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Daily News Analysis

The Hindu Important News Articles & Editorial For UPSC CSE

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On September 24, 2025, Leh city in the Union Territory of Ladakh witnessed violent protests following demands for **Statehood** and inclusion under the **Sixth Schedule** to safeguard tribal rights. The unrest led to destruction of public property, injuries to security personnel, and casualties. Climate activist **SonamWangchuk**, who initiated a hunger strike from September 10, was identified as a central figure triggering the mobilization of the youth. The protests underline longstanding regional aspirations for political and socio-economic autonomy.

Static Context (Constitutional & Legal Framework):

1. **Union Territory and Sixth Schedule:**
   - Ladakh is a **Union Territory** without a legislative assembly (since 2019 after bifurcation of Jammu & Kashmir).
   - The **Sixth Schedule** of the Constitution provides **autonomous councils** and special protections for tribal areas in Assam, Meghalaya, Tripura, and Mizoram, including protection of land, resources, and local governance.
2. **Autonomous Hill Councils:**
   - Ladakh has the **Ladakh Autonomous Hill Development Councils (LAHDC)** for Leh and Kargil, providing local self-governance and development autonomy.
   - Current statutory provisions include quotas for **Scheduled Tribes**, **women**, and recognition of **official languages**.
3. **Hunger Strikes and Public Protests:**
   - Peaceful demonstrations and hunger strikes are recognized forms of democratic expression, protected under **Article 19(1)(a) – freedom of speech and expression**.
   - However, **violent protests** and destruction of property fall under criminal offenses, addressed by **IPC sections and law-and-order regulations**.

Leh stir explodes into deadly violence; govt. blames activist

BJP office torched and Ladakh Hill Council premises vandalised as protesters seeking Statehood, tribal status for region go on a rampage; Centre says an unruly crowd destroyed public property, attacked the police; 30 security personnel injured

Public outcry: A vehicle belonging to the security forces was set on fire during the protests in Leh demanding Statehood for the Union Territory of Ladakh, on Wednesday. AP

Vijaita Singh
Peerzada Ashiq
NEW DELHI/SRINAGAR

Several people were feared dead and many injured in Leh city in the Union Territory of Ladakh on Wednesday after an ongoing protest demanding the constitutional safeguards of Statehood and tribal status for the region bordering China turned violent.

The Union Home Ministry, in a statement, said an unruly mob destroyed public property and attacked the police, injuring around 30 security personnel. The police had to resort to firing, in which "unfortunately some casualties are reported", it said.

The Ministry said a hunger strike was started by climate activist Sonam Wangchuk on September 10 to press for Statehood and inclusion of Ladakh under the Sixth Schedule (tribal status). It said the Government of India had been actively engaging with the Leh Apex Body (LAB) and the Kargil Democratic Alliance (KDA), and despite a planned meeting on September 26 with the leaders, "a mob guided by Sonam Wangchuk's provocative statements" caused violence.

"The government stands committed to the aspiration of people of Ladakh by providing adequate constitutional safeguards," the Ministry said.

It added that the demands on which Mr. Wangchuk was on hunger strike were an integral part of the discussion of a high-powered committee.

'Mislead the people'

"In spite of many leaders urging to call off the hunger strike, he continued with the hunger strike and misleading the people through provocative mention of Arab Spring-style protest and references to Gen Z protests in Nepal... Amidst these violent developments, he broke his fast and left for his village in an ambulance without making serious efforts to control the situation," it said. The protesters, mostly youth, torched the BJP office and vandalised the Ladakh Autonomous Hill Development Council premises.

The Ministry added that the process of dialogue through the high-powered committee had yielded phenomenal results, such as increasing reservation for Ladakh Scheduled Tribe from 45% to 84%, providing one-third reservation for women in the councils, and declaring Bhoti and Purgi as official languages. The process for recruitment for 1,800 posts had also commenced, the Ministry said.

Ladakh Lieutenant-Governor Kavinder Gupta, in a televised address, confirmed the deaths but did not specify the number, adding that curfew had been imposed as a precautionary measure.

"Deployment of security personnel was made in the wake of a shutdown call to maintain law and order in Leh. The security personnel were provided with *lathis* (batons). However, there was an attempt to burn down a CRPF vehicle with personnel in it. The vehicle of the Director-General of Police was attacked with stones," Mr. Gupta said.

On Tuesday, Home Ministry officials had called a delegation of seven leaders from Ladakh to Delhi on September 26 for a preliminary meeting, Cherring Dorjay Lakruk, the president of the Ladakh Buddhist Association (LBA), told *The Hindu*.

Mr. Lakruk, who is also the co-convener of the Leh Apex Body (LAB), which had been spearheading the protests, told *The Hindu* that a large number of people in the age group of 14-25 joined the protests on Wednesday, a day after two elderly protesters, who were on hunger strike along with Mr. Wangchuk for 14 days, were hospitalised.

Following the violence, Mr. Wangchuk called off the hunger strike. Addressing a virtual press conference, he said that "nobody had an inkling something like this will happen".

"Many leaders who came here said that peaceful protests are not enough. We never thought it will explode like this. Ladakh witnessed Gen Z frenzy today. They were not listening to anybody. They were not even afraid of bullets. This is the fifth time we have sat on a hunger strike. The youth said peaceful protests are not working... we were being told by the youth for the past few days," Mr. Wangchuk said.

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Current Context (Immediate Events):

1. **Triggers:**
   - Hunger strike led by SonamWangchuk demanding Statehood and Sixth Schedule inclusion.
   - Allegations that "provocative statements" encouraged the youth to engage in violence.

2. **Impact:**
   - BJP office torched; LAHDC premises vandalized.
   - Approximately **30 security personnel injured**, curfew imposed.
   - Casualties among protesters reported; exact numbers unconfirmed.
3. **Government Response:**
   - Central Home Ministry emphasized dialogue with Ladakh Apex Body (LAB) and Kargil Democratic Alliance (KDA).
   - Highlighted progress through high-powered committee:
     - Reservation for Ladakh Scheduled Tribes increased from **45% to 84%**.
     - One-third reservation for women in councils.
     - Recognition of **Bhoti and Purgi languages**.
     - Recruitment process for **1,800 posts initiated**.
4. **Youth Participation:**
   - Majority of protesters were **14-25 years old**, signaling **Gen Z activism**.
   - Demonstrates disillusionment with procedural dialogues and desire for urgent political solutions.

