

# Current Edge: Daily Brief

6<sup>th</sup> November 2025

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## QUOTES OF THE DAY

"Hope is being able to see that there is light despite all of the darkness." – **DESMOND TUTU**

## WHAT THE OTHERS SAY

"Bangladesh cannot afford a relapse into its cyclical pattern of political dysfunction." – **THE DAILY STAR, BANGLADESH**

### What constitutes as contempt of court in India?

| Explained  Premium

How does the Constitution define courts of record? What are the two types of contempt?

TH Text & Context; By C.B.P. Srivastava;  
Syllabus: Pre/Mains – Polity [Link](#)

## Why in News?

Recent controversy over alleged contemptuous remarks against the CJI & Supreme Court → seen as undermining judicial authority & administration of justice.

## Constitutional Basis

- **Art. 19(2)** → permits restriction on free speech for “contempt of court.”
- **Art. 129 (SC) & Art. 215 (HC)** → Courts of Record → decisions preserved for precedent + inherent power to punish for contempt.
- **Contempt of Courts Act, 1971** → codifies procedure & defines types of contempt.

## Types of Contempt

- **Civil Contempt (Sec. 2(b))** → Wilful disobedience of judgment/decreed/order/writ or breach of undertaking.
- **Criminal Contempt (Sec. 2(c))** → Publication/act that:
  - (i) Scandalises or lowers authority of court.
  - (ii) Prejudices/interferes with judicial proceedings.
  - (iii) Interferes with administration of justice in any other way.
- **Initiation** → Suo motu by SC/HC or on motion with AG/Advocate General’s consent.

## Judicial Interpretation

- **Fair Criticism ≠ Contempt** → Legitimate academic/legal critique permitted.
- **Ashwini Kumar Ghosh v. Arabinda Bose (1952)** → Fair commentary allowed; excess = contempt.
- **Anil Ratan Sarkar v. Hirak Ghosh (2002)** → Punishment only when clear violation proven.
- **M.V. Jayarajan v. High Court of Kerala (2015)** → Abusive public remarks = criminal contempt.

- **Shanmugam @ Lakshminarayanan v. High Court of Madras (2025)** → Purpose of contempt law = protect administration of justice.

### Broader Democratic Context

- **Judiciary** → guardian of constitutional morality & justice delivery.
- **Misrepresentation/derogatory attacks** → undermine public faith → threaten democratic principles.
- **Democratic criticism** ✓; Malicious defamation ✗ → affects judicial independence & substantive justice.

**Test Your Knowledge**

Q. Which of the following correctly distinguishes “court of record” as defined under the Indian Constitution?

(a) A court whose records cannot be questioned in any other court and which has the power to punish for contempt.

(b) A court whose proceedings are mandatorily recorded in writing but without inherent contempt power.

(c) A court whose judgments require Presidential authentication to become enforceable.

(d) A court that functions only as an appellate authority for subordinate courts.

**Hint:**  
Art. 129 (SC) & Art. 215 (HC) → courts of record → judgments preserved as evidence + inherent contempt power.

**Clearest black hole merger signal yet allows probe of Hawking’s law** Premium

As the clearest gravitational signal ever detected, GW250114 allowed researchers to draw important conclusions about fundamental physics. Notably, they analysed the frequencies of gravitational waves emitted by the merger to present the most compelling observational evidence to date of the black-hole area theorem

TH Text & Context; By Shreejaya Karantha;  
Syllabus: Pre/Mains – Science & Tech [Link](#)

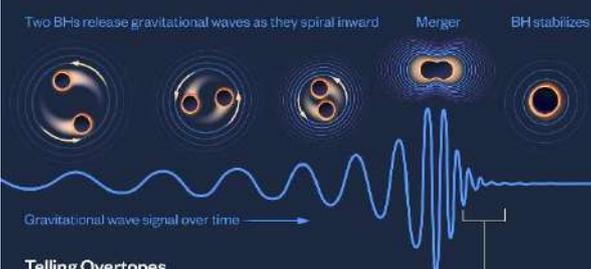
### Why in New?

LIGO–Virgo–KAGRA reported GW250114 (Jan 14, 2025): clearest BH merger signal yet → strongest test of Hawking’s black-hole area theorem.

### Clear Signal Sheds Light on Black Holes

When two black holes (BHs) collide and merge, they release gravitational waves. These waves can be detected by sensitive instruments on Earth, allowing scientists to determine the mass and spin of the BHs. The clearest BH merger signal yet, named GW250114, recorded by LIGO in January 2025, offers new insights into these mysterious cosmic giants.

Two BHs release gravitational waves as they spiral inward
Merger
BH stabilizes



**Telling Overtones**  
A fleeting secondary tone was detected in the signal, offering a rare chance to test the “Kerr solution,” which describes a rotating BH using only mass and spin. Excitingly, the mass and spin values from this overtone matched those from the fundamental tone. If they had differed, it would imply that additional properties are necessary to describe a BH, but a match confirms that — at least for this BH — no other details are needed.

**Forever Growing**  
The signal also tested Hawking’s area theorem, which states that a BH’s surface area can never decrease — it can only grow. Surface area of a BH is determined by the area of its event horizon and is proportional to the square of the BH’s mass. Comparing the BHs before and after the merger confirmed that the surface area had increased, supporting the theorem.



