



CURRENT AFFAIRS AUGUST 17, 2026

SOCIAL ISSUE / ENVIRONMENT: Groundwater That Glows Yellow-Green

UPSC | CSE SYLLABUS

GS-III (Environment/Pollution); GS-II (Governance — implementation gaps between NGT orders and State action); Static GK — industrial pollutants and their health effects.

Why in News

Decades of industrial waste dumping have contaminated groundwater with hexavalent chromium (Chromium VI) across parts of three districts in Uttar Pradesh — Fatehpur, Kanpur Dehat, and Kanpur Nagar — exposing villagers to unsafe water and serious health risks.

Key Facts

Aspect	Detail
Contaminant	Hexavalent chromium (Chromium VI) — bright yellow-green, highly reactive, a naturally occurring metal compound produced by chemical industries (electroplating, wood preservation)
Source	Chromium sulphate manufacturing for the Kanpur leather-tanning industry (tanneries operating since the 19th century)
2025 govt. report finding	73-96% of blood samples from affected residents had above-permissible levels of Chromium (VI)
Largest dump	~62,225 metric tonnes of chromium waste at Rania, Kanpur Dehat (came up ~1976); removed only in 2025 after NGT-ordered deadlines were missed
Health impacts reported	Liver infection, chronic gastro-intestinal issues, skin rashes; IARC classifies Chromium (VI) as a carcinogen when inhaled
Regulatory timeline	2005: U.P. Pollution Control Board identified 6 polluting factories in Kanpur Dehat, shut them down. 2017: NGT ordered removal of chromium dumps in Kanpur Nagar

Static/Conceptual Linkage

- Hexavalent chromium is used in electroplating, wood preservation, and leather tanning (chromium sulphate).
- International Agency for Research on Cancer (IARC) — under WHO — classifies substances into carcinogen groups; Chromium (VI) compounds fall under Group 1 (carcinogenic to humans) when inhaled.
- National Green Tribunal (NGT) — statutory body under the National Green Tribunal Act, 2010, for expeditious disposal of environmental cases.

SOURCE : THE HINDU

1. ECOLOGY & ENVIRONMENT

UPSC | CSE SYLLABUS

GS-I (Geography — interstate rivers); GS-III (Environment — EC process, NBWL role); Inter-state river water disputes (Karnataka-Goa), akin to Cauvery (Karnataka-Tamil Nadu) discussed elsewhere in this edition.



Mahadayi Diversion

Why in News

The Union government told the Lok Sabha that there is no proposal before it from Karnataka seeking Environmental Clearance (EC) for diversion of the Mahadayi river for various projects — a reply given by Minister of State for Environment, Forest and Climate Change Kirti Vardhan Singh to a question by a Goa MP.

Key Facts

Aspect	Detail
River	Mahadayi (also called Mandovi in Goa) — flows from Karnataka through Goa
Dispute	Karnataka's plans (Kalasa-Banduri Nala diversion project) vs. Goa's drinking water security concerns
NBWL status	National Board for Wildlife has NOT approved Karnataka's proposal to use 10.6852 hectares of forest land for the Kalasa Nala Diversion Scheme, which falls in the tiger corridor between Kali and Sahyadri Tiger Reserves
Pending studies	No Cumulative Impact Assessment (CIA) or Carrying Capacity Study (CCS) of the Mahadayi basin has been submitted by concerned State governments
Goa's concern	Potential impact on drinking water security, saline ingress, and freshwater aquifers in the river basin

3. GEOGRAPHY / ENVIRONMENT: MSC Elsa 3 Sinking — No Significant Impact on Lakshadweep, Says Study

Source: *The Hindu*,

Why in News

A comprehensive assessment by the Chennai-based National Centre for Sustainable Coastal Management (NCSCM) on the potential environmental impact of the MSC Elsa 3 shipwreck (sunk off the Kerala coast on May 25, 2025) on the Lakshadweep islands found no measurable ecological or socio-economic damage to the archipelago.

Key Facts

Aspect	Detail
Vessel	MSC Elsa 3 — container ship carrying hazardous cargo; sank off the Kerala coast in the Arabian Sea, May 25, 2025
Study body	National Centre for Sustainable Coastal Management (NCSCM), Chennai — under directives of the National Green Tribunal
Findings	Physiochemical parameters of seawater/sediments within natural baseline ranges; no stress in plankton, benthic assemblages, coral reefs, seagrass meadows, or lagoonal habitats
Trigger for study	NGT took suo motu cognisance of a report titled 'Containers from sunken ship likely to drift towards Alappuzha, Kollam Coasts in 48 hours: INCOIS', published in <i>The Hindu</i>
Broader lesson	Underscores the vulnerability of remote island ecosystems to maritime accidents; highlights need for early warning systems, island-specific contingency planning, and sustained environmental monitoring



Exam Relevance

GS-I (Geography — Lakshadweep archipelago, Arabian Sea); GS-III (Disaster Management, Environment); Static — INCOIS (Indian National Centre for Ocean Information Services), NGT suo motu powers.

