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Canadian poet Anne Carson wins Nobel Prize in literature

Associated Press
STOCKHOLM

Canadian poet, essayist and translator Anne Carson won the Nobel Prize in literature on Thursday for playful, genre-blending works that fuse the classical and the modern.

The Toronto-born Carson, 76, draws on themes and stories from ancient Greek and Roman literature for writing that often blends elements of poetry, essay and fiction.

The permanent secretary of the Swedish Academy said the author was in Iceland “listening to the wind” when the academy reached her to notify her of the win.

“She was very taken by surprise,” Ingrid Carlberg said.

Asked how she felt about the award, Ms. Car-



Anne Carson

son told the Icelandic public broadcaster RUV: “I think they’re all crazy.” She described the conversation with the academy as “rather halting”.

“They have the usual questions, and I have no answers.” She said poetry is “probably more useful than prose right now because it’s faster, and everybody is in a hurry. So basically I think it’s good because it’s brief. Except Homer. Homer’s not brief.”

Ms. Carson is among the more high-profile recent winners of the literature Nobel, which often honours authors little known outside of the literary world and is sometimes criticised for valuing literary experimentation over the ability to connect with a broad readership.

However, the prize can also introduce readers to writers and works beyond their own languages or reading habits.

Asked how the prize would change her sales, she said: “I’ll get a sticker on the front of my book. Stickers help.”

Ms. Carson’s books include *Eros the Bittersweet*, *Autobiography of Red*, as well as *Men in the Off Hours*, and *Norma Jeane Baker of Troy*.

The prize was announced in Stockholm.

1. Nobel Prize in Literature 2026 — Anne Carson

GS: GS-1 — Art and Culture | Literature

Context: Canadian poet, essayist and translator Anne Carson was awarded the 2026 Nobel Prize in Literature for her innovative literary contributions.

1. **Literary Style and Reason for Award**: Combines poetry, prose, essays and translation, reinterpreting ancient Greek and Roman traditions to create new forms of contemporary literature.
2. **Major Works**: Autobiography of Red (Greek mythology); Eros the Bittersweet (love and classical Greek thought); Nox (mourning the loss of her brother); Norma Jeane Baker of Troy (Greek mythology reimagined through modern culture).
3. **Significance**: Demonstrates how classical literature can be reinterpreted to explore contemporary human experiences.

GST refund norms eased; officers lose arrest powers

99% of GST rate and process issues addressed, says Union Finance Minister after 57th meeting of the GST Council; measures likely to come into effect from April 1, 2027; rates remain unchanged

T.C.A. Sharad Raghavan
NEW DELHI

The Goods and Services Tax (GST) Council on Thursday took a slew of decisions in its 57th meeting here to enhance simplification, improve certainty in tax treatment, remove holdups in the processing of input tax credits, and ease the compliance burden on businesses, especially smaller ones.

The council also recommended removing arrest powers of GST officers and increasing the prosecution threshold from ₹1 crore to ₹5 crore.

The general penalty will also be reduced from ₹25,000 to ₹10,000.

"I can say that 99% of issues in GST relating to rates and processes have

Good and simple

The 57th meeting of the GST council decided to enhance simplification, improve certainty in tax treatment, and ease the compliance burden on small businesses

KEY DECISIONS

- Tax officers' power to arrest scrapped
- Prosecution limit increased to **₹5 crore** turnover
- Export of services brought into input tax credit system
- Automated registrations, reduced paperwork, and eased input tax credit processes
- No notices for amounts below **₹10,000**, pending notices to be cancelled

The committee has also decided to examine proposal to allow small taxpayers to file returns once a year

New measures likely to come into force from April 1, 2027



I can say that 99% of issues in GST relating to rates and processes have now been addressed... The door is not closed to further reforms, and those will be taken up as needed, but the bulk of them are now done

NIRMALA SITHARAMAN
Union Finance Minister



now been addressed," Nirmala Sitharaman, Union Finance Minister and Chairperson of the GST Council, said following the meeting.

"The door is not closed to further reforms, and those will be taken up as needed, but the bulk of

them are now done," she added.

Apart from easing processes related to GST registration and availing of refunds and input tax credits, the council has also eased the litigation-related rules of the tax system, providing relief to

small taxpayers. Ms. Sitharaman said that all the changes are expected to come into effect from April 1, 2027, and added that no GST rates were changed during this meeting.

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2. 57th GST Council Meeting: Compliance and Enforcement Reforms

Context: The 57th Goods and Services Tax (GST) Council meeting focused on simplifying compliance, easing refunds and reducing arbitrary enforcement. GST rates remained unchanged.

1. GST Council: Constitutional Basics

Article 279A: The 101st Constitutional Amendment Act, 2016, established the GST Council to recommend GST rates, exemptions and other policy measures.

Chairperson: Union Finance Minister Nirmala Sitharaman.

Composition: Union Minister of State in charge of Revenue or Finance, and State representatives, including nominated representatives of eligible Union Territories.

Quorum: At least 50% of the total members must be present.

Voting: Decisions require at least 75% of weighted votes of members present and voting. The Centre has one-third of the voting weight and States together have two-thirds.

2. Major Reforms Recommended

1. Arrest and Prosecution: Removal of GST officers' arrest powers was proposed. The prosecution threshold was raised from ₹1 crore to ₹5 crore, a 400% increase in the threshold.

2. Lower Penalties: The general penalty was proposed to fall from ₹25,000 to ₹10,000, a 60% reduction.

3. Refunds and Input Tax Credit (ITC): Refund procedures and ITC processing are to be simplified, improving certainty and reducing working-capital blockages for eligible businesses.