Analysis

1. **Governance & Administration:**
   - Highlights the **challenges of administering Union Territories** with large youth populations and regional aspirations.
   - Shows the **limits of autonomous councils** in addressing tribal and local demands.
2. **Constitutional and Political Dimensions:**
   - Statehood demand relates to **federalism, devolution of power**, and Sixth Schedule protections.
   - The incident raises questions on **constitutional safeguards for tribal communities** in Union Territories.
   - Balancing **democratic protest** with **law and order** is a persistent governance challenge.
3. **Socio-Economic Context:**
   - Youth frustrations may stem from **perceived marginalization, lack of employment, and insufficient political representation**.
   - High-powered committees and policy measures like quotas are partial remedies but do not fully address aspirations for **Statehood**.
4. **Security Implications:**
   - Ladakh borders **China**, making civil unrest a **strategic concern**.
   - Violence against security personnel signals the need for **enhanced civil-military coordination** in border UTs.
5. **Lessons for Policy and Administration:**
   - Importance of **continuous engagement with youth-led movements** before escalation.
   - Need for **clarity on constitutional options for Union Territory Statehood**.
   - Use of **high-powered committees** should be complemented with **grassroots consultations** to prevent radicalization.

Conclusion:

The Ladakh unrest illustrates the **complex interplay between regional aspirations, youth activism, and constitutional provisions** in India. While the Union Government has made significant strides via the **high-powered committee**, the violent outbreak highlights the gap between policy delivery and public perception. For governance, the incident underlines the need for **proactive dialogue, timely grievance redressal, and effective security planning**, especially in sensitive border regions.

Strategically, addressing such aspirations through constitutional and administrative reforms will be crucial for **peace, stability, and inclusive development in Ladakh**.

UPSC Prelims Practice Question

Ques: The recent Leh protests highlighted challenges in governance in UTs. Which of the following statements is correct?

(a) UTs have full legislative powers like States

(b) LAHDC has powers under Sixth Schedule-like provisions

(c) UTs cannot have autonomous councils

(d) UTs' law and order is completely managed by Centre

Ans: b)

UPSC Mains Practice Question

Ques: Discuss the implications of civil unrest in border Union Territories like Ladakh for India's internal security and international strategic interests. Suggest policy measures to prevent recurrence.**(250 Words)**

Page 04 :GS 2 : International Relations / Prelims

India hosted a **high-level meeting of 20 like-minded Global South countries** on the sidelines of the **UN General Assembly (UNGA) 2025**, emphasizing the need for **strengthened multilateralism and UN reforms**. External Affairs Minister **S. Jaishankar** highlighted challenges facing the international system, including global conflicts, climate change, pandemics, and trade uncertainties, and stressed that the Global South must work together to address these concerns.

Static Context (Background/Constitutional & Global Framework):

1. **Global South:**
   - Refers to developing countries in **Asia, Africa, and Latin America**, historically less industrialized and economically weaker.
   - Often advocate for **equitable global governance, development financing, and protection of sovereignty** in multilateral forums.
2. **Multilateralism and UN System:**
   - Multilateralism is the **practice of coordinating policies among three or more states**, primarily through institutions like the **UN, WTO, WHO, UNESCO**.
   - UN reforms have been long-debated, including **Security Council expansion, funding mechanisms, and efficiency of peacekeeping**.
   - Developing countries have often felt **underrepresented** in global decision-making.
3. **India's Previous Engagement:**
   - India hosts the **Voice of Global South Summit**, inviting around **125 countries** to discuss global governance reforms, development, and cooperation.
   - India advocates for **reforms in UN, IMF, World Bank**, and other international organisations to reflect modern global realities.

Global South must work together, says Jaishankar

India hosts meet of 20 'like-minded' countries on sidelines of UNGA; External Affairs Minister says multilateralism under attack and international organisations are being rendered ineffective

Suhasini Haidar
NEW DELHI

The concept of multilateralism is "under attack", even as countries of the Global South are seeking more solutions from international organisations such as the United Nations, External Affairs Minister S. Jaishankar has said.

Speaking at a specially convened "high-level meeting of like-minded Global South countries" in New York on Tuesday, Mr. Jaishankar pitched for more consultations between developing countries and a joint push for UN reforms.

He said the state of the world was a cause for concern for all countries, listing a number of "shocks", including the pandemic, conflicts in Ukraine and Gaza, climate change, and trade uncertainties. He also called for an "urgent resolution of conflicts that are impacting food, fertilizer and energy security". Twenty countries took part in the meeting hosted by India, including 10 at the Ministerial level.

"In face of such proliferation of concerns and multiplicity of risks, it is natural that the Global South would turn to multilateralism for solutions," Mr. Jaishankar said. "Unfortunately, there too we are presented with a very disappointing prospect. The very concept of multilateralism is under attack. International organisations are being rendered ineffective or starved of resources," he added.

Nine countries from Asia, five from the Americas (South and North, including the Caribbean), and six from Africa took part in the meeting held on the sidelines of the UN General Assembly. Only Sri Lanka, the Maldives, and Mauritius were present from India's neighbourhood among the group. The meeting was the first of its kind, although officials did not confirm whether India now planned to hold such meetings regularly. India has hosted the "Voice of Global South Summit" in which about 125 countries have been invited for the past three years. It is unclear why the 20 countries present at the UN meeting had been chosen as "like-minded" rather than others, and whether more others had also been invited but declined due to scheduling issues.

The countries represented at the meeting included Bahrain, Indonesia, Qatar, Singapore, and Vietnam from Asia; St. Lucia, Trinidad and Tobago, Cuba, and Jamaica from North America; Suriname from South America; and Chad, Ghana, Lesotho, Morocco, Nigeria, and Somalia from Africa.

Mr. Jaishankar did not name any country for the "attacks on multilateralism", but his comments came a day after U.S. President Donald Trump's UNGA address. In his address, Mr. Trump criticised the UN system for not delivering peace in various conflicts, claiming he had resolved seven conflicts in the past few months, including the India-Pakistan conflict, without any help from the UN.

