# CURRENT AFFAIRS for UPSC

## INTERNATIONAL

### NEW TERM, OLD ISSUES

One of the key decisions Vladimir Putin took after being sworn in as Russia's President for the fifth time was to remove his long-time Minister of Defence, Sergei Shoigu. That Andrei Belousov, a civilian economist, has been brought in to run the Defence Ministry shows how much the war in Ukraine has become an economic battle for Russia as it struggles to stabilise its war-time economy and keep its energy ties and defence production going despite biting western sanctions. There have been criticisms about the way Mr. Shoigu planned and executed the war, which Russia, according to western intelligence, expected to be a quick affair. But Mr. Shoigu, who successfully executed the annexation of Crimea in 2014 and Russia's military intervention in Syria starting 2015, has deep ties with both the Kremlin and Russia's defence industrial complex. Even when Russia faced setbacks initially and a rare rebellion led by the late Wagner chief Yevgeny Prigozhin challenged the defence leadership, Mr. Putin threw his weight behind Mr. Shoigu. But now, as Mr. Putin begins a new term with a promise to Russia of victory in Ukraine he has decided to shake up the Defence Ministry and bring in a technocrat whose quick and primary responsibility would be to meet military objectives quickly.

The change comes at a time when Russia has gained battlefield momentum. Last week, it launched a new offensive in the northeast, in an apparent bid to attack Kharkiv, Ukraine's second largest city. Ukraine is expecting new weapons from the U.S., but it is not clear whether that would be enough for its war-fatigued army to withstand the Russian onslaught. Mr. Putin's immediate goal is to win the war, but he does not have a clear path to victory either. The war has caused lasting damage to Russia's ties with the West, especially with Europe with which Mr. Putin had sought to build strong economic and energy ties, and driven Russia deeper into China's hands. At home, he has tightened his grip on the state and society and is intolerant of dissent. For now, the state has managed to prevent the effects of sanctions reaching ordinary citizens, but it remains to be seen how long the Kremlin can do so if the war continues endlessly. Ukraine has also taken the war to Russia, by attacking its Black Sea fleet and border towns, raising the costs of the war. Mr. Putin seems to be thinking that the momentum is on his side, irrespective of the challenges. But even if his troops make further gains in Ukraine, he would be ruling over a Russia that is internally more repressive, economically weaker and isolated in the West and in a war of attrition with a permanently hostile neighbour.

### SWEDISH PM EXPRESSES WILLINGNESS TO HOST NUCLEAR WEAPONS DURING WARTIME

Sweden's parliament is set to vote on a Defence Cooperation Agreement (DCA) with the United States in June which will give the U.S. access to military bases in Sweden and allow the storage of military equipment and weapons in the Scandinavian country. Sweden abandoned two centuries of military non-alignment to join NATO in March this year.

Calls have mounted in recent weeks, from the Swedish Peace and Arbitration Association among others, for the government to put in writing in the DCA agreement that Sweden will not allow nuclear weapons on its soil.

The government has repeatedly insisted there is no need to have a ban spelled out, citing "broad consensus on nuclear weapons" in Sweden as well as a parliamentary decision that bars nuclear weapons in Sweden in peacetime.

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But Mr. Kristersson said on Monday that wartime was a different story.

"In the absolute worst-case scenario, the democratic countries in our part of the world must ultimately be able to defend themselves against countries that could threaten us with nuclear weapons."

He insisted that any such decision to place nuclear weapons in Sweden would be taken by Sweden, not the United States.

## WHAT THE NEW RIGHT-WING DUTCH GOVERNMENT PLANS TO DO ON IMMIGRATION AND MORE

After months of negotiations, Dutch ultranationalist Geert Wilders and his coalition partners have struck a deal to form the government. Here is what they plan to do.

### On immigration

The coalition aims to have the strictest admittance policy for asylum seekers in EU, and will request an opt-out of common EU rules for migration. Foreigners who have already been denied asylum in another EU country will be sent away immediately, family reunifications will be limited, and refugees and asylum seekers will no longer be prioritised for housing. Within EU, the government will strive for stricter border controls and deals with non-EU countries to take in migrants.

Labour migration will be curbed, as will the flow of foreign students to Dutch universities. Workers from outside the EU who do not have specific expertise will need work permits, and recruiting agencies will face stricter regulation.

### On energy

The coalition aims to expand offshore natural gas extraction and nuclear energy production as part of plans to reduce the Netherlands' dependence on "unreliable countries".

It will stick to internationally agreed climate goals, but will not add any national restrictions on top of them. Plans under the previous government for an additional national carbon emissions tax for industry will be scrapped.

### On agriculture, environment

Farmers won't be forced to reduce their livestock, a move by the previous regime to cut back nitrogen oxide emissions. The coalition will strive to ease EU environmental regulations for farmers, and domestic regulations will not be made stricter than what EU laws prescribe. Diesel for farmers will become cheaper, and the maximum speed on highways will be increased to 130 kmph after being reduced to 100 kmph in 2020 to fight nitrogen pollution.

### On taxes, spending cuts

Energy and income taxes will be lowered, while levies on share buybacks by listed companies, announced late last year, will be scrapped. A mandatory user contribution for healthcare procedures will be halved by 2027, and childcare subsidies will be increased.

Day care will be made nearly free. Plans will be financed with 14 billion euros in spending cuts through 2028, including through a freeze of government salaries. Unemployment welfare will be limited to 18 months.

**International stance**

Political and military support to Ukraine will be sustained, and the coalition will make it legally binding to spend at least 2% of Dutch gross domestic product on defence, in line with NATO agreements. Spending on foreign development aid will be cut by 2.4 bln euros. EU enlargement will not be supported unless all relevant criteria are fulfilled. The coalition aims to move the Dutch embassy in Israel to Jerusalem.

## SLOVAK PM IN 'VERY SERIOUS' CONDITION AFTER BEING SHOT

Slovak Prime Minister Robert Fico's condition has stabilised but is still "very serious", his deputy said on Thursday, as officials urged calm and a suspension of EU election campaigning a day after an attempt on Mr. Fico's life.

The shooting, which the government called a "political assault", stoked fears over heightened polarisation or even further violence just weeks before European Parliament polls. Slovakia's politics have been divided for years between pro-Europeans and nationalists, with the latest elections heavily influenced by disinformation, accusations and attacks on social media.

Mr. Fico, whose party won the election last September, is a four-time Prime Minister and political veteran criticised for swaying his country's foreign policy in favour of the Kremlin.

## VIOLENCE RAGES IN NEW CALEDONIA AS FRANCE RUSHES SECURITY FORCES TO ISLANDS

Violence raged across New Caledonia for the third consecutive day on Thursday, hours after France imposed a state of emergency in the French Pacific territory, boosting security forces' powers to quell deadly unrest in the archipelago where some residents have long sought to break free from France.

French authorities in New Caledonia and the Interior Ministry in Paris reported that five people, including two police officers, have been killed in the violence after protests earlier this week over voting reforms pushed by President Emmanuel Macron's government turned deadly.

## PANAMA MULLS CLOSING ITS 'TRANSIT' MIGRANT ROUTE

President-elect José Raúl Mulino says he will shut down a migration route used by more than 5,00,000 people last year. Until now, Panama has helped speedily bus the migrants across its territory so they can continue their journey north.

Whether Mr. Mulino is able to reduce migration through a sparsely populated region with little government presence remains to be seen, experts say.

"Panama and our Darien are not a transit route. It is our border," Mr. Mulino said after his victory with 34% of the vote in Sunday's election was formalised on Thursday evening. He will take over as president on July 1.

As he had suggested during his campaign, the 64-year-old lawyer and former Security Minister said he would try to end "the Darien odyssey that does not have a reason to exist."

**Exponential growth**

The migrant route through the narrow isthmus grew exponentially in popularity in recent years with the help of organised crime in Colombia, making it an affordable, if dangerous, land route for hundreds of thousands.

It grew as countries like Mexico, under pressure from the U.S. government, imposed visa restrictions on various nationalities including Venezuelans and just this week Peruvians in an attempt to stop migrants flying into the country just to continue on to the U.S. border.

But masses of people took the challenge and set out on foot through the jungle-clad Colombian-Panamanian border. A crossing that initially could take a week or more eventually was whittled down to two or three days as the path became more established and entrepreneurial locals established a range of support services.

## FUELLED BY PAKISTAN'S ECONOMIC CRISIS: WHY IS POK ON THE BOIL?

Violent street protests in Pakistan Occupied Kashmir (PoK) have left a police officer dead and more than 90 people injured since Friday (May 10), Pakistani media reported.

The violence erupted after about 70 members of the Joint Awami Action Committee, an organisation led by traders in the region, were arrested during a strike to protest the rising costs of food, fuel, and utilities. Pakistan's economic crisis and high inflation have resulted in hardships for its people, and a section of traders have been additionally hit by the stopping of trade with India.

**The protests in PoK**

The traders took to the streets on Friday to protest against high electricity and food prices. There were similar protests against high electricity bills in August 2023 as well.

A general strike halted Muzaffarabad, the capital and largest city of PoK, as public transport, shops, markets, and businesses shut down. As large numbers of protesters broke barricades and clashed with police in the Mirpur and Muzaffarabad divisions. On Sunday, the paramilitary Rangers were called in to secure government buildings such as the legislative assembly and the courts.

Pakistan's economy has been witnessing extremely high inflation and dismal economic growth for more than two years due to rising energy costs. Consumer inflation has been above 20% since May 2022, and touched 38% in May 2023, the Dawn newspaper reported.

**Alleged discrimination**

Leaders in PoK have been protesting alleged discrimination by the government in Islamabad in the distribution of power to the area. Dawn reported on complaints by the region's premier Chaudhry Anwarul Haq about not receiving their fair share of the 2,600MW of hydropower produced by the Neelum-Jhelum project.

Haq has also said that his request for resources to increase salaries of government employees in the recent budget was not accepted, and that he had been forced to divert development funds to pay them.

**Collapse of India trade**

Traders in PoK were hit hard after India raised customs duty to 200% on Pakistani products such as dry dates, rock salt, cement, and gypsum following the Pulwama terror attack of February 2019. As a result, Pakistan's exports to India fell from an average of $45 million per month in 2018 to only $2.5 million per month between March and July 2019, Dawn reported.

The situation was made more difficult after Pakistan stopped all trade following the constitutional changes carried out by India in Jammu and Kashmir in August 2019. India-Pakistan trade has shrunk to a low of about $2 billion annually over the last five years, a small fraction of the $37 billion trade potential estimated by the World Bank.

**Pakistan's economic crisis**

Pakistan's foreign exchange reserves have fallen drastically ever since global food and fuel prices rose in the aftermath of the Russia-Ukraine war. A similar balance of payments crisis crippled Sri Lanka as well in 2022-23, leading India to extend support measures.

According to the State Bank of Pakistan, the country's forex reserves fell from a peak of $20.1 billion in August 2021 to $2.9 billion in February 2023, enough to cover only a month's imports. Pakistan imports nearly 40% of its total primary energy supply.

Pakistan's largely aid-dependent economy has an underdeveloped private sector, and its stock market has shown very little growth over the years. The country's Gross Domestic Product (GDP) shrank by 0.17% during FY23. The International Monetary Fund (IMF) recently said Pakistan needed gross financing worth $123 billion over the next five years, and that the country was expected to seek $21 billion in the fiscal year 2024-25 and $23 billion in 2025-26.

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## NATION

### UN-LINKED BODY DEFERS ACCREDITATION OF NHRC-INDIA

In a setback for India's human rights record, the Geneva-based, United Nations-linked Global Alliance of National Human Rights Institutions (GANHRI) deferred the accreditation of the National Human Rights Commission-India (NHRC) for the second year in a row. The decision, which can affect India's ability to vote at the Human Rights Council and some UN General Assembly bodies, was taken during the meeting of the Subcommittee on Accreditation (SCA) on May 1, that included representatives from New Zealand, South Africa, Honduras, and Greece.

**Lack of transparency**

While the committee's latest report is still awaited, its previous report had cited a number of reasons for recommending the deferral, including the lack of transparency in appointing members to the NHRC, the appointment of police officers to oversee human rights investigations, and the lack of gender and minority representation on the member panel.

The accreditation deferral decision has been conveyed to the NHRC, sources confirmed to The Hindu, indicating that some of the demands made by the international peer review report were difficult to undertake during the election process in India.

"GANHRI wanted us to make some structural changes and incorporate a few suggestions given by them. The same was not possible at this time due to the ongoing general elections," an official, who asked not to be identified, said confirming the decision. Officials said the deferral was likely to be reviewed later this year, during meetings in September, or again in May next year. The NHRC's "A-status" has only been deferred once before, in 2016, but it was restored in 2017. This is the first time India's status has been suspended for two years in a row, in 2023 and in 2024.

The NHRC was set up under the Protection of Human Rights Act, passed by Parliament in 1993. It has been accredited as an 'A' Status NHRI since the beginning of the accreditation process for NHRIs in 1999, which it retained in 2006, 2011 and in 2017 also after the deferment.

The 'A' status was deferred this time after civil society organisations and human rights activists wrote to the global body, expressing concerns about India's record.

According to six-point submission by the SCA in March 2023, the NHRC has failed to create conditions required to be "able to operate independent of government interference".

### STAY INVESTED

By signing a 10-year agreement with Iran to develop and operate the Chabahar port, India has taken its infrastructure and trade partnership with the Islamic Republic to the next level despite tensions in West Asia. India will invest $120 million and offer a credit facility of $250 million to further develop the terminal it operates in Chabahar's Shahid Beheshti port and related projects. However, after the deal was signed, the U.S. State Department said entities considering business deals with Iran "need to be aware that they are opening themselves up to and the potential risk of sanctions". In the past, American sanctions on Iran had delayed the project. Conceived in 2003, the project did not take off for years after the U.S. and the UN imposed sanctions on Tehran over its nuclear programme. India signed a memorandum of understanding in 2015 after Washington

eased sanctions on Iran following that year's nuclear agreement, and in 2016, the contract was executed during Prime Minister Narendra Modi's Iran visit. The U.S.'s unilateral withdrawal from the nuclear deal in 2018 and reimposition of sanctions on Iran raised questions on India's continued cooperation with Tehran. But India managed to win a carve-out from U.S. sanctions that allowed it to operate the port through ad hoc measures.

The Chabahar port is critical for India's connectivity plans. First, it offers an alternative route to Afghanistan and Central Asia by bypassing Pakistan, allowing better trade with Central Asia. And, Chabahar is expected to be connected to the International North-South Transport Corridor (NSTC), bringing India closer to Europe through Iran, Azerbaijan and Russia. An alternative to the Suez route, a fully operational NSTC would reduce the time and money spent on intercontinental trade. The port, roughly 200 km from Pakistan's Gwadar, where China is developing a port as part of its BRI, would also help India expand its geopolitical influence in Central Asia. But the U.S. seems to have taken a narrow view of the project over its hostility with Iran. America's interests in the region have also changed. In 2018, when U.S. forces were backing the Islamic Republic government in Afghanistan, it gave a sanctions waiver to India as Kabul also stood to benefit from the port project. Today, U.S. troops are out of Afghanistan, the Taliban has replaced the Islamic Republic, and the U.S.'s focus is on containing Iran. India, in the past, had taken U-turns in its Iran engagement depending on the policy changes in Washington DC. It should not do that any more. It should stay invested in Chabahar and seek to improve its trade and connectivity projects with Central Asia, which is essential for India's continued rise.

**Key takeaways:**

— "Chabahar is a deep water port in Iran's Sistan-Baluchistan province. It is the Iranian port that is the closest to India, and is located in the open sea, providing easy and secure access for large cargo ships."

— The contract was signed between India Ports Global Ltd (IPGL) and Ports & Maritime Organisation of Iran (PMO) in Tehran.

— "Modern Chabahar came into being in the 1970s, and Tehran realised the strategic importance of the port during the Iran-Iraq war of the 1980s."

— "In January 2003, President Khatami and then Prime Minister Atal Bihari Vajpayee signed off on an ambitious roadmap of strategic cooperation. Among the key projects the two countries agreed on was Chabahar, which held the potential to link South Asia with the Persian Gulf, Afghanistan, Central Asia, and Europe."

— "The New Delhi Declaration signed by the two leaders recognised that the countries' "growing strategic convergence need[ed] to be underpinned with a strong economic relationship". For India, Chabahar held immense strategic and economic significance, as it provided a route to reach Afghanistan — land access to which had been blocked by a hostile Pakistan."

— "IPGL has been operating Chabahar port through its wholly owned subsidiary, India Ports Global Chabahar Free Zone (IPGCFZ), since December 24, 2018."

— "The port has also facilitated the supply of humanitarian assistance, especially during the Covid-19 pandemic."

— "With the operationalisation of the long-term investment, Chabahar could potentially become an important hub to connect India with the landlocked countries of Central Asia and Afghanistan.

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However, to better realise its commercial and strategic potential, the development of the port must be integrated with the larger connectivity project of the INSTC."

— The INSTC, which Russia, India, and Iran initiated, is a multi-modal transportation route envisaged to link the Indian Ocean and Persian Gulf to the Caspian Sea via Iran, and onward to northern Europe via St Petersburg in Russia.

— "The INSTC envisages the movement of goods from Mumbai to Bandar Abbas in Iran by sea; from Bandar Abbas to Bandar-e-Anzali, an Iranian port on the Caspian Sea, by road; from Bandar-e-Anzali to Astrakhan, a Caspian port in the Russian Federation by ship across the Caspian Sea; and onward to other parts of the Russian Federation and Europe by rail."

## SPAIN BLOCKS ARMS SHIP FROM CHENNAI TO ISRAEL

Spain has refused entry to a ship carrying arms from Chennai to Israel to dock at one of its ports, its Foreign Minister José Manuel Albares has said.

The Denmark-flagged cargo ship Marianne Danica sailed from Chennai on April 8 and was headed to the port of Haifa in Israel, according to maritime tracking portals and Spanish media.

**Critical stand**

Spain has been extremely critical of the rising civilian casualties due to the Israeli offensive in Gaza and, along with Belgium, has suspended arms export licences to Tel Aviv.

Ministry of External Affairs Spokesperson Randhir Jaiswal only said that they have seen the report of the ship and will revert with more information.

**'Consistent policy'**

Mr. Albares had said, "This will be a consistent policy with any ship carrying arms to Israel that wants to call at Spanish ports."

"The Foreign Ministry will systematically reject such stopovers for one obvious reason: the Middle East does not need more weapons, it needs more peace," he stated.

The ship was carrying 27 tonnes of explosives according to local reports. It was to make a port call at Cartegena in Spain.

The incident comes amid an ongoing row between Spanish Prime Minister Pedro Sánchez's party and his coalition partners over another ship, Borkum, that was due to dock at Cartegena port on Friday over allegations that it was carrying arms meant for Israel. However, the Spanish government has said that the arms it is ferrying are meant for the Czech Republic.

Belgium had suspended two arms export licences to Israel.

## HOME MINISTER EXTENDS BAN ON LTTE BY 5 YEARS: 'THREAT TO INDIA'

The Union Home Ministry on Tuesday extended the ban on the LTTE by five more years for fostering a separatist tendency among the masses and enhancing the support base for it in the country, particularly in Tamil Nadu, besides threatening the territorial integrity of India.

— The Centre has imposed the ban invoking the sub-sections (1) and (3) of section 3 of the Unlawful Activities (Prevention) Act, 1967.

— In a gazetted notification, the Home Ministry noted that the LTTE is an association based in Sri Lanka but has supporters, sympathisers and agents in the territory of India.

— "The Central government is of the opinion that the LTTE is still indulging in activities…Even after its military defeat in May 2009 in Sri Lanka, the LTTE has not abandoned the concept of 'Eelam' (an independent country for Tamils) and has been clandestinely working towards the 'Eelam'…" the notification stated.

**For Your Information:**

— The LTTE was founded in 1976 by Velupillai Prabhakaran with the goal of creating an independent Tamil Eelam out of Sri Lanka. From clashes with the Sri Lankan military, the LTTE in the early 80s launched a fullscale nationalist insurgency in the north and east of the country, carrying out a string of major terrorist attacks against both military and civilian targets.

— India's relationship with the LTTE was complex — from providing support to the guerrillas initially to sending the Indian Peacekeeping Force (IPKF) to Sri Lanka from 1987 to 1990. The LTTE pioneered suicide bombing as a weapon of terror, and in 1991, an LTTE suicide bomber killed Rajiv Gandhi in an attack on Indian soil.

— India first banned the LTTE after the assassination of Rajiv Gandhi; the ban was last extended for five years in 2014.

## LAME EXCUSES

It has been over three years since the coup d'etat in Myanmar in which the junta usurped absolute power and unleashed severe repression in order to clamp down on any demands for a return to democracy or granting more power to the marginalised ethnic identities in the civil war-prone country. Facing repression such as brutal bombing and the displacement of entire villages, many citizens, particularly those from ethnic minorities, have sought refuge in neighbouring countries including India. Many refugees from Myanmar's Sagaing region and Chin State have fled the junta's violent campaigns and headed to Mizoram and Manipur. While in Mizoram, refugees, of Chin ethnicity in particular, have been treated favourably, with the Mizo people regarding them as ethnic brethren, those in Manipur have not received such treatment from the government led by Chief Minister N. Biren Singh. Manipur has continued to conflate the issues related to the refugees fleeing Myanmar with that of cross-border drug trade. Ever since the ethnic violence between the Kuki-Zo community and the majority Meitei community last year, this refrain by the Manipur government, which has not hidden its preponderance to act as an ethnic majoritarian regime, has led to the stigmatisation of the refugees and policies that are in stark contrast to Mizoram's humanitarian approach.

Moves such as seeking to end the Free Movement Regime, that is seen as favourable by the citizens of both countries, the announcement that India will fence the 1,643 km India-Myanmar border and Mr. Singh's statement that 5,457 "illegal" migrants were found in Manipur's Kamjong district should be seen in this light. The Chief Minister has repeatedly maintained that the conflict, which has killed more than 220 people, displaced over 50,000 people and resulted in injuries to thousands, besides creating a siege mentality among the Meitei and the Kuki-Zo communities, is a consequence of his government's actions against "poppy cultivation" and "illegal immigration".

This is both an over-simplification and a biased view of the ethnic conflict that has raged in the State because of the inability of the Biren Singh government to rise above the ethnic fray and build confidence measures that could win the trust of the Kuki-Zo community. That the violence has been followed by the brazen militarisation of Manipuri society, in the hills and in the valley, with vigilante groups armed with sophisticated weapons, causing law and order problems, and impeding security personnel seeking to impose law and order, reflects even more poorly on the government. Unless there is a change, both in approach and in leadership in Manipur and the way it has treated the conflict, the situation will continue to fester.