### Event & signal

- Source → BH–BH merger @ ~1.3 bn ly; near-equal masses (~30 M<sub>⊙</sub> each), low/no spin, ~circular orbit
- Signal quality ↑ → highest SNR so far; clear inspiral–merger–ringdown “cosmic bell”

### Detectors & methods

- Network → LIGO (2 × 4 km), Virgo, KAGRA; laser interferometry in ultra-high vacuum
- Searches → model-agnostic (excess power) + model-dependent (matched BH templates) → consistent detection
- Data sharing → joint pipelines; cross-checks across sites

### Instrumental advances (why clearer)

- Laser noise ↓; mirror surfaces cleaner; calibration uncertainty ↓
- Multiple bounces (~300) in arms → path-length sensitivity ↑

### Key findings: Hawking area theorem (1971)

- Approach → separate fits: early inspiral vs post-merger ringdown

- Extracted areas →  $A_{\text{initial}}$  (BH1 + BH2) vs  $A_{\text{final}}$  (remnant)
- Result →  $A_{\text{final}} > A_{\text{initial}}$  (♦ strongest observational support yet)
- Implication → entropy-like BH area never ↓; GR consistent in strong-field

### Additional GR tests

- Ringdown modes →  $\geq 2$  quasinormal frequencies identified → “Kerr-like” spectrum
- Kerr solution (1963) → remnant consistent with rotating Kerr BH; damping rates/frequencies match expectations

### Error control & robustness

- Systematics mapped → calibration checks; noise artifacts vetted; selection of quiet data segments
- Astrophysical assumptions probed → circular vs eccentric orbits; consistent outcomes
- Dominant uncertainties understood/controlled → conclusions stable

### Context & significance

- Benchmarks → echoes of first GW event (2015) but with far clearer signal
- Catalogue growth → improves BH population inferences (mass, spin, formation channels)
- Outlook → decade-2 of GW astronomy → tighter tests of GR, horizon physics, BH thermodynamics

#### Test Your Knowledge

Q. According to Hawking’s black-hole area theorem (1971):

- The mass of a black hole can decrease due to radiation.
- The total entropy of black holes decreases after a merger.
- The total event horizon area never decreases in any classical process.
- The temperature of a black hole is directly proportional to its mass.

News / Explained / Explained Climate / Why Bill Gates' changed climate views are in step with India's

**Why Bill Gates' changed climate views are in step with India's**

Limiting emissions and temperature rise is one way of managing the climate change crisis. Gates has argued for adaptation and building resilience, which has immediate benefits for developing countries.

IE Explained; By Amitabh Sinha;  
Syllabus: Pre/Mains – Environment [Link](#)

### Why in News?

Bill Gates’ latest climate memo shifts focus from *mitigation* (emission cuts) → *adaptation* (resilience building), aligning closely with India’s stance on climate action.



### Gates’ Shift in Climate Perspective

- **Core Idea** → ↓ “Doomsday” view; ↑ focus on resilience, health, prosperity.
- **3 Key Points** →
  - Climate change serious but not existential.
  - 1.5°C–2°C targets ≠ only solution.
  - Development (↑ agri, health, infra, early warning) = best defence.
- **Criticism** → Climate scientists (Michael Mann, Hayhoe) warn it may ↓ urgency for emission cuts.
- **Supporters** → Argue realism: mitigation progress minimal, adaptation gives immediate/local gains.

### Mitigation vs Adaptation Debate

- **Old Debate** → Both essential but trade-offs inevitable in resource-limited world.
- **Mitigation limits** →
  - Global emissions ↑; ↓43% by 2030 target unrealistic.
  - CO<sub>2</sub> longevity (centuries) → no quick climate impact even if net-zero now.
- **Adaptation benefits** →
  - Immediate life-saving returns (e.g., early

- warning systems).
- Local relevance → appeals to developing nations.
  - Yet only ~20% of global climate finance → adaptation.

(d) Carbon neutrality ignores offsets; net-zero does not.

**Hint:**

Net-zero → includes all greenhouse gases; carbon neutrality → only CO<sub>2</sub> balance.

## Alignment with India's Climate Position

- **India's 2024 Economic Survey** →
  - Called temp-target approach “flawed”.
  - Advocated development-first → ↑ income, ↑ resilience.
  - Criticized elevation of emission cuts “to pinnacle” of policy.
  - Sought space for growth + green transition together.
- **Convergence** → Gates' memo echoes India's logic → growth & resilience key to climate security.

## Broader Global Context

- **Developing Countries** → Welcome Gates' realism; demand ↑ adaptation finance & tech support.
- **Risk** → Misuse by climate denialists (e.g., Trump's “hoax victory” remark).
- **China Example** →
  - 4× emission rise since 1990s → but rapid prosperity & tech base built.
  - Now leading in renewables; can decarbonise faster than West.
  - Illustrates: growth → capacity → later rapid emission cuts.

## Implications

- **Policy** → Shift toward balanced climate strategy: “*Prosper first, decarbonise faster later.*”
- **Finance** → Likely ↑ push for adaptation funds in COP agendas.
- **Narrative** → Reframes climate action from fear to pragmatic resilience-building — led by developing world voices like India.

### Test Your Knowledge

Q. Which of the following correctly differentiates carbon neutrality and net-zero?

- Carbon neutrality includes all GHGs; net-zero only CO<sub>2</sub>.
- Net-zero includes all GHGs; carbon neutrality only CO<sub>2</sub>.
- Both are identical in definition.