The U.S. has drastically cut its funding for the UN this year and withdrawn from several UN organisations, including the UN Human Rights Council and UNESCO. It has called for a review of other memberships in the UN system.

On one platform: External Affairs Minister S. Jaishankar speaks at a high-level meeting of like-minded Global South countries in New York on Wednesday. ANI

Current Context (Immediate Events):

1. **Event Details:**
   - Location: **New York**, during UNGA 2025.
   - Participants: 20 countries from Asia, Africa, and the Americas; 10 represented at **Ministerial level**.
   - Notable countries: Bahrain, Indonesia, Qatar, Singapore, Vietnam, St. Lucia, Cuba, Chad, Ghana, Nigeria, Morocco, Somalia, among others.

2. **Key Issues Raised:**
    - Global shocks: **pandemics, Ukraine and Gaza conflicts, climate change, trade uncertainties**.
    - Urgent need for solutions on **food, fertilizer, and energy security**.
    - Criticism of current multilateralism: **ineffectiveness and resource constraints** of international organisations.
3. **Underlying Drivers:**
    - Pushback against unilateral or dominant powers undermining **UN effectiveness** (context: US funding cuts and withdrawal from UN agencies).
    - Need for **collective bargaining** among Global South countries to influence international policy and reform global institutions.

Analysis :

1. **Diplomatic/Strategic Significance:**
    - Demonstrates India's **leadership in the Global South** and proactive role in global governance.
    - Enhances India's **soft power** and strengthens strategic partnerships across **Asia, Africa, and Latin America**.
2. **Multilateralism Under Stress:**
    - Jaishankar's statement reflects concerns about **unilateralism and erosion of global norms**, e.g., selective US engagement with the UN system.
    - Highlights the **need for structural reforms** in global institutions to remain relevant and effective.
3. **Global South Cooperation:**
    - Consolidates positions on issues like **climate action, conflict resolution, trade justice, and equitable development**.
    - Offers a **platform for like-minded countries** to coordinate on UNGA negotiations and global economic forums.
4. **Current Geopolitical Context:**
    - Amidst **US criticisms of UN** and its funding cuts, Global South cooperation provides **counterbalance in global governance**.
    - Reflects **India's agenda** of reforming multilateralism rather than abandoning it, differentiating its approach from unilateral powers.

Conclusion:

The Global South meeting hosted by India underscores the **importance of collaborative diplomacy among developing nations** to safeguard their interests in a multipolar world. With multilateral institutions facing challenges, **Global South countries must unite** to advocate for **UN reforms, equitable representation, and effective conflict resolution mechanisms**. India's leadership role reflects both **its diplomatic maturity and commitment to inclusive global governance**, aligning with its long-term strategic vision on the international stage.

UPSC Prelims Practice Question

Ques: The term "Global South" broadly refers to:

(a) Developed countries of the Southern Hemisphere

(b) Developing countries in Asia, Africa, and Latin America

(c) Only African countries

(d) Only Latin American countries

Ans: (b)

UPSC Mains Practice Question

Ques: Examine how developing countries can collectively address global challenges such as climate change, food security, and conflict resolution. Illustrate with India's initiatives in the Global South. **(150 Words)**

Page 06 :GS 2 : Social Justice/ Prelims

The Union Cabinet, chaired by Prime Minister Narendra Modi, approved Phase 3 of a Centrally Sponsored Scheme to add 5,000 postgraduate (PG) and 5,023 undergraduate (UG) medical seats across India by 2028-29. The scheme focuses on strengthening existing government medical colleges, standalone PG institutes, and hospitals, aiming to enhance healthcare access, medical education, and specialist availability.

Static Context:

1. **Medical Education in India:**
   - India currently has 808 medical colleges with 1,23,700 MBBS seats.
   - Over the past decade, 69,352 MBBS seats (127% increase) and 43,041 PG seats (143% increase) have been added.
   - All India Institutes of Medical Sciences (AIIMS) play a key role in tertiary healthcare and medical training.
2. **Central Sponsored Schemes:**
   - These are jointly funded by the Centre and States, with the Centre bearing a higher share.
   - Phase 3 has a total cost of ₹15,034.5 crore, with the Centre contributing ₹10,303.2 crore and States ₹4,731.3 crore.
   - The scheme aligns with the National Health Policy 2017, which emphasizes equitable access, quality education, and increased doctor-patient ratio.
3. **Faculty Regulations:**
   - New Medical Institution (Qualifications of Faculty) Regulations 2025 focus on competency-based, inclusive recruitment to meet the growing demand for teaching personnel.

Centre clears scheme to add medical seats across country

5,000 postgraduate and 5,023 undergraduate medical seats to be added; existing medical colleges, standalone postgraduate institutes, and hospitals run by the governments will be upgraded

The Hindu Bureau
NEW DELHI

The Union Cabinet, chaired by Prime Minister Narendra Modi, on Wednesday approved Phase 3 of a Centrally sponsored scheme that will add 5,000 postgraduate and 5,023 undergraduate medical seats in the country by 2028-29.

Under the scheme, existing medical colleges, standalone postgraduate institutes, and hospitals run by the Union and the State governments will be strengthened and upgraded at an enhanced cost ceiling of ₹1.5 crore a seat.

The Union government said the initiative would significantly augment the number of MBBS seats and availability of specialist doctors by creating additional postgraduate seats, and enable introduction of new specialties across government medical institutions.

"This will strengthen the overall availability of doctors in the country," the Health Ministry said in a press release.

The total financial implications of these two schemes is ₹15,034.5 crore from 2025-26 to 2028-29. The Central share is ₹10,303.20 crore and the States' ₹4,731.30 crore.

"The target of these schemes is to increase 5,000 PG seats and 5,023 UG seats in government institutions by 2028-2029," the Ministry added.

Detailed guidelines will be issued by the Union Health and Family Welfare Ministry for implementation of the schemes. Currently, India has 808 medical colleges with 1,23,700 MBBS seats.

Over the past decade, 69,352 MBBS seats have been added, a growth of 127%. Similarly, a total of 43,041 postgraduate seats have been added, a 143% rise.

