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Voting should be recognised as a fundamental right, says Ramesh

The Hindu Bureau
NEW DELHI

The right to vote should be recognised as a fundamental right to ensure the highest level of judicial review and protection, along with safeguards against voter suppression or arbitrary exclusions during exercises such as the special intensive revision (SIR), senior Congress leader Jairam Ramesh said on Sunday.

Mr. Ramesh made the remarks in the context of the recent Supreme Court judgment declaring the right to walk on a footpath a fundamental right. Providing historical context on the evolution of fundamental rights and electoral provisions, he argued that while the top court has already in the past recognised voters' right to know candidates' criminal records, funding sources, and has protected ballot secrecy and enabled NOTA, but voting itself continues to remain a statutory right. "All related rights are fundamental, but not the core right they depend on," he said.


Jairam Ramesh

He said elevating the right to vote has become essential in the present context. "With the blatantly partisan functioning of the Election Commission of India working at the behest of the Prime Minister and the Union Home Minister having been brutally exposed, it is now time to elevate the right to vote as a fundamental right that would offer it the highest level of judicial review and protection," he said.

"It would be a powerful step in putting in place safeguards against voter suppressions or arbitrary disqualifications that have taken place in different states in astronomical numbers under the SIR process. It would also mean greater Supreme Court vigilance over the functioning of the Election Commission," he added.

Referring to the Constituent Assembly debates, Mr. Ramesh said an Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas was set up under Sardar Patel. At its meeting on April 21-22, 1947, there was discussion on making the right to vote a fundamental right. Dr. B.R. Ambedkar and Babu Jagjivan Ram supported the proposal, he said, while Sardar Patel, C. Rajagopalachari and others opposed it.

"Sardar Patel himself took the position that universal adult franchise was, in itself, an implicit fundamental right. This is the background to Article 326 which provides for elections based on universal adult suffrage," he said.

He also cited Justice Ajay Rastogi's dissenting opinion in the *Anoop Baranwal vs. Union of India* judgment of March 2023, which held that the right to vote is a fundamental right.

Right to vote and to be elected in India is a

(a) Fundamental Right

(b) Natural Right

(c) Constitutional Right

(d) Legal Right

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1. Context: Congress leader Jairam Ramesh demanded that the Right to Vote be recognised as a Fundamental Right, arguing that stronger constitutional protection is needed against voter exclusion and arbitrary electoral processes.

2. Core Content
* Article 324 – Election Commission of India (ECI): Superintendence, direction and control of elections.
* Article 326 – Constitutional basis of Universal Adult Suffrage.
* Article 327 – Empowers Parliament to make laws relating to elections.
* Pursuant to Article 327:
    * Representation of the People Act (RPA), 1950 – Electoral rolls and voter registration.
    * Representation of the People Act (RPA), 1951 – Conduct of elections, qualifications, disqualifications and election disputes.

Nature of Voting Rights
* Article 326 → Constitutional foundation
* RPA 1950 & RPA 1951 → Statutory mechanism
* Article 19(1)(a) → Right to Know candidate information and None of the Above (NOTA)

Election Commissioner Appointment
* Anoop Baranwal v. Union of India (2023): Prime Minister + Leader of Opposition + Chief Justice of India.
* Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023: Prime Minister + Leader of Opposition + Union Cabinet Minister nominated by Prime Minister.

3. UPSC Mains Value Addition

Constituent Assembly Debate (Right to vote)

* Supported: Dr. B.R. Ambedkar, Babu Jagjivan Ram.
* Opposed: Sardar Vallabhbhai Patel, C. Rajagopalachari.
* Patel's view: Universal Adult Franchise itself is a sufficient democratic safeguard; separate Fundamental Right unnecessary.
* Consequently, voting was placed under Article 326, not under Part III (Fundamental Rights).

Supreme Court-led Electoral Reforms

* Indira Nehru Gandhi v. Raj Narain (1975) – Free and Fair Elections linked to Basic Structure.
* Association for Democratic Reforms (ADR) Case (2002) – Candidate disclosure of criminal cases, assets and educational qualifications.
* People's Union for Civil Liberties (PUCL) (2003) – Right to Know recognised under Article 19(1)(a).
* PUCL (2013) – NOTA and ballot secrecy.
* Lily Thomas v. Union of India (2013) – Immediate disqualification upon conviction.
* Public Interest Foundation v. Union of India (2018) – Wider disclosure of criminal antecedents.
* Anoop Baranwal v. Union of India (2023) – Independent appointment process for Election Commissioners.

Final Supreme Court Position

* N.P. Ponnuswami (1952) → Jyoti Basu (1982) → Kuldip Nayar (2006): Right to Vote is not a Fundamental Right; it is a Statutory Right, though rooted in Article 326.

Why have India's statistical databases been upgraded?

What key economic indicators have been revised? Why was an overhaul of the databases necessary? What changes were made to the national accounts and GDP estimates? How has the measurement of industrial output been improved? What changes have been made to India's inflation indicators?