4. Simplified Registration and Returns: Clearer documentation, more automated registration, simplified procedures for small e-commerce sellers and consideration of annual returns for small taxpayers aim to reduce compliance burdens.

5. Checks on Enforcement: Inter-State goods inspections would be restricted to officers of the supplier or destination State. Interception would require specific intelligence and authorisation at Joint Commissioner level.

6. Faceless Assessment: A faceless assessment system for Central GST is planned for 2027–28, similar to the income-tax system.

3. Impact and Significance

1. Ease of Doing Business: Reduced paperwork, easier registration and faster refunds can lower compliance costs, especially for small businesses and exporters.

2. **Taxpayer Protection:** Proposed limits on arrest and prosecution, together with clearer enforcement procedures, can reduce arbitrary intervention while preserving action against genuine tax evasion.
3. **Improved Liquidity:** Faster refunds and smoother ITC processing can release working capital, helping businesses manage cash flow and invest in expansion.
4. **Transparency and Efficiency:** Faceless assessments and intelligence-based inspections can reduce unnecessary discretion, improve accountability and facilitate inter-State movement of goods.
5. **Trust-Based Tax Compliance:** Simpler procedures may encourage voluntary compliance and formalisation, provided implementation remains consistent and enforcement against deliberate evasion remains effective.

Implementation: Most measures were expected to take effect from 1 April 2027, while faceless Central GST assessment was planned for 2027–28. The relevant legal amendments and notifications are necessary before proposed changes become effective.

Calibrating India's inbound investment framework

Following the successful 18th BRICS Summit, in New Delhi in September, Prime Minister Narendra Modi's planned December visits to Canada and Brussels, where formal free trade agreements (FTAs) are expected to be signed, signal consistency in institutionalising India's global economic footprint. The trade push, alongside domestic structural reforms and a new FTA strategy, has changed India's investment trajectory. Reserve Bank of India data show gross inward foreign direct investment (FDI) reached a record \$94.8 billion in FY26. UNCTAD's World Investment Report 2026 notes India as 11th among the world's top FDI destinations, following a 44% rise in inflows.

India follows global trend

However, the report reveals that globally, international project finance remains roughly a quarter below its 2021 peak, a trend India reflects. In greenfield data centre investments (a focal sector across economic partnerships), India attracted approximately \$7 billion during the first three quarters of 2025. While this placed India within the top 10, it trailed Thailand and Spain, and sat substantially behind South Korea's \$21 billion, the United States's \$29 billion, and France's \$69 billion. What creates this lag between committed investment and its actual deployment in greenfield projects, particularly in India?

Investors believe incremental reform can ease the challenges behind this lag. In some ways, the remaining 'negotiations' will be internal – between the Centre and States, between the Department for Promotion of Industry and Internal Trade (DPIIT) and line Ministries, or between central rules and State notifications needed to enforce policy. Crucially, resolving these operational bottlenecks would benefit domestic enterprises as much as foreign investors. Commercial dispute resolution is faster



Bharat Joshi
Director, ACTL,
a logistics company,
and the CEO of
J Curve Ventures,
an advisory firm

than before, but India's courts still had nearly 48 million pending cases as of April, including about six million in High Courts. Reforms such as the Commercial Courts Act, 2015 and the Mediation Act, 2023 have helped, with institutional arbitration increasingly becoming the corporate default. Smaller enterprises, however, still rely on courts. Better staffing of commercial benches and mediation centres remains essential to reducing resolution times.

On the labour codes

This fragmentation is also mirrored in the rollout of the landmark labour codes. Parliament's consolidation of 29 central labour laws into four codes was a legislative milestone, with the Central Rules notified in May 2026. But since labour is on the Concurrent List, implementation depends on State notifications. Gujarat moved swiftly to notify rules under all four codes, while other industrial States are finalising theirs. For enterprises designing national human resource frameworks, this necessitates managing a messy transitional phase of varied State timelines.

On tax certainty, the Taxation Laws (Amendment) Act, 2021 effectively ended the ghost of retrospective tax disputes by withdrawing outstanding demands against entities such as Vodafone and Cairn Energy. The relaunch of the Vivad se Vishwas scheme has also helped reduce the broader direct-tax litigation backlog.

Compliance, however, has required recalibration. Mandatory BIS certification under Quality Control Orders (QCOs) was designed to safeguard consumers, but the framework expanded extensively. The Gauba Committee found QCOs had grown from fewer than 70 to nearly 790, covering raw materials and intermediate goods. For imported components, compliance costs rose to ₹20 lakh, with six- to eight-month certification timelines disrupting domestic MSME supply chains. In response, the

government withdrew QCOs on critical intermediate goods, including PVC, aluminium and zinc, providing relief to manufacturers.

India's modern trade pacts now introduce binding investment targets. The EFTA agreement sets a historic \$100-billion target, but investor-protection mechanisms remain a work in progress. As the India-EFTA TEPA lacks an independent bilateral investment dispute mechanism, Switzerland is separately negotiating a bilateral investment treaty. This could inform negotiations with the EU and the U.K.

Further, speeds remain uneven. The DPIIT is the nodal agency but not the decision-maker on approvals. A revised SOP issued in May 2026 sets a 12-week deadline, but compliance remains uneven. However, large-scale projects such as Tata Electronics' semiconductor facility in Dholera, Gujarat, demonstrate how effective administrative coordination can accelerate capital deployment.

