



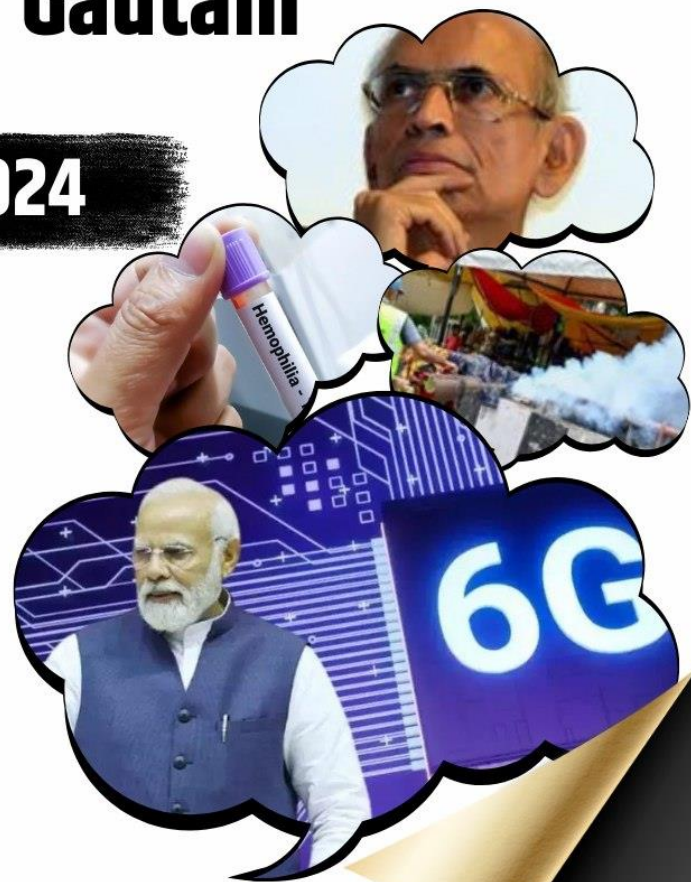
Daily Current Affairs



To The Point by Dhananjay Gautam

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1 The Code of Conduct for Judges: Upholding Ethics and Accountability

Context: Recent remarks by an **Allahabad High Court Judge** targeting the Muslim community during a **Vishwa Hindu Parishad event** have sparked public outrage. This incident highlights the critical need for judges to adhere to ethical guidelines and maintain public trust in the judiciary.

**What is the Judicial Code of Conduct?****Restatement of Values of Judicial Life (1997):**

- Adopted by the **Supreme Court of India**, this document outlines the **ethical principles** that judges of the Supreme Court and High Courts must follow.
- Focuses on ensuring **impartiality, integrity, and transparency** in judicial behavior.

In-House Procedure:

- A mechanism to address cases where judges fail to uphold the **standards of judicial conduct**.
- Allows complaints to be directed to the **Chief Justice of India (CJI)** or the **High Court Chief Justice**, providing a framework for remedial action.

Core Principles of Judicial Ethics:**The judiciary's credibility rests on two fundamental pillars:**

1. **Public Confidence in Judicial Authority**
2. **Integrity and Impartiality of Judges**

Key Guidelines in Judicial Ethics:

- **Reaffirming Public Faith:** Judges must act in ways that enhance public trust in the judiciary's impartiality.
- **Awareness of Public Scrutiny:** Judges must maintain the **highest ethical standards**, knowing their actions are constantly under public observation.
- **Respect for Diversity:** Judges should demonstrate respect for all communities, avoiding any remarks that reflect bias.

Bangalore Principles of Judicial Conduct (2002):

- **Global Standards:** Codifies international benchmarks for judicial ethics.
- Emphasizes **impartiality, dignity, and restraint** in public expression while advocating for diversity and fairness.

