

# WEEKLY C.A

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Test Alzheimer



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# New Alzheimer's

## B L O O D   T E S T



### WHY IN NEWS?

Researchers at Lund University, Sweden, have developed a new blood test, PrecivityAD2, which is about 90% accurate in diagnosing Alzheimer's Disease (AD) even at early stages of mild cognitive impairment.

**Significance:** This test is a breakthrough in the diagnosis of AD as it offers a non-invasive, simpler, and cost-effective alternative to the current expensive and complex diagnostic methods like amyloid or Tau PET scans. Traditionally, cerebrospinal fluid is obtained via lumbar puncture for diagnosis, making the blood test a revolutionary advancement.

**Impact on Diagnosis and Treatment:** Blood tests are set to transform the detection, diagnosis, and treatment of AD. They could replace invasive PET scans, providing a first-line defense in diagnosing the disease. With easier and more affordable testing, early diagnosis and treatment of AD could be significantly improved.

**Accuracy and Validation:** In studies involving 1,123 patients, the blood test showed an accuracy of 91% in identifying clinical AD. This is a substantial improvement compared to the diagnostic accuracy of 61% in primary care physicians and 73% in dementia specialists using traditional methods.

**Future Prospects and Challenges:** Researchers advocate for further studies on the clinical impact of these biomarkers. While costs are expected to decrease over time, making the test more affordable, in India, MRI and PET scans remain the primary diagnostic tools due to limited availability of the blood test.

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# REVISITING SUB-QUOTAS FOR Scheduled Castes

## WHY IN NEWS?

A seven-judge bench of the Supreme Court has ruled that states can sub-divide Scheduled Castes (SC) for sub-quotas within the reservation for Dalits. This overturns a 2004 judgment by a five-judge bench which held such sub-classification as impermissible without parliamentary approval.

**Historical Context:** The Andhra Pradesh Scheduled Castes (Rationalisation of Reservation) Ordinance, 1999, aimed to create sub-groups within SCs, assigning varying reservation percentages. This was challenged and struck down in E.V. Chinnaiah (2004), asserting that SCs constitute a single homogenous class under Article 341 of the Constitution.

**Rationale for Sub-Classification:** The court acknowledged differences in



advancement levels among SC communities. It highlighted the need for sub-classification to ensure fair representation of weaker castes, citing empirical evidence of discrimination within SCs. Sub-classification should be based on an "intelligible differentia" and serve a rational purpose.

**Views on Creamy Layer Exclusion:** The creamy layer concept, applicable in OBC reservations, was discussed. Some judges supported excluding the affluent among SCs to prevent the benefits from being monopolized, while others felt it contradicted the notion of SCs as a homogenous class.

**Implications:** The judgment empowers states to tailor reservations to address intra-caste disparities, potentially improving representation for marginalized SC communities. However, it emphasizes that such actions should not alter the fundamental homogeneity of SCs, maintaining judicial scrutiny over such measures.





# CONCERNS ABOUT INFLATION PERSIST AS PRICING PRESSURES EXTEND BEYOND FOOD.

## WHY IN NEWS?

Due to the general election early in June and the subsequent establishment of a new government at the Center, state spending on public works continued to have a significant negative impact on production in India's eight primary infrastructure sectors. The country's northern and western regions saw heatwaves in May and June that had a significant negative influence on many economic activities, contributing to the general decline in industrial production.

### Data on the Index of Eight Core Industries

The Commerce and Industry Ministry released preliminary data on the Index of Eight Core Industries (ICI) on July 31. The data indicates that the output of five of the sectors experienced either significant slowdowns in growth or contractions from the previous year. As a result, the overall growth of the core sector slowed to 4%, a 20-month low. Power generation fell 3.6% from May's record high level, while the output of refinery products—which, at 28%, has the biggest weight on the ICI—contracted year over year for the first time in five months.