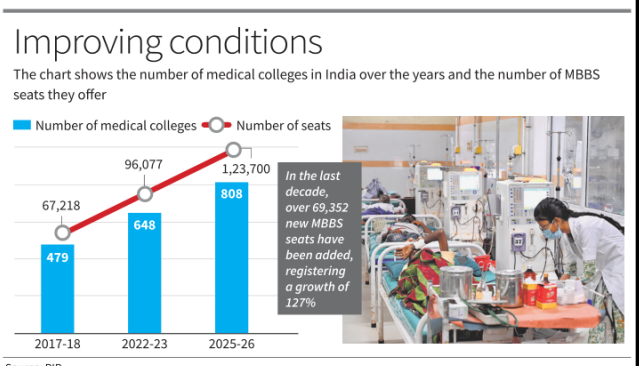
"Despite the addition, certain regions in India still need to enhance capacities to match the demand, access and affordability of healthcare," the Ministry said. Further, there are 22 All India Institutes of Medical Sciences approved under the Pradhan Mantri Swasthya Suraksha Yojana.

"Apart from providing tertiary healthcare services, they also play an important role in building a pool of health professionals with highest standards of medical competence with their latest teaching learning facilities," the Ministry said.

Faculty eligibility

The New Medical Institution (Qualifications of Faculty) Regulations 2025 have been issued by adopting a more inclusive and competency-based approach to faculty eligibility and recruitment. These changes aim to address the growing requirement of teaching personnel and meeting the academic and professional standards, it added.

A more inclusive and competency-based Qualifications of Faculty Regulation issued, says Ministry



Current Context:

1. **Implementation Plan:**
   - Existing institutions will be upgraded at a cost ceiling of ₹1.5 crore per seat.
   - Focus on new specialties, regional balance in healthcare access, and increasing specialist doctors in underserved areas.
2. **Healthcare Gaps:**
   - Certain regions still lack sufficient medical capacity.
   - Increasing seats in government institutions will improve access, affordability, and quality of healthcare, particularly in rural and semi-urban areas.

Analysis For Mains:

1. **Strategic Importance:**
   - Enhances healthcare infrastructure and addresses the shortage of specialist doctors.
   - Reduces regional disparities in medical education and healthcare access.
2. **Educational Impact:**
   - Expands the pool of trained medical professionals to meet the growing demand due to population growth and healthcare challenges.
   - Competency-based faculty recruitment ensures better quality teaching and professional standards.
3. **Economic Implications:**
   - Significant investment by the Centre and States contributes to job creation, skill development, and health sector growth.
   - Long-term benefits include strengthened public health outcomes and reduced dependency on private healthcare.

Conclusion:

The Phase 3 expansion of medical seats represents a major step towards universal healthcare and equitable medical education in India. By increasing UG and PG seats, upgrading infrastructure, and revising faculty norms, the scheme aims to address regional disparities, enhance healthcare quality, and build a robust pool of doctors and specialists, aligning with India's broader goal of strengthening public health systems for all citizens.

UPSC Prelims Practice Question

Ques: Consider the following statements about Phase 3 of the Centrally Sponsored Scheme for medical education in India:

1. It will add 5,000 postgraduate and 5,023 undergraduate medical seats by 2028-29.

2. The scheme focuses on building entirely new medical colleges only.

3. The Centre will contribute ₹10,303.2 crore, while the States will contribute ₹4,731.3 crore.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

Ans: (b)

UPSC Mains Practice Question

Ques: Analyze the role of competency-based faculty regulations in improving the quality of medical education in India. How do these reforms align with India's broader healthcare goals? **(150 Words)**

Page : 07: GS 3 : Science and Tech/ Prelims

Artificial Intelligence (AI) is increasingly shaping India's energy landscape. While AI promises **efficient energy management, renewable integration, and sustainable infrastructure**, its own **data and computing requirements**—primarily through large-scale data centres—pose significant challenges to India's already stressed power grid. According to the International Energy Agency (IEA), global AI-driven energy demand may quadruple by 2030, with India's data centre electricity consumption projected to rise by **40–50 TWh annually**.

Static Context:

1. **India's Energy Profile:**
   - Third-largest energy consumer globally after China and the U.S.
   - Predominantly dependent on **coal, crude oil, and natural gas**, though renewable energy capacity is rapidly increasing.
   - **Energy-intensive sectors** include real estate, steel, and heavy manufacturing.
2. **AI and Energy Nexus:**
   - AI is used in **smart grids, renewable integration, predictive maintenance, and energy optimisation**.
   - Data centres consume **1–2% of global power today**, expected to rise to 3–4% by 2030.
3. **Regulatory Frameworks:**
   - **National Smart Grid Mission** and **Energy Conservation Building Code (ECBC)** promote AI-enabled energy efficiency.
   - Green certifications like **GRIHA and LEED** encourage sustainable building management using AI.

Current Context:

1. **Data Centre Growth:**
   - India's demand for data centre capacity projected to rise from **1.2 GW in 2024 to 4.5 GW by 2030**, largely AI-driven.
   - Major hubs include **Mumbai (41%)**, **Chennai (23%)**, and **NCR (14%)**.

Will AI fix India's energy demand or will its own needs snowball?

A report estimates that annual global demand for data centre capacity may increase by 19 to 22% from 2023 to 2030, reaching 171 to 219 GW compared to the current demand of 60 GW; this would require building twice the capacity built since 2000 within a quarter of that time frame

T.V. Padma

As artificial intelligence (AI) and its attendant data demand continue to expand in India and worldwide, a curious dilemma has arisen: will AI help transform energy delivery for the better or will the data centres crucial to its operations impose a new burden on the world's power grid?

In a 2024 report, the International Energy Agency (IEA) highlighted the growing interconnections between energy and AI worldwide. It projected that demand from data centres would more than double by 2030 to around 945 TWh and that AI would be the principal driver. The demand from AI-optimised data centres was projected to more than quadruple by 2030.

A McKinsey report has also estimated that the annual global demand for data centre capacity could rise at 19-22% from 2023 to 2030, reaching 171-219 GW, against the total current demand of 60 GW. To avoid a deficit, at least twice as much data centre capacity built since 2000 will have to be in place in less than a quarter of the time.

Given AI's significant hunger for computing power, energy demand is naturally increasing, Ameesha Sen, an assistant programme manager at Takshashila University studying the impact of technology policy and AI on society, said. She is, however, optimistic that it's "not as drastic when compared to other energy-intensive industries".