Reform lessons from successes

India's reform agenda can draw lessons from past successes. Singapore's CECA has facilitated over \$195 billion in cumulative FDI since 2000, including \$19.8 billion last year. Its non-discrimination and investor-protection frameworks are a useful blueprint for treaty negotiations. Domestically, the mobile-phone industry shows the potential of coordinated policy: production has grown 33-fold since FY15, from ₹180 billion to ₹6.27 trillion, while exports reached ₹2.59 trillion. India is now the world's second-largest mobile-phone manufacturer by volume and meets 99.2% of domestic demand through local production.

India's rise to the 11th-largest FDI destination and the world's second-largest mobile-phone manufacturer reflects its resolve in addressing internal governance bottlenecks. These achievements underscore the long-term benefits of sustained institutional reform and free trade.

Turning
investment
commitments
into projects
requires tackling
State-level
administrative
bottlenecks

3. Calibrating India's Inbound Investment Framework

GS-3: Indian Economy, Foreign Direct Investment (FDI), Investment and Industrial Growth

Context: India is attracting record foreign investment, but converting investment commitments into operational projects remains difficult because of regulatory uncertainty, Centre–State coordination gaps, compliance costs and delays in dispute resolution.

1. India's FDI Performance and the Investment Gap

1. Record FDI Inflows: According to the article, gross FDI reached \$94.8 billion in FY 2025–26, while UNCTAD's World Investment Report 2026 ranked India among the world's top FDI destinations, following a reported 44% rise in inflows.
2. Greenfield Investment: India attracted approximately \$7 billion in greenfield investment during the first three quarters of 2025, placing it among the top 10 destinations, but behind South Korea at \$21 billion, the United States at \$29 billion and France at \$69 billion.
3. Commitments Versus Implementation: Signing a trade agreement or announcing an investment does not automatically create a functioning factory. Projects can be delayed by approvals, compliance requirements, inconsistent State rules and administrative bottlenecks.
4. Domestic and Foreign Investors: Resolving these bottlenecks benefits Indian businesses as well as foreign investors by improving predictability, reducing costs and encouraging long-term capital investment.

2. Major Domestic Bottlenecks

1. Centre–State Coordination: The Department for Promotion of Industry and Internal Trade (DPIIT) is the nodal agency for investment facilitation, but actual project approvals depend on several Central and State departments. The article highlights delays caused by inconsistent rules and State-level notifications.
2. Judicial Delays: India had nearly 48 million pending court cases as of April 2026, including around 6 million in High Courts. Delays in resolving commercial disputes increase uncertainty and the cost of doing business.
3. Labour-Code Implementation: The consolidation of 29 Central labour laws into four Labour Codes was intended to simplify compliance. However, implementation depends on State-level rules, creating different timelines and regulatory uncertainty for businesses.
4. Quality Control Orders (QCOs): Mandatory certification expanded from fewer than 70 products to nearly 790, according to the article. For imported intermediate goods, compliance could cost around ₹20 lakh and involve six-to-eight-month certification timelines, disrupting manufacturing supply chains.

5. Recent Correction: The government withdrew QCOs on selected critical intermediate goods, including polyvinyl chloride (PVC), aluminium and zinc, to reduce compliance burdens on manufacturers.

3. Trade Agreements and Investor Protection

1. Free Trade Agreements (FTAs): India is using trade agreements to deepen economic partnerships and attract investment. The article refers to planned December 2026 visits to Canada and Brussels, with agreements expected to be signed.

2. India–EFTA Agreement: The India–European Free Trade Association (EFTA) Trade and Economic Partnership Agreement sets a \$100 billion investment target. However, the article highlights that investor-protection mechanisms remain incomplete.

3. Bilateral Investment Treaty (BIT): An independent investment-dispute mechanism is absent from the India–EFTA agreement, according to the article. Switzerland is separately negotiating a bilateral investment treaty, which could inform future negotiations with the European Union and the United Kingdom.

4. Predictability Matters: Investors require clear rules, protection against arbitrary treatment and reliable dispute resolution. Signing an FTA alone cannot guarantee investment unless the domestic regulatory environment supports actual project implementation.

4. Investment Facilitation and Successful Examples

1. DPIIT's Role: DPIIT facilitates investment and coordinates with departments, but it is not the final decision-maker for every approval. A revised Standard Operating Procedure issued in May 2026 set a 12-week deadline, although compliance remains uneven.

2. Semiconductor Manufacturing: The Tata Electronics semiconductor facility at Dholera, Gujarat, illustrates how effective administrative coordination can accelerate large-scale capital deployment.

3. Singapore's Investment Experience: Singapore's Comprehensive Economic Cooperation Agreement (CECA) has facilitated over \$195 billion in cumulative FDI since 2000, including \$19.8 billion in the previous year, according to the article. The author highlights predictable rules and investor protection as lessons for India.

4. Mobile-Manufacturing Success: India's mobile-phone production grew 33-fold since FY 2014–15, from ₹180 billion to ₹6.27 trillion. Mobile-phone exports reached ₹2.59 trillion, and India became the world's second-largest mobile-phone manufacturer by volume, meeting 99.2% of domestic demand through local production, as reported in the article.

5. Way Forward: Calibrating the Investment Framework

1. Improve State-Level Execution: Align Central rules with State notifications, streamline approvals and establish clear accountability for delays. The aim should be to convert investment commitments into operational factories and infrastructure.
2. Reduce Regulatory Uncertainty: Review excessive or poorly calibrated compliance requirements, particularly QCOs affecting critical intermediate goods and small manufacturers.
3. Strengthen Dispute Resolution: Improve commercial-court capacity, mediation and institutional arbitration to resolve investor disputes more quickly and predictably.
4. Improve Investor Protection: Modernise bilateral investment treaty provisions and establish clear, credible mechanisms for resolving disputes while preserving India's legitimate regulatory powers.
5. Measure Actual Outcomes: Evaluate investment policy not only by FDI inflows and announcements, but also by projects commissioned, employment created, technology transferred and domestic supply chains developed.