Mechanisms for Removing Judges:**Constitutional Provisions:**

Under **Article 124(4)** and **Article 217** of the Indian Constitution, judges can be removed for **“proved misbehavior or incapacity.”**

Impeachment Process:

1. **Initiation of Motion:**
 - Requires support from at least **one-third** of the total members of a House of Parliament.
 - Must secure a **two-thirds majority** of members present and voting.
2. **Presidential Approval:**
 - Once the motion is passed, the **President of India** issues an order for the judge's removal.

In-House Procedure for Misconduct:

An alternative to impeachment, the **in-house procedure** ensures accountability without the formalities of parliamentary intervention.

Steps Involved:

1. **Filing Complaints:**
 - Complaints can be submitted to the **CJI**, High Court Chief Justice, or the **President**.
2. **Preliminary Inquiry:**
 - The **High Court Chief Justice** investigates and forwards findings to the CJI.



3. Fact-Finding Committee:

- A committee comprising two **Chief Justices of other High Courts** and one **High Court Judge** investigates serious allegations.

4. Outcome:

- If the charges are validated, the CJI may advise the judge to resign.
- If the judge declines, the matter can proceed to **impeachment**.

Why Judicial Ethics Are Crucial:

Maintaining Public Trust:

- Any breach of **impartiality** erodes the public's faith in the judiciary.

Preserving Judicial Independence:

- External influences or personal biases compromise the judiciary's role as a fair and independent authority.

Upholding the Rule of Law:

- Ethical lapses undermine the delivery of justice and impact the fair application of laws.

Conclusion: The Judiciary as a Beacon of Justice

Judges hold a position of immense trust, and their conduct must reflect the **highest ethical standards**. Adherence to these principles safeguards the **rule of law** and maintains the **credibility of the judiciary** as the guardian of constitutional values. By demonstrating **integrity, impartiality, and transparency**, the judiciary can continue to serve as the foundation of a just and equitable society.



2 Surge in Urban Sector Investments: Building the Future of India

Context: The Union Minister for Housing and Urban Affairs and Power highlighted a significant **16-fold increase in urban sector investments**, reflecting the government's focus on achieving the vision of **Vikshit Bharat (Developed India) by 2047**.



Milestones Under Key Urban Development Schemes:

Atal Mission for Rejuvenation and Urban Transformation (AMRUT):

- **Objective:** Enhancing basic urban services like water supply, sewerage, and urban transport, with a special focus on improving the quality of life for the urban poor.
- **Key Achievements:**
 - Created **4,649 MLD (Million Liters per Day)** of water treatment capacity.
 - Established **4,429 MLD sewage treatment capacity**.
 - **AMRUT 2.0:** Prioritizes stormwater drainage projects to combat waterlogging and enhance drinking water and sewerage systems.

Smart Cities and New Cities Initiative:

- **Launched in 2015:** Aims to foster **sustainable and inclusive cities** by leveraging smart technologies to improve infrastructure, transport, and services.
- **Progress:** Expansion of the metro network to new cities and emphasis on regional rapid transit systems (**RRTS**) to boost urban mobility.

Urban Housing: Pradhan Mantri Awas Yojana (PMAY) 2.0:

- Conversion of government-funded vacant houses into **Affordable Rental Housing (ARH)** through **PPP models** or public agencies.
- Provisional sanctions for **7% of the planned 1 crore urban houses** to expedite timely allocation.

Swachh Bharat Mission:

- **Landmark Achievements:**
 - Remediation of **major dumpsites** in Ahmedabad and Hyderabad, clearing **2.5 lakh metric tonnes** of legacy waste.
 - Under the **PM SVANidhi Scheme**, 13,422 crore in loans disbursed to street vendors.

Urbanization in India: A Mixed Landscape:

The Indian Urbanization Story:

- Unlike Western nations, where **industrialization drove urbanization**, India's urban growth often stems from **economic distress**, leading to **poverty-driven urbanization**.
- **Migration Patterns:** Both rural-to-urban and urban-to-urban migration have shaped Indian cities.
- The **COVID-19 pandemic** exposed significant gaps in urban planning, with reverse migration highlighting infrastructure shortcomings.