Worldwide, data centres consume 1-2% of total power and that's expected to increase to 3-4% by 2030. To compare, the steel industry consumes around 7% of total power, Ms. Sen said.

Pressure, and potential

According to McKinsey, India's data centre demand is projected to increase from 1.2 GW in 2024 to 4.5 GW by 2030, driven largely by AI and digital adoption across sectors.

Mumbai accounts for 41% of the data centre capacity, followed by Chennai (23%) and the National Capital Region (14%).

AI-driven data centres in India are projected to consume an additional 40-50 TWh of electricity annually by 2030, according to Raghu Raman, Professor and Dean at the School of Business at Amrita Vishwa Vidyapeetham.

The increasing adoption of AI and digital technologies in India is contributing to a significant rise in energy demand, especially in already energy-intensive sectors like real estate, Vimal Nadar, national director of research at the Mumbai-based India office of Colliers, a global investment company, said. India is the third-largest energy consumer worldwide, after China and the U.S., with coal, crude oil, and natural gas comprising the bulk of its energy mix.

The energy consumption of data centres is imposing huge pressure on energy systems worldwide, Anish De, global head for Energy, Natural Resources, and Chemicals at KPMG, said, adding: "India will not be any different."

According to Ms. Sen, an equal concern is the correspondingly increasing demand for freshwater required to cool the servers in these data centres.

That said, there is scope to press AI to the service of smarter energy management as well.

"AI is playing a pivotal role in transforming how energy is delivered, utilised, and managed, both globally and within India," Mr. Nadar said.

On the one hand, AI could help develop energy transition technologies and as well as new materials that mitigate India's dependence on critical minerals it currently has to import from abroad, Dr. De said by way of example.

"It will also aid faster project development. This is already playing out in the main geographies and will propagate to others quickly," he added. "We will see energy efficiency and resource efficiency gains that will also be substantial, though not enough to offset the demand. AI itself will support the gains in expansion of clean energy."

On the flip side, carbon emissions will also increase. "Despite best efforts it is practically impossible to meet this demand from renewables, both from quality and quantity standpoints," according to Dr. De.

The IEA also noted in its report that AI "could intensify some energy security strains" as "cyberattacks on energy utilities have tripled in the past four years and become more sophisticated because of AI," even as AI tools are becoming critical for energy companies to defend against such attacks.

Renewables rescue

As energy demand intensifies, real estate stakeholders are increasingly prioritising energy efficiency, sustainability, and emission reduction in both new developments and retrofitting of existing assets, Mr. Nadar said.

"Concurrently, there is a growing emphasis on renewable energy adoption. Real estate developers are increasingly incorporating rooftop solar solutions and solar-integrated building systems, further reducing the sector's reliance on conventional energy sources."

> It is practically impossible to meet this demand from renewables, both from quality and quantity standpoints
>
> ANISH DE
> GLOBAL HEAD FOR ENERGY, NATURAL RESOURCES, AND CHEMICALS AT KPMG

The IEA has also said a range of energy sources will be tapped to meet data centres' rising electricity needs although, according to its report, "renewables and natural gas are set to take the lead due to their cost-competitiveness and availability in key markets."

India and many other countries are taking advantage of AI to enhance energy efficiency and promote sustainable real estate practices, per Mr. Nadar. In India, the Energy Conservation Building Code and the Roadmap of Sustainable and Holistic Approach to National Energy Efficiency scheme aim to integrate AI and data analytics into smart metering, renewable energy management, and sustainable building design.

Also within the real-estate sector, AI-driven solutions like smart lighting systems, predictive HVAC optimisation, and automated building controls promise to reduce energy consumption by up to 25%. Green certifications such as GRIHA and LEED further encourage AI-based monitoring of energy and resource usage.

Data centres are also adopting AI to optimise cooling systems and server utilisation. As of April 2025, nearly one-fourth of the country's total data centre capacity in major cities had been green-certified, reflecting an explicit focus on creating sustainable infrastructure. Almost 67% of the Grade A office stock across India's top seven cities is also green-certified.

'Need some nudging'

Under the National Smart Grid Mission, AI-enabled systems manage demand and integrate renewables, enhancing grid reliability while reducing wastage, according to Raman. The Nxtra (Airtel) Data Centres use AI-powered cooling and predictive analytics to cut energy use, paired with renewable power purchase agreements to run green data centres. BrightNight's PowerAlpha AI deployed in India to forecast and optimise hybrid solar-wind-battery plants and ensure 24/7 access to renewable energy while minimising grid stress.

Tata Power ReNew Power and Hindustan Zinc both use AI for real-time load forecasting, reducing outages and optimising power supply in Mumbai, Dr. Raman added. BESCOM in Karnataka has also started using AI to detect faults and 'heal' grid sections and thus mitigate downtime. Similarly, smart meters in Uttar Pradesh have been using AI to detect power theft as well as manage demand-side issues.

"A digital energy grid approach aims to build a unified and interoperable power infrastructure, and its potential can be amplified using AI," Ms. Sen said.

She added that companies are also working to develop "sustainable AI" that uses recycled water and has higher power use efficiency.

"As the race to build the most capable AI systems has got companies investing in massive data centres, a transition of the energy grid itself to use more sustainable power sources is required and might need some nudging by governments," Ms. Sen said.

(T.V. Padma is a science journalist in New Delhi. tvpadma.10@yahoo.co.in)

- AI-driven cooling, predictive analytics, and renewable integration are being deployed to reduce environmental impact.

2. **AI-Driven Energy Efficiency:**
   - Smart grids, predictive load forecasting, and renewable optimisation (e.g., hybrid solar-wind-battery systems) **enhance reliability and reduce wastage**.
   - Real estate sectors use AI for **HVAC optimisation, smart lighting, and automated building management**, potentially reducing energy use by **up to 25%**.
3. **Challenges and Risks:**
   - Rising electricity demand and **freshwater use for server cooling**.
   - Potential increase in **carbon emissions**, despite renewable energy adoption.
   - AI-induced cybersecurity threats to energy infrastructure are increasing.