Govt. launches JOSH teams to accelerate TB elimination

The Union Health Ministry is engaging with youth volunteers to find people with tuberculosis (TB) who may be missing from the health system. JOSH teams of the National Cadet Corps (NCC) and MY Bharat volunteers will be deployed for household-level outreach in 55 districts across 11 States and Union Territories. Health Minister J.P. Nadda launched the JOSH (Joint Squad for Health) teams under the TB Mukht Bharat Abhiyaan on Thursday. The teams will work at block and ward levels to identify people with symptoms, encourage testing and support so they can complete treatment. The government's emphasis is on active case finding, with the Health Minister stating that people could be living with TB without recognising their symptoms and therefore remain outside the formal healthcare system.

4. JOSH Teams to Accelerate TB Elimination

Context: The Union Health Ministry launched JOSH (Joint Squad for Health) teams under the TB Mukht Bharat Abhiyaan to identify undiagnosed tuberculosis (TB) cases and improve treatment completion.

1. Tuberculosis: Basic Facts

Causative Agent: TB is caused by the bacterium *Mycobacterium tuberculosis*, not a virus. It mainly affects the lungs but can also affect other organs.

Transmission: It spreads through the air when a person with infectious pulmonary TB coughs, sneezes or speaks.

Symptoms: Persistent cough, fever, night sweats, weight loss and fatigue. Early diagnosis helps prevent complications and further transmission.

Treatment: TB is preventable and curable with appropriate antibiotics. Completing the prescribed course is essential to prevent relapse and drug resistance.

2. JOSH Initiative: Key Features

Composition: National Cadet Corps (NCC) cadets and MY Bharat youth volunteers will conduct community-level outreach.

Coverage: The initiative covers 55 districts across 11 States and Union Territories.

Active Case Finding: Volunteers will identify people with possible TB symptoms at the household level and encourage timely testing.

Treatment Support: Teams will connect patients with healthcare services, encourage treatment completion and help reduce stigma and misinformation.

3. India's TB Elimination Goal and Progress

National Target: India aimed to eliminate TB by 2025, five years ahead of the global Sustainable Development Goal (SDG) target of 2030. The national deadline has passed, and elimination remains an ongoing challenge.

Decline in TB Incidence: Between 2015 and 2024, India's estimated TB incidence declined by 21%, from 237 to 187 cases per lakh population, compared with a global decline of approximately 12%.

Treatment Coverage: The government reported 92% treatment coverage. This reflects progress in identifying and treating cases, but does not mean all infections have been detected or cured.

National Strategy: The National Tuberculosis Elimination Programme (NTEP) follows four pillars: Detect, Treat, Prevent and Build. Community participation and early diagnosis are essential to achieving these objectives.

4. Significance of JOSH Teams

Early Detection: Household outreach can identify people who remain outside the formal healthcare system and help reduce transmission.

Treatment Adherence: Follow-up and community support can reduce treatment interruption and the risk of drug-resistant TB.

Youth Participation: Involving NCC cadets and MY Bharat volunteers strengthens public awareness and community ownership of disease prevention.

Inclusive Healthcare: Local outreach can improve access for underserved communities and help address stigma associated with TB.

Global cooperation is needed now to tackle cybercrime: PM

The Hindu Bureau

NEW DELHI

Prime Minister Narendra Modi on Thursday called for global cooperation on cybercrime and financial cyber fraud, and said that “technology achieves scale only when it earns trust”.

“Cyber fraud and cybercrime respect no boundaries; a person sitting in one country can get help from a second country to commit a crime in a third country ... It is necessary that we work on a global framework for this. Governments, technology companies, telecom operators and financial institutions will all have to join this framework,” he said at the 10th edition of the India Mobile Congress.

Mr. Modi said that India had achieved a large amount of digitisation in recent years. “Until a decade ago, the digital divide



Narendra Modi

was a very big challenge in India,” he said, adding, “Through the Digital India campaign, we resolved to change this, and we put the mobile phone at its centre. This was a very big effort towards the democratisation of technology. For this, every necessary reform was made in the telecom sector, and infrastructure was expanded. We focused on ensuring that mobile phones and

other telecom hardware are made in India itself.”

Setting standards

Union Communications Minister Jyotiraditya Scindia said in his remarks at the event that “the Bharat 6G Alliance from India” has established 7,700 patents, with most being registered internationally. “It is our goal to be seated at the standard-setting table,” he said.

“One GB of data would cost ₹268 in 2014,” Mr. Scindia said, adding, “Today, 12 years later, one GB of data costs only ₹8 – the cheapest data capability across the world. And combine that with adoption. In 2014, the average monthly data usage per customer was only 0.26 GB. Twelve years later, it has grown 140 times to 36 GB per individual across the length and breadth of our country.”

5. Global Cooperation Needed to Tackle Cybercrime

GS-3 — Science & Technology, Cybercrime, Digital Infrastructure

Context: At the 10th India Mobile Congress (IMC), Prime Minister Narendra Modi called for global cooperation against cybercrime and financial cyber fraud, emphasising trust, secure technology and shared responsibility.