Urban Population Trends:

- India's urban population grew from **27.7% in 2001 to 31.1% in 2011** (Census 2011), increasing at a rate of **2.76% per year**.
- Estimates by the **World Bank** suggest that around **40% of India's population** now resides in urban areas, spread across **9,000 towns**.

Key Challenges in India's Urban Landscape:

1. **Outdated Urban Planning:** Many urban plans fail to account for **population growth**, leading to inadequate infrastructure.
2. **Overcrowding and Slums:** **40% of urban residents** live in slums due to deindustrialization and lack of affordable housing in peri-urban areas.
3. **Environmental Concerns:** Climate change exacerbates issues like **urban flooding, pollution, and heat island effects** in cities.



4. **Inequality in Urban Development:** Exclusive developments benefit the wealthy, while millions lack access to **basic housing and amenities**.
5. **Waste Management Woes:** Rapid urbanization has overwhelmed cities with **increased waste**, leading to **environmental degradation**.
6. **Transportation and Traffic:** Poor public transport coupled with a rise in private vehicle ownership results in **traffic congestion** and **pollution**.

Way Forward: Strategies for Sustainable Urban Growth:

1. **Infrastructure Development:** Focus on **roads, water supply, sanitation, and waste management** to support growing urban populations.
2. **Affordable Housing:** Build more **affordable housing units** to reduce slums and address the needs of lower-income groups.
3. **Sustainable Urbanization:** Prioritize **renewable energy, green spaces, and waste recycling** to promote environmentally friendly urban growth.
4. **Rural-Urban Integration:** Improve rural infrastructure and connectivity to balance growth and reduce the strain on major metropolitan areas.

Conclusion: Shaping India's Urban Future:

The significant rise in **urban sector investments** reflects India's commitment to building sustainable and inclusive cities. By addressing existing challenges and focusing on infrastructure, housing, and sustainability, India is paving the way for a **developed urban landscape by 2047**. This transformative journey will be crucial in realizing the nation's ambition of becoming a global powerhouse.

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TOGETHER WE SCALE HEIGHTS

3 India's Malaria Milestone: Insights from WHO's World Malaria Report 2024

Context: The World Health Organization (WHO) has released the 2024 World Malaria Report, highlighting India's significant strides in reducing malaria incidence and mortality. This achievement underscores India's commitment to eradicating malaria and improving public health.

Understanding Malaria:

What is Malaria?

- Malaria is a life-threatening disease caused by **Plasmodium** parasites transmitted through bites of infected **female Anopheles mosquitoes**.
- While primarily affecting tropical regions, it is **preventable and curable**.

How is Malaria Transmitted?

- Malaria is **not contagious** and cannot spread from person to person.
- The disease is caused by five species of parasites, with **Plasmodium falciparum** and **Plasmodium vivax** posing the greatest threat.

Key Highlights of the WHO's 2024 World Malaria Report:

Global Burden of Malaria (2023):

- **263 million cases** and **597,000 deaths** were reported globally.
- The **WHO African Region** accounted for **95% of malaria deaths**, disproportionately affecting **young children and pregnant women**.

Global Progress Since 2000:

- **2.2 billion cases** and **12.7 million deaths** have been averted.
- Case incidence has dropped significantly with steady improvements globally.

Certification of Malaria-Free Countries:

- As of **November 2024**, **44 countries** and one territory, including Egypt, have been certified as **malaria-free**.
- Certification requires maintaining **zero indigenous cases** for three consecutive years.
- **25 malaria-endemic nations** now report fewer than 10 cases annually, up from just 4 in 2000.

Country-Specific Trends:

- **Notable Reductions in Cases (2022-2023):**
 - Nepal: **-58.3%**
 - India: **-9.6%**
 - Bangladesh: **-9.2%**
- **Rising Cases:**
 - North Korea: **+47.9%**
 - Thailand: **+46.4%**
 - Myanmar: **+45.1%**
- **Timor-Leste and Bhutan** reported **zero indigenous cases** in 2023.