Analysis For Mains:

1. **Opportunities:**
   - AI can **optimise energy distribution**, support **clean energy transition**, and improve **grid stability**.
   - Encourages **regional energy efficiency** and sustainable urban planning.
   - Accelerates deployment of **smart and green infrastructure**, reducing dependency on fossil fuels.
2. **Challenges:**
   - Energy-intensive data centres risk **overburdening electricity grids**, especially in urban hubs.
   - Limited capacity of renewables may not fully meet AI-induced demand.
   - Requires government interventions, regulations, and incentives to **align AI growth with sustainable energy goals**.
3. **Strategic Implications:**
   - AI adoption in energy supports **India's climate and energy security goals**, but unchecked growth can create **new energy vulnerabilities**.
   - Calls for **integrated planning between AI expansion, energy policy, and renewable deployment**.

Conclusion:

AI in India presents a **dual-edged opportunity**: it can **transform energy management, optimise renewables, and enhance grid efficiency**, but the rising energy needs of AI itself can **strain power infrastructure and resources**. Strategic government policies, sustainable AI design, and adoption of **renewables and smart grids** are crucial to ensure that AI serves as a **catalyst for energy transition** rather than becoming an additional burden.

UPSC Prelims Practice Question

Ques :The International Energy Agency (IEA) projects that by 2030:

(a) AI-driven data centres globally will consume less than current energy demand

(b) AI will be the principal driver for a quadrupling of data centre energy consumption

(c) India will account for more than 50% of global data centre energy consumption

(d) Renewable energy will fully meet AI data centre demand in India

Ans: (b)

UPSC Mains Practice Question

Ques: Discuss the opportunities and challenges posed by Artificial Intelligence in India's energy sector. How can AI be harnessed for sustainable energy management? **(150 Words)**

Page 11 :GS 2: Social Justice/ Prelims

Organ donation is a life-saving intervention that enables individuals suffering from organ failure to receive a second chance at life. Despite advancements in medical technology and transplant surgery, India's **organ donation rate remains below 1%**, highlighting a massive gap between **demand and supply**. According to the Union Ministry of Health and Family Welfare, while India recorded **18,900 organ transplants in 2024**, over **63,000 patients await kidney transplants**, 50,000 for heart, and 22,000 for liver.

Static Context:

1. **Legal and Institutional Framework:**
   - **Transplantation of Human Organs and Tissues Act, 1994 (THOTA)** regulates organ donation and transplantation.
   - **National Organ and Tissue Transplant Organisation (NOTTO)** maintains a national registry of donors and recipients.
   - Living donors and deceased donors are legally permitted under strict ethical and medical guidelines.
2. **Medical Perspective:**
   - Organs commonly transplanted include **kidney, liver, heart, lungs, pancreas, and cornea**.
   - Transplants require **specialised medical infrastructure, trained personnel, and post-operative care**.

Current Context:

1. **Rising Awareness and Pledges:**
   - Since 2023, **3.30 lakh citizens** in India have registered online to pledge their organs.
   - Awareness campaigns, books, and media coverage around events like **World Heart Day** encourage public engagement.
2. **Challenges:**
   - Low awareness, cultural myths, and

BIBLIOGRAPHY

Transforming act: A woman signs on a board, taking a pledge ahead of World Organ Donation Day to donate organs, at Juhu Beach in Mumbai on August 10. ANI

How to start conversations around life, death and organ donation

Relative to India's population, the organ donation rate in India remains low. Here is a reading list that educates and empowers all to make an informed choice about the life-saving contribution as we approach World Heart Day on September 29

Soma Basu

English professor and former head of the Humanities and Social Sciences department at IIT Bombay, Viney Kirpal, has lived through cancer since 2007 and a heart transplant in 2018 at the age of 69. Her story is of a life-changing journey of hope, courage, and transformation. Her body was battered twice, treated, gifted, and healed. Organ recipients like her possibly understand the responsibility of honouring the gift they have received by living with care, gratitude, and purpose.

The critical importance of organ transplantation which gives life a second chance, and helps carry the legacy of selfless donors made Kirpal call out to lung, heart, kidney and liver recipients in support groups in 2024. Soon, she had stories of transformative journeys from 27 transplant recipients, including four doctor recipients and a living donor.

Staggering numbers

Quite befittingly, her book *New Life. New Beginnings: Compelling Stories by Organ Recipients, Donors and Doctors* (Sterling Publishers) has come out now as we celebrate World Heart Day on September 29. The heartfelt narratives blend candour and compassion to show the power of second chances and how transplant surgery impacts the lives of all those involved in the process. "There is a need to break the silence around organ donation and transplants. People believe transplant recipients live in the disease. But actually, we lead our lives like all others do," writes Kirpal.

In 2024, India recorded the highest number of organ transplants. The leap was significant from less than 5,000 in 2013 to 18,900 last year. But the numbers were dwarfed by the 63,000 individuals on the waiting list for kidney transplants; 50,000 for heart and another 22,000 for liver transplants, according to the Union Ministry of Health and Family Welfare. The challenge of demand-supply has remained unmitigated with India's organ donation rate falling below 1%.

In real terms, it means that we are unable to act enough to save more lives. On the brighter side, the National Organ and Tissue Transplant Organisation has so far registered 3.30 lakh citizens online pledging their organs ever since the website's launch in 2023. While the public participation has been heartwarming, not everyone on the waiting list is able to receive an organ in time. Lack of awareness, myths and misunderstanding about organ donation and transplantation adds to the widening gap annually. It is time to bring the conversation to the table, and books can perhaps convey this act of altruism powerfully.

Kirpal's book is a rare collection of stories direct from the heart of multi-organ recipients who have been lucky to get a second chance. They talk about their experiences, harrowing to moving, when told that no medicine can cure organ failure and the challenges they faced in financing a transplant. Each survivor movingly narrates how they are alive due to a silent hero's gift, and how they carefully balance their post-transplant life with continuous medical vigilance. Their return to life inspires them to pay back as advocates of organ donation.

In *New Life: Lessons in Faith and Courage from Transplant Recipients* (iUniverse, 2003), Bob Violino highlights how difficult situations can be turned into positive experiences with faith, perseverance, and strength. The book gathers stories of recipients who have life-threatening illnesses and how they overcome obstacles to lead generous and remarkable lives. The uplifting accounts are motivating for not only transplant candidates, recipients, and their families, but everybody faced with any adversity.