1. Why Global Cooperation Is Needed

Borderless Crime: Cybercriminals can operate from one country, target victims in another and route money through a third, making international cooperation essential.

Financial Cyber Fraud: Digital payments and online banking increase the need for coordinated action against fraud, identity theft and cross-border financial crime.

Shared Responsibility: Governments, technology companies, telecom operators and financial institutions must cooperate to prevent attacks and share threat information.

Trust in Digital Technology: Cybersecurity and data protection are essential for public confidence in digital services and the wider digital economy.

2. India's Digital Transformation: Key Data

Cheaper Data: According to the article, 1 GB of mobile data cost ₹268 in 2014, compared with ₹8 at the time of the speech.

Rising Usage: Average monthly data consumption per customer increased from 0.26 GB in 2014 to 36 GB, a reported 140-fold rise.

Digital Inclusion: The Digital India campaign and telecom reforms expanded access to mobile phones, internet connectivity and digital services.

Secure Infrastructure: India's next challenge is to ensure that expanding connectivity is supported by secure telecom networks, trusted devices and effective cyber-fraud prevention.

3. Technology Standards and India's Role

Bharat 6G Alliance: The alliance promotes Indian participation in developing and shaping sixth-generation (6G) telecommunications technology.

Patent Development: The article reports that the alliance has established 7,700 patents, most registered internationally, reflecting efforts to strengthen India's technology presence.

Standard-Setting: India aims to participate more actively in international telecommunications standards, influencing future network architecture and security requirements.

Domestic Manufacturing: Developing trusted mobile phones and telecom equipment in India can strengthen technological capability and reduce dependence on external supply chains.

4. Way Forward

International Cooperation: Strengthen cross-border intelligence sharing, digital evidence exchange and cooperation in investigating cybercrime.

Financial Security: Improve coordination among banks, payment providers and law-enforcement agencies to detect suspicious transactions and limit fraud.

Secure-by-Design Technology: Integrate cybersecurity, privacy safeguards and regular security testing into digital platforms and telecom infrastructure.

Inclusive Cyber Awareness: Improve public awareness about phishing, identity theft, fraudulent links and digital-payment scams.

Why stubble fires keep coming back

Stubble burning is the result of a combination of legal, technological and economic factors, including the paddy-wheat cycle, assured procurement and a narrow window between crops; a lasting solution needs stronger incentives for diversification, better residue management and more reliable measurement of burning

FULL CONTEXT

C.S.C.Sekhar

It is that time of the year when air pollution in North India, and in Delhi in particular, takes centre stage in public discourse. One oft-cited reason for the worsening air quality index (AQI) is stubble burning by farmers.

Why farmers burn stubble

Stubble burning is the practice of setting fire to crop residue, consisting of the lower parts of plants left after harvesting. This practice is prevalent from the beginning of October to the end of November across northwest India, especially in Punjab, Haryana, and parts of Uttar Pradesh. Stubble burning is mainly associated with the burning of paddy straw in Punjab and Haryana, which together produce around 29 million metric tons of paddy straw. Stubble burning releases large amounts of particulate matter, carbon monoxide, volatile organic compounds (VOCs), and other carcinogenic substances, which together form a thick smog that can harm human health. It also leads to a loss of soil fertility by depleting nitrogen, sulphur, potash, phosphorus, and other micronutrients. The heat generated by stubble burning results in a loss of soil moisture and organic content, which, in turn, leads to increased use of fertilizers in the next crop cycle.

Stubble burning is not a new phenomenon. It has been practised in Punjab since the late 1970s and early 1980s, largely following the introduction of combine harvesters, which leave a portion of the plant in the soil after harvesting. What has changed is its timing, which now coincides with the winter months in North India. This shift in timing followed the enactment of the Punjab Preservation of Sub-Soil Water Act, 2009 (PPSSWA 2009).

In 2012, nearly 73% of the cropped area in Punjab was irrigated using groundwater resources. There was a deficit of 14.31 billion cubic metres, which was met through excessive withdrawal of groundwater. Groundwater levels in Punjab declined at an alarming rate of 0.36 metres annually between 1999 and 2009, driven by intense over-exploitation for agriculture. A landmark NASA GRACE satellite study in 2009 showed that the region comprising Punjab, Haryana and Rajasthan lost 109 cubic kilometres of groundwater between 2002 and 2008 alone, which was considered the largest instance of groundwater depletion in the world at the time.

Water crisis

The PPSSWA 2009 was a result of this alarming situation. The main goal of the Act was to prevent rapid groundwater depletion by prohibiting early paddy nursery sowing and transplantation before the arrival of the monsoon rains. The Act prohibited farmers from sowing paddy before May 10 and transplanting it before June 10, thus delaying paddy transplantation to align with the monsoon season. To ensure compliance, the Act prescribed stringent punishments. Implementing officers were authorised to destroy paddy sown in contravention of the Act and impose a penalty of ₹10,000 per hectare for every month of contravention. These actions by officials were also exempt from legal scrutiny.

These sowing restrictions under PPSSWA 2009 pushed the paddy harvest



A farmer burns paddy stubble in a field on the outskirts of Amritsar, in Punjab. FILE PHOTO

to late October and early November, leaving farmers a narrow 10-15-day window to prepare their fields for the next wheat crop and reducing the time available for sowing. The PUSA-44 variety, which produces higher yields but takes 150-160 days to harvest, further narrowed the window between paddy harvesting and wheat sowing. Combine harvesters, which leave about a foot of stubble behind, put heavy pressure on farmers to clear the crop residue in a very short time. Manual clearing is time-consuming and expensive. Together, these factors made stubble burning almost a necessity for farmers.