4. SCIENCE & TECHNOLOGY: How AI Can Be Optimised for Better Healthcare

Source: Opinion, *The Hindu*,

Core Theme

AI is moving from innovation teams into consultations, diagnostic workflows, and hospital operations — helping extend limited clinical expertise further, especially in India where specialist care is concentrated in larger cities while chronic-disease patients need long-term monitoring.

Key Data Points

Metric	Detail
US FDA AI-enabled devices (Jan 2025)	Over 1,000 authorised — radiology, cardiology, and other diagnostic tools
Ayushman Bharat Health Accounts linked (May 2026)	100+ crore health records — twice the number recorded in Feb 2025
ABDM Scan & Share impact (Jul 2026 update)	Reduced outpatient registration wait from ~1 hour to 2-5 minutes at participating hospitals
McKinsey estimate (Jan 2026)	AI in healthcare revenue-cycle operations could cut collection costs by 30-60%
FDA move (Sept 2025)	Called for better methods to evaluate AI-enabled devices' real-world performance

Way Forward (per the article)

- AI should be applied where delays can be reduced and clinicians can make better-informed decisions — not 'AI everywhere'.
- Needs clinical validation, representative data, and human oversight given India's diversity of States, disease patterns, and care settings.

Exam Relevance

GS-III (Science & Tech, Health); relevant to Digital India, Ayushman Bharat Digital Mission (ABDM) static facts.

5. GOVERNANCE: Andhra Pradesh's Sustainable Urban Transformation

Source: *The Hindu*

Key Facts

- Andhra Pradesh's Municipal Administration and Urban Development (MA&UD) Dept. is streamlining ~45 different types of urban local body charges (including an unusual 'tree guard fee').
- Reuse of Treated Used Water Policy, 2026 approved to boost long-term water security via a circular water economy.



- Apartment complexes generating over 100 kg waste/day may be mandated to set up in-situ solid waste management units.
- Greater Visakhapatnam Municipal Corporation's slum redevelopment (177 housing units) is the first project to use relaxed Floor Space Index (FSI) norms for small slum areas, under the Visakhapatnam Economic Region Programme.
- Zoning regulations eased — zones reduced from 15 to 10 for flexibility in urban development.

Exam Relevance

GS-II (Governance, urban local bodies); GS-III (Sustainable development, urban planning); relevant for State PCS (Andhra Pradesh-specific) and urban governance current affairs.

6. SOCIAL ISSUE / DATA ANALYSIS: Girls Conditioned From Childhood to Take Up Domestic Burden

Source: *The Hindu*

Why in News

India's Time Use Survey (2025) shows that the gendered division of unpaid domestic labour, which peaks in the prime working years, actually begins in childhood — with girls taking on disproportionately more housework than boys from as early as age 10.

Key Data Points

Metric	Detail
Peak housework time (women)	~460 minutes/day (7.5+ hours) around age 30
Peak housework time (men)	Never crosses 65 minutes/day at any age between 6 and 75
Girl-to-boy ratio in unpaid work	1.6 (ages 6-9) → 4.5 (ages 10-14) → 7.5 (ages 15-17)
Girls' cooking time (ages 15-17)	42.4% report cooking (close to an hour/day) vs. just 2.9% of boys (~2 minutes/day)
Leisure time lost (ages 6-17)	Girls: housework up ~124 min/day, leisure down ~115 min/day; boys' leisure changes little
PLFS 2025 finding	52.5% of urban and 40% of rural women cite childcare/domestic responsibilities as the reason for staying out of the labour force (vs. <1% of men)

Policy Recommendation

Schools can equip all children — regardless of gender — with practical life skills (cooking, home management, stitching, carpentry, financial management) to remove the gendered assignment of domestic work rather than removing domestic work from children's lives altogether.

Exam Relevance

GS-I (Society, gender issues); GS-II (Social justice, women empowerment); Essay/Mains material on unpaid care work and female labour force participation.

7. INDIAN POLITY: The Federal Dilemma of Delimitation

Source: *The Hindu*

Why in News?



