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DAILY CURRENT AFFAIRS

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Kolkata Topper

VAISHNA BISWAS

AIR - 367 | CSE 2025

TODAY'S DATE

21 JULY 2026

---TUESDAY-----

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★ OUR PROVEN LEGACY ★

OUR UPSC TOPPERS 2023

IPS LAXMAN PRATAP
RANK - 597
FORMER ASST. COMMANDANT IN BSF
CITY COLLEGE KOLKATA

OUR UPSC TOPPERS 2024

IRS SARLA JAKHER
AIR 593
CITY COLLEGE KOLKATA

IRS TANMAY
AIR 346
IIT KHARAGPUR

DAILY CURATED NEWS | EXAM ORIENTED ANALYSIS | SMART NOTES & INFOGRAPHICS | BOOST YOUR PREPARATION

"INFORMED TODAY, EMPOWERED TOMORROW."

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DAILY CURRENT AFFAIRS-

1.Long-Duration Energy Storage (LDES)
2.Supreme Court (Number of Judges) Amendment Bill, 2026
3.Indus Waters Treaty (IWT)
4.Qdenga: India's First Dengue Vaccine
5.India's 8th Trade Policy Review (TPR) at the WTO

1.Long-Duration Energy Storage (LDES)

Why in News?

India's record **peak power demand of 270.8 GW** (May 2026) has highlighted the need for **Long-Duration Energy Storage (LDES)** to ensure reliable renewable power and grid stability. Experts argue that current storage plans are insufficient for prolonged periods of low solar and wind generation.

Key Highlights

Particular	Details
Peak Power Demand	270.8 GW
Existing Storage Target (FY 2035-36)	80 GW Battery Energy Storage + 94 GW Pumped Hydro Energy Storage
Gap Identified	Need for Long-Duration Energy Storage (LDES)
Nodal Agency	Central Electricity Authority (CEA)

What is Long-Duration Energy Storage (LDES)?

Long-Duration Energy Storage (LDES) refers to energy storage systems capable of **storing and supplying electricity for more than 8–10 hours**, and in some technologies, **for several days**, ensuring reliable power during prolonged renewable energy shortfalls.

Major LDES Technologies

Technology	Key Feature
Pumped Hydro Energy Storage (PHES)	Mature technology with high efficiency (70-80%)
Compressed Air Energy Storage (CAES)	Stores energy by compressing air in underground caverns
Vanadium Redox Flow Batteries	Long life, suitable for 10-24 hours of storage

Thermal Energy Storage	Stores energy as heat for extended discharge periods
Carbon Dioxide Battery	Emerging technology for long-duration grid storage

Importance of LDES

- **Grid stability during prolonged renewable energy shortages** caused by cloudy or low-wind conditions.
- **Reliable integration of solar and wind energy** into the national power grid.
- **Reduction in dependence on coal-based peaking power plants** during demand surges.
- **Support for India's Net Zero and renewable energy targets** through continuous clean power supply.
- **Improved energy security** by balancing seasonal and multi-day electricity demand.

India's Progress

- **160 MWh Carbon Dioxide Battery Project** at **NTPC Kudgi**.
- **3 MWh Vanadium Redox Flow Battery** at **NTPC Greater Noida**.
- **CEA estimates India's Pumped Hydro potential at 267 GW**, with plans to install **100.8 GW by 2035□36**.

Challenges

- **Absence of a dedicated policy framework** for Long-Duration Energy Storage.
- **High initial investment costs** for emerging storage technologies.
- **Lengthy environmental clearances** for Pumped Hydro projects.
- **Limited commercial deployment** of advanced LDES technologies in India.

Way Forward

- **Integration of LDES into the National Framework for Energy Storage Systems**.
- **Technology-neutral incentives** for diverse storage technologies.

- **Faster environmental and regulatory approvals** for storage projects.
- **Greater investment in research, manufacturing and grid modernization** to accelerate large-scale deployment.

UPSC Prelims MCQ

Q. With reference to Long-Duration Energy Storage (LDES), consider the following statements:

1. LDES systems generally provide electricity for durations exceeding 8–10 hours.
2. Pumped Hydro Energy Storage (PHES) is one of the most mature LDES technologies.
3. Vanadium Redox Flow Batteries are suitable only for short-duration storage of less than four hours.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: (a)

UPSC Mains Question (10 Marks)

Long-Duration Energy Storage (LDES) is emerging as a critical component of India's renewable energy transition. Discuss its significance and examine the challenges associated with its large-scale deployment. (150 words)

2.Supreme Court (Number of Judges) Amendment Bill, 2026

Why in News?