T.C.A. Sharad Raghavan

The story so far:

Last November, the Indian government received a 'C' grade, the second-lowest grade, by the International Monetary Fund for the quality of its national accounts statistics. Over the last few months, it has made several upgrades to its statistical databases, improving their timeliness, representativeness, accuracy, and coverage. These improvements have been wide-ranging, covering the way India measures its gross domestic product (GDP), the value addition in the economy, industrial output, and price levels at the retail, wholesale, and producer levels.

What are the metrics that have been updated?

The most significant of these changes was made to India's national accounts statistics in February this year by the Ministry of Statistics and Programme Implementation (MoSPI). National accounts include several key metrics such as GDP, gross value added (GVA), sector-wise output and growth figures, and the contributions of each of the engines of growth to the economy – government expenditure, private investment, household consumption, and trade. These are released on a quarterly and annual basis.

In June, MoSPI also updated the Index of Industrial Production (IIP), which captures how industrial activity in the economy is doing on a monthly basis. This includes key sectors such as manufacturing, mining, electricity, infrastructure, capital goods, and consumer goods. Apart from providing a regular snapshot of how the industrial sectors are doing, these monthly figures also feed into the GDP and GVA metrics.

The third broad set of upgrades were to how India measures inflation. Price changes at the retail level, which is meant to capture the consumer-end of the market, are measured by the Consumer Price Index (CPI). Similarly, price changes at the wholesale level, which is ideally meant to capture the prices that producers get, are measured by the Wholesale Price Index (WPI). MoSPI releases the CPI while the Ministry of Commerce and Industry releases the WPI. Both these indices have been significantly updated and upgraded – the CPI in February and the WPI in June.

In June, the Commerce Ministry also introduced a new index – the Producer Price Index (PPI) – which not only captures the price impact on producers more accurately, but will also replace the WPI entirely in five years.

Why was an update needed?

These databases were outdated and were becoming less representative of reality with each passing year. The GDP and GVA data, for example, had a base year of 2011-12, as did the IIP. The economy has changed substantially in the years since then, with the contribution of several sectors to the economy growing while others have diminished in importance. An outdated base year weakens the overall measurements and makes them less representative of the current reality.

Before they were updated, the WPI and CPI had base years of 2011-12 and 2012, respectively. Here, too, the outdated indices were measuring price changes and index values based on household consumption patterns that were about 15 years old. Several items used back then, such as DVDs and cassettes, were included in the indices even though they are not used now. Conversely, several items that are being used now were not captured by the indices because they were not in use back then.

The databases were outdated and were becoming less representative of reality with each passing year. An outdated base year weakens the overall measurements and makes them less representative of the current reality

Items like DVD players and tape recorders have been removed from CPI. GETTY IMAGES

More accurate price information is important not just for policymaking but also for a more accurate measure of the size of the economy and its growth. The RBI's Monetary Policy Committee, for example, uses the CPI to gauge inflation and decide on interest rates. The Dearness Allowance and Dearness Relief given to current and former government employees, respectively, are pegged to inflation. The rate of growth of the real economy, which is the commonly accepted metric used to measure growth worldwide, is arrived at after having adjusted the impact of inflation on the economy.

What changes were made to the national accounts?

First, the base year was updated to 2022-23, immediately making the data more representative of the current situation. Apart from this, the new series of national accounts has also incorporated several methodological changes and measurement improvements.

One of the most important changes, and one that has long been advocated by statisticians, was the incorporation of the 'double deflator' method for estimating real GDP growth. This adjusts input and output prices separately, providing a much more accurate picture of the impact of price changes. Currently, the 'double deflator' method is being used for agriculture and manufacturing. It is expected to be adopted for the other sectors as well over time.

The other important change was the segregation of activities in multi-activity enterprises. There are several companies that are active across different sectors. Earlier, the data would capture the company's entire output and allocate it to the main sector within which it was operating. This yielded a somewhat inaccurate measure of sectoral activity. Now, the output will be allocated to each sector proportionately, providing a more accurate picture.

The new series also incorporates new data sources such as the Goods and Services Tax data and the Periodic Labour Force Surveys. It also incorporates several improvements in statistical methodology that will reduce discrepancies.

What other changes were made to output measures?

MoSPI updated the base year of the IIP to 2022-23 and expanded its coverage by including sectors such as gas supply, water supply, sewerage, and waste management activities, while retaining the previous sectors. Simultaneously, the index was revamped to provide greater granularity in terms of sources of electricity (renewable and non-renewable), and the types of minerals produced.

The revised item basket consists of 1,042 products mapped to 463 item groups, compared to 839 items mapped to 407 item groups in the previous series.

What are the inflation-related changes?

The base year of the CPI was updated to 2024, and the basket of items it measures as well as their relative weightages were pegged to the latest Household Consumption Expenditure Survey of 2023-24. The price change metrics now better reflect the current consumption patterns of households.