India's Achievements in Malaria Control:

A Milestone Achievement: Exiting the HBHI Group:

- India has exited the **High-Burden-High-Impact (HBHI)** group, marking a significant reduction in its malaria burden.
- **Malaria Cases:** Reduced by **69%**, from **6.4 million in 2017** to **2 million in 2023**.
- **Malaria Deaths:** Dropped by **68%**, from **11,100 in 2017** to **3,500 in 2023**.

Strategies Behind India's Success:

1. **Artemisinin-Based Combination Therapy (ACT):** A dual-drug treatment where **artemisinin** eliminates most malaria parasites, and a **partner drug** clears the rest.
2. **Long-Lasting Insecticidal Nets (LLINs):** Widely used **insecticidal nets** effectively block and kill mosquitoes, reducing mosquito populations.





3. Targeted Interventions in High-Burden Areas:

- Focused efforts in **forested and tribal regions** (e.g., Jharkhand, Odisha, Chhattisgarh, and the North-East).
- Improved access to **diagnostics, treatments, and next-generation insecticide-treated nets**.

4. Robust Monitoring and Case Management:

Continuous evaluations ensured the **proper implementation** of interventions, driving sustained progress.

Challenges Highlighted in the Report:

African Region: A Persistent Struggle:

- Despite global progress, **Africa remains the most affected** region.
- Challenges include:
 - Insufficient **funding** (only \$4 billion in 2023 vs. \$8.3 billion target).
 - **Drug and insecticide resistance**, fragile health systems, and weak surveillance.
 - Compounding factors like **conflicts, climate change, and population displacement**.

Global Challenges:

- Gaps in access to **insecticide-treated nets**, medicines, and diagnostic tools.
- Need for improved data systems to monitor **health inequities**.

The Way Forward:

Recommendations from WHO:

1. **Invest More:** Increase funding for anti-malaria programs, especially in high-burden regions like Africa.
2. **Innovate:** Focus on developing new tools and strategies for prevention and treatment.
3. **Community Involvement:** Engage affected communities in designing and evaluating interventions.
4. **Promote Equity:** Advocate for **gender equality** and **human rights** in anti-malaria initiatives.

Conclusion: A Call to Action:

India's achievements in malaria control demonstrate the **power of strategic interventions**, innovation, and robust monitoring. However, **global challenges persist**, particularly in Africa. By sustaining momentum and addressing persistent gaps, the world can move closer to eradicating malaria, ensuring a healthier and brighter future for all.

4 Ecologist Madhav Gadgil Honored with UN's Champions of the Earth Award

Context: Renowned Indian ecologist **Madhav Gadgil** has been awarded the prestigious **Champions of the Earth Award** by the **United Nations Environment Programme (UNEP)**, the UN's highest environmental honor. Gadgil is the **sole Indian recipient** of this esteemed award in 2024, recognizing his exceptional contributions to **environmental conservation**.

**Madhav Gadgil's Contributions to Environmental Protection:****Role as Chair of the WGEEP:**

- Gadgil chaired the **Western Ghats Ecology Expert Panel (WGEEP)**, formed by the Government of India to address the challenges facing the fragile **Western Ghats ecosystem**.
- His work focused on evaluating the impacts of **population pressure, climate change, and development activities** on the ecologically rich Western Ghats region.

Key Recommendations by the WGEEP:

- Declare the Western Ghats as an Ecologically Sensitive Area (ESA):**
 - The report proposed classifying **64% of the Western Ghats**, spanning six states, into **Ecologically Sensitive Zones (ESZ 1, ESZ 2, and ESZ 3)**.
- Restrict Development Activities:**
 - Advocated halting environmentally harmful activities like **mining, dam construction, and thermal power plants** in the sensitive zones.
- Establish a Western Ghats Ecology Authority (WGEA):**
 - Suggested the formation of this body to manage the region and ensure **sustainable development** practices.
- Adopt a Bottom-to-Top Governance Approach:**
 - Emphasized community involvement, starting from **Gram Sabhas**, for effective ecological management.