The moot point is why farmers continue to grow paddy and wheat despite a stringent legal framework and depleting groundwater levels. The answer lies in the incentive structure built for these two crops. The present minimum support price and procurement framework heavily favours rice and wheat procurement in Punjab and Haryana. Between 2012 and 2024, average paddy procurement in India was about 37% of production. The corresponding figures for Punjab and Haryana were 87% and 74%, respectively, more than double the national average. The pattern is similar for wheat, with procurement accounting for 30% of production nationally, compared with 70% in Punjab and 63% in Haryana. It needs to be noted that the computation of national averages includes Punjab and Haryana, and if these two States are excluded, the differences could be even higher. Such a system provides assured incomes to producers of these two crops in these two States, discouraging them from diversifying into other crops. In addition, power is free for farmers in Punjab and almost free in Haryana. This further encourages farmers to grow water-intensive crops like paddy and wheat through groundwater extraction.

Incentive problem

The technical solutions to stubble burning fall broadly into two categories: *in-situ* measures that include the use of crop residue management (CRM) machines such as Happy Seeders, Super Seeders and Rotavators; short-duration rice varieties; and direct seeding of rice; and

ex-situ measures that involve using crop residue for alternative energy production, such as bio-ethanol and compressed biogas. However, both approaches face formidable problems. Happy Seeders and Super Seeders require an expensive 60-horsepower (HP) tractor, which remains unused for most of the year. Even hiring one typically costs a farmer ₹10,000 and involves a long waiting period. *Ex-situ* measures cost ₹1,500-₹2,500 per acre, a significant expense for many farmers.

The economic approach to address stubble burning involves building an incentive structure for farmers to diversify from paddy to other crops. The National Green Tribunal ruled in 2018 that farmers who burn stubble could be excluded from the purview of the minimum support price (MSP) policy. The Supreme Court upheld this view in 2023. During the stubble burning season of 2025, 31 flying squads by CPCB were deployed in 18 districts of Punjab and 13 districts of Haryana, involving 10,500 field functionaries in Punjab and 10,000 in Haryana.

Commission for Air Quality Management (CAQM) has directed that complaints be filed before the judiciary against the officials responsible for the lack of effective monitoring. The Parliamentary Committee on air quality, however, advocated that penalising farmers should be the last resort. The Committee recommended setting a minimum price covering all the costs for selling stubble for *ex-situ* measures, which can ensure farmers' guaranteed income.

The government of Punjab mostly adopted *in-situ* CRM-based measures and limited *ex-situ* initiatives. CAQM observed in 2025 that a lot is required to be done in Punjab in terms of timely availability of CRM machinery, necessary support for CBG plants and other industries utilizing paddy straw, and better enforcement. On the other hand, Haryana adopted an incentive-based approach, along the lines of the Parliamentary Panel's recommendations, in addition to *in-situ* and *ex-situ* measures. A financial incentive of ₹1,000/acre for CRM use; ₹4,000/acre for direct seeding of rice; ₹7,000/acre for diversification to alternate crops; and incentives to panchayats for better

performance have been put in place.

Punjab and Haryana are reported to have collectively achieved a 90% reduction in stubble burning incidents during paddy harvesting in 2025 in comparison to the same period in 2022 (Lok Sabha starred question No. 18, 1.12.2025). However, this assessment needs to be interpreted with caution, given some issues in measurement.

Measurement problem

Presently, the CREAMS (Consortium for Research on Agroecosystem Monitoring and Modeling from Space) protocol used for measuring stubble burning is built on NASA's MODIS and VIIRS satellites. These are polar satellites that orbit the earth's poles and observe India only at fixed times of the day, from 10:30 am to 1:30 pm. Their sensors are able to capture only active fires and are unable to compute the actual number of fires over a 24-hour period. According to a report by the *International Forum for Environment, Sustainability and Technology* in 2025, when data from multiple satellites was used to compute the actual land area affected by fire, the reduction was more gradual, at around 30%. A *Current Science* study in November 2025, led by scientists from ISRO using geostationary satellite observations, showed that farmers have shifted to stubble burning in the evening hours to avoid polar satellites. This study suggested using both polar and geostationary satellite data for an accurate picture of stubble burning.

Conclusion

In conclusion, stubble burning is a complex phenomenon driven by technological, economic and legal factors. The solution should be a judicious mix of the short-term *in-situ* and *ex-situ* measures with the medium/long term crop diversification (away from paddy). There needs to be an improvement in the methodology of measurement. Penal provisions are unlikely to be useful as there can be perverse incentives for collusion between farmers and officials, which may lead to 'showing' a reduction, rather than an actual reduction. (C.S.C.Sekhar is professor of economics, Institute of Economic Growth, Delhi University)

THE GIST

▼ The Punjab Preservation of Sub-Soil Water Act, 2009 delayed paddy cultivation, pushing harvesting into late October and leaving farmers little time to prepare fields for wheat sowing, making stubble burning an easier option

▼ The strong procurement of paddy and wheat, along with free or cheap power, has discouraged crop diversification and encouraged continued cultivation of water-intensive crops despite falling groundwater levels

▼ While Punjab has largely relied on crop-residue management, Haryana has adopted financial incentives for residue management and crop diversification; however, satellite-based estimates of declining stubble burning need closer scrutiny

6. Why Stubble Fires Keep Coming Back

GS-3: Agriculture, Environment, Air Pollution, Government Policies

Context: Stubble burning persists in Punjab, Haryana and neighbouring regions due to the paddy–wheat cropping cycle, a narrow sowing window, costly residue management and weak markets for crop residue.