The data is also more illustrative, with the tables providing 12 different categories of items compared to the six groups in the previous series. Overall, the total number of items measured – including both goods and services – has increased from 299 to 358.

These additions of goods and services include for the first time inclusion of rural house rent, modern consumption items such as online media services and fuels such as CNG and PNG, and improvements in the measurement of telephone charges, rail fare, air fare, fuel, postal charges and online media and streaming services. Items that are no longer used, such as VCRs, DVD players, radio, tape recorders, and cassettes, were removed from the CPI.

The WPI was similarly updated, with its base year revised to 2022-23 and the number of items expanded from 697 to 957. The new series also incorporates several methodological refinements.

The data have also been reorganised more logically. For instance, crude petroleum and natural gas have been moved from the 'Primary Articles' category to the 'Fuel and Power' major group, which already includes other key fuels such as coal, electricity and petroleum products.

The third major change introduced by the Commerce Ministry was the adoption of a PPI. Unlike the WPI, the PPI separately tracks the prices producers pay for inputs and the prices they receive for their outputs. The PPI excludes additional costs such as transport and indirect taxes, which the WPI includes. This makes the PPI a more accurate representation of prices at the producer level. It also incorporates both goods and services, which makes it more holistic. The government has indicated that the WPI will be phased out over the next five years, leaving the CPI and PPI as the country's two principal price indices.

1. Context: India has upgraded its major statistical databases covering Gross Domestic Product (GDP), Gross Value Added (GVA), Index of Industrial Production (IIP), Consumer Price Index (CPI) and Wholesale Price Index (WPI) to improve accuracy, representativeness and policy relevance.
* The reforms follow the International Monetary Fund's (IMF) upgrade of India's national accounts statistics to Grade A (second-highest category).

2. Important Facts
* Gross Domestic Product (GDP): Total value of final goods and services produced within India.
    * Base Year: 2011-12 → 2022-23
* Gross Value Added (GVA): Value of output minus intermediate consumption.
    * Base Year: 2011-12 → 2022-23
* Index of Industrial Production (IIP): Measures industrial output in manufacturing, mining and electricity.
    * Base Year: 2011-12 → 2022-23
* Consumer Price Index (CPI): Measures retail inflation; inflation-targeting benchmark of the Reserve Bank of India (RBI).
    * Base Year: 2012 → 2024
* Wholesale Price Index (WPI): Measures wholesale-level inflation.
    * Base Year: 2011-12 → 2022-23
* Producer Price Index (PPI): Measures prices received by producers for goods and services.
    * Newly introduced; expected to gradually replace WPI.

3. Why was the Revision Needed?
* Existing databases no longer reflected current production and consumption patterns.
* Rapid expansion of the digital economy and services sector was under-represented.
* Obsolete products remained in indices while several new products and services were excluded.
* Outdated base years reduced the accuracy of GDP, inflation and industrial output estimates.

4. Major Improvements

* GDP/GVA: Adoption of the Double Deflation Method; integration of Goods and Services Tax (GST) and Periodic Labour Force Survey (PLFS) data.
* IIP: Improved sectoral coverage, product basket and electricity classification.
* CPI: Based on Household Consumption Expenditure Survey (HCES) 2023-24; inclusion of digital and modern consumption items.
* WPI: Expanded product basket and improved classification.
* PPI: Separately captures producer-level input and output prices.

5. Significance

* More accurate measurement of economic growth and inflation.
* Better monetary policy decisions by the Monetary Policy Committee (MPC).
* Improved fiscal planning and welfare targeting.
* Stronger evidence-based policymaking and international comparability.

Biochar offers a way to turn India's farm smoke into 'black gold'

When added to poor, degraded soils, biochar can increase their ability to store water and stimulate the growth of beneficial microbes; studies have indicated that it can improve crop productivity by 10% to 30% and water-holding capacity by 10% to 25%, particularly in soils low in nutrients

Vinaya Kumar H.M.
Vikram Patil

India's agriculture faces a serious paradox: a large amount of biomass that could improve soil health is instead being burned. This threatens soil health and food security. Punjab and Haryana burn more than 20 million tonnes of paddy straw in their open fields every year. This is due to the short post-harvest periods and a lack of practical alternatives.

Burning these residues releases large quantities of greenhouse gases and fine particles into the air and soil, causing serious air pollution in the region as well as a major loss of organic matter that could otherwise be returned to the increasingly depleted soils.

At the same time, large tracts of agricultural land, from the black soils of Maharashtra to the red soils of Kerala, suffer from very low soil organic carbon, poor water-holding capacity, and rapid loss of nutrients, reducing crop productivity even with better seeds and irrigation.

Both these problems are symptoms of the same larger failure to recycle natural resources efficiently.

A biochar mixture ready to be applied to soil. Biochar is made by heating agricultural waste in low-oxygen conditions. What remains is a carbon-rich material that breaks down very slowly in the soil. NAMIBIABCBU [CC BY]

Value to agriculture

This is where biochar emerges as a carbon negative solution. Biochar is made by heating agricultural waste in low-oxygen conditions. What remains is a carbon-rich material that breaks down very slowly in the soil, helping to keep carbon locked away for long periods of time. The benefits extend well beyond carbon capture. Biochar is highly porous and contributes to aggregating soil particles, holding water, and creating a suitable environment for microorganisms.

