
 - **11.77 PetaFLOPS** computational speed.
 - **33 Petabytes** storage capacity.
- Integrates real-time inputs from **40+ Doppler Weather Radars** (to be scaled to 100).
- Covers **30° South to 30° North latitude** – focusing on tropical regions including **India**.
- Completes simulations within **4 hours**, improving responsiveness.

Key Features:

- **Global highest resolution**: 6 km grid (vs 9–14 km in EU, UK, US models).
- **60% faster** than previous model **Pratyush**.
- Comprehensive coverage of **rural and remote areas**.
- Supports early alerts for **thunderstorms, rainfall, floods**, etc.

Significance:

1. Disaster Risk Reduction:

- Early flood and cyclone warnings help in **quicker evacuation** and **loss mitigation**.

2. Agricultural Resilience:

- Forecasts of **rainfall, drought, heatwaves** aid in planning agricultural activities.

3. Water Resource Planning:

- Helps manage **reservoir levels** and **irrigation scheduling** efficiently.

4. Food Inflation Management:

- Reduces crop damage, thus stabilizing **agricultural supply and prices**.

5. Public Health Support:

- Provides early alerts for **heatwaves and air pollution**, aiding public health responses.

Why BFS is a Game-Changer:

- Enhances India's capability in **climate resilience**, disaster preparedness, and **rural weather intelligence**.
- Positions India as a **global leader** in high-resolution weather forecasting.

Press Council of India

Syllabus: GS-2: Statutory Bodies.

Context:

- Lok Sabha Speaker Om Birla has nominated three members of the House, including BJP leader Sambit Patra, to the Press Council of India.

Press Council of India (PCI)

Introduction:

- **Statutory, quasi-judicial body.**
- Established under the **Press Council Act, 1978**.
- Objective: To **preserve the freedom of the press** and maintain and improve the **standards of newspapers and news agencies** in India.

Composition:

- Comprises a **chairperson** and **28 other members**.
- **Chairperson:** A **retired judge of the Supreme Court**, nominated by a committee including:
 - Chairman of Rajya Sabha,
 - Speaker of Lok Sabha,
 - A member elected by the PCI.
- Members represent:
 - Working journalists,
 - Editors,
 - Owners of newspapers/news agencies,
 - MPs (Lok Sabha & Rajya Sabha),
 - UGC, Bar Council of India, Sahitya Akademi.

Functions:

- Acts as a **watchdog of the press**.
- Can **inquire into complaints** against or by the press for violation of journalistic ethics or professional misconduct.
- Issues **guidelines and advisories** to the press.
- Can **summon individuals**, demand documents, and hold inquiries.
- Can **warn, admonish, or censure** the guilty party but **cannot impose penalties**.

Powers:

- Limited to **moral authority**.
- Has powers of a **civil court** for conducting inquiries.

Limitations:

- Jurisdiction is limited to **print media only; electronic and digital media are excluded**.
- Recommendations are **not legally binding**.
- Lacks punitive power.

Significance:

- Acts as a **self-regulatory mechanism** for the print media.
- Ensures a **free and responsible press** in a democratic society.

Recent Issues:

- Debates on bringing digital and electronic media under its purview.
- Calls for **strengthening powers** to deal with fake news and unethical journalism.

Overnutrition in India's Urban Landscape

Syllabus: GS-2: Social Sector – Health.

Context:

- A recent *Nature* study on IT employees in Hyderabad revealed:
 - **84% prevalence** of MAFLD (Metabolic Dysfunction-Associated Fatty Liver Disease).
 - **71% of participants were obese.**
- Highlights a growing **public health crisis** linked to urban lifestyle and work culture.

Causes and Risk Factors

- **Chronic stress, high salt intake, poor sleep patterns, and sedentary work routines** in urban IT jobs.
- Unhealthy workplace incentives like **free, ultra-processed snacks**.
- Rapid urbanization and tech sector growth contributing to lifestyle diseases.

India's Dual Nutritional Burden

- Coexistence of **undernutrition** and **overnutrition** in different regions.
- India ranked **2nd globally in overweight/obesity prevalence** (2021).
- Low rank in **Global Hunger Index** due to undernutrition.
- Emerging crisis of **metabolic diseases among urban professionals**.

Burden of Noncommunicable Diseases (NCDs)

- **WHO data (2019):** 74% of global deaths due to NCDs (up from 61% in 2000).
- NCDs disproportionately affect **low- and middle-income countries**, including India.
- WHO (2024): NCDs rising in the **economically productive population**.
- South-East Asia at risk of missing **SDG 2030 targets** on premature NCD mortality.

Case Study: Tamil Nadu

- **STEPS Survey (2023–24)** in Chennai:
 - Over **65% of deaths** due to NCDs.
 - Poor NCD care outcomes:
 - Only **16% hypertension patients** had BP under control.
 - Among 18–44 years, **9.3% BP** and **9.8% diabetes** control.
 - **31.6% overweight, 14.2% obese**.
 - **94.2% reported poor fruit/vegetable intake, 24.4% lacked physical activity**.
- **MakkalaiThedi Maruthuvam (MTM)** Programme:
 - Workplace screenings for **3.79 lakh employees** (Jan 2024).
 - Initiatives like **8-km health walk** and **“Eat Right Challenge”**.
 - Challenge: proliferation of **fast food outlets** in metros.