The Tamil Nadu Legislative Assembly passed a resolution urging the Centre to permanently freeze Lok Sabha seats at 543 and maintain the present State-wise distribution, reviving the delimitation debate after the Constitution (131st Amendment) Bill — which sought to raise Lok Sabha seats from 550 to 850 — was defeated in the Lok Sabha in April 2026.

Defining Delimitation

- Delimitation is fixing the number of seats and boundaries of constituencies in each State for Lok Sabha and Assemblies, done by a Delimitation Commission set up under a Parliament act.
- Article 81(2) of the Constitution requires the seat-to-population ratio to be, as far as practicable, the same across all States ('one citizen-one vote-one value').
- Seats were fixed at 543 based on 1971 Census (population 54.8 crore); frozen since to encourage population control — extended via the 42nd Amendment (till 2000) and 84th Amendment (till 2026).

Key Data — Representation Imbalance

Comparison	Detail
Current LS strength	543 seats; ratio of 2.2:1 with Rajya Sabha's 245 seats
Proposed increase	550 → 850 (Constitution 131st Amendment Bill, April 2026) — defeated in Lok Sabha
Government's oral assurance	Each State's seat share to increase 50% on a pro-rata basis
If seats rise to 848 (2026 projected population)	Uttar Pradesh: 80 → 143 seats; Bihar: 40 → 79; Tamil Nadu: 39 → 49; Kerala: 20 → 20 (no change)
Women's reservation link	106th Constitutional Amendment (2023) provides one-third reservation for women in Lok Sabha/Assemblies, to be implemented through delimitation based on the 2027 Census

Challenges With 50% Pro-Rata Increase (per the article)

- Would skew the Lok Sabha:Rajya Sabha ratio from 2.2:1 to 3.3:1, diminishing the Rajya Sabha's checking role.
- More Joint Sittings could become necessary to resolve Lok Sabha-Rajya Sabha deadlocks — used only 3 times since Independence so far.
- Lok Sabha sits only ~60 days/year, so more MPs would mean less time per MP for meaningful deliberation.
- Higher exchequer cost, including added MPLADS fund allocations.

Suggested Reconciliation

Freeze Lok Sabha seats at 543 (maintaining federal balance) while increasing the number of MLAs in each State to reflect current population — and providing the one-third women's reservation out of the existing 543 seats.

Exam Relevance

GS-II (Indian Polity — Delimitation Commission Acts of 1952/62/72/2002, Articles 82 & 170, 84th & 87th Amendments); high-value Mains topic on federalism vs. representation.

8. SCIENCE & TECHNOLOGY: Understanding Anthropic's Move to Watermark Claude AI Content

Source: *The Hindu*

Why in News?

As part of compliance with the European Union's AI Act, Google- and Amazon-backed Anthropic announced that Claude content will carry a machine-readable watermark to better enable AI content labelling — extending beyond images/video to Claude-generated text as well.



Key Facts

Aspect	Detail
Trigger	Anthropic signed the EU AI Act's Article 50(2) Code of Practice on Transparency of AI-Generated Content
What gets watermarked	Text-level watermark (invisible, doesn't affect Claude's response) + signed provenance metadata for files (.svg, .png, .jpg)
Where it applies	Claude Platform (API), Claude, Claude Code, Claude Cowork, Claude Tag; also via AWS, Google Cloud, Microsoft Foundry
Key feature/concern	Watermark travels with copied/pasted text and 'may persist through some editing', raising concerns for lightly-edited human work
Limitations flagged	Possible false positives/negatives; short text, content edits, or metadata-stripping can affect detection reliability

Why It Matters?

- Helps regulators, fact-checkers, and journalists verify the origin of AI-generated images/videos more reliably than text.
- Detecting AI-generated TEXT reliably remains 'uncharted territory' — unlike images/video, text watermarking is far less mature.
- Raises the broader policy question of balancing AI transparency mandates (like the EU AI Act) against practical reliability of detection tools.

Exam Relevance

GS-III (Science & Tech — AI governance); Current Affairs on global AI regulation (EU AI Act); relevant comparative angle with India's own AI governance discussions.

9. CURRENT AFFAIRS ROUND-UP

Census 2027 — Phase 2 Begins

- Phase 2 (Population Enumeration) of Census 2027 began August 17 in Ladakh and snow-bound areas of J&K, Himachal Pradesh, and Uttarakhand — ahead of the rest of the country (Feb 2027).
- The Census 2027 questionnaire has 40 questions (13 new vs. Census 2011's 29) — including spouse's name, digital literacy, COVID-19 vaccination status, bank accounts, Aadhaar/voter ID/driving licence/passport numbers (all optional/subject to availability).
- Registrar-General & Census Commissioner of India (RG&CCI) clarified: no private/confidential data like bank account details are sought — only the number of accounts.
- This will be the first comprehensive Census for J&K after the abrogation of Article 370, and the first-ever Census of Ladakh as a Union Territory.