## MANIPUR ACCOUNTED FOR 97% OF DISPLACEMENTS IN SOUTH ASIA

Conflict and violence triggered 69,000 displacements in South Asia in 2023, with Manipur violence accounting for 67,000, according to a new report. The report by the Geneva-based Internal Displacement Monitoring Centre (IDMC) termed it the highest number of displacements triggered by conflict and violence in India since 2018.

On May 3, 2023, a 'Tribal Solidarity March' was organised in Manipur's hill districts to protest against the Meitei community's demand for Scheduled Tribe (ST) status. The march led to ethnic clashes between the Meitei and the Kuki communities, ultimately claiming more than 200 lives. The Manipur High Court had in March last year called for recommendations to be sent to the Union government to recognise the Meitei community as a "Scheduled Tribe," an official status designed to protect minorities from marginalisation.

The call was met with resistance from other local STs, including the Kukis. Land disputes were also an underlying driver of the tensions. "Protests turned violent in Churachandpur district on May 3, and the violence spread to other districts, including Imphal East, Imphal West, Bishnupur, Tengnoupal, and Kangpokpi, triggering around 67,000 displacements," the report said.

An internal displacement refers to the forced movement of a person, within the borders of a country. This term refers to the events or occurrences that cause people to be displaced internally and not the number of individuals displaced. Also, the same set of people can be displaced several times over.

More than three-quarters of the movements took place within Manipur, but almost a fifth were to the neighbouring State of Mizoram and smaller numbers to Nagaland and Assam. As the violence escalated, the Union government imposed curfews, shut down the internet, and dispatched security forces. It also set up relief camps and established a peace committee for Manipur but the initiative was hampered by disagreements about its composition.

The term internally displaced people currently living in India, focuses on the individuals who have been displaced and gives the number of persons displaced at the end of every year. At the end of 2023, there were 0.61 million such persons in India. The report said that 68.3 million people worldwide were displaced by conflict and violence as of 2023. Over the past five years, the number of internally displaced people resulting from conflict has increased by 22.6 million, with the two biggest increases in 2022 and 2023.

Fighting in Sudan, the Democratic Republic of Congo and the Palestinian territories accounted for nearly two-thirds of new movements of people due to conflict in 2023. Throughout 2023, there were six million forced movements of people caused by the violence in Sudan — more than in the previous 14 years combined. It is the second-highest number of forced movements within a year

after Ukraine's 16.9 million in 2022. World over, in 2023, the number of internal displacements (occurrences) resulting from conflict was 20.5 million.

Displacements can also happen due to natural disasters. If those numbers are included, the total internally displaced persons go up to a record 75.9 million (7.7 million by disasters) by the end of 2023. The figure was up from 71.1 million at the end of 2022.

## FOETUS HAS RIGHT TO LIVE: SC REJECTS PLEA TO ABORT 27-WEEK PREGNANCY

The Supreme Court on Wednesday rejected a prayer to allow abortion of a 27-week pregnancy while observing that the foetus too has a right to live.

**Key takeaways:**

— A bench of Justices B R Gavai, S V N Bhatti and Sandeep Mehta told the counsel appearing for the 20-year-old single woman that the pregnancy was in excess of seven months now and asked "what about the right of the child to survive? How do you address that?".

— The counsel told the court that the Medical Termination of Pregnancy Act primarily laid stress on the rights of the mother and that she is in a very delicate state.

— Last month, an SC bench presided by Chief Justice of India D Y Chandrachud had allowed a 14-year-old minor rape victim to terminate her 27-28 week pregnancy terming it a "very, very exceptional case where we have to protect her". The court, however, recalled the order two weeks later as her mother who initially was for the abortion, expressed doubts over the likely impact of the procedure on her daughter's health and opted to have a normal delivery.

— The CJI led bench also said that a "medical board, in forming its opinion on the termination of pregnancies must…also evaluate the physical and emotional wellbeing of the person in terms of the judgment".

## WHAT IS THE LEGAL POSITION ON LIVE-IN RELATIONSHIPS?

**The story so far:**

The Lucknow bench of the Allahabad High Court stated earlier this month that a Muslim cannot claim rights in a live-in relationship when he or she has a living spouse. A two judge Bench of Justices A.R. Masoodi and A.K. Srivastava called such a relationship against the tenets of Islam while hearing a writ petition by Sneha Devi and Mohammed Shadab Khan. Ms. Devi and Mr. Khan had sought protection from police action after the woman's parents filed a kidnapping case against Mr. Khan.

**What happened?**

The couple had told the court they were adults in a live-in relationship and that they sought protection under Article 21 of the Constitution (protection of life and personal liberty). The judges, however, stated, "Islamic tenets do not permit live-in relationships during the subsisting marriage. The position may be different if the two persons are unmarried and the parties being major choose to lead their lives in a way of their own." Incidentally, Mr. Khan was married to one Farida Khatoon since 2020.

"The constitutional morality may come to the rescue of such a couple and the social morality settled through the customs and usages over ages may give way to the constitutional morality and protection under Article 21 of the Constitution of India may step in to protect the cause. The case before us is, however, different," the court said, adding, "The constitutional protection under Article 21 of the Constitution of India would not lend an un-canalised support to such a right."

**What have been previous orders?**

Live-in relationships with variables of marital status of the partners, their possibly different faiths, birth of children and even separation have occupied the attention of the judiciary at various levels in recent years. If in the case of Ms. Devi and Mr. Khan, only the latter was married, in another case last year, both partners were married but involved in a live-in relationship away from wedlock.

In November last year, the Supreme Court stayed orders passed by lower courts and the Gujarat High Court awarding maintenance to a woman from the man she had been living with. The top court order came after a Surat-based man challenged the High Court order arguing that their relationship could not be termed a domestic relationship as they were both married to other people at the time of cohabitation. While their respective marriages subsisted, they lived together in 2012 and had a daughter too a couple of years later. The woman had approached the judiciary as the live-in relationship did not work out, and sought relief under the Protection of Women from Domestic Violence Act, 2005. She sought maintenance too.

Interestingly in the same month, the Punjab and Haryana High Court stated that a couple living together without obtaining a divorce from their previous spouse cannot be classified as being in a "live-in relationship" or being in a union similar to marriage. The court even felt that such an arrangement would amount to the offence of bigamy under Sections 494/495 of the Indian Penal Code. In this case, the man was already married. The court refused to provide protection to the couple, stating, "The male partner is engaging in a lustful and adulterous life with the female partner without obtaining a valid divorce from his previous spouse."

**What have the Courts said about live-in relationships?**

India does not have any laws that directly address a live-in partnership. As per the top Court, for a man and a woman to live together is part of 'the right to life'; therefore, a live-in relationship is no longer an offence. The Supreme Court in its various judgments has stated that a man and a woman living like a husband and a wife in a long-term relationship, and even have children, the judiciary will presume that the two were married and that the same laws would be applicable to them and their relationship. The concept of a live-in relationship was recognised in Payal Sharma versus Nari Niketan by the Allahabad High Court, where the judges felt, "A man and a woman, even without getting married, can live together if they wish to. This may be regarded as immoral by society, but it is not illegal. There is a difference between law and morality."

## MURDER AND MOTIVE

It is a matter of some consolation that the two men who shot dead Narendra Dabholkar, rationalist and anti-superstition activist, have been sentenced to life imprisonment by a Sessions Court in Pune. At the same time, it is regrettable that it took over 10 years since the August 2013 assassination for them to be brought to justice. It is disquieting that the Central Bureau of Investigation failed to prove the conspiracy behind the killing, leading to the acquittal of the man arraigned as the main conspirator. It is a setback to the conclusion of investigators in Maharashtra

and Karnataka that a right-wing organisation called Sanatan Sanstha was behind the heinous murder of ideological adversaries between 2013 and 2017, although the question is still alive in three other ongoing murder trials. Virendrasinh Tawde, an otolaryngologist associated with the Sanstha's activities, is the one acquitted of the conspiracy charge. He was an outspoken antagonist of Dabholkar and his Andhashraddha Nirmoolan Samiti Maharashtra, an organisation campaigning against superstitions. Despite the court finding that Sachin Andure and Sharad Kalaskar, young men associated with the Sanstha, were the ones who shot dead the 69-year-old Dabholkar in Pune, it criticised the failure to "unmask the masterminds". This meant that the role of the Sanatan Sanstha is yet to be legally established, although the court has noted the manner in which the defence lawyers sought to tarnish the image of Dabholkar and his activities.

Additional Sessions Judge P.P. Yadav's 171-page judgment rightly points out that the existence of a motive will be insufficient to prove a conspiracy, and that reliable and direct evidence is required to show that the accused had acted on the motive. However, he does find it strange that the defence was seeking to establish during cross-examination of witnesses that the victim was "anti-Hindu". The Sanatan Sanstha's role, according to investigators in Maharashtra and Karnataka, was seen in the murders of Govind Pansare, a leftist leader at Kolhapur in Maharashtra (2015), academician M.M. Kalburgi (Dharwad, 2015) and journalist Gauri Lankesh (Bengaluru, 2017). In fact, it was a ballistics analysis of the gun used to kill Lankesh that disclosed that it was the same weapon used in the murder of Kalburgi. Several common features in the four murders have so far been unearthed, leading the police to conclude that a single syndicate has been active in seeking to eliminate adversaries. The governments in Maharashtra and Karnataka must show greater political will in combating such threats to independent thinkers and activists. The first step in this regard is to expedite ongoing trials and focus on proving the conspiracy, motivated by religious extremism, in its entirety.

## ACQUISITION OF PVT PROPERTY NOT VALID IF PROPER PROCEDURE NOT FOLLOWED, SAYS SC

The procedure prescribed for acquiring private property is part of the Right to Property under Article 300A of the Constitution and any acquisition done without following it would be outside the authority of law, the Supreme Court ruled Thursday.

— The court said that there are seven basic procedural rights that Article 300A confers on a landowner and which need to be complied with before a valid acquisition.

— They are:

(i) duty of the State to inform the person that it intends to acquire his property

(ii) right to notice, duty to hear the objections to acquisition

(iii) right to be heard, duty to inform the person of its decision to acquire

(iv) right to a reasoned decision, duty to demonstrate that the acquisition is for public purpose

(v) acquisition only for public purpose, duty to restitute and rehabilitate

(vi) right to fair compensation, duty to conduct the process of acquisition efficiently and within prescribed timelines of the proceedings

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(vii) right to an efficient conduct, and final conclusion of the proceedings leading to vesting – the right of conclusion.

— The ruling said the requirement of a "law" does not end with the mere presence of a legislation which empowers the State to deprive a person of his property. "Rather, the nature, characteristics, provisions and procedure provided in such a legislation must necessarily be considered."

**For Your Information:**

— The Supreme Court (SC) on Wednesday (April 24) began hearing a case about whether the government can acquire and redistribute privately owned properties if they are deemed as "material resources of the community" — as mentioned in Article 39(b) of the Constitution.

## MALIGN MOTIVE

The Supreme Court of India's order invalidating the arrest and remand of NewsClick founder Prabir Purkayastha is much more than a technical outcome based on the failure of the Delhi police to furnish the grounds for his arrest in writing. It is also an indictment of the clandestine manner in which the police sought to obtain his custody. As if invoking the Unlawful Activities (Prevention) Act against the web portal was not malign enough — the case seems fictional in its entirety, and establishes no overt act that can even be described as unlawful, much less a terrorist act — the police seemed to have resorted to what the Court called a "blatant attempt to circumvent the due process of law". The Court did not go into the merits of the case at this stage, but said enough to warrant an adverse inference about the absence of bona fides. Mr. Purkayastha was produced before a remand judge before dawn and his police custody obtained at 6 a.m., even though the police had the entire day to comply with the statutory requirement of producing him before a court within 24 hours. The police kept his lawyer in the dark about the early morning proceedings, and instead had a 'remand advocate' readily present during the proceedings. The idea was "to confine the accused to police custody without informing him the grounds on which he has been arrested; deprive the accused of the opportunity to avail the services of the legal practitioner of his choice so as to oppose the prayer for police custody remand, seek bail and also to mislead the court".

The judgment is also notable for extending, to the UAPA, the principle laid down in Pankaj Bansal (2023) that those arrested under the Prevention of Money Laundering Act should be given the grounds of their arrest in writing. In fact, interpreting the relevant constitutional provisions, the Court says this may be required as a matter of course and without any exception for the arrest of any person under the UAPA or any other offences. The police recently filed a charge sheet in this case, which makes the outlandish claim that Mr. Purkayastha was funded by the Chinese government and that he and American millionaire Neville Roy Singham were involved in an alleged conspiracy to replace Indian democracy with a party-state system as in China. It speaks of their support to fomenting riots and protests in India and even funding terrorists. Given the grave, even if far-fetched, nature of the allegations against him, regular bail would have been difficult to come by. Therefore, it is salutary that the Court has treated the level of adherence to procedure — the need to furnish the grounds of arrest in this case — as sacrosanct.

**Key takeaways:**

— Role of the magistrate: Article 22(2) says every arrested person shall be produced before a magistrate within 24 hours — this is called "first production". The magistrate/judge can authorise

further detention in police custody (for interrogation) or judicial custody through remand hearings.

— What happens in courts: The findings suggest most magistrates do not fully realise the constitutional and statutory protections at first production and remand. Violations such as those flagged by the SC in Purkayastha's case are not uncommon.

— The study found that violations were often ignored or corrected in the paperwork, without consideration of its consequences or impact on the rights of the accused. At first production, standard explanations for injuries — accident or public beating — were usually accepted without further inquiry.

— There is no standard format for Arrest Memo or MLC, which adds to the lack of clarity about the information necessary to ensure the rights of the accused are protected.

— It was observed that most production hearings took place without legal representation for the accused, with magistrates not intervening to secure the accused's rights.

— Structural barriers: First production and remand proceedings do not even appear to be accorded proper time in the daily workload of the magistrate.

## SC LIMITS ED'S POWER TO ARREST PMLA ACCUSED

The Supreme Court on Thursday gave a fillip to the right to personal liberty by holding that a person summoned by a designated special court under the Prevention of Money Laundering Act (PMLA), is presumed to be not in custody and need not apply for bail under the draconian conditions posed by the anti-money laundering law.

"If the accused appears before the special court pursuant to a summons, it cannot be treated that he is in custody. Therefore, it is not necessary for the accused to apply for bail," a Bench of Justices A.S. Oka and Ujjal Bhuyan held in a judgment.

The judgment limits the power of arrest by the Directorate of Enforcement (ED) after a special court takes cognisance of a case.

The Bench said the ED would have to separately apply for the custody of a person once he or she appears in court. The Central agency would have to show specific grounds that necessitated custodial interrogation, said Justice Oka, who wrote the judgment.

However, the special court can direct the accused to furnish bonds in terms of Section 88 of the Code of Criminal Procedure. "A bond... is only an undertaking. An order accepting bond under Section 88 does not amount to grant of bail and hence the twin conditions of Section 45 of the PMLA are not applicable to it," Justice Oka clarified.

The judgment was based on an appeal filed by Tarsem Lal against the ED challenging a Punjab and Haryana High Court denying him anticipatory bail.

The twin conditions of bail under Section 45 of the PMLA pose stringent thresholds for an accused. For one, the person has to prove in court that he or she is prima facie innocent of the offence. Secondly, the accused should be able to convince the judge he would not commit any offence while on bail. The burden of proof is entirely on the incarcerated accused, who would be often handicapped to fight the might of the state.

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**More info**

Described as an "executive's court" in some quarters in recent times, the Supreme Court has proved its critics wrong yet again. A 41-page judgment of Justice Sandeep Mehta and Justice B R Gavai, authored by the former, has highlighted the importance of due process.

— "The SC verdict has rightly drawn a fine line between the "reasons of arrest," which are formal and common to all arrested persons, and the "grounds of arrest," which have to be peculiar to an individual arrested person."

—- "If the "grounds of arrest" are not communicated in writing, the right to life and personal liberty is violated making the arrest and detention illegal, despite repeated remand orders."

— "The history of "due process" in India is equally fascinating, but deeply frustrating. In 1918, the Indian National Congress asked the colonial government to revoke all laws that allowed state authorities to arrest or detain people without due process."

— "Balgangadhar Tilak and M K Gandhi invoked due process in their defence against unjust laws. But the framers of the Indian Constitution who had initially shown keen interest in the Due Process Doctrine abandoned it."

— "Constituent Assembly deliberations show how we went back on due process…"

— "After independence, starting from its regressive judgment in A K Gopalan (1950) to ADM Jabalpur (1976), the SC contributed to undermining the due process by overemphasising the literal meaning of procedure established by law."

— "Subsequently, Justice Fazal Ali's dissent in Maneka Gandhi (1978) became a majority opinion and due process was judicially recognised as part of the right to life and personal liberty. Every law must now be reasonable, just, fair and non-arbitrary. Moreover, the 44th Amendment (1978) made the right to life and personal liberty a non-derogable right that can no longer be suspended, even during an emergency."

**For Your Information:**

— Two fundamental principles of jurisprudence — "bail not jail" and "innocent until proven guilty" — are diluted in cases brought under "special" laws like the Prevention of Money Laundering Act (PMLA), Narcotic Drugs and Psychotropic Substances Act and the Unlawful Activities (Prevention) Act (UAPA).

— In these, investigating agencies and the prosecution are granted extraordinary powers of arrest and detention. In essence, such laws shift the burden of proof on the accused. Stringent provisions also place a high threshold for the grant of bail.

— By invalidating the arrest of Prabir Purkayastha, founder-editor of the portal Newsclick, the Supreme Court has upheld in principle and practice the constitutional protection offered to citizens under Article 22(1).

## CRIME AND TIME

Any inconsistency in judicial decisions is bound to be seen as unequal application of rules. On the principle of parity, former Jharkhand Chief Minister Hemant Soren, who leads the Jharkhand

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Mukti Morcha, is arguably entitled to interim bail to enable him to campaign in his home State for the next phases of the general election, from May 20. Mr. Soren was arrested on January 31. It was only last week that the Supreme Court of India underscored the importance of the general election to grant bail to Delhi Chief Minister Arvind Kejriwal up to the end of the polls. Although the opinion was based on "the peculiarities of the person in question and the surrounding circumstances", a principle did emerge from that ruling that key leaders could be allowed to campaign in the interest of electoral democracy. However, the Court chose the position that it first needs to hear the other side, the Enforcement Directorate in this case. Even though it favoured a hearing in the week beginning May 20, it agreed to an earlier date, May 17. It is indeed a legal requirement that any order of bail can be given only after hearing the prosecution's objections. In Mr. Kejriwal's case, the Court heard and rejected the argument that freeing a political leader solely for the purpose of canvassing votes during an election will amount to privileging the political class above other categories of people arrested for similar offences.

The Jharkhand High Court did not deliver judgment on the petition challenging Mr. Soren's arrest for two months, resulting in a delay in his approaching the Supreme Court. Ultimately, it passed an order dismissing his plea on May 3, having reserved its verdict on February 28. It is true that no two cases are comparable. While the Delhi Chief Minister is facing the charge of bribery in exchange for adopting an excise policy favourable to some manufacturers, Mr. Soren is accused of laundering the proceeds of crime in the illegal sale of a parcel of land to acquire property in Ranchi. With the prosecution depending mainly on approvers' statements against Mr. Kejriwal, and the agency banking on documentary evidence against Mr. Soren, there may be differences in the respective merits of their cases. The stringent provisions for bail in the Prevention of Money Laundering Act have the unfortunate effect of making courts consider the overall merits of a case at the bail stage itself. It is unfortunate that the relatively simple act of releasing the accused against bail bonds, with attendant conditions to safeguard evidence and prevent them from fleeing justice, has become politically sensitive. Election-time incarceration, which renders the playing field disadvantageous to the affected parties, adversely affects the democratic spirit.

## EXPERT EXPLAINS: HOW INDIA'S POLLING STATIONS WORK

During the ongoing Lok Sabha elections, 96.8 crore electors are enrolled to vote at 10.5 lakh polling stations spread out nationwide, from the heart of bustling metropolises to the most remote corners of the country. Here is how India's polling stations work.

**Setting up polling stations: norms and principles**

Under Section 25 of the Representation of the People Act, 1951 (RPA), the district election officer (DEO) is assigned the responsibility to set up and publish the list of polling stations in their district.

There are some principles on the basis of which polling stations are set up. These include ensuring that voters do not have to travel more than two km to cast their vote, a station has a minimum area of 20 sq m, a station serves at most 1,500 electors, and a village with over 300 voters is provided with a polling station.

These principles, however, are not set in stone. Polling stations can even cater to less than 300 voters in case access is a problem, say in rugged terrain. For instance, Arunachal Pradesh's Malogam polling station caters to only a single voter. Conversely, in cases where the number of electors exceeds 1,500, auxiliary polling stations are set up, preferably in the same building. In

urban areas, one building can have a maximum of four polling stations, whereas in rural areas, it can have at most two.

Locations for polling stations are chosen carefully, preferably in government or semi-government institutions. Private buildings are avoided unless absolutely necessary — they can be requisitioned with the written consent of the owner, or forcefully under Section 160 of the RPA.

The list of polling stations undergoes verification and updation during annual electoral roll revisions. The draft list is prepared with input from local political parties and citizens, after finalisation with the Election Commission of India's (ECI's) approval, it is distributed to parties and candidates, with extra copies available for sale.

**Layout and some facilities**

There are separate entrance and exit points for voters, even if only one door is available. This is done with temporary fencing using bamboo and ropes. The voting compartment, constructed from opaque corrugated plastic sheet or steel grey flex board, measures at least 24 x 24 x 30 inches (length × width × height), and is positioned away from windows or doors.

A comprehensive gap analysis is conducted before elections to ensure the provision of Assured Minimum Facilities (AMF) at each polling station, which ensures smooth voting experiences and efficient polling personnel duties. Accordingly, adequate furniture, proper lighting arrangements, clear signage, and separate toilets for male and female voters are ensured.

Voter facilitation posters are also displayed prominently, providing information such as the list of candidates, identification documents required, etc.

As the current elections are taking place during the peak of the Indian summer, the ECI has taken some steps to address the challenges caused by heatwaves, first being to identify polling stations which are likely to face heat waves based on India Meteorological Department data. These stations are then equipped with adequate shade structures like tents, canopies, or umbrellas, seating, cooling devices like fans, proper ventilation, drinking water, and ORS. The polling staff is also supplied with medical kits, and handbills on 'Dos and Don'ts' during a heat stroke, and trained to recognise and respond to heat-related illnesses.

**Provisions for Persons with Disabilities (PwD)**

There are some 88.4 lakh Persons with Disabilities (PwD) registered to vote in the ongoing Lok Sabha elections. The ECI has strict norms to ensure that they too can exercise their franchise without a hitch.

All polling stations must have a ramp with a maximum 1:12 gradient, and provide wheelchairs and designated parking spaces close to the station to PwD voters. They are also allowed to cast their vote without waiting in queues, with the ECI also providing transport facilities for voters with impaired mobility (such as PwD and senior citizens). PwDs can use ECI's Saksham App to book wheelchairs, pick and drop service, get assistance at the polling booth, etc.