The Union Government has introduced the **Supreme Court (Number of Judges) Amendment Bill, 2026** in the Lok Sabha to increase the sanctioned strength of the **Supreme Court from 34 to 38 judges**, aiming to reduce the growing backlog of cases.

Key Highlights

Particular	Details
Bill	Supreme Court (Number of Judges) Amendment Bill, 2026

Total Strength Proposed	38 Judges (including the Chief Justice of India)
Existing Strength	34 Judges
Pending Cases (Jan. 1, 2026)	92,101
Constitutional Basis	Article 124

Key Provisions of the Bill

- **Increase in puisne judges** from **33 to 37**.
- **Total sanctioned strength** raised from **34 to 38**, including the Chief Justice of India (CJI).
- **Replacement of the Supreme Court (Number of Judges) Amendment Ordinance, 2026**.
- **Objective of reducing case pendency** and improving judicial efficiency.

Constitutional Provisions

Article	Provision
Article 124	Establishes the Supreme Court and empowers Parliament to determine the number of judges by law.
Article 145	Empowers the Supreme Court to frame its rules of procedure.
Article 141	Supreme Court judgments are binding on all courts in India.
Article 142	Supreme Court may pass orders to ensure complete justice.

Need for Increasing Judge Strength

- **Rising pendency of cases**, with over **92,000 cases** awaiting disposal.
- **Growing annual case inflow** exceeding the number of cases disposed.
- **Regular constitution of Constitution Benches** for important constitutional matters.
- **Improved access to timely justice** through enhanced judicial capacity.
- **Reduction in workload** of existing judges.

Significance

- Strengthening of the Supreme Court's institutional capacity to handle increasing litigation.

- Faster disposal of pending cases and reduction in judicial delays.
- Improved delivery of constitutional and appellate justice.
- Greater flexibility in constituting larger and specialized benches.
- Enhancement of public confidence in the judicial system.

Challenges

- Increase in judge strength alone may not eliminate pendency without systemic judicial reforms.
- Need for corresponding expansion of court infrastructure and staff.
- Delays in judicial appointments affecting sanctioned vacancies.
- Persistent backlog in subordinate courts, where most cases originate.

Way Forward

- Timely appointment of judges to fill sanctioned vacancies.
- Strengthening of the subordinate judiciary to reduce the burden on higher courts.
- Expansion of e-Courts and digital case management systems.
- Judicial and procedural reforms to improve efficiency and reduce delays.

UPSC Prelims MCQ

Q. With reference to the Supreme Court of India, consider the following statements:

1. Parliament determines the sanctioned strength of Supreme Court judges under Article 124 of the Constitution.
2. The Supreme Court (Number of Judges) Amendment Bill, 2026 proposes to increase the total strength of the Supreme Court to 38 judges.
3. An amendment increasing the number of Supreme Court judges requires a Constitutional Amendment under Article 368.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: (a)

UPSC Mains Question (10 Marks)

Increasing the sanctioned strength of judges is necessary but not sufficient to address judicial pendency in India. Discuss in the context of the Supreme Court (Number of Judges) Amendment Bill, 2026. (150 words)

3.Indus Waters Treaty (IWT)

Why in News?

Following the **Pahalgam terror attack (April 2025)**, India has placed the **Indus Waters Treaty (IWT), 1960 "in abeyance"** and is accelerating hydropower projects on the **Chenab River**, while seeking a **renegotiation** of the treaty to reflect present-day realities.

Key Highlights

Particular	Details
Treaty	Indus Waters Treaty (1960)
Parties	India and Pakistan
Mediated By	World Bank
India's Action	Treaty placed "in abeyance"
Focus	Accelerated Chenab hydropower projects and treaty renegotiation

About the Indus Waters Treaty (IWT)

The **Indus Waters Treaty (1960)** governs the sharing of the waters of the **Indus River System** between **India and Pakistan**. It is regarded as one of the world's most enduring transboundary water-sharing agreements.

Water Sharing under the Treaty

River Group	Rivers	Allocated To
Eastern Rivers	Ravi, Beas, Sutlej	India (Exclusive use)
Western Rivers	Indus, Jhelum, Chenab	Pakistan (Major share); India allowed limited uses such as domestic use, irrigation and run-of-the-river hydropower

India's Concerns

- Cross-border terrorism affecting the spirit of bilateral cooperation.

- Changing developmental and energy requirements since the treaty was signed in 1960.
- Need for greater utilization of India's rights over the Western Rivers.
- Changing climate patterns requiring a modern water management framework.