1. Why Farmers Burn Stubble

1. Paddy–Wheat Cropping Cycle: Assured procurement and Minimum Support Price (MSP) encourage paddy cultivation, generating large quantities of straw. Haryana's Mera Pani Meri Virasat scheme incentivises farmers to shift towards alternative crops.
2. Short Sowing Window: Farmers often have only 10–15 days between paddy harvesting and wheat sowing. The Punjab Preservation of Sub-Soil Water Act, 2009, conserves groundwater by regulating paddy cultivation timing but indirectly narrows the harvest window. Short-duration varieties such as PR-126 can help.
3. High Machinery Costs: Happy Seeders and Super Seeders manage residue, but rental, fuel and labour costs limit access. The Central Government's Crop Residue Management Scheme provides 50% assistance to individual farmers and 80% to eligible Custom Hiring Centres.
4. Weak Residue Markets: Inadequate storage, transport and industrial demand make straw difficult to sell profitably. Biomass-based power plants, compressed biogas facilities and CAQM directions promoting crop-residue-based fuel in specified brick kilns can create demand.
5. Economic Convenience: Burning clears fields quickly at relatively low cost. Haryana's 2026 action plan offers ₹1,200 per acre for optimal residue-management practices, alongside machinery support.

2. Environmental and Agricultural Impacts

1. Air Pollution: Releases fine particulate matter (PM_{2.5}), carbon monoxide and other pollutants, worsening air quality across northern India. The Commission for Air Quality Management (CAQM) Act, 2021 provides a framework for coordinated action in the National Capital Region and adjoining areas.
2. Soil Degradation: Damages beneficial soil microorganisms and can reduce soil organic matter and nutrient availability. In-situ residue incorporation helps retain organic matter.
3. Climate Impact: Releases greenhouse gases and black carbon. Biomass power, industrial boilers and biofuel production offer alternatives to open burning.
4. Agricultural Sustainability: Repeated burning can weaken soil health and increase dependence on external agricultural inputs. Crop diversification and better residue management support long-term sustainability.

3. Legal Framework and Enforcement

1. Environmental Compensation: CAQM's revised rates, notified in November 2024, are ₹5,000 per incident for farms below 2 acres, ₹10,000 for 2–5 acres and ₹30,000 for farms above 5 acres.

2. State Enforcement: Haryana's 2026 action plan includes a Parali Protection Force, drones, village-level monitoring and action against verified incidents.

3. Supreme Court Oversight: The Court has pressed governments to strengthen implementation, collect environmental compensation and provide effective alternatives to burning.

4. Scientific Monitoring: Satellite-based fire detection and ground verification help identify incidents. The Indian Council of Agricultural Research–Indian Agricultural Research Institute protocol supports crop-residue-burning monitoring.

4. Way Forward

1. Crop Diversification: Expand Mera Pani Meri Virasat and strengthen markets, procurement and price support for pulses, oilseeds, maize and other suitable alternatives to paddy.

2. Affordable Machinery: Strengthen the Crop Residue Management Scheme, expand Custom Hiring Centres and ensure timely access to machinery. CAQM has also directed measures for rent-free machinery access for small and marginal farmers.

3. Profitable Straw Markets: Expand biomass power, compressed biogas, pelletisation and industrial use of straw through supply-chain support and biomass-use requirements in specified industries.

4. Incentives with Enforcement: Combine financial support, such as Haryana's per-acre incentive, with penalties for verified burning incidents and effective implementation.

5. Coordination and Accountability: The Centre, States, CAQM, agricultural universities, panchayats and industries should coordinate crop planning, machinery distribution, residue collection and monitoring. Measure success through reductions in burning, not merely machinery distribution.

SC seeks tighter measures for safety after Delhi rape cases

Top court orders enhanced patrolling around educational institutions, stringent verification of drivers operating public transport and cab services, and stepping up of emergency response

Aaratrika Bhaumik
NEW DELHI

In a slew of sweeping measures to curb sexual offences in the national capital, the Supreme Court has ordered enhanced patrolling around educational institutions, stringent verification of drivers operating public transport and app-based cabs, real-time monitoring of vehicle-tracking and SOS systems, and action against establishments serving liquor unlawfully.

A Bench of Justices J.B. Pardiwala and K. Vinod Chandran observed that the recurrence of sexual offences in public spaces, despite existing protocols such as anti-eve-teasing squads, called into question whether these measures were being implemented “with the degree of consistency, supervision and accountability” required.

The court accordingly made the Chief Secretary and the Delhi Police Commissioner responsible for filing periodic compliance reports, warning that the



The directions follow the court's September 28 order taking *suo motu* cognisance of rape cases in Delhi-NCR. SUSHIL KUMAR VERMA

two officers would be held “personally answerable” for any lapses.

“There shall be enhanced beat patrolling on an immediate basis, across the NCT of Delhi, more particularly around educational institutions (including schools, colleges, universities and coaching institutions) and other zones which get flagged under the vulnerability mapping exercise,” the Bench directed, while adding that the police chief must apprise the court whether control-room command centres or “war rooms” were operational

in the capital and detail the protocols for real-time coordination and emergency response.

The latest directions follow the court's September 28 order taking *suo motu* cognisance of a spate of rape cases reported across Delhi-NCR. The court said the intervention was aimed at strengthening immediate crime-prevention and emergency-response mechanisms, while requiring the authorities to identify gaps in existing policies and their implementation.