10. OBITUARY: Sumit Sarkar (1939-2026) — Historian

Source: *The Hindu*

Who Was He?



Eminent Indian historian, best known for his textbook 'Modern India' and for 'Swadeshi Movement in Bengal', which used plays, novels, and newspapers alongside colonial archives to study the 1905 Partition of Bengal and the nationalist movement it spawned. Passed away on August 13, 2026.

Key Contributions

- 'Modern India' broke new ground by centering peasants, workers, and ordinary people's experiences alongside colonial masters and nationalist leaders — spanning 1885 (Indian National Congress's founding) to 1947 (Independence).
- Studied the Swadeshi Movement's ambiguities: the 1905 Bengal partition, the Bande Mataram editorial praising both the labour movement and caste system's sense of duty, and the influence of the 1904-05 Russo-Japanese War on Indian nationalist pride.
- Co-authored 'Khaki Shorts and Saffron Flags' (with colleagues) after the 1992 Babri Masjid demolition — an early rigorous historical study of the RSS.
- Known for engaged scholarship — linking Marxist historical method with religion, colonial institutions, and the emergence of 'Hindu nationalism' as 'common sense'.

Exam Relevance

GS-I (Modern Indian History — historiography); Persons in News; useful for Essay/Mains reference on Swadeshi Movement and Partition of Bengal (1905).

11. SPORTS ROUND-UP

Badminton World Championships

- India hosts the Badminton World Championships for the first time since 2009; India has won at least one medal in each of the last 11 editions.
- P.V. Sindhu (5 medals so far, incl. 1 gold) aims for a record 6th World Championships medal — no woman has done this.
- Satwiksairaj Rankireddy-Chirag Shetty (Asian Games gold medallists) get a first-round bye in men's doubles.
- Defending champion Akane Yamaguchi (Japan) is bidding to become the first woman to win 4 World Championship golds, surpassing Spain's Carolina Marin.

India vs Sri Lanka — First Test (Galle)

- Devdutt Padikkal scored a maiden Test century (167) and Dhruv Jurel made a fine 51 as India reached 460/9 on a rain-hit Day 2.
- Sri Lankan spinners Prabath Jayasuriya (4 wickets) and debutant Keshara Nuwantha (3 wickets) shared 7 wickets.

Bangladesh's Historic Test Win in Australia

- Bangladesh beat Australia by 9 wickets in Darwin — its maiden Test victory on Australian soil; off-spinner Mehidy Hasan Miraz took 5/66.

Hockey World Cup (Women) — Amstelveen

- India, fielding 8 World Cup debutants, drew 2-2 with higher-ranked China in its Pool D opener (Navneet Kaur, Deepika scored for India).



Durand Cup 2026

- East Bengal FC beat Indian Army FT 1-0; Sporting Club Delhi staged a stunning second-half comeback to beat debutant FC Raengdai 5-1 in the quarterfinals.

Table Tennis — UTT Interview (Alvaro Robles, Spain)

- Spanish paddler Alvaro Robles (world ranking high of No. 28) credits the Ultimate Table Tennis (UTT) league for driving the rapid rise of Indian table tennis players like Manika Batra since 2018.

Exam Relevance

Sports current affairs — useful for SSC/Railways/Banking one-liners; Badminton World Championships venue/host history is a common static-cum-current question.

12. SCIENCE: Enervating Disorder

Source: *The Hindu*

Why in News?

A new study from the University of Oklahoma Health Sciences Center (published in *Human Molecular Genetics*, June 2026) explains why Friedreich's ataxia (FRDA) — a genetic disorder damaging nerves and the heart — has never been reported in people from sub-Saharan Africa, North America, China, Japan, or Southeast Asia, occurring almost exclusively in Eurasian (European, North African, West Asian, South Asian) populations.

Key Facts

Aspect	Detail
Cause	Mutation in the FXN gene, which codes for frataxin — a protein essential for mitochondrial (cell powerhouse) function
Mechanism	Expanded 'repeat' variants (100-1,500 repeats) in the FXN gene's intron close the chromosome structure, reducing frataxin production
India-specific data	Nizam's Institute of Medical Sciences (Hyderabad) diagnoses ~1 FRDA case/month on average, almost all linked to consanguineous marriages
Key finding	95% of disease-causing 'expanded variants' trace back to just two ancient 'protomutations' that arose only in Eurasia — never in sub-Saharan Africa or East Asia
Ancient DNA evidence	Both protomutations were present in Europe/West Asia at least 9,000 years ago; absent in Neanderthal and Denisovan DNA

Exam Relevance

GS-III (Science & Tech — genetics, biotechnology); useful for Health-sector current affairs; India's high consanguinity rate as a public-health risk factor for rare genetic disorders.