Given these properties, the value of biochar to agriculture should be obvious. When added to poor, degraded soils, it can increase their ability to store water and stimulate the growth of beneficial microbes.

Studies have indicated that it can improve crop productivity by 10% to 30% and water-holding capacity by 10% to 25%, particularly in soils low in nutrients.

Biochar derived from maize stalks and applied to black soils in Akola district of Maharashtra has improved soil organic carbon content and overall soil fertility in field trials. Research from Kerala has shown that biochar made from coconut leaf stalks increased soil quality in different cropping systems, emphasising the need to use local resources effectively. Perhaps most significantly, long-term studies have shown that biochar has the benefit of enhancing soil health and maintaining higher crop output over time.

Wider vision

This approach also supports India's wider vision of sustainable agriculture and climate resilience. As droughts, heatwaves, and erratic rainfall become more frequent and more intense, improving soil health will be crucial to sustaining agricultural productivity.

By increasing the water-holding capacity and the ability to use nutrients efficiently, thus, biochar can help crops withstand moisture stress while reducing dependency on external inputs. This is particularly important for small and marginal farmers who are often the most exposed to the climate's vagaries.

Integrating biochar into the existing initiatives on natural farming, soil health management, and carbon farming can deliver environmental and economic benefits at scale. Yet in India, biochar remains largely confined to research trials and pilot projects, and is very much alien to many farmers.

In fact, agricultural residues are generally seen only as a problem of disposal. But they are an important resource that can generate additional income, create jobs, can deliver environmental benefits, and could even support payments for ecosystem services.

Carbon credits

As one way forward, the government could package the activities of turning agricultural waste into biochar and putting it on soil into carbon credit markets, creating a strong economic incentive for mass adoption.

Biochar carbon already passes rigorous stability criteria for long-term sequestration, and it can be classified as a persistent carbon dioxide removal technology under internationally accepted accounting standards. For instance, VM0042 agricultural land management methodology quantifies both avoided emissions from residue burning and long-term carbon sequestration in soils. In this protocol, each tonne of certified biochar can generate 2-2.8 t carbon dioxide-equivalent in carbon credits. Depending on carbon market prices, certified biochar can thus provide an additional source of income for project developers, farmers, and cooperatives.

Biochar is highly porous and contributes to aggregating soil particles, holding water, and creating a suitable environment for microorganisms

This approach is already being tested in projects such as those using the KISAN kiln from IIT-Kharagpur, which allows smallholders to monetise farm waste.

Several international examples also illustrate the scalability of biochar systems. In Kenya, turning rice husks into biochar has produced thousands of certified carbon credits and improved soil pH and phosphorus content. Thailand has pushed biochar use through national initiatives on soil rehabilitation and carbon management, and tied certification to access to the national carbon registry system, providing a policy-to-market pipeline. High carbon retention and large yield gains have also been reported from Brazil's Embrapa Institute after using on-farm biochar generated from sugarcane bagasse.

These examples also show that success depends on integrated strategies that combine decentralised, appropriately scaled pyrolysis technology with strong measurement, reporting, and verification systems.

Urban organic waste

The feedstock for biochar is also not limited to agricultural waste and can encompass urban organic waste as well. India generates around 62 million tonnes of municipal solid garbage per year and more than 50% of that is biodegradable. Sewage sludge and crop residues can also be converted into biochar.

This is in keeping with the precepts of the circular economy, as organic waste is diverted from landfills that produce methane and is converted to a useful product for agriculture. By systematically implementing these measures, India can turn its large waste streams into 'black gold', thus ensuring a more resilient agricultural future while making a meaningful contribution to global climate mitigation efforts.

Overall, the value of biomass can only be realised through an integrated ecosystem that catalyses innovation, entrepreneurship, market linkages, investment, and cost-effective access to biochar for farmers.

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THE GIST

- Biochar is made by heating agricultural waste in low-oxygen conditions
- Integrating biochar into the existing initiatives on natural farming, soil health management, and carbon farming can deliver environmental and economic benefits at scale
- As droughts, heatwaves, and erratic rainfall become more frequent and more intense, improving soil health will be crucial to sustaining agricultural productivity
- In India, however, biochar remains largely confined to research trials and pilot projects, and is very much alien to many farmers

What is the use of biochar in farming ?

1. Biochar can be used as a part of the growing medium in vertical farming.

2. When biochar is a part of the growing medium, it promotes the growth of nitrogen-fixing microorganisms.

3. When biochar is a part of the growing medium, it enables the growing medium to retain water for longer time.

Which of the statements given above is/are correct ?