Volunteers from National Cadet Corps/National Service Scheme/Scouts & Guides assist in queue management, and help PwD and senior citizens. For the visually impaired, electronic voting machines (EVMs) and dummy ballot papers come with Braille facilities. Moreover, clear signages are used in the International Symbol of Access in blue and white to identify assistance counters, toilets, etc. quickly.

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**People inside a polling station, voting day restrictions**

Only specific individuals are permitted access inside a polling station. These include registered electors, polling officers, candidates, one polling agent per candidate at a time, authorised media personnel, public servants on election duty, ECI-appointed observers, micro observers, videographers, photographers, and webcasting staff for critical/sensitive polling stations, a child in arms accompanying an elector, a person assisting a blind or infirm voter, and any others admitted by the Presiding Officer for voter identification or assistance purposes, whenever required.

A polling party comprises a Presiding Officer and three Polling Officers. The first Polling Officer verifies the elector's identity, the second applies indelible ink on their left index finger, maintains the voters' register, and issues voter slips. The third Polling Officer takes back the voter slip issued by the second polling officer, manages the EVM's control unit, and ensures that an elector has been properly inked before being allowed to vote.

Sector Officers or Zonal Magistrates are appointed for around 10-12 polling stations to facilitate the link between polling staff and the Returning Officer. Micro Observers are deployed in vulnerable areas to report any deviations. Booth Level Officers (BLO) at the Voter Assistance Booths assist voters in finding their polling booth and serial numbers in the alphabetically arranged electoral roll. Digital photographers capture critical events such as mock polls, sealing of EVMs, etc. Village Officers assist in identifying electors whenever required, and security personnel ensure the smooth conduct of elections.

On the day of polling, there are separate queues for men and women voters — with two women allowed to vote before each man. There is also a prohibition on any political propaganda, use of cameras, mobile phones, and canvassing within a 100 metre radius of the polling station, with a penalty of arrest without warrant under Section 130 of the RPA. Candidates can set up their booths beyond 200 m of the polling station, and there are also restriction on the use of loudspeakers.

**Critical polling stations**

Critical polling stations are those where the ECI takes some extra measures to ensure the security and integrity of the voting process.

These include ones in vulnerable areas, areas with abnormal law & order situations, those with unusually high ( over 90%, with over 75% votes polled in favour of one candidate), or low ( under 10%) voter turnout rates. Polling stations where re-polling is held due to electoral offences, with instances of violence on polling day in the last five years, or with a disproportionate number of Absentee, Shifted, and Dead (ASD) voters may also be deemed critical polling stations by the ECI.

In such stations, the ECI conducts pre-poll confidence building initiatives, gets regular feedback from candidates and intelligence agencies, legally binds identified trouble-mongers, and uses preventive detention under appropriate sections of law. On the day of the poll, Central Armed Police Forces (CAPF) and Micro Observers are deployed.

## WHY CONGRESS HIT '400 PAAR' IN 1984 ELECTIONS, HOW RAJIV GANDHI'S TENURE WAS MARRED BY STRUGGLES

The only politician who actually went "400 paar" in Lok Sabha was Rajiv Gandhi, who found himself unexpectedly pitchforked into the job after Indira Gandhi was assassinated on October 31, 1984.

Riding a nationwide tsunami of sympathy, Rajiv's Congress won 404 of the 514 seats in the first phase of the eighth Lok Sabha election held on December 24, 27, and 28, 1984, and another 10 seats after votes were cast in militancy-hit Punjab and Assam in September and December 1985 respectively.

The goodwill vanished remarkably quickly. India's youngest Prime Minister — Rajiv was only 40 when he took office — lost power amid a huge corruption scandal in 1989, and the Congress could never achieve a Lok Sabha majority on its own after 1984.

**Churn in Opposition**

The years after the collapse of the Janata experiment and Indira's return to power saw massive churn in the political opposition and important developments in the states. Chaudhary Charan Singh's Janata Party (Secular) splintered into his own Janata Party (S-Charan Singh) and Janata Party (S-Raj Narain). In August 1982, Charan Singh's group, now called Lok Dal, too split as the Bihar leader Karpoori Thakur went his own way. Both Charan Singh and Thakur were honoured with the Bharat Ratna earlier this year.

The opposition had several single-personality parties — Jagjivan Ram's Congress (Jagjivan), H N Bahuguna's Democratic Socialist Party (DSP) and Chandrajit Yadav's Janwadi Party. George Fernandes, Madhu Limaye, Devi Lal, and Biju Patnaik were in the Lok Dal (K).

Farooq Abdullah became Chief Minister of Jammu and Kashmir after his father Sheikh Abdullah died on September 8, 1982. In Karnataka, Ramakrishna Hegde became CM in a Janata government on January 10, 1983. A day earlier, Telugu actor-turned-politician N T Rama Rao had taken oath in Andhra Pradesh.

As efforts were made for a possible alliance or merger of some "progressive and socialist" national and regional parties, Chandra Shekhar's Janata came together with K Ramachandran's Congress (Secular), Bahuguna's DSP, and Ratubhai Adani's Rashtriya Congress in a United Front. The BJP, which had earlier opposed the idea of a merger of parties, said it would follow a policy of "meaningful cooperation" — and following multiple rounds of talks between between BJP chief Atal Bihari Vajpayee and Charan Singh, the two parties came together in August 1983 in the first avatar of the National Democratic Alliance (NDA).

But this version of the NDA did not last. A year after it was formed, the BJP decided to break away, and Charan Singh formed the new Dalit Mazdoor Kisan Party (DMKP).

**An early election**

The Lok Sabha election would have taken place in the normal course in January 1985. On August 25, 1984, the Election Commission of India (ECI) called a meeting of all parties to discuss the alleged misuse of official machinery in the election campaign. Some parties wanted a ban on the

use of official aircraft by ministers and other leaders from the last date of withdrawal of nominations to the day of polling.

The assassination of Indira Gandhi was followed by terrible anti-Sikh violence.

More than 3,000 members of the community were killed across the country, including more than 2,500 in Delhi. Some accused, including a few Congress leaders, have been convicted.

The ECI was forced to bring the Lok Sabha election forward by a few weeks. During the campaign, the Janata Party and the BJP objected to a Congress advertisement with the line: "Why should you feel uncomfortable riding in a taxi driven by a taxi driver belonging to another State?" The ECI's report said that "according to the complainants, the reference to taxi driver was in fact intended to refer to Sikh community and that it aimed at fanning communal prejudice and disaffection among different sections of the people".

The ECI concluded that the ad "did not offend any electoral law or run counter to the principles laid down in the Model Code of Conduct".

**Unprecedented mandate**

Elections were held in 17 states and in all nine Union Territories on a single day. No voting could be held in Punjab and Assam — to facilitate this, Section 73A was added to The Representation of the People Act, 1951, which allowed the ECI to "take steps in relation to elections…in the State of Assam and the…State of Punjab separately and in such manner and on such dates as it may deem appropriate".

The counting of votes began on December 28, 1984 in states and UTs where polling was held on December 24 and 27, and on December 29 in Nagaland and Meghalaya, where voting took place on December 28. Results were declared for almost all constituencies by December 31.

Rajiv won in Amethi, defeating his sister-in-law and Sanjay's wife Maneka Gandhi. Actor Amitabh Bachchan defeated the former Congressman and veteran leader H N Bahuguna in Allahabad. K R Narayanan, the future President of India, won in Kerala's Ottapalam, Prakash Chand Sethi in Indore, Ghulam Nabi Azad in Washim in Maharashtra, and P V Narasimha Rao, who would be Prime Minister, in Berhampur. Abida Ahmed, the wife of Fakhruddin Ali Ahmed, who was President during Indira's Emergency, won in Bareilly.

NTR's Telugu Desam Party won 30 seats in Lok Sabha. The CPI(M) won 22 seats, Janata 10, CPI 6, and Lok Dal (C) 3. The BJP won just two seats — Chandupatla Janga Reddy from Hanamkonda in Andhra Pradesh and A K Patel from Mehsana in Gujarat. Vajpayee lost in Gwalior, and Janata's Chandra Shekhar was defeated in his home turf of Ballia in UP.

Charan Singh won in Baghpat. Jagjivan Ram, who had left the Congress to join Congress for Democracy and later formed a new party, the Congress (J), won in Sasaram. Sharad Pawar of Congress (Socialist) won in Baramati.

**New phase of politics**

By the time of the 1984 election, most Opposition giants of the earlier generation had passed on. C Rajagopalachari, the architect of humiliating Congress defeats, died in 1972. Jayaprakash Narayan, the force behind Opposition unity in 1977, died in 1979. J B Kripalani passed away in 1982.

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Among the new Opposition parties and leaders, the TDP, founded in March 1982, was the most prominent. Several new faces gained prominence in the Congress too, as Rajiv carried out a revamp of the party.

In 1985, the central government signed the Rajiv-Longowal Accord in Punjab and the Assam Accord with the leaders of the Assam movement. In 1986, the government brought a law in Parliament to effectively nullify the Supreme Court's progressive judgment in the Shah Bano case. The contract with the Swedish arms manufacturer Bofors for the supply of field howitzers was followed by revelations of kickbacks of Rs 64 crore in the deal, which was considered a big amount at the time. The Bofors scandal would haunt Rajiv for the rest of his tenure and his life.

In 1989, the Congress crashed from the dizzying heights of 1984 to just 197 seats in Lok Sabha, paving the way for the formation of another non-Congress government.

## HOW 1989 ELECTIONS LED TO A ONE-YEAR VP SINGH TERM AND THE ARRIVAL OF MANDIR-MANDAL IN INDIAN POLITICS

In the Lok Sabha election of 1989, the corruption scandals of Rajiv Gandhi's tenure overshadowed some significant reforms his government had carried out. For the second time in a dozen years, the Congress lost power at the Centre. But after V P Singh formed a coalition government, Rajiv repeated his party's "Charan Singh experiment" of 1979 — propping up Chandra Shekhar and, within months, pulling the plug on him. In the space of 19 months in 1989-1991, India saw two Lok Sabha elections and two Prime Ministers.

**Reforms and scandal**

In December 1988, Rajiv's government amended Article 326 of the Constitution to lower the voting age to 18 from 21, adding almost 4.7 crore new electors. This was the government's fourth electoral reform, after the anti-defection law (1985), an amendment to the Companies Act to put additional restrictions on political donations by firms (1985), and a law to prevent misuse of religious institutions and their funds for political interests (1988). Rajiv, who was only 40 when he became Prime Minister, also gave important roles in both the party and the government to younger individuals.

Rajiv's problems with V P Singh, his Finance Minister, had a lot to do with the several anti-corruption raids that Singh ordered on leading businesspersons, many of whom were the Prime Minister's friends. As some of these individuals were hauled off to jail and the hue and cry over "raid raj" became louder, Rajiv moved Singh to the Defence Ministry in January 1987.

In his new job, Singh announced an inquiry into the Bofors howitzer purchase deal made when Rajiv himself held the portfolio. As relationships in the Cabinet turned increasingly bitter, Singh resigned on April 12, 1987, and left the Congress.

**V P Singh vs Rajiv Gandhi**

On October 2, 1987, Singh formed a political platform called Jan Morcha. Among those who joined him were Arun Nehru, Rajiv's cousin who was his close adviser once, and Arif Mohammad Khan, who had quit Rajiv's government in 1986 over the Shah Bano issue.

In June 1988, V P Singh contested the Lok Sabha bypoll from Allahabad — the incumbent, Amitabh Bachchan, had resigned — as an Independent supported by the Opposition, and won. He began

efforts to bring together parties that were part of Janata in 1977 and, on October 11, 1988, the birth anniversary of Jayaprakash Narayan, formed the Janata Dal by merging Jan Morcha with various factions of the Lok Dal and Janata Party.

The Opposition gave the rousing slogan, "Raja [of Manda, Singh] nahin fakir hai, desh ki taqdeer hai (Singh is not a king but an ascetic, the destiny of the nation)."

As V P Singh built his anti-corruption campaign against Rajiv Gandhi, the BJP under L K Advani was aggressively pushing its Hindutva agenda in coordination with the VHP and RSS. The campaign for the construction of a temple in Ayodhya got a fillip after the locks of the Babri Masjid were opened on February 1, 1986, after an order by the Faizabad district court.

**The election of 1989**

A total 49.89 crore Indians, including new electors between ages 18 and 20, were eligible to vote in 1989. Almost 62% voted in three phases from November 22-26, 1989, for 529 seats (except in insurgency-hit Assam).

Janata Dal won 143 seats — 54 of them in Uttar Pradesh and 32 in Bihar — and the BJP, which had won only two in 1984, shot to 85 seats in the new Lok Sabha. The CPI(M) won 33 seats and the CPI 12. Kanshi Ram's Bahujan Samaj Party (BSP) won three seats, and Mayawati, just 33 years old then, entered Parliament for the first time.

The Congress, which had won 414 seats in the previous election, suffered a stunning blow but was still the single largest party with 197 seats. It won 39 seats in Andhra Pradesh, 28 in Maharashtra, 27 each in Karnataka and Tamil Nadu, and 14 in Kerala.

After Rajiv declined the invitation to form the government, a National Front coalition led by the Janata Dal took power. Singh was sworn in as Prime Minister on December 2, 1989, with former Haryana Chief Minister Devi Lal as his Deputy.

The BJP and Left Front led by the CPI(M) supported V P Singh's government from the outside. The CPI(M)'s Harkishan Singh Surjeet and Jyoti Basu, CPI's Indrajit Gupta, and BJP's Advani and Atal Bihari Vajpayee met the Prime Minister for dinner and discussions every Tuesday.

**Mandal and Mandir**

The National Front had the same issues of coordination, conflicting ambitions, and internal weaknesses that had laid the Janata Party low a decade earlier. Devi Lal called V P Singh "spineless" in an interview, which led to his sacking on August 1, 1990. But the firebrand Jat leader, who enjoyed the support of the farming communities, was no pushover.

On August 15, 1990, Singh announced the implementation of the report of the Mandal Commission, which recommended 27% reservation for backward classes in government jobs. One of Singh's aims was to alienate the OBCs from Devi Lal, whose community, Jat, was not OBC. The announcement led to widespread protests by students and groups including Jats.

On October 23, 1990, Lalu Prasad Yadav's Janata Dal government stopped Advani's Somnath-to-Ayodhya Rath Yatra in Bihar's Samastipur, and arrested the BJP leader. The BJP responded by withdrawing support to the central government. Singh lost a confidence vote on November 7, 1990, and was forced to resign.

**Shekhar, the new Charan**

In order to form the next government, 64 Janata Dal MPs formed a new faction, the Janata Dal (Socialist), led by Chandra Shekhar, who was sworn in as Prime Minister on November 10, 1990, with Devi Lal as his Deputy.

Like Charan Singh in July 1979, Chandra Shekhar was supported by the Congress from the outside. But this situation was inherently unstable — and once the Congress began levelling allegations that the PM was spying on Rajiv, Chandra Shekhar sensed that the withdrawal of support was near.

On March 6, 1991, the PM resigned and recommended dissolution of Lok Sabha.

## HELD AFTER RAJIV GANDHI'S ASSASSINATION, HOW THE 1991 ELECTIONS HERALDED CHANGE FOR INDIA UNDER PV NARASIMHA RAO

On May 21, 1991, six and a half years after Indira Gandhi was assassinated, Rajiv Gandhi was blown up by a suicide bomber of the Liberation Tigers of Tamil Eelam (LTTE). India was in the middle of a Lok Sabha election, its polity was fractured, and its economy was in deep crisis.

The election was held in three phases, on May 20, June 12, and June 15. In Punjab, votes were cast in February 1992. Unlike in 1984, Rajiv's assassination did not bring an avalanche of sympathy votes for the Congress. But the party did return to power, with P V Narasimha Rao at the head of a minority government.

**T N Seshan's election**

T N Seshan, an IAS officer of the 1955 batch and a former cabinet secretary, was appointed Chief Election Commissioner on December 12, 1990. He enforced election rules with an uncompromising firmness that elevated him to legendary status for many Indians. It also changed the way in which the Election Commission of India was viewed.

A little less than 500 million electors were eligible to vote in the election, but the burning summer ensured a turnout of only 56.73%, much less than the 61.95% in 1989.

The Congress won 232 of the 521 seats for which elections were held. The BJP, which contested 468 seats, won 120, the Janata Dal 59, CPI(M) 35, and CPI 14. Rajiv won in Amethi by a margin of more than 1.12 lakh votes — cast the day before he was assassinated. In the bypolls that followed, Rajiv's close associate Captain Satish Sharma won the seat.

Former Prime Ministers V P Singh and Chandra Shekhar won from Fatehpur and Ballia respectively, and the future Prime Minister H D Deve Gowda from Hassan on a Janata Party ticket. Pratibha Patil, the future President, won in Amravati.

L K Advani won in New Delhi and Gandhinagar (he retained Gandhinagar), and Atal Bihari Vajpayee in Lucknow and Vidisha (he retained Lucknow). Other leaders of the Ram Janmabhoomi movement, Uma Bharti and Vinay Katiyar, won in Khajuraho and Ayodhya respectively.

Bahujan Samaj Party founder Kanshi Ram won from Etawah. The young firebrand Mamata Banerjee won from Calcutta South (now Kolkata Dakshin) and held the seat until 2011, when she became Chief Minister of West Bengal.

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### Who would be PM?

Rajiv's death meant the Congress suddenly had no candidate for Prime Minister.

Days after the assassination, senior Congress leaders Arjun Singh, Sitaram Kesri, and M L Fotedar met P V Narasimha Rao and suggested that Sonia Gandhi be made the party's next leader. Apparently Rao disagreed strongly — according to Arjun Singh's autobiography, A Grain of Sand in the Hourglass of Time, the would-be Prime Minister "burst out in anger and virtually yelled out words to the effect that whether it was essential that the Congress Party should be treated like a train where the compartments have to be attached to an engine belonging to the Nehru-Gandhi family or were there other alternatives?"

One of these "alternatives" could have been Uttar Pradesh Chief Minister N D Tiwari, but he lost the election in Nainital. And after Sonia declined to head the party, Rao became Congress president and took oath as Prime Minister on June 21, 1991.

### Economic reforms, Babri demolition

Politically, Rao's tenure was marked by a constant tussle with those close to 10 Janpath (Sonia's residence). Rao managed a majority in Parliament with defections from some parties, including a faction of the Janata Dal. His tenure saw multiple scandals, including the 1992 Indian stock market scam, known as the Harshad Mehta scam, the 1995 Delhi housing allotment scam involving then Housing Minister Sheila Kaul, the 1995 petrol pump scam involving Satish Sharma, the 1996 telecom scam involving then Minister of Telecom Sukh Ram, and the Jain diaries case, also known as the hawala scam.

Two events of the Rao years changed India forever — the liberalisation of the economy, spearheaded by Finance Minister Manmohan Singh, and the razing of the Babri Masjid in Ayodhya by kar sevaks on December 6, 1992.

On the night after the demolition, Rao dismissed governments in four states ruled by the BJP — UP (Kalyan Singh), Madhya Pradesh (Sunderlal Patwa), Rajasthan (Bhairon Singh Shekhawat), and Himachal Pradesh (Shanta Kumar). For the third time since Independence, the Rashtriya Swayamsevak Sangh was banned. The ban was later quashed by the Jabalpur High Court.

The demolition of the mosque was followed by riots in several cities, including Mumbai. Worse was to follow: on March 12, 1993, a series of bomb blasts killed more than 250 people in the city. The mafia boss Dawood Ibrahim, who engineered the bombings, has been absconding since that time.

Rao decided to bring back an elected government in Punjab. Assembly polls were held in February 1992. Beant Singh became Chief Minister after nearly five years of President's Rule. But he himself fell victim to a terrorist attack on August 31, 1995.

### Turmoil in Congress

Rao had many rivals in the party. Arjun Singh, the former Madhya Pradesh Chief Minister and one of Sonia's close confidants, claimed in his book that he wrote to Rao raising a range of concerns. Arjun Singh had resigned as Human Resource Development (now Education) Minister on December 24, 1994, and he was soon suspended over alleged anti-party activities.

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Arjun Singh joined hands with Sheila Dikshit, the future Chief Minister of Delhi, and N D Tiwari, who was upset with Rao's decision to ally with the BSP in the UP Assembly polls, formed the All India Indira Congress (Tiwari). With the blessings of 10 Janpath, many other leaders too joined Tiwari's faction at the Centre and in the states.

As Narasimha Rao's tenure neared its end, the organisation of the Congress was crumbling, even as other parties at the Centre (BJP) and in the states (Janata Dal, BSP, and Samajwadi Party) were consolidating themselves. As the next Lok Sabha election approached, the demands for Rao's resignation grew louder.

## CAN PARTIES BE DE-RECOGNISED OR DE-REGISTERED?

**The story so far:**

The Election Commission of India (ECI) in its report on enforcement of Model Code of Conduct (MCC) has stated that it expects star campaigners to lead by example and not vitiate the fabric of society. This has raised a debate about ECI powers to rein in MCC violations.

**What are registered parties?**

Section 29A of the Representation of the People Act, 1951 (RP Act) lays down the requirements for registration of a political party with the ECI. Any political party that seeks registration should submit a copy of its memorandum/constitution. Such document should declare that the party shall bear true faith and allegiance to the Constitution of India. It should also bear allegiance to the principles of socialism, secularism and democracy, and uphold the sovereignty, unity and integrity of India. Registered political parties enjoy the following legal benefits – (a) tax exemption for donations received under Section 13A of the Income Tax Act, 1961, (b) common symbol for contesting general elections to the Lok Sabha/State Assemblies, and (c) twenty 'star campaigners' during election campaign. As per the ECI, there are 2,790 active registered political parties in India.

**What are recognised parties?**

A registered party is referred to as a Registered Unrecognised Political Party (RUPP). Political parties are recognised as a 'national' or 'State' party under the provisions of The Election Symbols (Reservation and Allotment) Order, 1968 (Symbols Order) by the ECI. The criteria for recognition at the 'national' or 'State' level consists of winning requisite number of seats and/or obtaining required percentage of votes in a general election to Lok Sabha or State Assembly. At present, there are six 'national' parties, and sixty-one 'State' parties that have been recognised. These recognised parties enjoy additional concessions of having a reserved symbol during elections and forty 'star campaigners'.

**What are the issues?**

It has been noticed that less than a third of RUPPs contest elections. The RP Act does not confer explicit powers on the ECI to de-register any political party if it fails to contest elections, conduct inner-party elections or lodge requisite returns. The Supreme Court in Indian National Congress versus Institute of Social Welfare & Ors (2002) had held that the ECI does not have power to de-register any political party under the RP Act. It may de-register only under exceptional circumstances like registration being obtained by fraud or the political party ceasing to have allegiance to the Constitution or if it is declared unlawful by the Government. The RUPPs that don't

contest elections raise concerns over the possible misuse of income tax exemption and donations collected being used for money laundering.