Chenab Hydropower Projects

- **Pakal Dul Hydroelectric Project**
- **Ratle Hydroelectric Project**
- **Kiru Hydroelectric Project**
- **Kwar Hydroelectric Project**

*These projects together are expected to add nearly **6,000 MW** of hydropower capacity.*

UPSC Prelims MCQ

Q. With reference to the Indus Waters Treaty, consider the following statements:

1. It was signed between India and Pakistan in 1960 with the World Bank as a mediator.
2. India has unrestricted rights over the Ravi, Beas and Sutlej rivers.
3. India is permitted to construct run-of-the-river hydropower projects on the Chenab River subject to the Treaty provisions.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) **1, 2 and 3**

Answer: (d)

UPSC Mains Question (10 Marks)

The Indus Waters Treaty has remained a cornerstone of India Pakistan relations for over six decades. In the light of recent developments, examine the challenges associated with the Treaty and the need for its modernization. (150 words)

4.Qdenga: India's First Dengue Vaccine

Why in News?

The **Drug Controller General of India (DCGI)** has approved **Qdenga (TAK-003)**, developed by **Takeda Biopharmaceuticals**, making it **India's first approved dengue vaccine**. The vaccine provides protection against **all four dengue virus serotypes** and marks a major step towards preventive dengue control.

Key Highlights

Particular	Details
Vaccine	Qdenga (TAK-003)
Developer	Takeda Biopharmaceuticals
Indian Manufacturing Partner	Biological E
Approved By	Drug Controller General of India (DCGI)
Eligible Age Group	4–60 years

About Qdenga

Qdenga is a **live-attenuated tetravalent dengue vaccine** designed to provide immunity against **all four dengue virus serotypes (DENV-1, DENV-2, DENV-3 and DENV-4).**

Key Features

- Protection against all four dengue serotypes through a single vaccine.
- Two-dose schedule, administered three months apart.
- No prior dengue infection or pre-vaccination blood testing required.
- Suitable for individuals aged 4-60 years.
- Local manufacturing by Biological E with a planned capacity of 50 million doses annually.

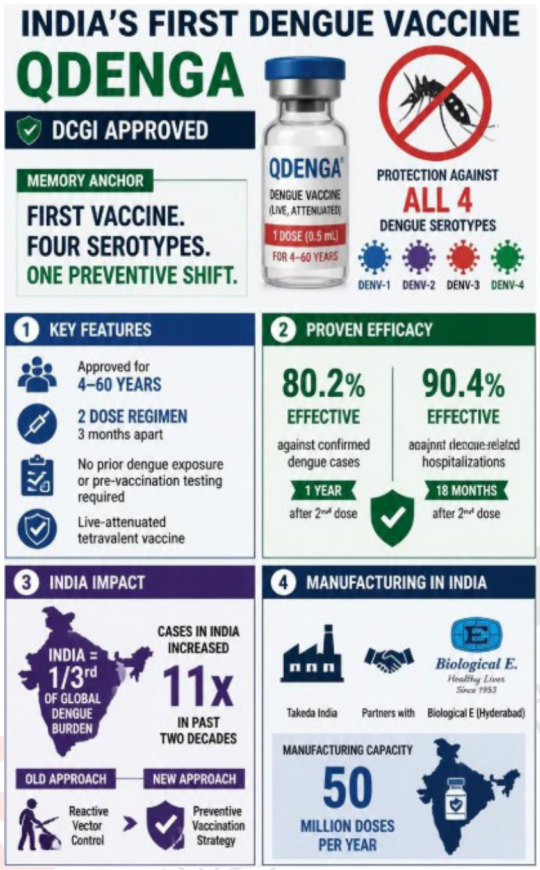
About Dengue

Feature	Details
Causative Agent	Dengue Virus (Flavivirus)
Vector	*Aedes aegypti* mosquito
Serotypes	DENV-1, DENV-2, DENV-3, DENV-4

Peak Transmission	Monsoon and post-monsoon season

Significance

- Strengthening of India's dengue prevention strategy through vaccination.
- Reduction in severe dengue cases and hospitalizations.
- Protection against all four circulating serotypes, reducing the risk of secondary infections.
- Expansion of indigenous vaccine manufacturing capacity through Biological E.
- Support for India's public health system, considering the country's high dengue burden.



Challenges

- **Large-scale implementation and affordability** for vulnerable populations.
- **Need for continued vector control measures**, as vaccination alone cannot eliminate dengue.
- **Public awareness regarding vaccination schedules** and preventive practices.
- **Surveillance of vaccine effectiveness** against different circulating serotypes.