(a) 1 and 2 only

(b) 2 only

(c) 1 and 3 only

(d) 1, 2 and 3

1. Context
* Biochar is emerging as a sustainable solution to India's crop-residue burning problem by converting agricultural waste into a carbon-rich soil amendment.
* It offers a triple benefit of improving soil health, enhancing farm productivity and supporting climate-change mitigation.

2. Important Facts
Biochar
* A carbon-rich material produced through Pyrolysis—heating biomass (crop residues, organic waste, bagasse, coconut waste, etc.) in low-oxygen conditions.
* Unlike open burning, carbon remains locked in a stable form for decades, making biochar a long-term carbon sink.
* Biochar is highly porous, enabling water retention, nutrient storage and microbial growth.

3. Significance / Applications
I. Soil Health
* Improves soil organic carbon, nutrient retention and microbial activity.
* Enhances water-holding capacity by 10–25%.
II. Agricultural Productivity
* Can increase crop yields by 10–30%.
* Improves drought resilience and moisture availability.
* Studies in Maharashtra's black-soil regions reported improved soil fertility and organic carbon.
III. Climate Action
* Reduces emissions from stubble burning.
* Recognised as a Carbon Dioxide Removal (CDR) technology.
* 1 tonne of certified biochar can generate 2–2.8 tonnes of carbon dioxide-equivalent carbon credits.
IV. Farmer Income
* Converts crop residue into a value-added product.
* Creates additional revenue opportunities through carbon-credit markets.
V. Circular Economy
* Utilises crop residue, sewage sludge and biodegradable urban waste.
* India generates about 62 million tonnes of municipal solid waste annually, with over 50% biodegradable.

What a 'super' El Niño might mean for India's monsoon

Setting the El Niño years since 1950 against IMD's long-period rainfall series shows that, of roughly two dozen such years, about 15 produced a below-normal monsoon and around 10 tipped into outright deficiency

Jacob Koshy

The U.S. National Oceanic and Atmospheric Administration (NOAA) confirmed this month that an El Niño has formed in the equatorial Pacific Ocean, and placed the odds at about 63% that it will strengthen into a "very strong" – colloquially, a "super" – event by the northern winter. India's June rainfall, until the 16th, is roughly 35% below normal. The combination has revived a question that returns with every El Niño year: how reliably do the strongest of these events translate into a failed Indian monsoon?

An El Niño is the periodic warming of the central and eastern equatorial Pacific that tends to weaken the South Asian monsoon and whose potency is measured by how far sea-surface temperatures in a reference patch of the Pacific climb above their long-term average.

D.S. Pai, Chief Forecaster at the India Meteorological Department's (IMD) Regional Meteorological Centre in Chennai, set out the gradations: a departure of 0.5-1° C is 'weak,' 1-1.5° is 'moderate,' 1.5-2° is 'strong', and anything beyond 2° is 'very strong.' He added that some forecasts suggest the current event could approach a record of around 2.5°.

The trade winds that normally drive warm surface water westward towards Asia weaken; the eastern Pacific warms, which in turn slackens the winds further generating a feedback loop that amplifies the anomaly. Scientists note that a warmer baseline ocean, the result of long-term climate change, has raised the heat available to recent events, making them more intense than earlier ones.

In the long term however, such events remain rare. Only a handful, the instrumental record shows, have crossed the 2° threshold – 1972-73, 1982-83, 1997-98 and 2015-16.

El Niño also follows a consistent calendar, which bears directly on its monsoon impact. "It starts in one spring season, peaks in the winter, and very fast it weakens in the next spring," Pai said, noting that an event very occasionally persists into a second year. Because the warming establishes only in spring and matures later, he said, its suppressing effect on the monsoon is felt mainly in the middle and later part of the June-September season rather than at its start. June rainfall and the pace of onset, he added, are governed largely by local and regional factors – so a weak June, including the present 35% shortfall, is not by itself a reliable guide to the season.

The 1982-83 El Niño was associated with severe drought and bushfires in Australia and dry conditions across Indonesia. The 1997-98 event drove severe forest fires and choking haze across Indonesia and Southeast Asia, killed an estimated one-sixth of the world's coral, and helped push global temperatures to a record. The 2015-16 episode triggered mass bleaching of the Great Barrier Reef, made 2016 the warmest year then recorded, and catalysed severe drought and food shortages across southern and eastern Africa.

Paradoxically, the 1997-98 El Niño actually brought 2% more rains than usual for India's summer monsoon months. This was due to an effect in the Indian Ocean, called the Indian Ocean Dipole, that brought in warm water pools, countering the Pacific-induced drying. Since then, forecasters have consistently watched for the Dipole's waxing and waning.

One of the reasons, IMD Director General, M. Mohapatra has said, for a monsoon deficit this year is that the Dipole won't be strong enough to counter the Niño.

Setting the El Niño years since 1950 against IMD's long-period rainfall series shows that, of roughly two dozen such years, about 15 produced a below-normal monsoon and around 10 tipped into outright deficiency, i.e. seasonal rainfall below 90% of the long-period average. This correlation is strong enough to shape food and fiscal planning.