Driven by compassion

Organ donation and transplantation is like an exchange driven by compassion where one death gets postponed in a leap of faith. Inspired by a true story, palliative care doctor and author Rachel Clarke gives a riveting account in *Story of a Heart: Two Families, One Heart, and the Medical Miracle That Saved a Child's Life* (Scribner, 2024). She interweaves the history of medical innovations behind transplant surgery with the story of two children: Max, who desperately needs a new heart after valiantly fighting a viral infection, and nine-year-old Keira, an accident victim with catastrophic brain injuries.

In an act of extraordinary generosity, parents and siblings of Keira agree that the child would have wanted to be an organ donor. When the recipient's family receives the call they had been waiting for, they knew it came at a terrible cost to another family. The author describes it as the "brutal arithmetic of transplant surgery." The act of Keira's heart resuming its rhythm inside Max's body was a medical miracle involving the knowledge and dedication not just of surgeons but of countless nurses and technicians, immunologists and paramedics. It paved the way for changing U.K.'s laws around organ donation.

The Gift That Heals: Stories of Hope, Renewal And Transformation Through Organ and Tissue Donation by Reg Green (Author House 2007) chronicles lives that came out of death. It is about the revival of a police officer, who was left for dead in a hail of bullets; about a woman, dependent on oxygen due to damaged lungs, going on to climb 5,000 feet; and a man returning from near-death to become an Olympic champion.

Green, an American, compiled these stories, after his seven-year-old son was shot in an attempted robbery while the family was on vacation in Italy. He and his wife donated their son's organs and corneas to seven Italians and their story captured the imagination of the world.

There is a radical kindness in one person's generosity in death. This is what the books capture and convey – that no other part of the human body matches the metaphorical richness of the human heart.

It takes a heart to donate and accept organs. It is the heart that keeps life going. As long as it continues to beat, there is hope.

religious misconceptions reduce donation rates.
    - Demand vastly outstrips supply, leading to **long waiting lists and preventable deaths**.
    - Financial and logistical barriers make transplantation inaccessible to many.
3. **Human Stories and Advocacy:**
    - Narratives of recipients and donors, like VineyKirpal's experience, **humanise organ donation** and inspire altruism.
    - International examples, such as Reg Green's family and UK legal reforms, demonstrate the transformative social impact of donation.

Analysis For Mains:

1. **Policy Implications:**
    - Need to strengthen **public awareness campaigns**, integrate organ donation in **school and college curricula**, and encourage donor pledges.
    - Expanding **government-supported organ transplant infrastructure** in states can improve access.
    - Collaboration with **NGOs and patient advocacy groups** can bridge the information gap.
2. **Societal Impact:**
    - Organ donation fosters a **culture of empathy and solidarity**, transforming personal loss into societal gain.
    - Promotes ethical medical practices and highlights the importance of **family consent and counselling**.
3. **Global Lessons:**
    - Countries like **Spain and the UK** have successful organ donation systems due to **opt-out frameworks, efficient registries, and robust awareness programs**.
    - India can adopt **best practices in policy, technology, and community engagement** to enhance donation rates.

Conclusion:

Organ donation is more than a medical procedure; it is a profound **act of compassion and social responsibility**. India faces a critical need to **bridge the gap between organ demand and availability**. Alongside legal frameworks and medical infrastructure, **public awareness, personal stories, and cultural acceptance** are key to fostering a sustainable organ donation ecosystem. Every registered donor and informed discussion contributes to **saving lives and giving hope** to thousands awaiting transplants.

UPSC Prelims Practice Question

Ques:Which of the following statements about organ donation in India is/are correct?

1. India's organ donation rate is less than 1% of the population.

2. National Organ and Tissue Transplant Organisation (NOTTO) maintains a registry of organ donors and recipients.

3. Kidney, liver, heart, lungs, and cornea are commonly transplanted organs.

Select the correct answer:

a) 1 and 2 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2 and 3

Ans: d)

UPSC Mains Practice Question

Ques: Critically analyse the gap between organ demand and supply in India. Suggest measures to bridge this gap while respecting ethical and cultural sensitivities. **(150 Words)**

Page : 09 Editorial Analysis

Follow the rains, not the calendar, to fight floods

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Each year, urban India braces for the monsoon – contractors are deployed, drains desilted, and emergency protocols rehearsed. Yet, when the rain finally arrives – often untimely and more intense than expected – headlines are dominated by flooded roads, waterlogged homes, and stranded commuters. The deeper issue is that our cities are often still designed for a climate that no longer exists.

Northern States are seeing heavy flooding even in September, with all of Punjab's 23 districts being hit by floods. Delhi and Gurugram have been inundated by intense rains, and Uttarakhand and Himachal Pradesh are experiencing frequent cloudbursts. In the east, Kolkata is facing torrential rains.

Timing, amount, and intensity

But the rains came early too. In May, Mumbai recorded 135.4 mm of rainfall in just 24 hours, followed by 161.9 mm the next day. Delhi recorded 81 mm fall within a few hours on the same day, overwhelming the drainage systems. This shift in rainfall timings is not new; yet our preparedness remains tethered to outdated schedules. Drain cleaning, for instance, still follows the June monsoon calendar.

Cities must follow the rain to be able to bridge the gap between schedules, and readiness and reality. An analysis by the Council on Energy, Environment and Water shows that about 64% of Indian tehsils have seen a rise in the frequency of heavy rainfall days by 1-15 days, especially in Maharashtra, Tamil Nadu, Gujarat, and Karnataka. The consequences for urban systems are significant, from localised flooding to disruptions in essential services. In the last two decades, floods have caused most of the loss to life and property from natural disasters in India. Today, a single flood can cause damages of some ₹8,700 crore, with such events becoming increasingly frequent.

Indian cities are often designed for a climate that no longer exists

The challenge is not just the amount of rainfall, but also the intensity. Intensity, Duration, Frequency (IDF) curves, which track rainfall patterns over time, offer an interesting picture. For instance, CEEW's analysis of daily rainfall from 1970 to 2021 in the coastal city of Thane shows that one-hour rainfall now reaches 50 mm once every two years, and about 80 mm per hour once every 50 years. This means such heavy rainfall can be expected to occur within hours, leaving little room for cities to respond. There is also a sharp difference between how much rain falls in one hour versus three hours, revealing that rainfall that once spread across a day may now have a higher chance of falling within an hour. We propose three interlinked actions to prepare Indian cities better for the monsoons and flood-proof them.