SCIENCE: Hara Mangrove Forests

Source: *The Hindu*



Why in News?

Satellite images have revealed a major oil spill (from the bulk carrier Minoan Pioneer, struck by a projectile amid the West Asia conflict) threatening Iran's Hara mangrove forests off Qeshm Island in the Strait of Hormuz — the spill slick stretches 160 km.

Key Facts

Aspect	Detail
Location	Spanning the Strait of Hormuz, Persian Gulf, around Qeshm Island (Iran)
Dominant species	Grey mangrove (<i>Avicennia marina</i>) — has a special root filtration system for saline conditions
Status	UNESCO Biosphere Reserve
Ecological role	Nursery for shrimp, crabs, fish (supports regional fisheries); migratory bird hub (great stone-curlew, herons); protects coast from erosion; major carbon sink
Economic role	Backbone of Qeshm's sustainable tourism (mangrove waterway tours)
Current threat	Oil spill from bulk carrier Minoan Pioneer, leaking heavy fuel oil after being struck; cleanup hindered by the ongoing West Asia conflict

Exam Relevance

GS-I (Geography — Strait of Hormuz, Persian Gulf); GS-III (Environment — mangrove ecology, UNESCO Biosphere Reserves); links to the Iran-Israel-U.S. conflict current affairs theme.

QUICK-REVISE MCQs

Q1. Hexavalent chromium contamination of groundwater, reported in August 2026, primarily affects which three Uttar Pradesh districts?

- (a) Kanpur Nagar, Kanpur Dehat, Fatehpur
- (b) Lucknow, Kanpur, Unnao
- (c) Varanasi, Prayagraj, Mirzapur
- (d) Agra, Mathura, Aligarh

Answer: (a) Kanpur Nagar, Kanpur Dehat, Fatehpur

Explanation: The Spotlight report identifies these three districts as the areas where hexavalent chromium (Chromium VI) from tannery-linked industries has contaminated groundwater.

Q2. The Kalasa-Banduri Nala Diversion Scheme, in the news for lack of Environmental Clearance, involves the diversion of which river?

- (a) Cauvery
- (b) Krishna
- (c) Mahadayi (Mandovi)
- (d) Godavari

Answer: (c) Mahadayi (Mandovi)

Explanation: Karnataka's Kalasa Nala Diversion Scheme concerns the Mahadayi river, which flows into Goa as the Mandovi; the project falls in the tiger corridor between Kali and Sahyadri Tiger Reserves.

Q3. As per the Text & Context explainer, which Constitutional Amendment provides for one-third reservation of seats for women in the Lok Sabha and State Assemblies?

- (a) 84th Amendment



- (b) 101st Amendment
- (c) 106th Amendment
- (d) 131st Amendment

Answer: (c) 106th Amendment

Explanation: The 106th Constitutional Amendment (2023) provides one-third reservation for women in the Lok Sabha and Legislative Assemblies, to be implemented through delimitation based on the 2027 Census.

Q4. Anthropic's Claude AI text watermarking initiative, reported in August 2026, was introduced primarily to comply with which regulation?

- (a) US AI Bill of Rights
- (b) EU AI Act's Article 50(2) Code of Practice
- (c) India's Digital Personal Data Protection Act
- (d) UK's Online Safety Act

Answer: (b) EU AI Act's Article 50(2) Code of Practice

Explanation: Anthropic signed the EU AI Act's Article 50(2) Code of Practice on Transparency of AI-Generated Content, prompting the new Claude watermarking policy.

Q5. The Hara mangrove forests, threatened by a recent oil spill, are located around which island in the Strait of Hormuz?

- (a) Kish Island
- (b) Qeshm Island
- (c) Hormuz Island
- (d) Larak Island

Answer: (b) Qeshm Island

Explanation: The Hara mangrove forests span the Strait of Hormuz around Qeshm Island, Iran's largest island, and are a UNESCO Biosphere Reserve threatened by the Minoan Pioneer oil spill.

Q6. Friedreich's Ataxia is caused by mutation in which gene?

- (a) BRCA1
- (b) FXN
- (c) HTT
- (d) CFTR

Answer: (b) FXN

Explanation: The FXN gene codes for frataxin, a protein essential for mitochondrial function; its mutation (via expanded intron repeats) causes Friedreich's Ataxia.

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