Several of India's worst droughts were in El Niño years, among them 1972, 1982, 2009, and 2015.

El Niño also redistributes the world's tropical cyclones rather than simply adding to them. NOAA's research arm notes that the warming generally suppresses Atlantic hurricane activity by strengthening vertical wind shear – the change in wind speed and direction with height that can tear a developing storm apart – while making conditions more favourable for hurricanes in the central and eastern Pacific. The effect tends to scale with the event's strength.

For the basins closer to Asia, the signal runs the other way: forecasters note that during an El Niño, the odds of a Pacific storm intensifying into a super typhoon rise appreciably, though such systems typically recurve towards East Asia and the Americas rather than the Indian subcontinent.

Heat and rain

Several of India's worst droughts have been in El Niño years

- The NOAA has confirmed an El Niño has formed, with high odds of becoming a very strong event
- India's current rainfall deficit in June is mostly local and cannot reliably predict the entire season's final outcome
- Roughly 60% of El Niño years produce deficient rainfall, often leading to significant agricultural deficits
- The Indian Ocean Dipole sometimes counters El Niño, but this year it may be too weak to do so
- Delayed monsoon onset and dry spells are often more concerning than the total volume of rainfall
- Contemporary climate change makes modern El Niño events more intense than those recorded in the past

El Niño follows a consistent calendar, which bears directly on its monsoon impact. THE HINDU

La Nina is suspected to have caused recent floods in Australia. How is La Nina different from El Nino ?

1. La Nina is characterised by unusually cold ocean temperature in equatorial Indian Ocean whereas El Nino is characterised by unusually warm ocean temperature in the equatorial Pacific Ocean.

2. El Nino has adverse effect on south-west monsoon of India, but La Nina has no effect on monsoon climate.

Which of the statements given above is/are correct ?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

1. Context: The National Oceanic and Atmospheric Administration (NOAA), USA has confirmed El Niño conditions in the equatorial Pacific Ocean and estimates a 63% probability of it strengthening into a strong ("super") event, raising concerns over India's southwest monsoon.

2. Important Facts

El Niño–Southern Oscillation (ENSO): Ocean-atmosphere phenomenon over the equatorial Pacific Ocean affecting global weather and monsoons.

* El Niño: Abnormal warming of Sea Surface Temperature (SST) in the central-eastern equatorial Pacific Ocean → weaker trade winds → generally weaker Indian monsoon.
* La Niña: Abnormal cooling of Sea Surface Temperature (SST) in the central-eastern equatorial Pacific Ocean → stronger trade winds → generally stronger Indian monsoon.

India Meteorological Department (IMD) Classification (SST anomaly): Weak (+0.5°C–<1°C) | Moderate (+1°C–<1.5°C) | Strong (+1.5°C–<2°C) | Very Strong/Super (≥2°C).

3. Impact on India

I. El Niño

* Around 60% of El Niño years are associated with deficient monsoon rainfall.
* Since 1950, nearly 15 El Niño years recorded below-normal rainfall and about 10 resulted in drought conditions.
* Associated with delayed monsoon onset, prolonged dry spells, lower agricultural output and food inflation.
* Major drought years: 1972, 1982, 2009, 2015.

II. La Niña

* Generally linked with above-normal monsoon rainfall, higher agricultural output, groundwater recharge and reservoir storage; may also increase flood risk.

III. Indian Ocean Dipole (IOD)

* Positive Indian Ocean Dipole (IOD) can offset El Niño effects; e.g., 1997-98 El Niño did not significantly weaken India's monsoon.

IV. Climate Change

* Warmer oceans may intensify future El Niño events and amplify impacts on agriculture, water security and food prices.

What is Google's Project Nimbus, and why are students protesting against it?

Amazon and Google's Project Nimbus cloud contract with Israel has sparked protests over U.S. Big Tech enabling the Israeli military's violence against Palestinians; the row has intensified internal unrest within companies, with employees raising ethical concerns over how their work is being used

Sahana Venugopal

The story so far:

On June 14, Google CEO Sundar Pichai's speech at Stanford was disrupted as more than 100 students walked out in protest. Some carried Palestinian flags, others draped black-and-white patterned *keffiyeh* as scarves, and they shouted, "Free, free Palestine!"

The students were protesting against Google's Project Nimbus, a tech contract between the search giant and the Israeli government that is linked with violence against Palestinian civilians.

What is Project Nimbus?

Project Nimbus is a technology contract between the Israeli government and Google and Amazon. It is worth over $1 billion. In May 2021, Google said the agreement would deliver cloud services to Israeli government entities, including ministries, authorities, and government-owned companies. The project was scheduled to run for an initial period of seven years, and the Israeli government could extend it for up to 23 years. A month later, Amazon said the Israeli government had selected Amazon Web Services (AWS) as its primary cloud provider, under the Nimbus contract for government ministries and its subsidiaries.