The MCC prohibits using caste and communal feelings to secure votes, and bribing or intimidation of voters. Recognised political parties are guilty of violating the MCC on various occasions. However, it has been observed that the ECI on such occasions at best bars leaders from campaigning for a short period of two to three days.

**What needs to be done?**

The ECI in its memorandum for electoral reforms (2016) has suggested amendment to the law that would empower the ECI to deregister a party. The Law Commission in its 255th report (2015) on 'Electoral reforms' has also recommended amendments for de-registration of a political party if it fails to contest elections for 10 consecutive years. These recommendations should be implemented. Under Paragraph 16A of the Symbols order, the ECI has the power to suspend or withdraw recognition of a recognised political party for its failure to observe MCC or follow lawful directions of the Commission. It has probably been used only once for three weeks in 2015 when the recognition of National People's Party was suspended for failure to follow the directions of the ECI. Strict action under this provision would have a salutary effect in ensuring adherence to the MCC.

## WHAT ARE THE RULES ON CONTESTING SEATS?

**The story so far:**

When Congress leader Rahul Gandhi announced that he would contest from Rae Bareli in Uttar Pradesh, questions were raised on why he took the decision after the Kerala election was over — he is a contestant from Wayanad too. According to the Representation of the People Act (RPA), 1951, a candidate is permitted to contest an election from up to two constituencies, but he or she can hold only one seat at a time if elected from both.

**Is there a cap?**

A sub-section, 33 (7), of the RPA, allowing a candidate to contest from two seats, was introduced through an amendment in 1996, prior to which there was no bar on the number of constituencies from which a candidate could contest. However, Section 70 of the same Act stipulates that a candidate can hold only one seat at a time, regardless of whether he or she has been elected from more than one seat. Thus, if a candidate wins from two seats, a byelection is necessary from the seat he or she vacates. Former Chief Election Commissioner N. Gopalaswami said the opposition to a candidate contesting from many seats was basically due to the fact that many byelections had to be conducted after polls were over. Since then, the Election Commission of India and the Law Commission have both proposed that the RPA Act should be further amended to allow one person to contest from only one seat, given that a candidate cannot hold two seats at the same time. Mr. Gopalaswami said this was proving to be difficult as "no politician would like to reduce it to one from two, and laws are made by parliamentarians."

Moreover, a person has to be a voter in a particular State to contest Assembly polls from there. But to contest in a Lok Sabha election, a person can be registered as a voter in any constituency of the country. If a person is a registered voter in any constituency, he or she can contest from any seat in India, except Assam, Lakshadweep and Sikkim.

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**What is the minimum age to contest?**

The minimum age for a person to contest Lok Sabha and Assembly polls is 25 years, while one can become a member of the Rajya Sabha or the State Legislative Council only at 30 years. There is no minimum educational qualification needed to contest general elections in India. Candidates must be citizens of India, registered in some constituency of the country as a valid voter and must not have been convicted of any offence punishable by more than two years.

**How can a candidate be disqualified?**

A person shall be disqualified from being chosen as or being a member of either House if he holds any office of profit under the Government of India or the Government of any State; if he or she is of unsound mind and stands so declared by a competent court; if he or she is an undischarged insolvent; if he or she is not a citizen of India or has voluntarily acquired the citizenship of a foreign state.

Under the RPA Act, if a person is convicted of any offence and sentenced to an imprisonment of two years or more, this will lead to his disqualification to contest elections. Even if this person is out on bail, after the conviction and his appeal is pending for disposal, he or she is disqualified from contesting an election. For some categories of serious offences, one may incur disqualification for any conviction, regardless of the quantum of punishment.

**Over the years, what are some of the changes undertaken by the ECI regarding candidates?**

The ECI has amended the rules for political party funding during elections. The new regulations include decreasing the cash donation limit from ₹20,000 to ₹2,000. The Electoral Bond Scheme, notified in January, 2018, allowing anonymous contributions to limit use of cash, was scrapped by the Supreme Court in 2024. For the 2024 polls, the ECI has banned cash transportation in bank vehicles after sunset. The Commission is also monitoring non-scheduled chartered flights for cash, liquor, and drug movement. ADR founder member Jagdeep Chokkar says there have been many interventions, but the desired effect has not come about as parties have found a way to circumvent it.

Mr. Gopalaswami points out that no law has been brought in with regard to muscle power of candidates. "That falls under criminal law which are enacted by politicians themselves," he says. But he adds that the presence of central paramilitary forces has been able to put a stop to practices like booth-capturing, a point strongly rebutted by Prof. Chokkar who says the "use of para-military forces is a shame in a democracy."

## EXPLAINED: RULES FOR POLITICAL PARTIES TO USE STATE-FUNDED MEDIA DURING POLLS

Two Opposition leaders — Communist Party of India (Marxist) General Secretary Sitaram Yechury and All India Forward Bloc leader G Devarajan — were asked to make certain changes to their speeches made on Doordarshan and All India Radio (AIR) during the allocated broadcast time in the run up to the ongoing Lok Sabha elections.

Yechury had to delete references to the electoral bond scheme, drop terms "communal authoritarian regime" and "draconian laws", and replace "bankruptcy" (of governance) with "failure". Devarajan was made to remove the word "Muslims" from his speech about the Citizenship Amendment Act.

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However, according to a Prasar Bharati official, the TV and radio networks were simply following rules set by the Election Commission of India (ECI) regarding the use of state-controlled media by recognised parties during elections. Prasar Bharati is India's state-run public broadcaster and the parent organisation of Doordarshan and AIR.

**Allocation of time on state media**

Recognised political parties have been allowed to freely use state-owned television and radio during polls since the 1998 Lok Sabha elections. The ECI decides how much time each recognised national and state party will be allotted prior to the start of the election campaign.

National parties, all put together, get a minimum of 10 hours of telecasting time on Doordarshan's national channel, and at least 15 hours on its regional channels. They also get 10 hours of broadcasting time on the national hook-up of AIR and 15 hours of broadcasting on regional AIR stations. State parties, all put together, get a minimum of 30 hours of telecasting time on the appropriate regional Doordarshan channel and AIR radio station.

On March 28, the ECI allocated broadcast and telecast time to each of the six national parties — AAP, BSP, BJP, CPI(M), Congress, and Conrad Sangma's National People's Party — and 59 state parties for the 2024 elections. For national parties, out of the 10 hours prescribed, a total of 4.5 hours (45 minutes each) was allocated in both Doordarshan and AIR. The remaining 5.5 hours was further allocated on the basis of voteshare in the 2019 Lok Sabha elections. Similar formulae was followed while allocating time to state parties.

**Guidelines on speeches' contents**

Parties and their speakers are expected to submit transcripts of their speeches three to four days before recording — these have to be approved by the concerned authorities in the respective AIR and Doordarshan stations.

The ECI's guidelines forbid "criticism of other countries; attack on religions or communities; anything obscene or defamatory; incitement of violence; anything amounting to contempt of court; aspersions against the integrity of the President and judiciary; anything affecting the unity, sovereignty and integrity of the nation; and any criticism by name of any person".

However, both Devarajan and Yechury, whose edited speeches were aired on Doordarshan on April 16, were not happy with the changes made to their speech.

"The censorship applied to the text of my address on Doordarshan is a patent denial of the right to dissent in a democracy… The deletion of the word 'bankruptcy' of governance and the suggestion to replace it with 'failure' only endorses the authoritarian character of the government," Yechury wrote in a letter to Director General, Doordarshan.

Devarajan told The Indian Express that after he was told to drop the word 'Muslims' from his speech, he (unsuccessfully) argued for the need to use the word to emphasise that the CAA is "discriminatory to Muslims as the law mentions every other minority community eligible for citizenship".

The ECI had allocated 54 minutes each on Doordarshan and AIR to CPI(M), and 26 minutes each on the two media to AIFB.

not just a mark of disrespect to the process but also to the intelligence of the electorate.

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## CONGRESS' PROMISED GRAIN RATION GOES AGAINST ITS CLAIM OF MAKING PEOPLE 'ATMANIRBHAR'

In 2019, Prime Minister Narendra Modi swept the Lok Sabha polls on the back of his government's welfare schemes for building rural homes, toilets and roads, providing access to banking, electricity and LPG connections, and the Rs 6,000 annual cash transfer to landholding farmers. In 2024, the scheme that is seemingly a big draw among voters is the one giving 5 kg of free rice or wheat to about 813.5 million persons. Proof of its impact on the ground is the Congress, more than midway through the ongoing elections, promising to double the free ration quota for the "poor" among the scheme's beneficiaries.

But schemes are only as good as their implementation. Just as the focused execution and near saturation coverage of the earlier flagship programmes helped cultivate a pro-poor image for Modi nationally during his first term, the free grain scheme delivered during the Covid crisis. Till the early 2000s, the southern states were largely the ones with reasonably well-functioning public distribution systems (PDS). By around 2015-16, they were joined by the likes of Chhattisgarh, Odisha, Madhya Pradesh and West Bengal. But the Covid period saw NFSA beneficiaries even in Uttar Pradesh, Bihar and Jharkhand actually receiving free grain. The ruling party's victory in the 2022 Assembly elections in UP was widely attributed to the Modi-Yogi Adityanath "double-engine" government's efforts at not just expanding the reach of the PDS, but also ensuring last-mile delivery of grain to eligible households.

The Congress's promised grain ration of 10 kg/person/month is notable not only for the additional fiscal cost it would entail (even if restricted to the "poor"). It goes contrary to party general secretary Priyanka Gandhi's recent pronouncement that government policies should aim at making people "atmanirbhar" (self-reliant), not "nirbhar" (dependent). At a public rally, she asked the crowd to choose between free 5-kg ration and employment that will earn them an independent income. The apparent about-turn and competitive free grain offer is, perhaps, also reflective of a deeper political economy malaise. Governments find it more expedient to deliver freebies, whether in kind or as direct cash transfers, than investing in public education, healthcare, irrigation or agricultural research and extension that take time to yield results. It doesn't help that voters are also sceptical about state capacity and hence increasingly transactional and short-termist.

## EX-JUDGE ON MAMATA: YOUR RATE IS RS 10 LAKH… BECAUSE YOU DO MAKEUP? IS SHE EVEN A WOMAN?'

The Election Commission Friday issued a show-cause notice to former Calcutta High Court judge and BJP candidate Abhijit Gangopadhyay over his remarks on West Bengal Chief Minister Mamata Banerjee at a recent election rally. The poll panel said the remarks were found to be "improper, injudicious and undignified", and prima facie a violation of the Model Code of Conduct.

The Trinamool Congress had complained to the EC on Thursday, a day after Gangopadhyay, the BJP candidate from Tamluk, made the remarks at a rally in Purba Medinipur's Haldia.

In his address, Gangopadhyay referred to the Sandeshkhali sexual abuse allegations and said: "Today, the Trinamool says everything is a lie. Rekha Patra (one of the protesters and BJP's Basirhat candidate) was bought for Rs 2,000. Mamata Banerjee, how much are you being sold for? One gives you Rs 8 lakh and gets a job, one gives you Rs 10 lakh and ration vanishes… Why is your

rate Rs 10 lakh? Is it because you get your makeup done by Keya Seth (Kolkata-based beautician)?…"

"How can a woman make such a comment about another woman (Patra), we can't understand? Is Mamata Banerjee even a woman? I wonder sometimes," Gangopadhyay said.

The EC said that upon examination the remarks were found to be "improper, injudicious, beyond dignity in every sense of term, in bad taste and to be prima facie violative of the… MCC and Commission's advisory dated March 1, 2024".

It sought a response from the former judge by 5 pm on May 20.

According to the Model Code of Conduct, parties and candidates should not criticise aspects of private lives of opponents; should not make unverified allegations; and should not make statements that may be malicious or offending decency and morality.

In its March 1 advisory to parties ahead of the Lok Sabha elections, the EC had reminded them to follow the model code and maintain decency in political discourse. It also said that parties and candidates should refrain from any action that may be seen as repugnant to the dignity of women.

## CLICKBAIT PAPER

A recent 'working paper' titled the 'Share of Religious Minorities: a Cross-Country Analysis (1950-2015)', by Shamika Ravi, a credentialed economist and member of the Economic Advisory Council (EAC) to the Prime Minister, and two co-authors, has sparked a political firestorm, dredging familiar anxieties of a decline in the proportion of Hindus in India's population. Freely accessible, the paper draws on a dataset, Religious Characteristics of States Dataset, 2017 (RCS-Dem), where two U.S.-affiliated researchers have compiled an extensive dataset of religio-demographic changes in 167 countries. By defining 'majority' and 'minority' religions based on countries' official census data, the RCS-Dem quantifies changes in the population of those professing a country's major religion. There is no discussion on the causes or factors driving these changes. The current paper does little other than reproduce this data set, explain it, and highlight — what has been known since 2011 in India and discussed threadbare since — that the share of Hindus as a proportion of India's population declined from 84.68% to 78% (1950-2015). Muslim proportion meanwhile has risen from 9.84% to 14%. They underline how most countries have seen their majority-religion adherents decline. They note that the Indian experience, vis-à-vis the proportional decline of Hindus, is unexceptional in the light of broad trends globally. They reiterate that they make no "…causal links between a specific state action and demographic shifts.." They note however that in the "immediate South Asian neighbourhood", this 7% relative decline was second only to Myanmar's 10% decline of the majority Theravada Buddhists.

From here the authors make, without analysis or data, a deduction. That the rise in Muslim numbers proved media reports and UN human rights reports (which they cite) of discrimination and violence against Muslims in India were false. They single out Pakistan and Bangladesh to underline that "demographic shocks" reduced the proportion of the largest minorities, Hindus, there. The authors thus break their own rule of not having a causative explanation of demographic change by ascribing rising Muslim numbers in India to "progressive policies and inclusive institutions." The authors would then have to explain if India's Parsi and Jain populations (whose numbers they reference) are declining due to hostile state policies. Given that prosaic explanations of declining fertility rates across religions and economic migration explain some of

these known India trends, it is perplexing why the EAC would lend its sanction to a work that is at best incomplete, and at worst disingenuous.

## NUMBER OF CHILDREN HAS MORE TO DO WITH DEVELOPMENT THAN RELIGION

Once again, the Muslim population has become a point of discussion. Last month, Prime Minister Narendra Modi referred to Muslims in India as "those who have a large number of children". A Data Point published on April 23 showed that the fertility rate of Muslims was 2.36 in 2019-21, much closer to the replacement level. The fertility rate is the average number of children a woman is expected to have in her lifetime. A rate of 2.1 (the 'replacement level') means that the population is stable.

This month, the Economic Advisory Council to the Prime Minister concluded that while the share of Muslims in the total population increased by 43.15% between 1950 and 2015, the share of Hindus decreased by 7.82%.

Data show that the number of children one chooses to have has more to do with socio-economic parameters than religion. Government data show that educating girls and not marrying them off early, creating more awareness about family planning, and ensuring access to family planning measures help reduce fertility levels.

The fertility rate of Muslim women varies according to region. For instance, the fertility rate of Muslim women in Bihar was 3.6 in 2019-21, much higher than the 2.0 in Maharashtra. Similarly, the fertility rate of Muslim women was 1.9 in Tamil Nadu and 2.0 in Karnataka, much lower than the 2.7 in Jharkhand and 2.4 in Rajasthan. The answer for why fertility levels drastically vary among Muslim women across different regions lies in how developed a State is not just economically but also socially.

There is a strong positive correlation, which means that fertility rates were higher in States where a higher share of women were married off early. There is a strong negative correlation, which means that the fertility rates were lower in States where the share of literate women was higher.

A major concern is also lack of awareness about family planning. In 2019-21, close to 25% of Hindu women said they had never heard or seen a message about family planning via radio, TV, newspapers, wall paintings or the Internet. Among Muslim women, the share was higher at 30%.

Even among women who were aware and wanted to limit the number of children they planned to have, or wanted more space between children, a significant share was unable to do so due to lack of access to family planning measures.

Unmet demand refers to the share of women who want to limit or space out children, but are unable to do so. In most States, the unmet demand among Muslim women was higher than Hindu women. In States such as Haryana, Bihar, and Jharkhand where the fertility rate of Muslim women was high, the unmet demand was also high. In these States, the gap between the unmet demand between Muslim and Hindu women was much wider too.

Increasing awareness about contraceptive measures and enhancing access to them, educating girl children, and stopping child marriage — all functions of the government — will reduce the fertility rates among all the religious groups at a much faster rate.

## DANGERS OF DIVISIVENESS

With polling over in 379 of the 543 constituencies after the fourth phase in the general election, the electoral campaigns of parties have reached closer to the end point. Deep into the campaign calendar, though, the disconnect between the concerns of the electorate and campaign rhetoric — especially that of BJP lynchpin and Prime Minister Narendra Modi — remains, unfortunately, intact. While job creation, inflation and development have been emphasised by voters as primary issues, Mr. Modi refuses to be driven by the idea of contesting mainly on his government's record over 10 years of rule and focusing on measures to ameliorate the main concerns. Instead, he seeks to do what he has always revelled in — attacking the Opposition with truths, half-truths, and non sequiturs. Mr. Modi's recourse to this is also helped by the shrill noise of television and social media being a useful tool to distract from concerns with the rhetoric that he has used, be it hate speech against Muslims or dog whistles to rev up support from Hindutva adherents. Other parties, including the Congress and its public face, Rahul Gandhi, are also — even if not to the same extent — guilty of raking up identity issues such as those related to caste politics. But Mr. Modi and some of his colleagues have taken vituperation as a campaigning device to new levels. In his rally in Jaunpur, he accused the Opposition in Uttar Pradesh, the SP and the Congress, of silence when their southern allies used "absurd and abusive language" for the people of U.P. and "sanatana dharma".

Some of the northern parties in the INDIA bloc have publicly disagreed with DMK leader Udhayanidhi Stalin's comments on "sanatana dharma" while emphasising their stances on social justice and taking on the issue of caste hierarchy. There is more that unites the politics of federalism and social justice espoused by these parties than what divides them — questions related to linguistic nationalism such as the need for English as a link language — but that is to be expected from coalitions made up of different political parties. Mr. Modi should focus on the differences in emphasis on how to tackle socio-economic issues between the BJP and the INDIA bloc. But, instead, his use of half-truths as a weapon to rile the Hindi heartland against southern parties is problematic, at a time when there is greater north-south economic integration, with working class citizens from the north migrating to the south for employment. Recently, the BJP inducted Manish Kashyap, a YouTube content creator who had been jailed in Tamil Nadu for spreading false news about Bihari migrants being attacked in the State. Such actions could foment divisive politics that does not help the Indian nation as a whole.

## COLLAPSE IN GHATKOPAR, A CALL TO REFORM

The Mumbai-based Veermata Jijabai Technological Institute is investigating the reasons behind this week's hoarding crash in the city's Ghatkopar suburb, which claimed 16 lives and injured at least 75 people. The results of the probe are expected next week. However, there is much in the public domain already that underlines that lives were lost because rules were not followed. The hoarding that was toppled by strong winds on Monday was three times the size sanctioned by the Brihanmumbai Municipal Corporation (BMC) and had a weak foundation. The municipality claims it flagged the irregularities to the Government Railway Police (GRP), which owns the land where the hoarding stood. It also maintains that several notices were issued to Ego Media, the company which put the advertising panel, for defaulting on licence fees — Bhavesh Bhinde, Ego Media's owner, was arrested on Thursday. However, the arrest should only be seen as the first step towards fixing accountability and putting remedial measures in place. The Ghatkopar tragedy is a grim reminder of the longstanding ills of urban governance in the country — flailing

municipalities, agencies with overlapping jurisdictions, negligent officials, faulty street design and questionable space allocation processes.

The 74th constitutional amendment requires state governments to devolve 18 functions, including land use regulation, to municipalities. But several studies — including a 2021 Niti Aayog report — have revealed that no state government has delegated all 18 functions to civic bodies. Urban local bodies are often constricted because their remit clashes with other state agencies. In Delhi, for example, there is much confusion amongst the city's municipality, DDA and PWD over road maintenance. Fire accidents in most cities are followed by government agencies passing the buck to each other – much like the BMC and GRP evading responsibility for the Ghatkopar tragedy. The apathetic attitude of officials compounds people's problems — they have to knock on the doors of multiple authorities. One of the fundamental purposes of the 74th Amendment was that citizens would turn to corporators — the "first-mile" representatives — to cater to civic needs. But the term of the BMC's elected members expired about two years ago. Bengaluru — currently facing a severe water crisis — does not have elected corporators. The failure of the state governments to hold civic body elections goes against the Supreme Court's unequivocal directions in the Suresh Mahajan case (2022). "State government and State Election Commissions (SEC) are obliged to ensure that a newly elected body is installed in all municipalities before the expiry of the five-year term of the outgoing council," the court said.

Data from Mumbai's observatories suggests perilous wind speeds during the time of the billboard crash. But authorities in the city should have been alerted by a similar incident in neighbouring Pune in 2017 which claimed five lives — and one in nearby Pimpri-Chinchwad in April 2023, which also killed five people. The failures behind the Ghatkopar tragedy are multiple. But there is one dominant theme: Urban governance is not adequately empowered or accountable for people's well being.

## THE POLL PROMISE OF AFFORDABLE HOUSING

**The story so far:**

With the 2024 elections underway, among various poll promises are those pertaining to housing. India has around 1.7 million homeless people, as per the 2011 Census. Even for people with houses, the quality of build, congestion, and inadequate infrastructure remain major concerns.

**Does India have a housing crisis?**

According to a Government of India report in 2012, an estimated 18.78 million more houses were required to cater to the housing demand in the country. Post this, a study by the Indian Council for Research on International Economic Relations (ICRIER) in 2020 found that India's urban housing shortage rose by 54% from 2012 to become 29 million in 2018. This included homeless populations, inadequate houses that could not be upgraded, obsolete houses and congested households. However, an analysis by the Centre for Social and Economic Progress of the 2011 Census data noted that coexisting with an urban housing shortage of 19 million units were 11 million vacant units. Seemingly, while houses are built, none of these cater to the class which needs it the most.

Per the government's definition, affordable housing properties are those with an area not more than 60 sq.m, with the price capped at ₹45 lakh.

In the first quarter of 2024, housing sales were at an all-time quarterly high, with 1.30 lakh units sold across the top seven cities. But in the new housing supply, it was mid-segment homes that continued to dominate with a 33% share. Affordable housing was at a mere 18% share. As reported by The Hindu, the share of affordable housing in overall sales during the first half of 2023 saw a sharp decline, to approximately 20% — an 11 percentage point decrease as compared to the first half of 2022. In an interview with Al Jazeera, Abdul Shakeel, member of a housing civil society group in New Delhi, said, given the high cost of land and construction materials, "building low-cost houses for low-income people is not economically viable. The low-income class cannot afford the house unless the charges are subsidised." Urban congestion and lack of proper housing create another issue — slums. The 2011 census found that over 65 million people, about 5% of India's total population, lived in slums.