About the Champions of the Earth Award:

- The **Champions of the Earth Award** is the **highest environmental accolade** bestowed by UNEP.
- It celebrates **individuals, organizations, and governments** for their exceptional contributions to **environmental protection and sustainable development**.

2024 Award Honorees:

This year's award recognized **six exceptional leaders and initiatives:**

- Sonia Guajajara** – Indigenous rights advocate.
- Amy Bowers Cordalis** – Attorney and environmentalist.
- Gabriel Paun** – Conservationist.
- Lu Qi** – Forest ecologist.
- Madhav Gadgil** – Ecologist and sustainability pioneer.
- SEKEM Initiative** – Sustainable development project in Egypt.

Conclusion:

The recognition of **Madhav Gadgil** with the **Champions of the Earth Award** underscores the critical role of scientific expertise and community-led approaches in conserving biodiversity and fostering sustainable development. His work on the **Western Ghats** serves as a blueprint for balancing environmental conservation with development, inspiring global action to safeguard fragile ecosystems.

5 Gene Therapy Success in India: A Transformative Medical Breakthrough

Context: Indian scientists have achieved a **remarkable milestone** in medical science by using **gene therapy** to treat severe **Hemophilia A**, a rare genetic disorder causing life-threatening bleeding episodes. This **pioneering trial** conducted on five patients in Tamil Nadu has shown **promising outcomes**, with no bleeding episodes reported during a follow-up period averaging 14 months.

**What is Gene Therapy?**

Gene therapy involves modifying or manipulating genes to treat or cure diseases. It can address various conditions, including cancer, genetic disorders, and infectious diseases.

Key Mechanisms of Gene Therapy:

1. **Replacing a faulty gene** with a healthy copy.
2. **Inactivating a malfunctioning gene** causing disease.
3. **Introducing a new or modified gene** to aid in treatment.

Types of Gene Therapy Products:

- **Plasmid DNA:** Circular DNA engineered to carry therapeutic genes into human cells.
- **Viral Vectors:** Modified viruses used as carriers to deliver therapeutic genes.
- **Bacterial Vectors:** Altered bacteria employed to transfer genes into tissues.
- **Gene Editing Technology:** Tools like CRISPR to repair or disrupt faulty genes.
- **Patient-Derived Cellular Products:** Cells removed, modified, and reintroduced to the patient.

Understanding Hemophilia A:**What is Hemophilia?**

Hemophilia is a rare genetic disorder that prevents proper blood clotting, leading to excessive bleeding. It is classified based on the percentage of clotting factors in the blood.

What Makes Hemophilia A Unique?

- **Cause:** A hereditary deficiency of Factor VIII, a critical blood-clotting protein.
- **Severity:** Severe cases have less than 1% of normal clotting factors.
- **Prevalence in India:** With 40,000–100,000 cases, India has the world's second-largest patient pool.

Current Treatments:

- Frequent **Factor VIII infusions** or monoclonal antibodies.
- Extremely **high costs**—around ₹2.54 crore per patient over 10 years—make treatment inaccessible to many.

The Promise of Gene Therapy:**How Does It Work?**

Gene therapy offers a **one-time solution** by introducing a functional gene that enables the body to produce sufficient Factor VIII. This reduces or eliminates the need for repeated infusions.

Innovative Techniques in India

The Indian trial used **lentivirus** to deliver the clotting factor gene into stem cells, a safer method compared to adenovirus vectors. This approach eliminates the need for **immunosuppressive drugs**.

Results of the Trial

- **Participants:** Five patients experienced no bleeding episodes during the 14-month follow-up.
- **Team:** Led by **Dr. Alok Srivastava** at Christian Medical College (CMC), Vellore.
- **Support:** Funded by the Union Department of Biotechnology.