In 2024, an investigation by Israeli media outlets *+972 Magazine* and *Local Call* found that the country's army stored information on servers managed by AWS. That data came from the surveillance of Palestinians, as per the investigation. Sources quoted by the media outlets alleged such information could be used to help plan airstrikes.

Furthermore, the outlets reported an increase in Israeli service demands from Google Cloud, AWS, and Microsoft Azure since October 2023, as army units sought data storage and AI services.

Why are protesters against Project Nimbus?

Project Nimbus has been facing backlash since it was first announced. In 2021, an anonymous letter signed internally by 90 Google workers and over 300 Amazon workers criticised the partnership, per *The Guardian*. They condemned Project Nimbus and the Israeli military's killings of Palestinian civilians, claiming that their employers would be "selling dangerous technology to the Israeli military and government."

The workers claimed that cloud service technology would help expand the surveillance of Palestinians, as well as illegal Israeli settlements on Palestinian land.

Opposition to Project Nimbus has grown since the Hamas attacks against Israeli civilians on October 7, 2023, followed by Israel's airstrikes and blockades in Gaza. In 2024, protesting Google employees even carried out sit-ins at Google locations in the U.S. Later, 28 employees were fired.

Pro-Palestinian protests by employees have also taken place at Big Tech company events, such as during Microsoft's 50th anniversary celebrations in 2025.

Last year, *The Guardian*, *+972 Magazine*, and *Local Call* cited leaked documents revealing that under the Project Nimbus contract, Israel mandated that Google and Amazon would not restrict how its governmental units used the tech companies' cloud services – even if Israel violated their terms of service.

However, Google has in the past stressed that Project Nimbus workloads are not related to the military, weapons, or classified intelligence. Amazon too highlighted its privacy commitments to its customers.

Which other tech companies have links to Israel?

A Palestinian-led movement, called Boycott, Divestment and Sanctions (BDS), has identified large technology companies that have formal contracts with Israel and its military sector.

The BDS website alleges these companies "technologically equip the Israeli military with computing systems as well as surveillance and communications technologies to accelerate the genocide in Gaza and automate apartheid in the West Bank, including East Jerusalem."

In September, Microsoft Vice-Chair & President Brad Smith said the company had "ceased and disabled a set of services to a unit within the Israel Ministry of Defense (IMOD)." This announcement came after media outlets *The Guardian*, *+972 Magazine*, and *Local Call* reported that the Israel Defense Forces (IDF) was using Microsoft's Azure to store Palestinians' recorded phone calls data that could be leveraged for mass surveillance or even military action.

Did Microsoft truly sever its ties with Israel's defense surveillance systems?

While Mr. Smith said that Microsoft does not provide technology to facilitate the mass surveillance of civilians, he affirmed the company's "important work" to protect the cybersecurity of Israel and other West Asian countries.

In a conclusion to the external investigation that Microsoft commissioned after the Azure surveillance allegations, the tech giant said it would implement better review processes, provide more guidance to employees, and let employees anonymously report potential policy violations.

The No Azure for Apartheid group, which is made up of Microsoft workers, claimed on June 6 that Microsoft still allowed the Israeli military and government to host other surveillance projects on Azure. "Nothing short of cutting all ties with the genocidal Israeli military and government will be enough. We will show up to escalate, confront, and disrupt in every place, at every moment, announced and unannounced," said the group.

With reference to "Software as a Service (SaaS)", consider the following statements :

1. SaaS buyers can customise the user interface and can change data fields.

2. SaaS users can access their data through their mobile devices.

3. Outlook, Hotmail and Yahoo! Mail are forms of SaaS.

Which of the statements given above are correct ?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

1. Context: Project Nimbus, a $1.2 billion cloud-services contract between Israel, Google Cloud and Amazon Web Services (AWS), has triggered protests over the alleged use of cloud and Artificial Intelligence (AI) technologies in surveillance and security operations.

2. Cloud Computing
* Delivery of computing resources such as servers, storage, databases, software and Artificial Intelligence (AI) services over the internet instead of local devices.
* Examples: Google Drive, Amazon Web Services (AWS), Microsoft Azure, Microsoft 365.

Types of Cloud Services
* Software as a Service (SaaS): Ready-to-use software over the internet; examples: Gmail, Google Docs, Microsoft 365.
* Platform as a Service (PaaS): Platform for developing, testing and deploying applications; examples: Google App Engine, Microsoft Azure App Services.
* Infrastructure as a Service (IaaS): Virtual servers, storage and networking infrastructure; examples: Amazon Web Services (AWS), Google Compute Engine, Microsoft Azure.

Project Nimbus
* Provides cloud infrastructure, storage, computing power and Artificial Intelligence (AI) services to Israeli government entities.

3. Significance / Applications of Cloud Computing
I. Governance: E-governance, Digital Public Infrastructure (DPI), public-service delivery.
II. Business & Economy: Reduces infrastructure costs, enables scalable computing and digital innovation.
III. Artificial Intelligence (AI): Supports Machine Learning (ML), Big Data Analytics and Generative AI applications.
IV. Defence & Security: Real-time data processing, intelligence analysis and secure data storage.
V. Education & Research: Remote learning, collaboration and high-performance computing.