Way Forward

- **Integration of dengue vaccination** with national vector-borne disease control programmes.
- **Expansion of disease surveillance** for early detection and outbreak management.
- **Strengthening of mosquito control measures** through source reduction and community participation.
- **Promotion of research and indigenous vaccine development** for emerging infectious diseases.

UPSC Prelims MCQ

Q. With reference to the Qdenga vaccine, consider the following statements:

1. It is a live-attenuated tetravalent vaccine.
2. It provides protection against all four serotypes of the dengue virus.
3. It requires prior dengue infection and pre-vaccination serological testing before administration.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

Answer: (b)

UPSC Mains Question (10 Marks)

Dengue poses a major public health challenge in India. Discuss the significance of India's first approved dengue vaccine in reducing disease burden and examine why vaccination must be complemented with integrated vector management. (150 words)

5.India's 8th Trade Policy Review (TPR) at the WTO

Why in News?

India's **8th Trade Policy Review (TPR)** at the **World Trade Organization (WTO)** is scheduled for **21 and 23 July 2026**, during which WTO members will review India's trade policies and economic performance for **2021–2025**.

Key Highlights

Particular	Details
Review	8th Trade Policy Review (TPR)
Organization	World Trade Organization (WTO)
Review Dates	21 & 23 July 2026
Review Period	1 January 2021 – 31 December 2025
Indian Delegation	Led by the Commerce Secretary
Merchandise & Services Exports (2025–26)	US$ 863.1 billion

What is the Trade Policy Review (TPR)?

The **Trade Policy Review (TPR)** is a **transparency and monitoring mechanism** of the WTO that periodically reviews the trade policies and practices of member countries to ensure greater transparency and predictability in the multilateral trading system.

Features of the Trade Policy Review Mechanism (TPRM)

- **Conducted by the Trade Policy Review Body (TPRB)**, comprising all WTO members.
- **Frequency depends on a country's share in global trade**:
  - Every **2 years** – Top 4 trading members.
  - Every **4 years** – Next 16 largest traders.
  - Every **5 years** – Other members, including **India**.
  - Longer intervals for Least Developed Countries (LDCs).
- **Not a dispute settlement mechanism**; it promotes transparency and peer learning.

India's Performance During the Review Period

- **Fastest-growing major economy** during the review period.
- **Record exports** of **US$ 863.1 billion** in merchandise and services.
- **Expansion of Free Trade Agreements (FTAs)** with key trading partners.
- **GST rationalisation and tax reforms** improving the business environment.
- **Digital initiatives** such as **Unified Payments Interface (UPI)** and digital trade facilitation.
- **Focus on MSMEs, Atmanirbhar Bharat and Viksit Bharat**.

About the World Trade Organization (WTO)

Feature	Details
Established	1 January 1995
Predecessor	General Agreement on Tariffs and Trade (GATT), 1948
Headquarters	Geneva, Switzerland
Objective	Promote free, fair and predictable global trade
Key Functions	Trade negotiations, dispute settlement, trade monitoring and capacity building

Significance of TPR

- Enhancement of transparency in India's trade policies.
- Strengthening of investor confidence through policy predictability.
- Opportunity to showcase economic reforms and trade achievements.
- Constructive engagement with WTO members on trade-related issues.
- Identification of policy improvements for strengthening global competitiveness.

Challenges

- Growing scrutiny on industrial policies, subsidies and digital trade measures.
- Balancing domestic priorities with multilateral trade commitments.
- Rising global protectionism affecting export competitiveness.
- Need for continued reforms in logistics, customs and ease of doing business.

Way Forward

- Deepen trade facilitation reforms through digital customs and logistics.
- Expand high-quality Free Trade Agreements (FTAs) with strategic partners.
- Strengthen MSME integration into global value chains.
- Continue alignment of domestic trade policies with WTO obligations while safeguarding national interests.

UPSC Prelims MCQ

Q. With reference to the Trade Policy Review (TPR) mechanism of the World Trade Organization (WTO), consider the following statements:

1. The Trade Policy Review is conducted by the Trade Policy Review Body (TPRB).
2. Its primary objective is to resolve trade disputes between WTO members.
3. India undergoes the Trade Policy Review once every five years.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

Answer: (b)

UPSC Mains Question (10 Marks)

The WTO's Trade Policy Review Mechanism promotes transparency and accountability in the multilateral trading system. Discuss its significance for India in the context of changing global trade dynamics. (150 words)