Underlining the importance of preventive policing, the Bench referred to

the “Broken Windows theory” of policing, noting that seemingly minor administrative lapses such as unattended streetlights, dysfunctional CCTV cameras, dark stretches and unresolved public complaints could eventually create a “heightened perception of insecurity” among citizens and deter them from using public spaces, fueling a “self-reinforcing cycle” that provides greater scope for crime.

Verification of drivers

Notably, the court also directed strict verification of drivers and assistants operating government and private buses, cabs, taxis and autorickshaws, including vehicles linked to app-based aggregators such as Ola, Uber and Rapido.

The court directed the authorities to file comprehensive, district-wise status reports by November 6, detailing compliance with its earlier and latest directions, measures still pending, and reasons for any delay. It posted the matter for further hearing on November 16.

7. Women's Safety in Public Spaces: Supreme Court Directions, Laws and Judicial Precedents

GS-2: Judiciary, Governance, Fundamental Rights, Women's Safety

Context: In *In Re: Recent Rape Incidents in Delhi-NCR*, the Supreme Court initiated *suo motu* proceedings in September 2026 to examine systemic failures in women's and children's safety.

Its focus is on whether existing safeguards actually work on the ground, not merely whether policies exist.

1. Supreme Court's Directions

1. Vulnerability Mapping: Identify high-risk parks, isolated roads, transport hubs, markets and educational institutions using crime data, complaints and local intelligence.
2. Enhanced Patrolling: Strengthen police patrols, particularly during evening and early-morning hours, with designated officers responsible for vulnerable locations.
3. Infrastructure and Transport Audits: Review street lighting, Closed-Circuit Television (CCTV) cameras, public-space security and vehicle inspections.
4. Review Existing Safety Systems: Examine the functioning of emergency number 112, Women Helpline 181, Women Help Desks, One Stop Centres, the Safe City Project and the National Database on Sexual Offenders.
5. Accountability and Compliance: Require status reports on police initiatives, including Shishtachar Squads, Operation Nirbheek and the Nazuk Scheme, and examine staffing, investigation delays and the functioning of Fast Track Special Courts and Protection of Children from Sexual Offences (POCSO) courts. The Court warned that responsible senior officials could be held personally answerable for non-compliance.

2. Relevant Supreme Court Judgments

1. Vishaka v. State of Rajasthan (1997): Established binding guidelines against sexual harassment at the workplace, later followed by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.
2. Lalita Kumari v. Government of Uttar Pradesh (2013): Held that registration of a First Information Report (FIR) is mandatory when information discloses a cognisable offence, subject to the limited principles laid down by the Court. This is crucial for reporting sexual offences.
3. Nipun Saxena v. Union of India (2018): Reinforced protection of the identity of rape survivors. The law restricts disclosure of identifying information to protect dignity and privacy.
4. Shakti Vahini v. Union of India (2018): Issued preventive, remedial and punitive directions against honour crimes, including unlawful interference with consenting adults' choices of partners.
5. Aureliano Fernandes v. State of Goa (2023): Re-emphasised effective implementation of workplace sexual-harassment law, including properly constituted Internal Committees and awareness of complaint mechanisms.

3. Important Laws for Women's Safety

1. Bharatiya Nyaya Sanhita (BNS), 2023: Sections 63–71 address rape and related offences; Sections 74–79 cover offences such as assault intended to outrage a woman’s modesty, sexual harassment, disrobing, voyeurism, stalking and insulting the modesty of a woman. Effective from 1 July 2024.

2. Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023: Provides criminal-procedure safeguards, including provisions on recording information about specified offences against women, investigation and victim-related procedures.

3. Protection of Children from Sexual Offences (POCSO) Act, 2012: Protects every child below 18 years from sexual assault, sexual harassment and pornography, with child-friendly reporting and trial procedures.

4. Sexual Harassment of Women at Workplace Act, 2013: Requires eligible workplaces to establish Internal Committees; provides Local Committees for complaints where applicable and imposes duties on employers to prevent and redress workplace harassment.

5. Protection of Women from Domestic Violence Act, 2005: Provides civil remedies, including protection, residence, monetary and other reliefs for women experiencing domestic violence.

4. Government Initiatives and Institutional Mechanisms

1. Mission Shakti: Umbrella programme for women’s safety, security and empowerment, incorporating support and empowerment services.

2. Emergency Response Support System (112) and Women Helpline (181): Facilitate emergency assistance and access to support services; actual availability and coordination must be verified locally.

3. One Stop Centres: Provide coordinated medical, legal, police, counselling and other support to women affected by violence.

4. Safe City Project and Women Help Desks: Seek to improve public-space surveillance, emergency response and access to police assistance.

5. Shishtachar Squads, Operation Nirbheek and Nazuk Scheme: Delhi Police initiatives whose operational effectiveness, coverage and safeguards for complainants are being examined by the Supreme Court.

5. Way Forward

1. Implement Court Directions: Complete vulnerability mapping, repair lighting and CCTV systems, and strengthen patrols around vulnerable locations.

2. Ensure Prompt Registration and Investigation: Apply the BNSS framework, monitor delays and use the Investigation Tracking System for Sexual Offences (ITSSO) for oversight.

3. Protect Survivors: Maintain confidentiality, prevent intimidation and provide coordinated legal, medical and psychological assistance.

4. Strengthen Accountability: Publish measurable district-level data on response times, operational patrols, complaint handling and court pendency.

5. Promote Women's Confidence: Improve public awareness of helplines, transport safeguards and complaint mechanisms so women can access education, employment and public spaces without fear.