Can police re-open probe without court approval?

Does Section 173(8) of CrPC permit filing of a supplementary report without Magistrate's permission?

EXPLAINER

R.K. Vij

The story so far:

The Supreme Court recently in *Paliniswamy Veeraraja & Ors. versus The State of Karnataka & Anr.* reiterated that the investigating authorities were required to obtain permission from the Magistrate to initiate further investigation after filing the closure report. In this case, the court quashed the First Information Report (FIR) and subsequent chargesheet noting that such permission had not been obtained.

Although an application seeking further investigation had been filed before the concerned Magistrate for a third time, no order granting permission was placed on record, the court said.

The investigating agency had earlier filed closure reports twice, stating that the dispute appeared to be entirely civil in nature. The court also relied on the principles laid down in *State of Haryana v. Bhajan Lal (1992)*, holding that the civil nature of the dispute was an additional ground for quashing the FIR and subsequent proceedings.

Can supplementary report be filed without Magistrate's approval?

The sub-section (2) of Section 173 of the Criminal Procedure Code (CrPC) provides for forwarding a report to the Magistrate after completing investigation in the prescribed form. The Section 173(8) CrPC says that in case the in-charge of a police station finds additional evidence after sending final report to the Magistrate, he may send supplementary report to the Magistrate. It is silent on obtaining permission from a Magistrate for filing supplementary report under sub-section (8). Section 193(9) of the BNSS is *pari materia* (dealing with the same subject matter) to Section 173(8) of the CrPC.

What has been held by the Supreme Court with regard to further investigation after filing a final report?

The Supreme Court in *Vinay Tyagi versus Irshad Ali (2013)* held that "though there is no specific requirement in the provisions of Section 173(8) of the code to conduct further investigation or file supplementary report with the leave of the court, the investigating agencies have not only understood but also adopted it as a legal practice to seek permission of the courts to conduct further investigation and file supplementary report with the leave of the court".

The court held that the requirement of seeking prior leave of the court to conduct further probe will have to read into, and is necessary implication of the provisions of Section 173(8) of the code. The court held that the doctrine of *contemporanea expositio* supports such an interpretation, as a practice that has been consistently understood and implemented over time, and is backed by law, should be recognised as an integral part of the interpretative process. This proposition has been approved by the Supreme Court in subsequent cases also.

While the newly added proviso to Section 193(9) of the BNSS (which is *pari materia* to Section 173(8) of the CrPC) mandates that the permission of the court is necessary if the trial has begun, the top court, in *Rama Chaudhary versus State of Bihar (2024)* reiterated that even though the statute does not require express permission, the law has developed and seeking permission from the concerned magistrate is essential. The Supreme Court, in *Robert Lalchungnunga Chongthu v. State of Bihar (2025)*, reaffirmed the ratio in Vinay Tyagi (supra), holding that obtaining the court's leave to file a supplementary chargesheet forms an integral part of the law.

Therefore, despite the new provision of the BNSS, once a chargesheet or closure report has been filed, further probe based on new evidence may be undertaken only with the permission of the court.

R.K. Vij is a former IPS officer.

Which of the following statements about a Zero First Information Report (Zero FIR) under the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023 is/are correct ?

1. A Zero FIR can be lodged at a police station, even though the place of commission of a cognizable/non-cognizable offence is outside the territorial jurisdiction of that police station.
2. The Officer-in-Charge of the police station where a Zero FIR has been lodged may, with the permission of the competent authority, initiate a preliminary enquiry.
3. Under Zero FIR, it is obligatory for the informant to furnish information electronically.

Select the answer using the code given below :

(a) 1, 2 and 3

(b) 2 and 3 only

(c) 1 only

(d) 2 only

1. Context: In Paliswamy Veeraraja v. State of Karnataka (2026), the Supreme Court held that after filing a closure report or chargesheet, further investigation cannot be conducted without prior permission of the concerned Magistrate.

2. Legal Basis
* Section 173(8), Criminal Procedure Code (CrPC), 1973 and Section 193(9), Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023 permit further investigation and filing of a supplementary report after submission of the final report.
* Though the provisions are silent on court permission, judicial interpretation has evolved requiring prior leave of the Magistrate.

3. Supreme Court Position
* Vinay Tyagi v. Irshad Ali (2013) → Rama Chaudhary v. State of Bihar (2024) → Robert Lalchungnunga Chongthu v. State of Bihar (2025) → Paliswamy Veeraraja v. State of Karnataka (2026)
* Consistent position: Further investigation is permissible, but prior permission of the Magistrate is required before filing a supplementary chargesheet/report.

4. Related Terms / PYQ Linkage
Zero First Information Report (Zero FIR): Can be lodged at any police station irrespective of territorial jurisdiction and later transferred to the competent police station.
Electronic First Information Report (e-FIR): Enables electronic reporting of cognizable offences for faster access to justice.