**What policies have been implemented?**

A right to housing has been held to be a part of the fundamental right to life under Article 21 of the Constitution by the Supreme Court. The first policy intervention from the Government came in 1985, with the Indira Awaas Yojana, which was focused on rural housing. After 2004, urban housing came into focus with programmes such as the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), launched in 2005. In 2008, the Parekh Committee report on housing led to urban housing interventions such as the Rajiv Awas Yojana and Rajiv Rinn Yojna. The Housing for All schemes (2015-22) were launched once the Modi government came to power. The two wings under these are Pradhan Mantri Awas Yojana (Gramin) and Pradhan Mantri Awas Yojana (Urban).

**What are PMAY-U and PMAY-G?**

The Pradhan Mantri Awas Yojana-Urban was launched by Prime Minister Narendra Modi in June 2015 to tackle urban homelessness. The PMAY-U promised houses for 1.18 crore families by December 2024. As of March 2024, it has only achieved around 67% of its target, that is, around 80 lakh.

The duration of the PMAY-U was initially seven years, from FY 2015-16 to FY 2021-22. It has now been extended up to December 31, 2024 – with all verticals except Credit Linked Subsidy Scheme – to complete houses sanctioned up to March 31, 2022. Around 83% of the houses to be constructed under PMAY-U are not meant for the urban landless poor, but rather for families having access to capital and land. The slum rehabilitation scheme within PMAY-U has sanctioned only 2.96 lakh homes.

The PMAY-G was launched by the Modi government in 2016 with the aim of constructing 2.95 crore houses. The scheme offers ₹1.3 lakh for each unit constructed under the scheme, with a 60:40 funding split between the Centre and State. According to the PMAY-G dashboard, as of April 30, 2024, a total of 2.6 crore houses have been completed. According to data shared by the government, as of September 29, 2022, over 69% of houses constructed under PMAY-G were either wholly or jointly owned by women. Both components of the PMAY combined received ₹80,671 crore in the interim budget.

**What about State schemes?**

States too have sought to introduce housing schemes. In the run-up to the polls, the Andhra Pradesh government has undertaken schemes such as the Navaratnalu-Pedalandariki Illu. Under this, the State had taken up construction of 21.76 lakh houses, with an outlay of ₹56,700 crore. Of these, the construction of 7.43 lakh houses was completed as of October 2023, with the State

reportedly acquiring more than 77,000 acres of land. The State was chasing a target of building 1.79 lakh homes by a deadline of March 2024. In a press release, it specifically mentioned that the government would register the houses in the names of women beneficiaries to empower them. This is in line with the increasing focus on women as an important voting bloc.

## AN OVERVIEW OF THE SMART CITIES MISSION

**The story so far:**

The Smart Cities Mission (SCM), a flagship programme of the NDA-1 government, has taken a back seat in this year's list of poll promises and achievements.

**What are smart cities?**

The term 'Smart City' has been used widely ever since 2009, after the great financial crash. Smart cities were defined by urban practitioners as new Silicon Valleys built with a strong integration of a network of airports, highways, and other types of communications, a so-called intellectual city with advanced ICT.

The NDA-1 government wanted to adapt to these global changes, already happening through the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). It went ahead with a major flagship programme and thus, the SCM was announced in June 2015. Hundred cities were selected for five years under the mission. However, the mission did not clearly define a smart city. It stated, "there is no universally accepted definition of a Smart City.... The conceptualisation of Smart City... varies from city to city and country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. A Smart City would have a different connotation in India than, say, Europe. Even in India, there is no one way of defining a Smart City."

**What was the SCM?**

The SCM had two main aspects: area-based development consisting of three components — redevelopment (city renewal), retrofitting (city improvement), and green field projects (city extension); and pan-city solutions based on ICT. These further comprised some six categories that would include e-governance, waste management, water management, energy management, urban mobility, and skill development. Around ₹2 lakh crore was kept aside for the mission, with public-private partnerships (PPP) an important driver of the same.

The mission that was to be completed in 2020, was given two extensions till June 2024. Additionally, to make the mission effective, a business model of governance was adopted bypassing the existing models of city governance in the country. An SPV (special purpose vehicle) led by a bureaucrat or a representative of an MNC, and other major stakeholders was created and registered under the Companies Act. The elected council, thus, had little role in the governance structure.

**What is the status of the SCM?**

The Urban Ministry's dashboard as of April 26, exhibits that 8,033 projects sanctioned under the SCM have seen a fall in the total outlay from the expected ₹2 lakh crore to ₹1,67,875 crore, which is 16% less than the projected capital flow in 100 cities. The dashboard also states that the SCM

grant funded 5,533 projects worth ₹65,063 crore that have been completed, while 921 projects worth ₹21,000 crore are still ongoing.

As many as 400 projects being undertaken by about 10 cities under the Mission are unlikely to meet the extended deadline of June 2024.

Interestingly, the funding pattern shows that not more than 5% has come through the PPP route.

**Where did the SCM falter?**

The selection of 100 cities on a competitive basis was flawed due to the diversity in existing urban realities. The scheme was divorced from the ground realities of urban India — the urbanisation here is dynamic and not static like the West.

The SCM became an exclusionary scheme wherein not more than 1% of a city's geographical area was selected for development. For example, Chandigarh which received ₹196 crore in the first tranche under the SCM spent it on smart water meters, a Wi-Fi zone, and solid waste management programmes all ploughed into one pocket-sector 43.

According to two major reports by McKinsey, to make Indian cities liveable, a capital expenditure of $1.2 trillion is required by 2030. In this context, ₹1,67,875 crore is less than $20 billion in nine years. This comes to around 0.027 % of the total requirement in urban India. Hence, there was little traction for this scheme.

Additionally, the SPV model designed for smart cities was not aligned with the 74th Constitutional Amendment, which led to many cities objecting to the governance structure. The design, according to critics, was too top-bottom. A hilly town that had an annual budget of less than ₹100 crore claimed projects worth more than ₹2,500 crore. This was incongruent to the demands of the residents of the town.

Urban India, according to the World Bank has more than 49% of the population living in slums. In the name of executing smart city projects, there was displacement of people living in poorer localities. Street vendors, for example, were displaced and urban commons were disrupted.

Another major consequence of the SCM has been enhanced urban flooding. Some of the towns which have historically never been flooded were made vulnerable because of infrastructure development projects that spoiled or dismantled the water channels and contours.

## 11 DEATHS IN FIRST FIVE DAYS OF CHAR DHAM YATRA AS PILGRIMS FLOOD ROUTES

With nearly twice the number of pilgrims embarking on the Char Dham yatra in Uttarakhand since it commenced on May 10, the state government has reported the death of 11 pilgrims in the first five days.

— The pilgrimage to Yamunotri, Gangotri, and Kedarnath Dham commenced on May 10, while the doors to Badrinath Dham opened on May 12. Over 1.55 lakh pilgrims have already journeyed to Kedarnath, over 70,000 to Yamunotri, and over 63,000 to Gangotri. Within just three days, Badrinath Dham has welcomed over 45,000 pilgrims.

— This year almost twice the number of pilgrims have arrived in Uttarakhand as compared to last year.

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**For Your Information:**

— The term Char Dham refers to the four holy places in Uttarakhand state, which are Yamunotri, Gangotri, Kedarnath, and Badrinath. These four destinations are believed to be the abode of gods and goddesses and are considered highly sacred by Hindus.

— A flagship initiative of the Centre, the Rs 12,000-crore highway expansion project was envisaged in 2016 to widen 889 km of hill roads to provide all-weather connectivity in the Char Dham circuit

## ARMED FORCES' INTEGRATED COMMANDS STRUCTURE PLAN LOOKS AT VICE CDS, DY CDS WITH CLEAR ROLES

"Media reports suggest that the complex and contentious policy issue of rewiring the Indian military into integrated theatre commands (ITC) is gaining traction and that the armed forces are looking at the appointment of a Vice Chief of Defence Staff and a Deputy Chief of Defence Staff."

— "Wearing three hats, the CDS is the first among equals along with the other three service chiefs as a four-star general. Concurrently, he is Secretary to the Government of India in the Ministry of Defence and Principal Adviser to the Defence Minister on inter-service issues."

— General Bipin Rawat, who retired as the army chief in December 2019, was appointed as the first CDS in January 2020. General Rawat died in an unfortunate air accident in December 2021. In October 2022, Lt Gen Anil Chauhan (retd) was appointed the second CDS.

— "New posts at the higher level are being envisaged to enable the CDS to realise the larger objective of enhancing jointness (the sharing of domain expertise and assets) and improving composite combat capability."

— "The first pertains to the post of a Vice CDS in four-star rank. Rank hierarchy is central to the military and if implemented, the office of the CDS would be tenanted by two four-star rank officers and at a later stage — complemented by three theatre commanders presumably of four-star rank. Concurrently, the three service chiefs who are the original four-star rank officers would have a different profile that would be devoid of the command responsibility."

— "The creation of the CDS in 2019 was to enable an enhancement in overall combat efficiency across the board and prepare for new exigencies that will be shaped by the techno-strategic churn that is now taking place."

## WHAT IS DIGILOCKER AND DOES IT KEEP YOUR DATA AND DOCUMENTS SAFE?

**The story so far:**

As thousands of students across the country rush to their computers to check their board exam results, many of them now have the option of viewing their scores and even obtaining their verified marksheets through the Indian government's DigiLocker platform. While 10th and 12th standard students from the CISCE board as well as 10th standard students from the State Board of Tamil Nadu can get their 2024 results from DigiLocker, this facility is coming soon to the students of the CBSE board.

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**What is DigiLocker and who uses it?**

The DigiLocker platform, launched in 2015, operates as an app to store users' digital records. The app can be used when applying for a passport, reviewing marksheets, or proving one's identity during travel. The app is part of the Indian government's paper-free initiative aimed at letting users access, verify, and store essential documents in a digital wallet so that they are easy to retrieve and present to officials when required. As of early May, the app has over 270 million registered users, while nearly 6.7 billion documents — like Aadhaar, insurance policy papers, PAN records, and driving licences — have been retrieved through it.

As per DigiLocker's website: "The issued documents in DigiLocker system are deemed to be at par with original physical documents as per Rule 9A of the Information Technology (Preservation and Retention of Information by Intermediaries providing Digital Locker facilities) Rules, 2016 notified on February 8, 2017 vide G.S.R. 711(E)."

**Why are users adopting DigiLocker?**

DigiLocker is a paperless solution meant to ensure that a user can access the latest and updated versions of their documents online in order to prove their identity and their credentials at any given moment. To the verifying officials, this helps in keeping at bay fake, poor quality print copies, and outdated documents that miss key details.

Also, for the user, this app helps eliminate the need to carry separate sets of documents while they are on the move. Instead, the documents can be fetched or stored in a local device. In theory, these digital documents are no less valid than their originals. Additionally, the DigiLocker website noted that using the app can help with faster service delivery.

**How secure is DigiLocker?**

DigiLocker is a flagship initiative of the Ministry of Electronics & IT (MeitY) under the Digital India programme, meaning it is a government approved application and is ideally maintained with strict security protocols framed by officials. As per the MEITY website: "DigiLocker ties into Digital India's vision areas of providing citizens a secure document access platform on a public cloud."

According to DigiLocker's own website, it has standard security measures in place including 2048 Bit RSA SSL encryption, multi-factor authentication (OTP verification), consent systems, timed log outs, and security audits. However, any government database that stores citizens' information and documents is inevitably an attractive target for hackers who steal user data and sell it on the dark web.

On June 2, 2020, DigiLocker posted a notice about a "potential vulnerability in the sign-up flow," that could have led to accounts being compromised. However, due to a CERT-In alert and another independent researcher, DigiLocker said that the vulnerability was patched within a day of getting the alert, and that user data was safe. As per Google Play Store, no DigiLocker data is shared with third parties and data is encrypted in transit. Examples of data collected include files and documents (optional), your name, email (optional), and user IDs.

**What are some issues with DigiLocker?**

People who are not used to smartphones or those find it difficult to navigate apps may struggle to download DigiLocker, use OTPs, and fetch their credentials unless they have assistance. Those who cannot read are also at a disadvantage.

Another hurdle is that people with multiple names, aliases, inconsistent spellings, or even slightly mismatched certificates may not be able to smoothly fetch their documents via DigiLocker as the app needs the submitted details to match the issuer's data exactly. Users have in the past complained that even subtle changes such as capitalised letters and initials can lead to failure.

Furthermore, there is no uniformity in how different government authorities and law enforcement bodies in India review official documents. While some insist on being shown virtual documents through DigiLocker, others claim the original hard copies are mandatory.

**Do I need DigiLocker in order to get a new passport?**

The Hindu reached out to Passport Seva in order to learn whether DigiLocker is a must for passport processing. An official responder from the National Call Centre said that only the original hard copy of the documents and xerox copies were required, and that the DigiLocker was not mandatory. By contrast, officials have in the past urged passport applicants to use the DigiLocker app in order to speed up the application process. There have also been instances where passport office authorities insisted on seeing documents through the DigiLocker app, in addition to inspecting the originals in paper form. Since the implementation of this policy varies wildly across the country, those who wish to complete administrative processes without hassle can come prepared with their original documents, physical copies of the same, and the needed documents/credentials on DigiLocker as well.

## HURDLES ON THE PATH TO GREEN

The recent heatwave has reminded us of the stark risks posed by climate change and highlighted the criticality of the efforts taken by the Conference of Parties (COP). The World Meteorological Organisation has confirmed that 2023 was the warmest year on record. This has brought the focus back on sectors like power and industry, which account for the bulk of carbon emissions."

— "India is the third-largest carbon-emitting country and sectors like power, steel, cement, chemicals, fertilisers, refineries are facing heightened scrutiny."

— "The government has been supporting a shift to green energy with initiatives such as the PLI scheme in the renewable energy (RE) sector and the Faster Adoption & Manufacturing of Electric Vehicles (FAME) scheme. It has also launched the National Green Hydrogen Mission, made amendments to the Energy Conservation bill, launched green bonds, etc."

— "Fossil fuel-based power is the major source of carbon emissions in India. With the government's climate target of enhancing non-fossil power to 50 percent by 2030, various schemes have been launched to boost renewable energy."

— "The availability of round-the-clock supply from RE sources remains important to achieve the targeted level of its share, given their intermittent generation. This can be made possible through the use of hybrid RE projects (wind and solar) complemented with energy storage systems."

— "For hard-to-abate sectors like steel and cement, the government needs to explore more ways of carbon sequestration. Installation of carbon capture utilisation and storage (CCUS) will be inevitable."

— "After water, concrete is the second-most used substance on Earth, in which cement is the main component. While producing one tonne of cement, an equivalent amount of carbon dioxide is released. As maximum emissions are generated while producing clinker, CCUS will reduce more than 60-70 per cent of the emissions in the process of cement manufacturing."

— "Several entities in these high-carbon emitting sectors are taking voluntary steps to become more green. Nevertheless, the government's support will be critical to hasten the technology transition in these hard-to-abate sectors."

**For Your Information:**

— India has set itself a target of achieving 500 GW of renewable energy capacity by 2030 as part of its commitment under the Paris accord. Significant progress has been made, with renewable energy capacity reaching over 170 GW in 2023.

## NEARLY 6 MILLION TREES DISAPPEARED FROM FARMLANDS: STUDY

In a mere three years, from 2019 to 2022, India may have lost close to 5.8 million full-grown trees in agricultural lands, says a satellite-imagery-based analysis by researchers at the University of Copenhagen, Denmark, published this week in the peer-reviewed journal Nature Sustainability.

Additionally, 11% of such trees detected via satellite during 2010-2011 were no longer visible when reviewed from 2018 to 2022, leading the researchers to conclude that these trees had "disappeared".

However, this doesn't necessarily imply that India's overall tree cover is declining as the analysis was specific to only large trees above a certain size.

The Forest Survey of India (FSI) conducts regular surveys of tree cover but only publishes data on the changes in acreage and not individual trees. The latest FSI report says that India's tree cover has increased in 2021 over 2019.

The present analysis focuses on farmlands and tracks individual trees, albeit only big ones, relying on maps from multiple 'micro-satellites', and machine learning analysis to estimate trends, beginning in 2010. About 56% of India is covered by farmland and 22% by forest. With the largest agricultural area in the world, changes in tree cover here, while critical, have been largely "overlooked", the authors say.

For their analysis, the researchers combined satellite-imagery from two repositories — RapidEye and PlanetScope — to estimate changes in tree number from 2010 to 2022. These have resolutions of three to five metres, meaning that the satellite can "see" large trees, three to five metres apart, as individual trees. The FSI relies on data from the Sentinel satellite that has a coarser resolution of 10 metres — implying that they can tell apart blocks of trees but not individual ones.

**Hotspots**

Trees detected by RapidEye had an average crown size (the leafy outgrowth of tree) of 96 sq.m and such a high loss rate of mature trees over less than a decade is "unexpected", the authors note.

"The disappearance of mature farmland trees was observed in many areas, but numbers rarely exceed five to 10%, except for areas in central India, in particular in the States of Telangana and

Maharashtra, where we document massive losses of large trees. Here, several hotspot areas have lost up to 50% of their large farmland trees, with up to 22 trees per square kilometre disappearing. Smaller hotspot areas of loss are also observed, such as in eastern Madhya Pradesh around Indore."

The tree loss estimate was on the "conservative" side and most of the losses were likely between 2018 and 2020, they noted.

One of the authors told The Hindu that the absolute number of trees lost since 2010 could not be estimated as ".. images from 2010 to 2011 are not always good and it was not a wall-to-wall (tree) mapping exercise".

"Trees may be missed due to bad image quality. An absolute number would thus have a high uncertainty. We trust the images from 2018 to 2022, so if a tree was detected in 2010 but not over 2018-2022, there is little uncertainty that it was lost. But not all trees in 2010 were mapped," said Martin Brandt, of the University of Copenhagen and one of the study authors.

"Similarly for the 2018-2022 period: it's not a consistent thinning all over India, but often clustered, with some areas losing a considerable number of trees within a few years. You can see it visually on Google Earth using the historic images, it's unbelievable seeing how many large trees disappeared." A plausible reason for large trees being lost was the conversion of farmland to paddy fields. "A certain loss rate is natural, and the cutting of trees is also part of agroforestry management systems, and not every lost tree is related to climatic disturbances or human appropriation. An observable trend is emerging in several areas where established agroforestry systems are replaced with paddy rice fields, which are being expanded and intensified, a development facilitated by the availability of newly established water supplies. Large and mature trees within these fields are removed, and trees are now being cultivated within separate block plantations typically with lower ecological value," the authors noted.

## THE MAGPIES OF THE HIMALAYAS

Magpies belong to the Corvidae family of birds that includes crows, jays and ravens. Birds of this family are generally considered to be noisy, inquisitive birds that in folklore from around the world have often been associated with omens, good or bad. In some European cultures, they accompany witches. An English rhyme, "One for sorrow, two for joy; three for a girl, four for a boy; Five for silver, six for gold; Seven for a secret never to be told," suggests that spotting a lone magpie brings bad news. But no one will deny that the magpies are striking in appearance, or that some of the most flamboyant species are found in the Himalayas.

From Kashmir to Myanmar, a few closely related blue magpie species are a common sight. The gold-billed magpie, Urocissa flavirostris, also called the yellow-billed blue magpie, has mischief in its eyes and occupies the high altitude zone between 2000 and 3000 meters above sea level. At slightly lower heights we find the red-billed magpie, and the blue magpie is found at lower altitudes where humans live in larger numbers.

**Trekking corridors**

Best sightings of the yellow and red-billed varieties are in the trekking corridor in Western Sikkim that leads from the town of Yuksom, at 1,780 metres above sea level, to fabulous sights of the Kanchenjunga from near the Goche La pass at about 4,700 metres above sea level. The journey takes you from tropical moist broad-leaf forests at the lower altitudes through high sub-Alpine

forests to a treeless Alpine landscape of juniper bushes. Somewhere in the middle are forests whose canopies close in over you, and an astonishing diversity and density of birds.

Field studies by zoologists at the Sikkim Government College have documented that over 250 species of birds are found in this zone, and at around 2,500 metres above sea level, you can see or hear nearly 60 individual birds in a five-minute time interval. The yellow-billed blue magpie is very often a part of this chorus. The body of the bird is about the size of a pigeon, but with a 45-centimeter-long tail, adding up to an overall size of 66 cm. While foraging for worms on the ground, the tail is pointed upward; while picking berries in trees, the tail swoops downward. The flight is characteristic too: a few quick wing beats, followed by long gliding movements.

The yellow-billed blue magpie builds its nests at the forks of branches in rhododendron trees. The nest itself appears to be a hurried job of twigs, with a soft lining of grass in which three-six eggs are laid in May or June. Both parents take part in raising the young. As the nursery rhyme says, two for joy.

The blue magpie and the red-billed magpie are very similar in appearance too, though a little smaller. The blue magpie is less of a forest bird, and more often seen around villages. All the species can be spotted as solitary birds, in pairs, or noisy flocks of 8-10 birds.

As human presence in forests increases, there are worries about how well the birds can cope. The colourful flowers of rhododendrons attract tourists. To support tourists, villagers often resort to forest resources such as firewood. It is hoped that just like agriculture, tourism will also learn to be a sustainable trade.

## NITI AAYOG'S ALARM BELLS ON CANCER DETECTION: C THE SIGNS

It's well-known that spotting signs of cancer at an early stage significantly increases the possibilities of surviving the disease. In India, government projects, including the National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke, recognise this necessity. These programmes have given special emphasis to checking for cervical, oral and breast cancers — they constitute a third of all cases of the disease in the country — before symptoms appear. Yet, successive National Family Health Surveys have revealed that a very small percentage of people in the vulnerable age group — those over 30 years of age — get screened for malignancy. Turning 1,50,000 health and wellness centres (HWCs) into nodal points for cancer detection under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) could have proved to be a game changer. The introduction of screening facilities at these primary healthcare centres could have reduced accessibility-related problems to a great extent. But a Niti Aayog report has flagged "huge gaps" in the performance of these HWCs. Less than 10 per cent of these centres had completed one round of screening for non-communicable diseases, including cancer, says the report.

In recent years, India has done well in piloting low-tech approaches to cancer screening that can be delivered at scale by community-level workers. AB-PMJAY makes use of these technologies. Global experience shows that the trust enjoyed by grassroots-level professionals is a big positive when it comes to screening people for diseases that may not show any symptoms. The government, therefore, did the right thing in roping in ASHA workers in its project. However, it does not seem to have invested adequately in the next steps. Given the low awareness of the disease, it was imperative that these frontline professionals were educated about cancer prevention protocols and trained to use the screening techniques. Much before the NITI Aayog's

study, analyses conducted with smaller sample sizes had underlined that ASHA workers should be sensitised to risk factors, symptoms and, in fact, the need for screening itself. These studies also emphasised the need to improve the working conditions of these low-paid and overburdened workers. The AB-PMJAY also refers to such imperatives. The NITI Aayog's study underlines that the upgrades have not been undertaken in adequate measure.