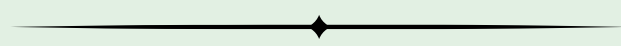
### Monsoon impact :

The commencement of the monsoon rains in certain regions of the nation

contributed to a reduction in the YoY expansion of the crucial electricity sector, which has the second-heaviest weight of around 20%. The pace of growth virtually halved to 7.7% from May's 13.7%. But June's crippling heatwaves, which the India Meteorological Department estimated to be at a 14-year high, reduced demand for steel as building projects found it difficult to resume in the sweltering heat. After a 6.8% pace in May, steel output fell 4% from the previous month, bringing down the year-over-year rise to just 2.7%. The bright spot was coal, as output growth jumped from 10.2% in May to 14.8% in June.

The most recent HSBC India Manufacturing Purchasing Managers' Index (PMI), which is based on private surveys, suggests that manufacturing activity overall decreased somewhat in July. According to a poll conducted by S&P Global among purchasing managers at around 400 firms, the PMI in July eased to 58.1 from 58.3 in June due to somewhat lower gains in new orders and output. The genuinely unsettling conclusion of the PMI survey, however, goes beyond the slight slowdown in manufacturing activity. It indicates that firms have been raising selling prices at the sharpest rate in over 11 years due to a notable increase of input costs.

Goods makers report having to pay more for steel, coal, paper, rubber, and packaging. This means that the outlook for overall inflation, both at the wholesale and retail levels, is not encouraging. The Monetary Policy Committee of the Reserve Bank of India has a tough job ahead of it when it convenes this week to discuss its interest rate position. In the fight to control inflation, officials cannot afford to let their guard down given the evident indications that price pressures are extending beyond food.]





## KERALA REQUESTS THAT THE CENTER

**LABEL  
LANDSLIDES AS A  
"NATIONAL  
DISASTER."**



### WHY IN NEWS?

The Center has been asked by the Kerala government to designate the Wayanad landslide, which destroyed at least three villages, as a national catastrophe.

Union Minister of State for Tourism visit

Union Minister of State for Tourism Suresh Gopi stated that the Center was considering the legality of the demand and had to follow a number of procedures. He said the Kerala government has been asked to submit a report to the Center. He asked the State to ask the Center to release additional support.

According to officials, the Union government would be able to allocate more funds for recovery and climate change mitigation initiatives, such as moving communities residing in disaster-prone areas, if the landslide were officially declared a natural disaster. A national catastrophe tag was also demanded by V.D. Satheeshan, the Leader of the Opposition in the Kerala Assembly.

### Landslide impacts



The official death toll, according to the State administration, is 221. Given that over 200 people have gone missing and that rescuers have been recovering bodies and severed body parts, it may increase. At least 9,000 victims of the accident have taken up residence in relief camps managed by the government.

The State administration has disclosed intentions to build a community for those who survived the catastrophe.





## The Lok Sabha has passed the spending authorization Finance bill for the financial year 2024-25

On Monday, the Lok Sabha approved expenditure demands of around ₹140 lakh crore from various ministries. This important step completes two-thirds of the legislative approvals required for the full budget for fiscal year 2024-25.

### Key Acceptances

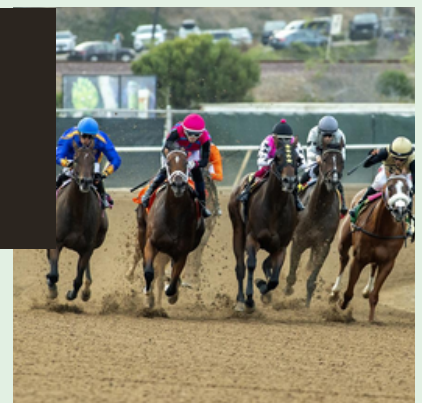
The Lower House has passed the Appropriation (No. 2) Bill 2024 with demands for grants. The Bill empowers the Government to draw a specified amount from the Consolidated Fund of India to cover services for the ensuing financial year.

### The guillotine proposal was used

The approval process has been expedited by implementing the guillotine proposal after discussing the demands for grants for the four ministries. This procedural step allowed the necessary approvals to be passed quickly, ensuring that the legislative process for the budget could proceed efficiently.

## A gene that regulates blood pressure in racehorses may also help human athletes

Horse racing has been a beloved hobby for centuries. Recently, researchers have found that it can help us



understand how blood pressure is regulated during exercise.