Global Context of Gene Therapy:**Advancements Worldwide:**

- **Roctavian:** Approved by the **U.S. FDA in 2023**, significantly reducing bleeding incidents in Hemophilia A patients.
- **Mechanism:** Uses adenovirus vectors but requires **immune suppression**, unlike the Indian trial



Significance of India's Success:

Why It's Groundbreaking:

1. **Resource Constraints:** Demonstrates the feasibility of conducting advanced gene therapy in a developing country.
2. **Cost Reduction:** Localising gene therapy manufacturing in India could make treatments **more accessible and affordable**.
3. **Broader Accessibility:** Eliminating the need for immunosuppressive therapy makes treatment possible for **younger patients**, overcoming challenges like liver immaturity.

Conclusion:

India's success with gene therapy for Hemophilia A marks a **transformative step** in medical science, offering a **safer, more accessible, and effective treatment** for this rare disorder. This breakthrough not only promises **better care** for Indian patients but also sets a **global precedent** for advancing medical research in resource-limited settings.



6 Bharat 6G Vision Document: A Leap into the Future of Wireless Technology

Context: The **Bharat 6G Vision** positions India as a key contributor in the **design, development, and deployment** of **6G technology** by the year 2030, aiming to lead the global technological landscape.

What is 6G?

6G (sixth-generation wireless) is envisioned as a groundbreaking technology that offers **internet speeds up to 100 times faster** than 5G.

- **Speed:** While 5G delivers speeds up to **10 gigabits per second**, 6G promises speeds up to **1 terabit per second** with **ultra-low latency**.
- **Designation:** The International Telecommunication Union (ITU) has termed this technology as **'IMT 2030'**.
- **Frequency Bands:** Studies by the ITU have focused on frequency bands like **4400–4800 MHz, 7125–8400 MHz, and 14.8–15.35 GHz** for 6G usage.



The Bharat 6G Vision:

India's 6G project is structured into two distinct phases:

- **Phase 1 (2023–2025):** Focus on **exploratory research**, testing innovative ideas, and conducting proof-of-concept studies.
- **Phase 2 (2025–2030):** Shift towards **conceptualization** and **commercialization** of 6G technology solutions.

Key Use Cases of 6G:

1. **Remote-Controlled Factories** for efficient industrial operations.
2. **Self-Driving Cars** with seamless communication capabilities.
3. **Smart Wearables** that interact directly with human senses.

Bharat 6G Alliance:

This alliance brings together **domestic industries, academia, research institutions, and standards organizations** to drive the 6G initiative.

- **Objective:** To craft a **national action plan** that keeps India at the forefront of **technological innovation** in the coming decades.

Pillars of the 6G Vision:

Benefits of 6G Technology:

6G is expected to revolutionize multiple sectors:

- **Healthcare:** Facilitating **telemedicine, robotic surgeries, and AI-powered diagnostics**.
- **Agriculture:** Enabling **precision farming** and **smart monitoring** using IoT sensors.
- **Education:** Real-time, immersive learning experiences via **AR/VR technologies**.
- **Industrial Automation:** Boosting **Industry 4.0** through enhanced **machine-to-machine communication, Digital Twins, and IoT-based smart industries**.

Challenges in Implementing 6G:

1. **Investment in R&D:** A significant focus on **semiconductors, AI processors, and advanced SoCs (System on Chips)** is necessary.
2. **Cybersecurity Concerns:** Ensuring data privacy and security in a hyper-connected 6G environment.

Recommendations for Bharat 6G Mission:

1. **Global Standards Participation:** Actively contribute to international forums to ensure **interoperability and global relevance**.
2. **Space-Terrestrial Integration:** Develop solutions for **seamless connectivity** across terrestrial and satellite networks.
3. **Innovative Funding Mechanisms:** Support R&D through funding for **startups, academia, and national laboratories**.



4. **Spectrum Sharing:** Optimize the use of **higher frequency bands** to meet growing demands.

Conclusion:

The **Bharat 6G Mission** aligns with the vision of **Atmanirbhar Bharat**, ensuring that India emerges as a **global leader** in telecom technology. By delivering **affordable and advanced solutions**, India is poised to make a significant contribution to the global technological ecosystem, fostering innovation for the **greater good of humanity**.