The Union Ministry of Health has designated the Noida-based National Institute for Cancer Prevention and Research as a training hub. The institution's expertise must be summoned for screening malignancy. Experts agree that such instruction can be given online and professionals receiving such training can educate others. Reducing India's cancer burden will require efforts in several directions. The Centre must take the right lessons from the report of the Niti Aayog.

## HOW IS INDIA STREAMLINING THE PHARMA SECTOR?

**The story so far:**

India's drug regulator, the Central Drugs Standard Control Organisation (CDSCO), has withdrawn powers delegated to State licensing authorities to issue NOCs (no objection certificates) for manufacture of unapproved, banned or new drugs for export purposes. This latest announcement covering drugs for export comes at a time when India has been under scrutiny for allegations of supplying substandard drugs causing health concerns in several countries. The CDSCO is now the sole authority for issuing manufacturing licences for drugs meant for export.

**What is India's role in the pharma market?**

India ranks third worldwide as a producer of drugs and pharmaceuticals by volume, exporting to around 200 countries/territories. The Indian pharmaceutical industry supplies 62% of the global demand for vaccines and is a leading supplier of DPT (diphtheria, pertussis and tetanus), BCG (Bacillus Calmette-Guérin, used primarily against tuberculosis), and measles vaccines. At least 70% of WHO's vaccines (as per the essential immunisation schedule) are sourced from India, the Centre had noted in a submission in Parliament.

**What will be the impact?**

India is a key player in the international generic medicine market and any change in policy has a direct impact on manufacturers and importers, say industry insiders. The centralising of the licensing authority is significant, they point out, because according to a study conducted by the Department of Pharmaceuticals, India needs to get ready to take advantage of drug sales worth $251 billion going off-patent this coming decade.

**What are the challenges?**

India is dealing with several challenges, including tackling intellectual property rights, lack of research and development etc. The study points out that understanding the political, economic, sociocultural, technological, environmental, and legal factors is vital for assessing the opportunities and challenges in the pharmaceutical market in India. "The industry must adapt to changes in these external factors, navigate regulatory requirements, leverage technology advancements, and align their strategies with the evolving needs of the pharmaceutical industry to succeed in the global market," it noted. Speaking about the change, Raheel Shah, business development director, BDR Pharmaceuticals, says the move is welcome as the centralisation of NOCs will formalise the Indian pharma industry. "This will result in the efficiency of the overall

process along with bolstering pharma exports to key international markets. It will help to bring uniformity in protocols, achieve the target of reaching $450 billion by 2047," he adds.

**What about the quality of manufacturing?**

An article in the British Medical Journal titled, 'Indian government cracks down on 18 drug companies for poor quality manufacturing', noted that the Indian government had cancelled the licences of over 10 pharmaceutical companies as part of a crackdown on poor quality manufacturing. The action last March came after an inspection of 76 drug firms across 20 States. "The government is also understood to have given notices to a further 26 companies for not complying with good manufacturing processes. The Indian pharmaceutical industry has an estimated 10,500 companies, with drug exports having more than doubled in the past decade. But the industry has faced a series of scandals of late, including a World Health Organization investigation into four contaminated cough syrups that caused acute kidney injuries and were linked to the deaths of 66 children in the Republic of the Gambia last year," it added.

In what seems like an effort to keep a strict watch, the latest order by CDSCO states that pharmaceutical companies will have to get their NOCs from the zonal offices of CDSCO online before applying for manufacturing licences from their respective State/UT drug regulators. The Drugs Controller General of India, Rajeev Singh Raghuvanshi, said the decision was taken to facilitate the application process. In 2018, the CDSCO had permitted State and UTs' drug licensing authorities to grant permissions to export some specific drugs. As per the new order, local regulators will have to hand over the details of all the approvals they have given from August 2018 to May 2024 to CDSCO.

The centralisation of powers hasn't come as an overnight development, says an industry expert. The Central government's advisory group on drugs had earlier this year noted that getting NOCs from local drug regulators for pharmaceutical products is a tedious process, leading to delays. Says Harish K. Jain, president, Federation of Pharma Entrepreneurs: "We don't anticipate any major impact as far as costing or delays with this latest move. Export of goods is on the Union List. Also, the central authority was always the Central government; the power to hand out licences for export of drugs was delegated to States a few years ago."

## RISE IN PUBLIC HEALTH SPENDING DUE TO STATES, NOT CENTRE

Public spending on health in India has historically remained low. Recently, many think tanks claimed that India, which has always spent a little more than 1% of its GDP on healthcare, is inching close to 2% under the current regime. An increase in public spending is welcome. But is it correct to attribute it to the Union government?

First, public spending on health in India continues to be abysmal compared to many countries. Second, while public spending on health has indeed increased, much of the rise is due to the States and not the Centre. In fact, the Union Health Ministry has been transferring a lower share of its resources to States in recent years. Moreover, the Centre has also cut the budget for the National Health Mission (NHM) in recent years, while increasing disproportionately the spending on government-funded health insurance schemes (GFHIs).

Chart 1 shows the per capita public spending on health in India compared to other countries in 2021. Bhutan's spending on health, per capita, was 2.5 times more than India's while Sri Lanka's was three times more. Many BRICS nations (old list) spent 14-15 times more than India.

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The increase in public spending on health in recent years, particularly during the COVID-19 pandemic, can be attributed to the States and Union Territories. The States have sustained the increase post-COVID-19 as well. Given the resource constraints they face, this is commendable. In contrast, the Union government's spending on health as a percentage of GDP, which increased moderately during the pandemic, has decreased post-pandemic.

Furthermore, a significant part of the increase in health investment as a percentage of GDP during the pandemic needs to be attributed to the negative and low growth of GDP, while absolute increase in expenditure remained modest, in real terms.

More concerning is the decline in the share of resources transferred to the States by the Union Healthy Ministry. In FY14, three-fourth (75.9%) of the Union spending on health was transferred to the States. Within the first three years of the National Democratic Alliance government, the share came down to little more than half (53.4%) and declined consistently to reach a new low of 43% in FY24 (Budget Estimates). The trend reflects increased centralisation of financial resources on health, a subject which largely falls within the domain of States.

Launched in 2005, the NHM was a crucial intervention by the Union government. But expenditure on the scheme has mostly remained stagnant or has come down in the last seven years. Between FY14 and FY19, the spending on NHM grew at 7.4% on average, largely due to a sudden jump in FY18. During the second tenure of the NDA government, spending on NHM declined in real terms at 5.5% on average.

The Modi government's emphasis on Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PMJAY) is visible in its spending patterns. A look at the expenditure on various GFHIs such as PMJAY shows a steady increase in expenditure. Between FY15 and FY20, expenditure in real terms nearly doubled, growing at an average of 18% per annum. Even though the Centre draws a lot of mileage from these schemes, a bigger share of the spending is incurred by the States.

The COVID-19 pandemic had shown the cracks in India's health system and highlighted the need for increased public investment in healthcare. While the States have risen up to the challenge, despite financial constraints, the Union government has done little.

## KERALA SOUNDS WARNING ON WEST NILE VIRUS; NEIGHBOURING STATES ON GUARD

Kerala's annual battle with vector-borne diseases has begun early this year, even before the South West monsoon, with West Nile Fever (WNF) being reported from several districts. The first official alert was sounded by the Health department on May 7 and according to the IDSP report till date, the State has reported 20 suspected cases (only 10 cases confirmed so far) and two deaths are also suspected. Given that Kerala has been endemic for the WN virus for at least two decades and that 80% of cases are asymptomatic, for every officially reported case, there could be several unreported and asymptomatic cases in the community.

In symptomatic cases, patients usually have fever, headache, fatigue, myalgia, nausea and vomiting, and sometimes, swollen lymph glands. As clinical symptoms of most mosquito-borne viral diseases are similar, the possibility of WN or JE is considered only when the patient exhibits symptoms of neuroinvasive diseases like encephalitis or meningitis, collectively known as Acute Encephalitis Syndrome (AES). Thus, because of the diagnostic difficulties in identifying WNF in its acute phase, only a few cases get recorded in the State's official surveillance mechanisms.

**Diagnostic difficulties**

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Only 1 in 150 cases affected by the WN virus gets a severe disease, and even fewer get encephalitis. WHO states that while serious illness can occur in people of any age, people over the age of 50 and some immunocompromised persons, like transplant patients, are at the highest risk of falling severely ill when infected with WNV. Kerala's Director of Health Services, K. J. Reena, said that WNF has been in the official surveillance records of Kerala every year since 2011 and that cases are being reported from almost all districts now. Districts that have reported WN cases this year include the northern districts of Thrissur, Malappuram, Kozhikode, and Palakkad.

The principal vectors of the disease are mosquitoes of the genus Culex, generally found breeding in stagnant, large water bodies like paddy fields. WNV circulation is maintained in mosquito populations through vertical transmission (adults to eggs).In a study, published in the Indian Journal of Medical Research in 2017, B. Anukumar, et al. say that the first reported acute encephalitis syndrome (AES) outbreak in Kerala occurred in the Kuttanad region between January and February 1996, causing 105 cases and 31 deaths.

### Exceptional features

Although the Japanese Encephalitis virus was reported to be an aetiological agent associated with the outbreak, there were some exceptional features noticed during the outbreak. The seasonality of the outbreak was different from the one known for JE in Kerala, and most patients were from adult age groups, whereas JE occurs mainly in children.

Another outbreak occurred in 1997, causing 121 cases and 19 deaths. The role of WNV in AES cases was not ruled out, Dr. Anukumar says. In 2006, during the Chikungunya epidemic in Alappuzha, abundant in paddy fields and prone to waterlogging, the possibility of the co-circulation of the WN virus was mooted because of the high mortality rate during the epidemic. However, NIV (National Institute of Virology, Pune) provided conclusive evidence about the major presence of the WN virus in the region in 2011 during an AES outbreak when 208 cases were reported.

Public health experts say that the fact that the northern districts too have begun reporting the presence of the WN virus frequently could be either due to improved diagnostic facilities or the fact that the WN virus itself has been spreading. Most cases of AES are still reported by the health system as AES/JE or JE-WN complex because only the plaque reduction neutralisation test (usually done only in NIV) can isolate the WN virus antibodies.The WN virus is maintained in nature in a mosquito-bird-mosquito transmission cycle. More than 250 species of birds are reservoir hosts of WNV. "In Kerala, the presence of large stagnant water bodies and migratory birds provides an ideal eco system for the WN virus to thrive. In the era of climate change, when mosquito-borne diseases are emerging as major public health problems, it is important that the State establishes efficient surveillance systems on the One Health platform to identify new pockets where WN and similar arboviruses may emerge," points out T.S. Anish, a public health expert and Associate Professor of Community Medicine, Government Medical College, Manjeri.

### Avian reservoir

"Members of the crow family are said to be particularly susceptible. All our information on the WN virus is based on Western literature. Have there been any studies to identify if our common crow could be spreading any viruses?" Dr. Anish wonders.Kerala's health department, while issuing a public alert on WN fever and asking people to take protective measures to prevent mosquito bites, perceives WN virus to be a lesser villain because of the low mortality profile of the disease, when compared to JE or dengue. WNV rarely turns fatal.The health department also

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contends that unlike dengue fever, which is spread rapidly and efficiently by Aedes mosquitoes, the WN virus does not cause huge outbreaks. Viremia due to WN virus is transient in humans, and hence Culex mosquitoes cannot transmit the virus efficiently to more people.

Neurological sequelae left behind by the virus is not something that can be discounted however. Neurological sequelae reported by doctors post WN infection include cognitive dysfunction, memory loss, seizure episodes and motor deficits.

## THE IMPACT OF 50 YEARS OF VACCINATION ON CHILDREN WORLDWIDE

In the last 50 years, the lives of about 150 million children have been saved due to vaccinations against different diseases. Of these, measles vaccination alone accounts for saving 60% of lives. These are some of the findings from a new study published in The Lancet.

The decrease in deaths due to vaccine-preventable diseases can be attributed to the large-scale expansion of immunisation programmes across the globe. For instance, the measles vaccination rate increased from less than 20% in 2000 to 70% by 2021, worldwide. A similar pattern was observed in the case of vaccination against diphtheria, pertussis, and tetanus (DTP3) too. The significance of vaccinations has been particularly pronounced in reducing infant mortality rates from around 10% in 1974 to 3% in 2024. The researchers estimate that 40% of this decline is due to vaccines.

from 1974 to 2024 across the world, Measles vaccination has had the most impact, with 94 million individuals benefiting from the vaccine, followed by tetanus (27.9 million), whooping cough-pertussis (13.17 million) and tuberculosis (10.87 million) vaccine.

The Western Pacific region saw the most drastic increase in vaccination coverage from 2% in 2000 to 91% in 2021. Rising from 15% in 2010 to nearly 80% in 2021, Southeast Asia also showed significant advancement in measles vaccination rates over the last decade.

In 2021, more than 80% of infants received the third dose of the DTP3 vaccine. Here too, the Western Pacific region showed high progress, from less than 10% in 1980 to 90% in 2021.

The progress in vaccination rates is noteworthy because 50 years ago, vaccination coverage outside of Europe and North America was almost negligible. For instance, less than 5% of infants received the DTP3 vaccine. But in 1974, the World Health Assembly, the decision-making body of the WHO, formed the Essential Programme on Immunization. Various vaccination programmes were initiated across the world, which aimed to eradicate vaccine-preventable diseases. This led to a significant rise in vaccination rates.

But by 2000, progress was stalling, and many of the world's poorest infants were still being left behind, especially in Africa and Asia. The formation of Gavi, the Vaccine Alliance — a partnership between the Bill and Melinda Gates Foundation, the WHO, UNICEF, and the World Bank — has since helped close the gaps by ensuring that vaccination programmes were available for all. While the worldwide progress in vaccination rate is commendable, millions still continue to lose their lives due to insufficient vaccination coverage.

Every year, tuberculosis claims the lives of over a million people, while hundreds of thousands still die due to measles, tetanus, whooping cough, meningitis, and hepatitis B.

Thus, we need to push for universal vaccine coverage. This will require increased investment and coordination from governments to provide universal immunisation programmes. It is also imperative to address scepticism and the fear towards vaccination.

## WHY KERALA HAS BANNED OLEANDER FLOWERS IN TEMPLE OFFERINGS

Two Kerala government-controlled temple boards, which together manage 2,500-odd temples in the state, have banned use of oleander flowers (locally known as arali) in temple offerings after a 24-year old woman died after accidentally chewing some oleander leaves.

Here is all you need to know about oleander, its medicinal uses, and toxicity.

**What is oleander?**

Nerium oleander, commonly known as oleander or rosebay, is a plant cultivated worldwide in tropical, subtropical, and temperate regions. Known for its drought tolerance, the shrub is often used for ornamental and landscaping purposes.

In Kerala, the plant is known by the names of arali and kanaveeram, and is grown along highways and beaches as a natural, green fencing. There are different varieties of oleander, each with a flower of a different colour.

**How is oleander used in traditional medicine?**

The Ayurvedic Pharmacopoeia of India (API), a government document that describes the quality, purity, and strength of drugs used in Ayurveda, mentions oleander. According to API, an oil prepared from the root bark can be used to treat skin diseases.

The plant has been "frequently described in Brihattrayi, Nighantus and other classical Ayurvedic texts. Charka [Charak Samhita] has prescribed the leaves of white flowered variety externally in chronic and obstinate skin diseases of serious nature including leprosy," Anamika Chaudhari and Bhawna Singh, from the Himalayee Ayurvedic Medical College and Hospital, Dehradun, wrote in their research paper 'A Critical Review of Karvira', published in 2016 in the International Journal of Ayurveda & Medical Sciences.

"Bhavaprakasha has described Karvira [another name of the plant] as a visha (poison) and indicated it in treatment of vrana (infected wounds), kustha (skin diseases including leprosy), krimi (microbes and parasites), kandu (itching), etc," they wrote.

**How toxic is oleander?**

Even though it is prescribed in some ayurvedic formulations, oleander's toxicity has also long been recognised across the world, and as researchers Shannon D Langford and Paul J Boor wrote, the plant has been "exploited therapeutically and as an instrument of suicide since antiquity." ('Oleander toxicity: an examination of human and animal exposures' published in the journal Toxicology in 1995). Moreover, ingestion or inhalation of smoke from burning oleander can also be intoxicating.

This is due to the properties of cardiac glycosides (a type of chemical) including oleandrin, folinerin, and digitoxigenin, which are present in all parts of the plant.

"Cardiac glycosides are steroidal compounds capable of exerting pharmacological effects on cardiac muscle. The primary therapeutic value of these glycosides lies in their ability to exert profound tonic effects on the heart [stronger and faster heart contractions]," Langford and Boor wrote. "However, the therapeutic window is small and overdose/toxicity is frequently encountered when using these drugs," they added.

Effects of oleander toxicity include nausea, diarrhea, vomiting, rashes, confusion, dizziness, irregular heartbeat, slow heartbeat, and, in extreme cases, death. According to the website of New York's Mount Sinai hospital, "Symptoms last for 1 to 3 days and may require a hospital stay. Death is unlikely."

## ARCHAEOLOGIST FINDS FIRST EVIDENCE OF ROCK ART IN FORM OF FOOTPRINTS IN MANGALURU CITY

The first evidence of rock art in Mangaluru city has been found near Boloor Panne Koteda Babbu Swamy shrine, according to T. Murugeshi, retired Associate Professor, Ancient History and Archaeology, MSRS College, Shirva.

Mr. Murugeshi said the rock art is in the form of a pair of human footprints, found on a natural stone boulder near the shrine. These footprints might have been created in the first or second century A.D.

Rock art, is referred to paintings and rock paintings, which were unquestionable cognitive evidences of illiterate societies.

## EXPRESS VIEW ON SUSHIL MODI: A GENTLE POLITICIAN, BUILDER OF BRIDGES

Among the several richly deserved tributes that flowed in was the one Lalu Prasad wrote for "51-52 varshon se hamare mitra, bhai Sushil Modi (my friend and brother for 51-52 years, Sushil Modi)". In his homage, Lalu's son and political heir, Tejashwi, described Modi as "hamaare abhibhavak (our guiding light)". That Lalu and Tejashwi should choose these words to pay their respects to the leader, who died after a battle with cancer on Monday, is good form — but it is more than just that. After all, Modi's rivalry with Lalu, which began during their participation in the JP movement in the 1970s, had billowed over the following decades. Modi was one of the lead petitioners in Patna High Court in the fodder scam that has overhung most of Lalu's political career, and still shadows his legacy and his son's stewardship of the RJD. He played a pivotal role in Lalu's conviction and later, his pungent press conferences on the property that Lalu and his family had allegedly acquired illegally hastened the end of the ruling alliance between the JD(U) and RJD. Lalu and Tejashwi's tributes to a fierce political opponent are, above all, an ode to the way of Sushil Modi, whose relationships, across political differences and party lines, were marked by respect and cordiality.

The character of the BJP in Bihar — an ideologically less edgy and politically more flexible force — was shaped by the man who played various roles in the course of its rise, from MLA to Leader of Opposition, to Finance Minister and Deputy Chief Minister, the last one for 11 years in two stints, November 2005 to June 2013, and July 2017 to December 2020. In Bihar, unlike in neighbouring UP, for instance, the BJP has been reticent on polarising campaigns like "love jihad". To be sure, that has to do with the state's political biography. In this landscape of glaring inequalities, the socialist movement and the JP agitation for "total revolution" laid the ground for "social justice" mobilisations in the 1990s, which took precedence over religion-centric politics.

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But it also had to do with the leadership style of Sushil Modi. As he helped steer Bihar's turnaround story as Nitish Kumar's deputy, he kept governance at the centre and insistently spoke the language of policy. He is credited with pioneering the gender budget in Bihar, and in the state and at the Centre, played a key role in building the consensus that helped ease the implementation of the GST, and subsequently the fine-tuning of the indirect tax regime in the country.

Sushil Modi will be remembered for each and all the parts he played with wisdom and dignity — RSS swayamsevak and ABVP activist, protester who went to jail during the Emergency, deputy CM and finance minister of Bihar in a critical time for the state, and MP who expertly steered the work of several parliamentary committees. But most of all, in times when the dividing lines are etched deeper, and spaces are shrinking for dialogue and civility, he will be remembered as the gentle politician and the builder of bridges, an unusual leader for the political moment he lived and died in.

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## BUSINESS & ECONOMICS

### INDIAN EXPORTERS FEAR DUMPING FROM CHINA AFTER FRESH US-CHINA TARIFF WAR

Days after the United States (US) jacked up tariffs on multiple Chinese imports, including electric vehicle (EV) batteries, computer chips and medical products, Indian exporters said that the loss of a major market for China could trigger dumping of Chinese products into India.

"China is sitting on overcapacity in many sectors and thus the threat of dumping, in any case, not ruled out and more so when an important market is closed for their exports. I am sure industry and the government will be keeping a close watch on imports," Ashwani Kumar, President, Federation of Indian Export Organisations (FIEO) said at a press briefing.

Notably, China accounts for over half of the global EV sales, largely driven by its near dominance in battery production – a critical element for EV manufacturing. In 2023, China's production of lithium-ion batteries was equivalent to the global demand that stood at 2,600 GWh.

Chinese battery giant China's Contemporary Amperex Technology Co Limited (CATL) plays the most crucial role in China's hold over global battery production and the company alone accounts for two-thirds of the global battery production. CATL is a supplier to major automakers such as Tesla, Volkswagen AG and Toyota Motor Corp.

Indian exporters said that the recent US move will start a tariff war between two major economic powers as a retaliation is soon expected from China. However, the US-China tariff war could also open up opportunities for the Indian players.

"This [tariff war] provides an opportunity for India and other competitors to chip in the supply gap. Of the products affected by additional duties on China, India has opportunities in facemasks, Personal Protective Equipment Kit (PPE), syringes & needles, medical gloves, aluminium and iron & steel. Opportunity may come in China also with retaliation on US exports, provided we have market access in products targeted by China," Kumar said.

Notably, only $18 billion out of $420 billion exports of China to the US is affected by the recent tariff hikes which is little over 4 per cent. But a threat of dumping also comes as the European Union is expected to announce similar barriers citing possible injury from Chinese imports.

The European Commission (EC) in October last year launched an anti-subsidy investigation into the imports of battery electric vehicles (BEV) from China. As per the EC, the investigation will first determine whether BEV value chains in China benefit from illegal subsidisation and whether this subsidisation causes or threatens to cause economic injury to EV manufacturers in the EU.