### **Major genetic findings**

On June 17, researchers at the Swedish University of Agricultural Sciences discovered a DNA sequence in horses that enhances racing performance. This sequence affects the levels of two proteins that regulate blood pressure. Their findings were published in PLoS Genetics.

### **Implications for health**

The research sheds light on the mechanism of blood pressure modulation, which provides information about heart health. The sequence identified also affects other physiological processes affected by hormone signaling.

### **Research development**

Previously, researchers knew that horses with this genomic region ran faster but could not link it to any physical trait. Now they have linked it to better racing performance and lower blood pressure during exercise.

This gene, shared between trotters and standardbreds, is associated with better athletic performance in both horses and humans, underscoring its widespread importance.



# Discovered in the Ganges Delta, *an Ancient Earthquake Offers a Future Warning*



## Finding of an Extended-Lost Seismic Event

An expedition conducted by Dr. Elizabeth Chamberlain, an assistant professor of geochronology at Wageningen University & Research in the Netherlands, visited the Ganges delta in Bangladesh in 2018. Their objective was to investigate an old riverbed, referred to as a "paleochannel," located roughly 45 kilometers south of the present-day Ganges in order to learn more about the historical movements of the river. It turned out that this area, which is being cultivated for rice, contained hints of a major and long-forgotten earthquake event.

## The Significance of Sand Dikes and Earthquake Data

A kilometer east of the team's discovery of the paleochannel were two sizable sand dikes. The first hard proof that an earthquake had significantly changed the Ganga's path more than 2,500 years ago came from these formations, which are produced when sediments on a riverbank liquefy and move. Dr. Chamberlain said, "We had a feeling we were looking at a big event—the type that is rarely recorded and studied by scientists."

## How Rivers Are Moved by Earthquakes

The group used a method called optically stimulated luminescence (OSL) dating to validate their results. The dates of the sand dikes' and the paleochannel's creation were determined by examining the amount of natural radiation present in mineral grains. The results showed that the earthquake and the river's avulsion, or sudden change in course, occurred at the same moment, providing strong evidence of the earthquake's role in the Ganga's path shift.



## **Speculating About the Cause of the Earthquake**

Even though the effects of the earthquake are amply demonstrated, one important question is still unanswered: where did the earthquake originate? The experts believe it may have started in the hills of Shillong or the Indo-Burma mountain ranges, which both lie on the border between the Indian and Eurasian tectonic plates. For whatever reason, the earthquake changed the path of one of the most important rivers in the world as well as the landscape.

## **Potential Risks: The Importance of Being Ready**

The study's conclusions, which were released in June 2024 in Nature Communications, will have a big impact on how people are ready for disasters in the future. A University of California, Santa Barbara associate professor of sedimentology, Vamsi Ganti, observes that "this finding implies that the effects of big earthquakes may be even more catastrophic than previously believed." Large river avalanches could result from strong earthquakes.

With an estimated population of 630 million, the Ganges-Meghna-Brahmaputra delta is especially susceptible to these kinds of disasters. Avalanches have been responsible for some of the deadliest floods in recorded history, and they can trigger devastating avalanche cascades in the case of an earthquake. Human activities like building embankments and raising sea levels, together with climate change, make the region more vulnerable to natural disasters.

## **Call for Collaborative Research and Preparedness**

Dr. Till Hanebuth, a marine geosciences professor at Coastal Carolina University, emphasized the importance of this discovery. He pushed for increased efforts to forecast large earthquakes that could produce river avalanches and stressed the importance of decision-makers and the general public being aware of the risks. He

cautioned that "climatic and geological issues of such magnitude do not care about political borders" and urged close cooperation in monitoring, research, and disaster planning among Bangladesh, India, and Myanmar.

## Conclusion:

In conclusion, preserve the future by drawing lessons from the past.

It is believed that by learning more about the past of earthquake-induced river avalanches, scientists may be able to stop more fatalities. The historic earthquake that changed the Ganga's path in one of the world's most populous areas is a sobering reminder of the unseen forces that mold our environment and the value of being ready for anything unexpected.