Preparing for the monsoon

First, city authorities should incorporate sub-daily rainfall analysis into city monsoon planning. Municipalities must move beyond long-term averages and integrate recent patterns and short-duration, high-intensity rainfall events that unfold within a few hours, into infrastructure design. Real-time data on sub-daily rainfall, which occurs over intervals shorter than 24 hours, must inform citizens about drainage operations and upgrades. For instance, the Brihanmumbai Municipal Corporation (BMC) has announced this year that it will widen its drains to handle up to 120 mm of rainfall in an hour.

While India's monsoon officially spans 100-120 days, just a few hours of intense rain across select days account for most of the seasonal rainfall. Yet, maintenance and planning assume a uniform spread. This illusion of consistency leads to systems that fail not due to excessive seasonal totals, but hourly extremes. Recognising this compression is the first step towards resilience.

Second, align cleaning of storm water drains and municipal solid waste management calendars. An overlooked cause of urban flooding is unmanaged waste – plastic, debris, and litter frequently block drains. Yet storm water and waste are handled by separate departments on different schedules. While the Ministry of Housing and Urban Affairs recommends drain cleaning before, during, and after the monsoon, its effectiveness hinges on coordination with waste collection. Even a freshly cleaned drain can clog again if garbage is left uncollected nearby. Ideally, storm water and sanitation departments must coordinate, especially during high-risk periods. Rainfall alerts from the India Meteorological Department should automatically trigger joint sanitation drives and drain inspections in vulnerable areas. In Vijayawada, such coordination – through monsoon response teams composed of officials from the sanitation, engineering, and planning departments – has reduced waterlogging and eased conditions for residents.

Third, city authorities must update IDF curves every 5-10 years to ensure that infrastructure keeps pace with evolving rainfall patterns. Without this, new drainage systems will continue to rely on outdated data, leaving them ill-equipped to handle present day storm water run-off volumes. In response to recent intensifying rains, the BMC has also proposed expanding storm water capacity and preparing a new drainage master plan based on updated trends. Drainage design should also be based on micro-catchment-level hydrological analysis that accounts for topography, which affects peak discharge during storms. New systems must be separated from the sewerage networks to avoid overload and ensure efficiency. We are not losing to the rain, but to the idea that the rain fits into seasonal boxes. Instead of asking when the monsoon will begin, we need to ask, are we prepared for the rain already falling?

GS. Paper 03–Disaster Management

UPSC Mains Practice Question: Urban India faces recurring floods despite preparations. Discuss the challenges and suggest measures to enhance urban flood resilience. **(150 Words)**

Context :

Urban India faces recurring floods every monsoon despite pre-monsoon preparations. Traditional planning based on **fixed monsoon calendars** has become inadequate due to **changing rainfall patterns** caused by climate variability. Recent events, including **cloudbursts in Uttarakhand and Himachal Pradesh** and heavy rains in **Mumbai, Delhi, and Kolkata**, demonstrate that Indian cities are ill-prepared for **untimely and high-intensity rainfall**, leading to infrastructure failure, economic losses, and human casualties.

Static Context:

1. **Urban Flood Vulnerability:**
   - Indian cities have rapidly expanded without adequate **storm water management systems**.
   - Poor **solid waste management** blocks drains, compounding urban flooding.
   - Drainage systems are designed for historical rainfall data, not **intense short-duration events**.
2. **Economic and Human Costs:**
   - Floods are the leading cause of **loss of life and property among natural disasters** in India.
   - A single urban flood event can cause damages of **₹8,700 crore or more**.
3. **Relevant Institutional Framework:**
   - **Ministry of Housing and Urban Affairs (MoHUA)** provides guidelines for municipal flood preparedness.
   - **India Meteorological Department (IMD)** issues rainfall alerts, but integration with municipal action is often weak.

Current Context:

1. **Changing Rainfall Patterns:**
   - Sub-daily rainfall intensity has increased; cities now face **80 mm/hour events once every 50 years**, which previously occurred over a day.
   - 64% of Indian tehsils have recorded an **increase of 1–15 days in heavy rainfall frequency** in recent decades.
2. **Case Studies:**
   - **Mumbai:** BMC plans to widen drains for **120 mm/hour rainfall**.
   - **Vijayawada:** Coordinated monsoon response teams reduce waterlogging by integrating **sanitation, storm water, and planning departments**.
3. **Recommendations for Urban Resilience:**
   - Incorporate **sub-daily rainfall data** into infrastructure planning.
   - Align **storm water and municipal solid waste management** schedules to prevent drain blockages.
   - Update **Intensity-Duration-Frequency (IDF) curves every 5–10 years** and design drainage systems at **micro-catchment level**.
   - Separate storm water drains from sewer networks to prevent overload.

Analysis For Mains:

1. **Policy Implications:**
   - Urban flood planning must shift from **calendar-based monsoon preparedness to rain-responsive management**.
   - **Investment in smart drainage systems, early-warning systems, and GIS-based flood mapping** is essential.
   - Municipalities need **interdepartmental coordination** to respond to high-risk rainfall events efficiently.
2. **Societal and Environmental Impact:**
   - Unmanaged floods disrupt **transport, healthcare, and essential services**.
   - Flood-resilient urban planning enhances **public safety, economic stability, and climate adaptation**.
3. **Global and Comparative Perspective:**
   - Cities like **Tokyo and Singapore** use real-time rainfall monitoring, integrated drainage design, and citizen alert systems.
   - India can adopt **technology-driven solutions** including AI-based flood forecasting and smart water management.

Conclusion:

Urban flooding in India is no longer a predictable monsoon event but a **complex challenge driven by climate change, urbanisation, and inadequate infrastructure**. To safeguard lives and property, cities must **follow the rains, not the calendar**—integrating real-time rainfall data, interdepartmental coordination, and updated infrastructure design. Effective flood preparedness is not just about responding to monsoon schedules but **adapting to the intensity and timing of modern rainfall patterns**, ensuring resilience and sustainability for urban India.