Trends from NFHS-5

- **Obesity increases with age:**
 - From **7% in 15–19 years** to **32% in 40–49 years** (men).
- **Richer households more affected:**
 - **10% obesity** in lowest quintile vs **37% in highest**.
- **Waist-to-hip ratio (WHR)** rises with age:
 - Women: 46% to 65%; Men: 28% to 60% (15–49 years).
- Urban vs Rural:

- **Urban overweight/obesity:** 46.1% (men), 43.1% (women).
- **Rural:** 35.4% (men), 31.6% (women).

Working Age Group Most at Risk

- **18–59 age group** (workforce) is highly vulnerable.
- Exposed to **ultra-processed foods**, sedentary lifestyle, and urban stress.

Future Projections

- **The Lancet (2025)** estimates:
 - India's obese/overweight adults to reach **450 million by 2050** (180 million in 2021).
 - **Childhood obesity:** increased **244% in past 30 years**, expected rise of **121% more**.

Regulatory and Policy Interventions

Current Initiatives

- **Eat Right India Movement** (FSSAI-led):
 - Hygiene ratings and certifications.
 - Campaigns like “**Aaj Se Thoda Kam**” to reduce salt, sugar, and fat.
 - Promotes **labelling of High-Fat, Salt, Sugar (HFSS)** foods.
 - Proposal for **Health Star Rating (HSR)** on packaged foods (2022).
 - Faces criticism over effectiveness.
- **Supreme Court Directive:**
 - FSSAI expert committee to recommend food labelling norms.

Need for Stronger Regulatory Action

- Current efforts must move from **awareness** to **action**.
- Call for:
 - **Taxation** of unhealthy foods (high in sugar/salt).
 - **Multisectoral coordination** for food safety.
 - **Stricter enforcement** of manufacturing and marketing norms.

International Best Practice: Saudi Arabia

- **Vision 2030** embeds NCD prevention:
 - **Calorie labels** on restaurant menus.
 - **50% excise tax** on sugary drinks, **100% on energy drinks**.
 - **Sodium limits** in processed foods.
 - **Trans fat elimination** and **WHO best practices** compliance.
 - Integrated strategy involving **health, regulations, and civic action**.

Urban Work Culture & Nutrition Crisis in India

- Cities like **Bengaluru, Hyderabad, Pune, Chennai** are tech hubs with:
 - **Flexible, extended work hours**.
 - Surge in **late-night food delivery, cloud kitchens, energy-dense diets**.
- Growing **nightlife** and **food consumption culture** escalating NCD risk.

Conclusion

- **NCD epidemic** in India is a **population-wide crisis**, not limited to IT professionals.
- Requires:
 - **Policy reforms**.
 - **Nutrition-sensitive food systems**.
 - **Targeted public health strategies**.
- Taxation of **unhealthy food** could be a **progressive step** toward public health protection.

Customised Gene-Editing Treatment

Syllabus: GS-3: Science and Technology – Genetic Engineering.

Context:

A nine-month-old boy, born with a rare genetic disorder, has become the first (known) person to successfully receive a custom gene-editing treatment, a report published on May 15, 2025 in the New England Journal of Medicine said.

Custom Gene Editing Technique Using Base Editing

What It Is

- A **personalised gene therapy** based on an evolved form of **CRISPR-Cas9**, called **base editing**.
- **Unlike traditional CRISPR**, which makes double-stranded cuts, **base editing** allows **single-nucleotide correction** without breaking both DNA strands.
- **Analogy:**
 - *Base Editing* = pencil and eraser
 - *CRISPR* = scissors and glue

Case Study: First Human Application

- **Patient:** 9-month-old boy named *KJ* with **CPS1 deficiency** (a rare genetic disorder).
- **Institutions Involved:**
 - **University of Pennsylvania**
 - **Children's Hospital of Philadelphia**
- **Procedure:**
 - **Diagnosis:** Faulty base pair identified in the gene.
 - **Tool Design:** Guide RNA + base-modifying enzyme + modified Cas9.
 - **Targeted Edit:** Corrects the wrong base **without double-strand DNA breaks**.
 - **Delivery:** Introduced into the body using **viral vectors**.

Mechanism of Base Editing

Feature	Traditional CRISPR-Cas9	Base Editing
DNA Cut	Double-strand break	No break – only single base modification
DNA Insertion	Often needs foreign DNA	No need for foreign DNA
Precision	Relatively lower	Highly precise (single base)
Risk of Mutations	Higher	Lower
Delivery Mechanism	Complex (multiple components)	Compact – suitable for viral vectors

Significance

- **First Human Success:** Marks a leap in **real-time precision medicine**.
- **Personalised Therapy:** Tailored to the patient's **specific genetic mutation**.
- **No Foreign DNA:** Reduces risk of immune reactions or off-target effects.
- **Delivery:** Compact editing tools are easier to deliver inside the human body.
- **Scalable Potential:** Could address **thousands of rare genetic conditions** in the future.

Limitations & Challenges

- **High Cost:** Current treatments cost **hundreds of thousands of dollars**.
- **One-Time Customisation:** Each tool is **patient-specific**, hindering scalability.
- **Regulatory Barriers:**
 - Lack of clear regulatory pathways in countries like **India**.
 - Delays in **clinical approval** and usage.
- **Low Pharma Incentive:**
 - **Not profitable** for pharmaceutical companies due to **low repeatability**.
 - Commercialization difficult for **ultra-personalised solutions**.

Conclusion

Base editing represents the **next frontier in gene therapy**, offering **unprecedented precision and personalisation**. While its application is revolutionary, **ethical, economic, and regulatory** barriers need resolution to make it **accessible and widespread**.