## India Alliance protest against GST in brief

India Alliance parties protest against GST Life and Health Insurance Demonstration at Makar Dwar of Parliament in protest against 18% Goods and Services Tax (GST) on premiums. He described this tax as a huge burden on the middle class and termed it "tax terrorism".

## WHY IS THIS IN THE NEWS?

India alliance parties protest against implementation of 18% GST on life and health

insurance premiums K.T. They claim that it puts more burden on the middle class and this step reflects the government's irrational thinking.

**Key Points:** Rahul Gandhi claims Modi govt has reduced general health insurance premiums ₹24,000 crore has been collected from the people.

Senior Congress leader Shashi Tharoor termed GST on health insurance as illegitimate because the people of India Already spend the most on health issues.

West Bengal Chief Minister Mamata Banerjee and Union Minister Nitin Gadkari also discussed this issue.

**Background:** There have been many controversies regarding GST in the last few years. The issue of implementing GST on health and life insurance has already come up for discussion. Many officials and leaders have expressed their displeasure on this issue.

**Result:** The government should understand how important health and life insurance is to the common people and There is a need to remove the GST.

Government should amend policies to increase access to health and life insurance in India So that it can be accessible to all sections of people.

The government needs to help people by subsidizing health and life insurance and making it GST free. A plan should be made.

Keeping in mind the interest of the common people, tax exemption on health insurance should be given, so that their There should not be too much burden on him.



## The Finance Bill passed by the Lok Sabha modifies the LTCG tax provision on immovable properties.

### WHY IN THE NEWS?

The central government loosened the recently implemented new capital gains tax on real estate, giving taxpayers the choice to migrate to a new, lower tax rate or continue with the previous system, which had a higher rate with indexation advantage. On Wednesday, the Lok Sabha passed the Finance Bill 2024.

In her 2024–2025 budget address, Union Finance Minister Nirmala Sitharaman suggested reducing the long-term capital gains tax on real estate from 20% to 12.5%, although she did not include the indexation benefit. She proposed a bill change today to include the option.

The new provision was criticized for increasing tax incidence and discouraging real estate investment, which led to the revision.

#### **Indexation benefit:**

The primary modification in the bill pertains to the reinstatement of the indexation



benefit for properties sold before July 23, 2024.

### **What does the New amendment say ?**

Now, under the new scheme, individuals or HuFs who bought residences before July 23, 2024, have the option to pay LTCG tax at a rate of 12.5% without indexation or to receive the indexation advantage and pay 20% tax.

Afterwards, the Lower House voted by voice to accept the bill with 45 official modifications.

### **Sitharaman on middle class taxation:**

Sitharaman added that encouraging investment and helping the middle class were the goals of the FY25 Budget plans.

According to her, middle-class investors in the stock market will profit from the increase in the tax exemption ceiling on long-term capital gains in listed stocks and bonds to Rs 1.25 lakh from Rs 1 lakh.

She claimed that without significantly raising taxes, the Modi administration has eased compliance and implemented a more straightforward tax system. She continued by saying that the removal of customs duties on a variety of items will encourage investment and trade as well as create jobs.

### **Bill to be referred to Rajya Sabha now:**

The Rajya Sabha will now debate the Finance measure 2024, although the Constitution does not provide the Upper House the authority to reject a money measure. Only such bills may be returned, and the law is deemed authorized if they fail to do so within the allotted 14 days.

In response to calls for the elimination of the GST on life and health insurance premiums, Sitharaman stated that the states receive 75% of the GST collected.

All states used to tax insurance premiums before imposing an 18% GST on health insurance (premium). According to Sitharaman, the tax was consequently automatically incorporated into GST when it was implemented.

## India briefly evacuates non-essential staff and families of politicians from Dhaka to Bangladesh In the wake of the violence



India on Wednesday evacuated "non-essential" staff and The families of the politicians have been called back. This decision has been taken voluntarily and by commercial flights. However, the Indian High Commission in Dhaka and Consulates in Chittagong, Rajshahi, Khulna and Sylhet remain operational.