"Based on the investigation's findings, the Commission will establish whether it is in the EU's interest to remedy the effects of the unfair trade practices found by imposing anti-subsidy duties on imports of battery electric vehicles from China," the EC said.

The US on Tuesday said that it will increase tariffs from 25 per cent to 100 per cent on EVs, bringing total duties to 102.5 per cent, from 7.5 per cent to 25 per cent on lithium-ion EV batteries and other battery parts and from 25 per cent to 50 per cent on photovoltaic cells used to make solar panels. Some critical minerals will have their tariffs raised from nothing to 25 per cent.

The tariffs imposed by the US on ship-to-shore cranes will rise to 25 per cent from zero, those on syringes and needles will rise to 50 per cent from nothing now and some personal protective equipment (PPE) used in medical facilities will rise to 25 per cent from as little as 0 per cent now.

More tariffs will follow in 2025 and 2026 on semiconductors, as well as lithium-ion batteries that are not used in electric vehicles, graphite and permanent magnets as well as rubber medical and surgical gloves. The US cited "unacceptable risks" to US economic security posed by what it considers unfair Chinese practices that are flooding global markets with cheap goods.

## IMF WARNS MALDIVES OF 'DEBT DISTRESS' WITH MORE CHINESE LOANS IN THE OFFING

Since winning office last year, President Mohamed Muizzu has reoriented the atoll nation — known for its upmarket beach resorts and celebrity vacationers — away from traditional benefactor India and towards Beijing.

Without naming the archipelago's main lender, the IMF said the Maldives remained "at high risk of external and overall debt distress" without "significant policy changes".

It urged the Maldives to urgently raise revenue, cut spending and reduce external borrowing to avoid a major economic crisis.

China has pledged more funding since last year's victory by Mr. Muizzu in the Maldives's presidential elections.

**India's goodwill gesture**

Meanwhile, in a goodwill gesture, India has decided to extend vital budgetary support to the Maldives with the rollover of a $50 million Treasury Bill for another year at the Maldivian government's special request, it was announced on Monday.

The State Bank of India has subscribed for one more year to the USD 50 million Government Treasury Bill, issued by the Ministry of Finance of Maldives, upon maturity of the previous subscription, the High Commission of India said in a brief statement.

## NORWAY EXCLUDES ADANI PORTS FROM GOVERNMENT PENSION FUND GLOBAL OVER ETHICAL CONCERNS

Norges Bank, the central bank of Norway, has excluded Adani Ports and Special Economic Zone (APSEZ) from its Government Pension Fund Global, over the 'unacceptable risk' the company contributes to human rights violations during the times of war and conflicts. The Norwegian Government Pension Fund Global GPFG is one of the world's largest fund, owning almost 1.5 percent of all shares in the world's listed companies. It has holdings in around 9,000 companies worldwide.

Besides, two other companies – Weichai Power Co Ltd and L3Harris Technologies Inc – have also been excluded from the investment by the GPFG.

The decision to exclude APSEZ, which was announced on May 15, is based on a recommendation from the Council on Ethics of November 21, 2023, Norges Bank said in a statement. APSEZ, a part of the Adani Group, is a logistics company that engages, among other things, in the operation of ports and port services.

"The Council on Ethics recommends that Adani Ports & Special Economic Zone Ltd be excluded from investment by the Norwegian Government Pension Fund Global (GPFG) due to an unacceptable risk that the company is contributing to serious violations of the rights of individuals in situations of war or conflict," Norges Bank said. The company has been under observation since March 2022, but that observation now ends given the exclusion decision, it said. In May 2023, APSEZ disclosed that it had sold its port-related operations in Myanmar to Solar Energy Ltd. No information on the buyer is available, and APSEZ has stated that it cannot share any such information on the grounds of confidentiality, the statement said.

"Lack of information means that the Council cannot establish whether APSEZ has links to the enterprise concerned. In a situation in which extremely serious norm violations are taking place, this constitutes an unacceptable risk that the GPFG's investments in APSEZ may breach its ethical guidelines," it said.

The Government Pension Fund Global was established after Norway discovered oil in the North Sea. The fund was set up to shield the economy from ups and downs in oil revenue. While investing in companies, the fund considers environmental and social issues. The fund itself may also decide to divest from companies that impose substantial costs on other companies and society as a whole, and so are not considered long-term sustainable. As per the Norges Bank Investment Management website, the fund held 0.24 per cent stake in Adani Ports at the end of December 2023. The fund is invested in a few other Adani group entities as well. Adani Ports did not respond to a request for comment till press time.

## TRADE IMBALANCE

India's merchandise exports, which shrank over 3% in 2023-24 — a year marred by multiple geopolitical and logistical disruptions to global trade — are off to a positive start this year, but only just. This April recorded outbound shipments worth $34.99 billion, reflecting a meagre uptick of 1.07% or $370 million from a year ago. As many as 17 of India's top 30 export items reported year-on-year contractions, compared with 13 in the previous month. Significantly, these declines are over a weak base — in April 2023, goods exports had tanked 12.7% and 20 of the top 30 items had reported a fall in export values. The minor growth last month was largely driven by just four items, pharma, chemicals, electronics and, most importantly, petroleum products, which recovered from a 35% contraction in March, aided by the rise in global oil prices. On the flip side, the surge in oil and gold prices through April lifted the country's goods import bill by 10.25% to over $54 billion. As a result, last month's trade deficit was the highest in four months at $19.1 billion, and nearly 22.5% over March's gap. If the OPEC+ club, which meets in early June, decides to extend output cuts, oil prices could well hit $100 a barrel. Moreover, a persistent global savings rush to gold as a safe haven, could keep pushing India's favourite yellow metal's prices higher. Apart from the deleterious effects of such a scenario on the domestic front (through higher fuel prices, for one), the trade balance and the rupee would be under pressure.

Global trade volumes, after tanking 1.2% in 2023, are expected to rise 2.6% this year, as per the World Trade Organization. The government is hopeful that India's key markets in the western world clock lower inflation and improved growth rates, spurring a demand bounce. However, India needs to sharpen its approach to capitalise on such a bounce and ensure that any gains that may accrue will create wealth across the domestic economy. This requires addressing the challenges facing labour-intensive sectors such as garments and footwear, where the country has been losing out to rivals, including Bangladesh and Vietnam, in recent years. The downward trend for these sectors, as well as gems and jewellery, continued in April. Tackling concerns about

product quality (in spices or drugs, for example) or allegations about labour or environmental concerns (aimed at booming shrimp exports) with greater vigour, is also critical. Moreover, agricultural exports, curbed in the battle against inflation, must be reinvigorated soon, given the healthy monsoon prospects. The next government must roll up its sleeves quickly to rev up the export growth engine and ensure trade balances do not turn unwieldy.

## INDIA'S TOP TRADE PARTNER: CHINA REGAINS SPOT ON HIGHER IMPORTS

With imports from China crossing over $100 billion in FY24, China has overtaken the US to become India's largest trading partner after a gap of two years, as per data released by the think tank Global Trade Research Initiative (GTRI).

— The US was India's top trading partner during FY22 and FY23 after China was the top bilateral trading partner in FY21.

— India's bilateral trade with China in FY24 stood at $118.4 billion as imports increased by 3.24 per cent to $101.7 billion and exports rose by 8.7 per cent to $16.67 billion in FY24 compared to FY23, GTRI data showed.

— The GTRI report further said that exports to China have remained near stagnant between FY19 and FY24 while imports have surged by nearly 45 per cent which has resulted in widening of the trade deficit from $53.57 billion in FY 2019 to $85.09 billion in FY 2024.

— India trade relations with China have been under scrutiny largely due to India's dependence on the neighbouring country's critical products such as telecom & smartphone parts, pharma, advanced technology components among others.

— However, India has undertaken significant measures to decrease its dependence on China through production linked incentive schemes (PLI), anti-dumping duties along with quality control orders.

**For Your Information:**

— To boost domestic manufacturing and cut down on import bills, the central government has launched a production-linked incentive (PLI) scheme that aims to give companies incentives on incremental sales of products manufactured in domestic units. Apart from inviting foreign companies to set shop in India, the scheme also aims to encourage local companies to set up or expand existing manufacturing units.

## MODEST REBOUND

India's factory output growth slowed to 4.9% in March from a downgraded 5.6% uptick in February, despite benevolent base effects from the previous year when the Index of Industrial Production (IIP) had shrunk 1.9%. Output from mines slid to a 19-month low growth of 1.2%, while manufacturing growth picked up from 4.9% in February to 5.2%, still marking a five month-high. Electricity generation rose 8.6% but over a contraction in March 2023. The National Statistical Office, which will release fresh GDP growth estimates for 2023-24 this month end, will thus factor in a 5.8% uptick in industrial output through FY2023-24, moderately higher than the 5.2% rise recorded in the previous year. Most of this annual increase came from mining, up 7.5%, while manufacturing saw a milder pick up to 5.5% from 4.7% in 2022-23 and electricity generation growth eased to 7.1%. Production growth was strongest for capital goods as well as

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infrastructure and construction goods for the second straight year — not surprising given the ramp up in government infrastructure spends to pump prime the economy till private capex recovers.

However, for private investments to take over the economy's growth engine, household consumption signals are critical and there is little comfort here for the second year in a row. Production of consumer durables and non-durables rose just 3.6% and 4%, respectively, on top of a meagre 0.6% and 0.7% uptick in 2022-23. This matches with the 3% growth estimated in private consumption spends over last year, and their production this March was still below pre-COVID levels. Hopes of an above-normal monsoon may prop up rural demand dented by last year's erratic rainfall, although tight credit conditions could impair urban consumption. As some economists have stressed, consumption recovery since the pandemic has been uneven, driven by demand for higher-end goods and services from upper-income households, while lower-income homes have turned reluctant spenders even for fast-moving consumer goods. Job creation and real wage growth for those already employed are imperative for a broad-based demand recovery that triggers private capex. The concern here is that employment-intensive manufacturing segments such as apparel, computers and electronics, furniture and leather products, have contracted in 2023-24, with weaker exports only explaining part of this downturn. The latest IIP data also reflect flagging momentum — growth slid to a three-quarter low of 4.9% between January and March. The next government must prioritise addressing the broader challenges haunting hesitant consumers and reviving platforms for reticent investors to voice their concerns freely.

## FOOD INFLATION CONTINUES TO UNDERMINE WIDER PRICE STABILITY

April's retail inflation data flattered to deceive. The Consumer Price Index (CPI)-based provisional headline print shows year-on-year retail price gains, across the broad spectrum of goods and services that combine to constitute the CPI, slowed fractionally to a 11-month low of 4.83%, from March's 4.85%. This slowing, however, did little to mask the more disconcerting acceleration in food price gains. Inflation based on the Consumer Food Price Index (CFPI) quickened by 18 basis points from the preceding month's year-on-year pace to a four-month high of 8.7%, with the month-on-month rate accelerating to 0.74%, from 0.16% in March. Rural consumers fared worse than their urban counterparts with both food and broader headline inflation reflecting faster price gains. The CPI-based reading for the hinterland was still well above the 5% mark at 5.43%, while inflation in urban areas was a sharply lower 4.11%, reflecting the widening divergence in the impact that price gains are having on those already struggling from the hit to the rural economy from a weak monsoon last year and sizzling temperatures this summer. Food price gains at 8.75% for rural consumers, a good 19 basis points faster than the 8.56% faced by urban consumers, is all the more disconcerting as food is an essential expenditure that every household must try and find the means to meet.

The pressure on food prices remains wide-ranging, with cereals — the heaviest weight in the food category — witnessing a 26 basis points quickening in inflation to 8.63%. Data from the Department of Consumer Affairs' Price Monitoring Division shows the average price of rice was 14.3% steeper as on May 14 than on May 14, 2023. And the price of wheat was 6.4% higher from a year earlier, signalling that respite on the cereals front is unlikely in the near term. April's soaring temperatures also kept inflation in vegetables, particularly vulnerable as perishable produce, in double digits for a sixth straight month at 27.8%. Price gains in pulses too offered little succour as they extended their stay in double digits to an eleventh month. And the Consumer

Affairs department's data show prices of all the five key dals — gram, tur, urad, moong and masoor — continued to rise appreciably as on May 14. With live water storage at the country's 150 reservoirs dwindling to 27% of capacity as on May 9 and trailing both the year-earlier and 10-year average levels significantly, the outlook for price stability rides almost entirely on the forecast 'normal monsoon' delivering spatially and temporally well-distributed rains in the coming months.

## EASE THE COMPLIANCE

"The monthly collection of GST reached its zenith last month — crossing the Rs 2 lakh crore mark for the first time. The exclusive focus on collections must not lead to a neglect of several chronic irritants and glitches in the day-to-day implementation of GST laws. One such problem is what can be called the time-limit conundrum in taking input tax credit."

— "There is no doubt that taxes cannot remain due indefinitely. But when the law permits the levy of interest on delayed payment of tax, there is no justification for refusing credit on tax already paid on inputs that have been used in the manufacture of final products."

— "There is an urgent need to alter the GST portal to permit the acceptance of monthly returns even when the full tax is not paid. The portal can record the tax arrears for that month."

— "It is common knowledge that several small and medium enterprises do not receive payments despite the limit of 45 days imposed under the Micro, Small and Medium Enterprises Development Act, 2006."

— "In several cases, supplies made to government agencies remain unpaid for months with no effective legal recourse. The time-limit conundrum is simply a matter of practical difficulty and need not await any judicial interpretation."

— "The GST Council must act urgently to redress this monthly injustice practically because the default is not deliberate in most cases but due to adverse business circumstances that are beyond the control of thousands of small and medium taxpayers. Till the GST Portal accommodates monthly returns even with a shortfall, the time limit of November 30 prescribed for availing input tax credit should not be enforced."

**For Your Information:**

— Wrongfully availing of input tax credits through fake claims has emerged as one of the biggest causes of concern for GST authorities amid continuing action against fraud, evasion, and registration of bogus entities under the indirect tax regime.

## THE KARNATAKA HC RULING ON EPF BENEFITS

**The story so far:**

The Karnataka High Court recently struck down a 15-year-old amendment to the law which permits the incorporation of foreign workers in the Employees' Provident Fund (EPF). Accordingly, it quashed the special provisions for international workers under paragraph 83 of the Employees' Provident Funds Scheme, 1952 (EPF Scheme) and paragraph 43A of the Employees' Pension Scheme, 1995 (EP Scheme) for being "unconstitutional and arbitrary."

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**What are EPF benefits for foreign workers?**

The Employees' Provident Funds and Miscellaneous Provisions Act, 1952 is India's pivotal social security legislation and regulates three main schemes — the EPF Scheme, the EP Scheme and the Employees' Deposit-Linked Insurance Scheme, 1976. It is administered through a statutory body — the Employees' Provident Fund Organisation (EPFO). An establishment with a minimum of 20 employees is required to register with the EPFO and make Provident Fund (PF) contributions for eligible employees. In 2008, the 1952 Act was amended to bring international workers or expatriates within the fold of the statute. As per the amendment, international workers employed in India for a minimum period of six months are mandated to make PF contributions which include 12% of the employee's total salary. A matching contribution is made by the employer for each of these workers. However, contrary to their domestic counterparts, the wage ceiling of ₹15,000 per month for availing PF benefits does not apply to international workers. Withdrawal of PF accumulations by international workers based in India is permitted only upon retirement from service in the establishment at any time after the attainment of 58 years of age; upon retirement on account of permanent incapacity for work due to bodily or mental incapacity and pursuant to any stipulations under existing Social Security Agreements (SSAs).

**What are Social Security Agreements?**

They are bilateral instruments executed to protect the social security interests of workers posted in a foreign country. Indian employees who are posted in other countries by their Indian employers continue to make social security contributions in India as per domestic law. They may also be required to make similar contributions under the host country's laws. However, due to restrictions on withdrawals and stipulations relating to their duration of stay, such employees rarely reap benefits from PF contributions made outside India. As a result, SSAs are executed to avoid such double coverage — coverage under the social security laws of both the domestic as well as the host countries. India has SSAs with 21 countries.

**What does the ruling say?**

The Court highlighted that the primary aim of the 1952 Act was to safeguard industrial workers by offering them an alternative to pensions. However, it clarified that the law was never designed to universally extend PF benefits to employees irrespective of the salaries drawn by them. "The EPF & MP Act was (1952 Act) enacted with a view to see that those in lower salary brackets get retirement benefits and by no stretch of the imagination, could it be said that the employees who draw lakhs of rupees per month should be given the benefit under the enactment," the Court asserted.

Justice K.S. Hemalekha pointed out that an Indian employee working in a foreign country which has an SSA with India continues to make PF contributions on a meagre sum of ₹15,000; however, a foreign worker is made to contribute PF on his entire salary even though both are international workers. Deeming this disparity unconstitutional, she observed, "The Government of India is unable to substantiate any nexus with the object sought to be achieved, para 83 is clearly discriminatory in treating the international workers of Indian origin and foreign origin differently and thus violative of Article 14 of the Constitution of India." Dismissing the government's contention that special benefits were extended to international workers as a result of existing international obligations, the judge reasoned, "There is no rational basis for this classification nor there is reciprocity that compels to classify foreign employees from non-SSA countries as international workers. The respondents neither have stated whether the Indian employees

working in non-SSA countries [are] required to contribute their entire pay without statutory limit towards PF of that country. In the absence of parity and also in the absence of reciprocity, there is no justification to demand a contribution on the entire pay of a foreign employee from a non-SSA country."

**How has the EPFO responded?**

The Ministry of Labour and Employment through the EPFO has issued a statement saying that it was "actively evaluating the future course of action." An official told The Hindu, "The appeal is being prepared and the argument will be based on special provisions in the scheme that are drafted with specific purposes of protecting the interests of Indian workers abroad. The EPFO is also consulting representatives of employers and employees to clear apprehensions".

Referring to the SSAs executed with 21 countries so far, the EPFO's press release said, "These agreements aim to guarantee the uninterrupted social security coverage of employees during international employment. These agreements are very important for India for promoting international mobility and leverage the demographic dividend."

**What are the implications?**

Pooja Ramchandani, partner and head of the employment law practice at Shardul Amarchand Mangaldas, told The Hindu that while the High Court's ruling may have a persuasive value before the Courts outside of Karnataka, PF authorities can still enforce these provisions in other States in the interim period. This might result in employers having to continue with provident fund compliances for international workers in certain regions. "The question is not whether international workers should be extended provident fund benefits on account of their limited period of employment, it is whether there is a rationale for classification of foreign employees from non-SSA countries (as) different from Indian employees in terms of the rate of contribution," Ms. Ramchandani said. She also pointed out that India should consider introducing amendments to ensure that expats are treated at par with domestic workers with respect to provident fund benefits to attract foreign investments. Highlighting that the ruling is also likely to have an impact on India's existing SSAs with other countries, she added, "If the Karnataka High Court judgment is upheld by the Supreme Court, it remains to be seen what amendments it [India] will bring about in the law to continue the reciprocal arrangements enshrined in the SSAs."

## AFTER COAL AND GAS, GOVT BOLSTERS HYDRO CAPACITY TO MEET RISING PEAK DEMAND

The Ministry of Power said it has "optimised" hydropower generation to make available an additional 4GW capacity, weeks after it instructed fifteen imported coal-based and all gas-based thermal plants to be operational during the summer months. With peak power demand set to touch 240 GW in June, the ministry's latest effort to avoid supply shortfall reflects growing concern over risk of outages

— The reliance on coal and gas to meet peak demand is more pronounced given the absence of adequate energy storage infrastructure in the country, which can help store excess energy generated by solar and wind plants during non-peak hours and release it during peak hours.

— In India, which is the world's third largest producer of renewable energy, around 40 percent of installed electricity capacity comes from non-fossil fuel sources. This green push has resulted in a sharp 24 percent reduction in the emission intensity of GDP between 2005 and 2016, but it has

also thrown up challenges in meeting peak demand with a grid being increasingly powered by renewables.

— Even as the share of installed capacity of renewables like solar and wind has increased to nearly 29 percent of total capacity in FY24, compared to 20 percent in FY20, these sources of power do not have high capacity utilisation as they are variable in nature.

— Energy storage is needed alongside green energy sources to primarily balance out the variability in renewable generation – electricity is generated only when the sun shines or when the wind blows. This is not always in sync with the demand cycle. Storage can help tide over this shortcoming associated with renewables.

— With lithium-ion battery storage being ruled out as unviable for grid application, at least for now, an emerging policy resolve is that solar and wind-based generation cannot continue to be pushed down to struggling electricity distribution companies or discoms.

— To compensate for the intermittency, pumped-storage hydroelectric plants – where it stores energy in the form of the gravitational potential energy of water … is being seen as the most viable alternative. These projects thereby work similarly to a giant battery, because they can store power and then release it when needed.

**For Your Information:**

— In its latest World Energy Outlook, IEA said India will see the largest energy demand growth of any country or region in the world over the next three decades.

— It projected India's energy supply to rise from 42 exajoules (EJ) in 2022 to 53.7 EJ in 2030 and 73 EJ in 2050 under stated policies scenarios and 47.6 EJ by 2030 and 60.3 EJ by 2050 as per announced pledges.

## KHANIJ BIDESH INDIA MAY ACQUIRE LITHIUM ASSETS IN AUSTRALIA IN FY25

Khanij Bidesh India Ltd (KABIL) hopes to acquire a lithium block in Australia this year, a top official said on Saturday. KABIL, a joint venture of three PSUs to scout for mineral assets overseas, has been working in Australia for the last year, Mines secretary V L Kantha Rao said.

— KABIL is owned by three public sector undertakings — National Aluminium Company Ltd (Nalco), Hindustan Copper Ltd (HCL) and Mineral Exploration and Consultancy Ltd (MECL).

— Lithium is the most important mineral for the energy transition, a fundamental component of lithium-ion batteries, which power electric vehicles and battery energy storage systems.

— The government had earlier said that India would pump in about Rs 200 crore to explore and develop five lithium mines in Argentina. Argentina is part of the 'lithium triangle' along with Chile and Bolivia with more than half of the world's total lithium resources.

**For Your Information:**

— Lithium is a soft, silvery-white alkali metal, which is a vital ingredient of rechargeable lithium-ion batteries that power electric vehicles, laptops, and mobile phones.

— India is 100 per cent reliant on imports for its lithium.

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## ALL AUTO COMPANIES CAN MAKE INVESTMENTS UNDER EV POLICY

Amid concerns raised by automakers already operating in India that the new electric vehicle (EV) policy favours new entrants such as Tesla, a senior government official on Friday clarified that the union government will allow existing automakers to make greenfield investment commitments under the new policy.

— India is currently the world's third largest automobile market and one of the fastest growing automotive markets in the world. The current market size of the automotive sector is Rs 12.5 lakh crore and the sector is expected to cross Rs 24.9 lakh crore by 2030. The automotive sector contributes over 7.1 per cent to the country's GDP.