### Three Key Points

## WHY IS THIS IN THE NEWS?

Due to the ongoing violence and protests in Bangladesh, India has withdrawn from its High Commission in Dhaka. It has been decided to recall non-essential staff and families of politicians. This ensures security in the face of the spread of violent incidents and changes in the political situation.

### **Key Points:**

- India has voluntarily recalled non-essential staff and political families.
- The Indian High Commission is fully functional in Dhaka.
- The staff and Rajnayak family are returning by commercial flights.
- Bangladesh Prime Minister Sheikh Hasina also had to leave the country and come to India due to violent protests.
- Indian states have issued special helpline numbers for assistance.

### **Background:**

Violent protests are not new in Bangladesh given its political instability. Historically, there have been several political crises in Bangladesh after the assassination of Sheikh Mujibur Rahman in 1975. Moments of violence have been witnessed. Due to this violence, major changes are taking place in political management, due to which Rajnayak and Safety of families has become a priority.

### **Result:**

Given the current violence and political situation in Bangladesh, it is high time that all countries in the world should re-examine their security plans and we need to see how India and other countries act in this situation.

India needs to keep its citizens safe and those whose condition is critical. Special plans should be prepared to provide assistance.

To analyze and put forward relief plans to deal with the local political situation and instability.

### **Need:**

It should be ensured that full preparation is done to deal with such situations in future. International cooperation is needed to bring political stability in Bangladesh. With this, the welfare and safety of the local people can be ensured.

# Announcing his retirement from wrestling is Vinesh Phogat.



## WHY IS THIS IN THE NEWS?

On Thursday, the Indian wrestler Vinesh Phogat declared her retirement from the sport, following her disqualification from the 50-kg Olympic division final the previous day.

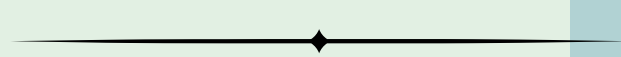
### Reason :

At the morning weigh-in before the final, the seasoned wrestler weighed 100 grams over the allowed limit and was disqualified.

Phogat requested that she be given a shared silver medal in an appeal against her disqualification that was filed in the Court of Arbitration for Sports (CAS) a few hours ago. The information was verified to PTI by an Indian Olympic Association (IOA) source inside the visiting Indian delegation.

### Government views:

The government of Haryana declared that Phogat will receive the same facilities and prize money as an Olympic silver medallist.





# The First State to Adopt Disaster Insurance is Nagaland



Nagaland has partnered with SBI General Insurance to launch the nation's first disaster management insurance program. The Disaster Risk Transfer Parametric Insurance Solution (DRTPS), a brand-new program, is intended to offer protection from natural disasters.

## **PARAMETRIC INSURANCE: WHAT IS IT?**

The way parametric insurance operates is by providing fixed benefits based on particular occurrences, like the intensity of a natural disaster. This implies that prompt financial assistance is provided following a disaster, negating the necessity for in-depth damage evaluations.

### **The MoU's goals**

The primary objectives of the accord are to safeguard Nagaland's crucial infrastructure and mitigate financial damages resulting from natural disasters. The program will assist in preventative disaster management by covering the entire state. This is an example of the collaborative effort between SBI General Insurance and the Nagaland State Disaster Management Authority (NSDMA) to improve the state's capacity to handle catastrophes.

### **Importance of the Project**

Nagaland is leading by example as the first state in India to use this kind of finance structure. With greater preparedness and reaction to disasters, people and resources would be better protected. This novel approach aims to achieve this.

### **Additional Information About Nagaland**

Northeastern Indian state of Nagaland is home to sixteen large tribes, each with distinctive customs. It is home to *Dendrocalamus giganteus*, the second-largest species of bamboo in the world. Every year, the Hornbill Festival honors the diversity of cultures in the state. The capital city of Kohima saw one of the biggest battles of World War II. Nagaland residents have long engaged in "jhum," or shifting farming. The state's official language is English. Along with its vivid festivals like Moatsu and Sekrenyi, Nagaland is renowned for its handcrafted shawls.