— The government plans to allow all companies including existing automakers to make greenfield investments under the EV policy. Concerns over a level playing field comes as New Delhi after initial resistance conditionally eased duty norms for EVs under the new policy. The policy allows import of completely built-up (CBU) cars at a 15 per cent import duty from 100 per cent earlier for manufacturers setting up facilities in India with a minimum investment of Rs 4,150 crore.

**For Your Information:**

— China accounts for over half of the global electric vehicle (EV) sales, largely driven by its near dominance in battery production — a critical element for EV manufacturing.

— A global shift from internal combustion engine (ICE) vehicles to EVs presents a massive opportunity for new entrants like India, vying to be a part of the global supply chain. However, India has a fragmented EV supply chain.

## MORE THAN 70 LAKH TRANSACTIONS ON ONDC PLATFORM IN APRIL: DPIIT

Transactions on Open Network for Digital Commerce (ONDC), a digital infrastructure launched in 2021 with an aim to democratise digital commerce, crossed 70 lakh in April this year, the Department for Promotion of Industry and Internal Trade (DPIIT) said on Friday.

—- According to Sanjiv Singh, Joint Secretary, DPIIT, "Startups can play a pivotal role in the ONDC ecosystem by driving innovation, fostering competition and enhancing consumer choice. More than 125 startups have committed to onboard the ONDC network in today's event reflecting the momentum of the national initiative."

— "The ministry in a statement said that creating and discovering markets is a challenge for startups that can be addressed through the ONDC platform as it lowers entry-barriers to digital commerce, and provides level playing field for all e-commerce players, especially the small-scale businesses and those who have been digitally excluded."

— "The ONDC entity, a not-for-profit company incorporated under Section 8 of the Companies Act 2013, manages and operates the ONDC Network..."

**For Your Information:**

— By moving the exchange of goods and services from a platform-centric approach to a network-centric approach, ONDC eliminates the need for buyers and sellers to use the same application, and promotes the discoverability of local digital stores across industries.

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— This paradigm shift from "store of value" to "flow of value" brings with it a multitude of benefits.

— From the buyer's perspective, ONDC offers greater freedom of choice, reducing the overwhelming reliance on a single platform.

— Sellers also stand to benefit greatly: the network-centric approach of ONDC reduces the skewed bargaining power in favour of the platforms, which often results in higher entry barriers and lower margins for sellers.

## SURGE IN RETAIL TRADING IN FUTURES AND OPTIONS: FROTH AND RISK

In recent years, there has been a surge in stock market participation in India. At the end of 2018-19, the number of demat accounts in the country stood at 3.59 crore. By October 2021, the figure had risen to 7.38 crore and as per more recent reports, there are now more than 15 crore demat accounts. Then there are the millions who invest through mutual funds. According to data from the Association of Mutual Funds in India, investments just through the SIP route (systematic investment plan) stood at Rs 1.99 lakh crore in 2023-24, more than doubling from Rs 92,693 crore in 2018-19. All this points towards a spreading culture of equity. But, alongside this growing participation by households in stock markets, there are concerns over the sharp surge in trading in futures and options (F&O) by retail investors.

On Tuesday, Finance Minister Nirmala Sitharaman spoke on the issue, saying that "any unchecked explosion in retail trading of futures and options can create future challenges, not just for markets but for investor sentiments and also for households finances". The surge in participation in this market segment has been staggering. In 2023, according to a study by the Securities and Exchange Board of India, the number of unique traders in the F&O segment had risen to 45.2 lakh in 2021-22, up from 7.1 lakh in 2018-19. This was based on a sample of the top 10 brokers in the country who accounted for 67 per cent of individual turnover in the F&O segment. What was equally revealing was that 89 per cent of the traders incurred losses while trading in the F&O segment. The average loss was pegged at around Rs 1.1 lakh. The SEBI Chairman had, last November, expressed surprise over people trading in this segment, despite the odds not being in their favour. In 2023, a report titled "Gamification of Indian equities" by Axis Mutual Fund had estimated the derivatives to cash volume ratio in India at 422. In comparison, the ratio was 36 in the case of Germany and nine for the US. The report had attributed the surge in derivatives trading to changes in the contract structure, higher leverage, and the ease of trading facilitated by trading apps.

In the coming years, as more individuals join the labour force, more will channel their money into the stock market. They will need to be educated not only about the workings of the market, but also about the risks stemming from various investment products. In the recent past, the stock market regulator has taken action in the case of financial influencers, asked small and mid cap funds to conduct stress tests, and spoken about froth in certain segments of the market. It must continue to place investor protection front and centre.

## INDIA VIX INDEX RALLIES: WHAT DOES MARKET VOLATILITY MEAN FOR INVESTORS?

India VIX, which is an indicator of the market's expectation of volatility over the near term, surged past the 21 mark on Tuesday (May 14). The rise shows that fear among traders or market participants on the expected volatility is more now, as compared to 15 days earlier.

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— The Volatility Index, VIX or the Fear Index, is a measure of the market's expectation of volatility over the near term.

— The Volatility Index is a measure of the amount by which an underlying index is expected to fluctuate in the near term, (calculated as annualised volatility, denoted in percentage e.g. 20 per cent) based on the order book of the underlying index options.

— India VIX is a volatility index computed by the NSE based on the order book of NIFTY Options. For this, the best bid-ask quotes of near and next-month NIFTY options contracts, which are traded on the F&O segment of NSE are used.

— India VIX indicates the investor's perception of the market's volatility in the near term i.e. it depicts the expected market volatility over the next 30 calendar days. The higher the India VIX values, the higher the expected volatility and vice versa, as per NSE.

— The India VIX has risen amid concerns over the results of the ongoing elections. The market participants said a lower voter turnout ratio in this election may have some impact on the BJP's seat count

## AS A SECTION OF AIR INDIA EXPRESS EMPLOYEES CALL IN SICK, A LOOK AT 'SICKOUTS' AS A MEANS OF PROTEST

In a few weeks, two Indian airlines — Vistara and Air India Express — were hit by protests from sections of employees critical to operations. In early April, Vistara was rocked by disruptions when many of its pilots called in sick en masse. Last week, something similar happened at Air India Express, with a large number of senior cabin crew taking coordinated sick leaves, resulting in network-wide disruptions for the airline.

Over the years, calling in sick en masse, also known as a "sickout", has emerged as an instrument of industrial action by employees — mainly in key operations roles — to disrupt operations and strike work without calling a formal strike.

While aviation is one industry that has been evidently prone to this collective bargaining tool over the years, other sectors have also been impacted. Here's a look at the practice and why it has been employed time and again.

**What is a sickout, and how does it differ from a strike?**

A sickout essentially involves organising a large number of workers with grievances and getting them to take coordinated leaves on the pretext of being unwell, usually at the eleventh hour, giving the management hardly any time to respond effectively and put mitigation measures in place.

Usually, sickouts spring a surprise on the management as there is no strike notice or formal procedure that precedes such an act.

In essence, both traditional strikes and sickouts are similar, as they involve employees refusing to work to force the management to address their grievances and consider their demands. However, while strikes are usually formal and legal affairs involving notices, procedures, recognised employee unions and associations, and typically a well-laid-down process, sickouts are seemingly informal, swift, and free of such constraints.

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Globally, employee unions have gone out of vogue with governments, regulators, the public at large, and even sections of workers over the years for several reasons.

Many argue that in large parts of the world, laws and regulations have been brought in to weaken labour unions and their collective bargaining potential. Private sector workers are unable to organise themselves into formal unions due to a lack of supportive legislation and government policies.

Where workers' unions exist, some categories of employees may not be allowed to join unions or participate in strikes, and management and government may refuse to recognise or derecognise a union. There may even be competing unions with different leanings squabbling among themselves.

Then there are issues like excessive politicisation of unions, victimisation of union leaders, distrust between workers, unions, and the management, and an easily replaceable workforce, among others.

All this, in turn, has led to an evident fall in the number of formal strikes and labour agitations across sectors in many parts of the world. But that does not mean that workers never feel the need to organise themselves into interest groups, put forth their demands, and use collective bargaining tools to force the management to pay heed.

**Are sickouts only limited to aviation?**

In India, apart from the two sickouts seen at Vistara and Air India Express, there have been many others over the years in the aviation sector. For instance, a sizable number of aircraft technicians and cabin crew at IndiGo went on mass sick leave in 2022.

In 2013, engineers of the now-defunct Kingfisher Airlines went on mass sick leave. In 2012, Air India and Kingfisher pilots called in sick en masse over different sets of demands. In 2009, over 300 pilots of Jet Airways went on mass sick leave as part of an agitation against the airline's management.

Although they tend to grab headlines the most when they happen in the aviation industry, sickouts are not limited to the sector. They have been used as a tool of collective bargaining by workers in different sectors in different countries. In many such instances, the workers seemingly resorted to sickouts because they were not legally allowed to strike work, which would be the case for many workers in sectors classified as essential services.

For instance, in April 2020, scores of Amazon workers — in key departments like warehousing and technology — in the United States called in sick over the company's ostensibly inadequate response to the Covid-19 pandemic and its alleged punitive action against workers who spoke out. Similar action was witnessed by workers at other retail majors like Target and Whole Foods around the same time.

There have also been some instances of sickouts by teachers, healthcare workers, and other essential services workers in different countries over the past few years. For example, a large number of public school teachers in Detroit announced sickouts to protest against poor working conditions, leading to nearly all schools in the US city being shut.

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## LIFE & SCIENCE

### FINALLY, ROCKY PLANET WITH ATMOSPHERE FOUND 41 LIGHT YEARS AWAY

Astronomers have searched for years for rocky planets beyond our solar system with an atmosphere, a trait considered essential for any possibility of harbouring life. Well, they finally seem to have located one. But this hellish planet, apparently with a surface of molten rock, offers no hope for habitability.

Researchers said on Wednesday the planet is a "super-earth", a rocky world significantly larger than our planet but smaller than Neptune, and it orbits perilously close to a star dimmer and slightly less massive than our sun, rapidly completing an orbit every 18 hours or so.

Infrared observations using two instruments aboard the James Webb Space Telescope indicated the presence of a substantial, if inhospitable, atmosphere, perhaps continuously replenished by gases released from a vast ocean of magma.

"The atmosphere is likely rich in carbon dioxide or carbon monoxide, but can also have other gases such as water vapor and sulphur dioxide. The current observations cannot pinpoint the exact atmospheric composition," said planetary scientist Renyu Hu of NASA's Jet Propulsion Laboratory and Caltech, lead author of the study published in the journal Nature.

The Webb data also did not make clear the thickness of the atmosphere. Dr. Hu said it could be as thick as the earth's or even thicker than that of Venus, whose toxic atmosphere is the densest in our solar system.

The planet, called 55 Cancri e or Janssen, is about 8.8-times more massive than the earth, with a diameter about twice that of our planet. It orbits its star at one-25th the distance between our solar system's innermost planet Mercury and the sun. As a result, its surface temperature is about 1,725 degrees C.

The planet is probably tidally locked, meaning it perpetually has the same side facing its star, much like the moon does toward the earth. The planet is located in our Milky Way galaxy about 41 light-years from the earth, in the constellation Cancer. A light year is the distance light travels in a year, 9.5 trillion km. Four other planets, all gas giants, are known to orbit its host star.

That star is gravitationally bound to another star in a binary system. The other one is a red dwarf, the smallest kind of ordinary star. The distance between these companions is 1,000 times the distance between the earth and the sun, and light takes six days to get from one to the other.

All of the previous exoplanets found to have atmospheres were gaseous planets, not rocky ones. As Webb pushes the frontiers of exoplanet exploration, the discovery of a rocky one with an atmosphere represents progress.

### NATURE HOLDS A LIGHT SHOW

The night sky was lit up by northern lights, or aurora borealis, at Hanle village in Ladakh early Saturday morning. Northern lights were also witnessed in other parts of the world, including in the United States and the United Kingdom. Meanwhile, southern lights, or aurora australis, were spotted in countries such as New Zealand and Australia.

— The northern lights- also known as aurora usually don't reach that far south. They are most often seen in higher latitudes closer to the North Pole.

— Solar storms occur when the Sun emits huge bursts of energy, leading to the release of a stream of charged particles, some of which get caught in the polar regions of the Earth. These particles interact with gas molecules in the upper atmosphere and produce a colour called Aurora. The current solar storm was the biggest in 20 years.

**For Your Information:**

— Auroras are essentially natural lights that appear as bright, swirling curtains in the night sky and **can be seen in a range of colours**, including blue, red, yellow, green, and orange. These lights primarily appear near the poles of both the northern and southern hemispheres all year round but sometimes they expand to lower latitudes (to know why, scroll down). As mentioned before, in the north, the display is called the aurora borealis; in the south, it is known as the aurora australis.

While most of India did not get to see the Aurora lights visible in many parts of the world recently, the solar flares that caused it were seen by Indian ground stations, the spacecraft Aditya-L1 studying the Sun from a point 1.5 million km away, and the Chandrayaan-2 orbiter circling the moon.

— The colourful lights in the night sky are a result of the charged particles ejected by the Sun hitting the gases in Earth's upper atmosphere. Usually, these particles travel along the Earth's magnetic fields, reaching the poles where the vibrant colours are seen.

— But, during a geomagnetic storm, like the one witnessed recently, the magnetic fields may break and allow the particles to reach the upper atmosphere.

— The geomagnetic storm witnessed recently was the most intense seen since 2003, according to a statement by the Indian Space Research Organisation, and led to disruptions in communications and GPS systems.

— On the geomagnetic storm index, it touched a nine, the maximum available, the space agency said.

— One of the payloads on-board Aditya-L1 called ASPEX captured high speed solar wind, high temperature solar wind plasma (the charged particles expelled by the Sun), and an energetic ion flux.

## GPT-4O COMES WITH SOME INSANE CAPABILITIES: 7 USE CASES THAT IMPRESSED ME

It has only been less than a week since OpenAI unveiled its most powerful model, GPT-4o, to the world. The new large language model (LLM) is claimed to be more powerful than GPT-4, OpenAI's most advanced AI model. The best part is that OpenAI has made this accessible to all users. The Sam Altman-led company has announced that it will roll out an iterative deployment over the next few weeks.

During the demo, OpenAI stunned the world when it showcased GPT-4o's multimodal capabilities. Unfortunately, not many have been able to witness the magic of the new model as it has yet to reach millions of users.

## STRANGE TRIGGER

**Can heavy snowfall and rain contribute to some earthquakes?**

A recent study has found that episodes of heavy snowfall and rain likely contributed to a swarm of earthquakes over the past several years in northern Japan. This is the first time that climate conditions have been found to initiate some quakes. The seismic activity in the region was surprisingly found to synchronise with certain changes in underground pressure, and those changes were influenced by seasonal patterns of snowfall and precipitation. Scientists suspect that this new connection between quakes and climate may not be unique to Japan. Since late 2020, hundreds of small earthquakes — earthquake swarms — have shaken up Japan's Noto Peninsula, in 2020 changes in seismic velocity appeared to be synchronised with the seasons. When it rains or snows, that adds weight, which increases pore pressure, which allows seismic waves to travel through slower. When the seismic velocity observations and the model of excess pore pressure were overlapped, they fit extremely well.

## OVER 300 KILLED AS FLASH FLOODS HIT NORTH AFGHANISTAN, SAYS UN

Flash floods, that have ripped through northern Afghanistan, have left more than 300 people dead, the United Nations World Food Programme (WFP) said. The WFP, which operates throughout Afghanistan, said on X that floods had killed more than 300 people in the worst-hit province of Baghlan, where more than 1,000 homes have been destroyed. However, it did not give a source for its figure.

— A climate-sensitive nation, Afghanistan was battered by a similar calamity in April as heavy rains and flash floods resulted in the deaths of at least 100 people across 10 provinces in Afghanistan.

— Afghanistan's vulnerability to climate change is exacerbated by its relatively dry winter, making it challenging for the soil to absorb rainfall.

— This vulnerability is compounded by the nation's prolonged history of conflict, spanning four decades, and its status as one of the poorest countries globally.

— According to scientists, Afghanistan is among the least prepared nations to confront the consequences of global warming.

**For Your Information:**

— Excessive or continuous rainfall over a period of days, or during particular seasons can lead to stagnation of water and cause flooding. Flash floods refer to such a situation, but occurring in a much shorter span of time.

— In India, flash floods are often associated with cloudbursts – sudden, intense rainfall in a short period of time. Himalayan states further face the challenge of overflowing glacial lakes, formed due to the melting of glaciers, and their numbers have been increasing in the last few years.

— India is the worst flood-affected country in the world after Bangladesh and accounts for one-fifth of the global death count due to floods. Flash floods have been commonly witnessed in cities like Chennai and Mumbai.

## WHAT'S BEHIND ORCAS, ALSO CALLED 'KILLER WHALES', SINKING BOATS?

Two people were rescued on May 12 after a group of orcas, also known as killer whales, sank their 15-metre-long sailing yacht in the Strait of Gibraltar, 22.5 kilometres off the coast of Morocco. The incident took place after the animals approached the yacht and began to slam the hull, thereby damaging the rudder and causing a leak, according to the crew members.

This was not an isolated event. In November 2023, orcas slammed the rudder of a yacht for nearly 45 minutes, forcing the crew members to abandon the boat, which ultimately sank near the Tanger Med port, located 45 km northeast of Tangier, Morocco.

Data by the research group GT Atlantic Orca (GTOA) show that since 2020 (when the rise in targeting of boats was first observed), there have been more than 700 interactions between orcas and boats — in some cases, boats sustained critical damages — near the Strait of Gibraltar. Owing to the high frequency of the interactions, they become a multinational issue which involves scientists and officials from Spain, Portugal, and Morocco, according to a report by The New York Times.

"Online, anxious sailors have gathered to share advice on navigating "orca alley," and biologists are tracking the orcas' movements and testing methods that could deter them," the report said.

Despite the growing research, scientists, who have said that this behaviour by orcas is unusual, are yet to ascertain why exactly the animals have been targeting the boats. They, however, have come up with possibilities: either the orcas are playing around or they are reacting to negative experiences with the boats. Here is a look at them.

**The orcas are playing around**

A part of the dolphin family, orcas or killer whales — they can measure up to 8 metres in length and weigh up to 6 tonnes as adults — are highly intelligent and curious mammals, who are not known to be aggressive against humans in the wild.

Therefore, some scientists believe that targeting boats could be just a form of play or a fad — a behaviour initiated by one or two individuals and temporarily picked up by others before it is abandoned — for the orcas. Research has shown that once juvenile orcas learn a new behaviour, they tend to keep repeating it, much like toddlers. Some young orcas possibly learnt to push the boats and are now repeating the behaviour ad nauseam.

Speaking to the BBC, orca specialist Renaud de Stephanis said orcas are just pushing the rudders until they break. "It is a game. Imagine a kid of 6, 7 years, with a weight of three tonnes. That's it, nothing less, nothing more…If they wanted to wreck the boat, they would break it in 10 minutes' time."

**The orcas are attacking**

According to this theory, a traumatic event must have happened with one or two orcas, triggering a change in their behaviour, which is being imitated by the rest of the population near the Strait of Gibraltar.

There have been some instances of orcas getting tangled in fishing lines, usually used by the region's fishermen to snap up some fish. Some scientists suspect that a female orca, whom they call White Gladis, went through a similar traumatising experience, which altered her behaviour.

Speaking to LiveScience, Alfredo López Fernandez, a researcher with GTOA, said, "That traumatised orca is the one that started this behaviour of physical contact with the boat."

Regardless of the reason behind orcas targeting the boats, researchers fear that if such incidents continue to take place it would not only endanger the lives of mariners but also become a conservation issue for orcas.

## THE USE OF AI IN DRUG DEVELOPMENT

Drug development is an expensive and time-consuming process. However, the advent of Artificial Intelligence (AI) has opened up a world of possibilities with respect to fast-tracking drug development.

**How does the process start?**

The process of developing a drug starts with identifying and validating a target. A target is a biological molecule (usually a gene or a protein) to which a drug directly binds in order to work. The overwhelming majority of targets are proteins. Only those proteins with ideal sites where drugs can go and dock to do their business are druggable proteins.

Target proteins are identified in the discovery phase, wherein a target protein sequence is fed into a computer which looks for the best-fitting drug out of millions in the library of small molecules for which the structures are stored in the computer. The process assumes that the structures of the target protein and drug are known. If not, the computer uses models to understand the sites where a drug can bind. This discovery process avoids time-consuming laboratory experiments that require expensive chemicals and reagents and have a high failure rate. Once the suitable protein target and its drug are identified, the research moves to the pre-clinical phase, where the potential drug candidates are tested outside a biological system, using cells and animals for the drug's safety and toxicity. After this, as part of the clinical phase, the drug is tested on a small number of human patients before being used on more patients for efficacy and safety. Finally, the drug undergoes regulatory approval and marketing and post-market survey phases. Due to a high failure rate, the discovery phase limits the number of drugs that pass and carry on to the pre-clinical and clinical phases.

**How can AI help this process?**

AI has the potential to revolutionise target discovery and understand drug-target interaction by drastically cutting down time, increasing the accuracy of prediction of interaction between a drug and its target, and saving money. The development of two AI-based prediction tools, AlphaFold and RoseTTAFold, developed by researchers at DeepMind, a Google company, and the University of Washington, U.S., respectively, has provided a major scientific breakthrough in the last four years in the area of computational drug development. Both tools are based on deep neural networks. The tools' neural networks use massive amounts of input data to produce the desired output — the three-dimensional structures of proteins. Published recently, the new avatars of AlphaFold and RoseTTAFold, called AlphaFold 3 (developed jointly by Isomorphic Labs, a DeepMind spinoff) and RoseTTAFold All-Atom, respectively, take the capability of these tools to an entirely new level. The significant difference between the upgraded versions and their previous forms is their capability to predict not just static structures of proteins and protein-protein interactions but also their ability to predict structures and interactions for any combination of protein, DNA, and RNA, including modifications, small molecules and ions. Additionally, the new

versions use generative diffusion-based architectures (one kind of AI model) to predict structural complexes. In a test with 400 interactions between targets and their small molecule drugs, AlphaFold 3 accurately predicted their interactions 76% of the time versus 40% by RoseTTAFold All-Atom.

**What are the drawbacks?**

With all the promise and potential in drug development, AI tools have limitations. For example, the tools can, at best, provide up to 80% accuracy in predicting interactions (the accuracy comes down drastically for protein-RNA interaction predictions). Second, the tools can only aid a single phase of drug development, target discovery and drug-target interaction. It will still have to go through the pre-clinical and clinical development phases, and there is no guarantee that the AI-derived molecules will result in success in those phases. Third, one of the challenges with diffusion-based architecture is model hallucinations, where insufficient training data causes the tool to produce incorrect or non-existent predictions. Finally, unlike the previous versions of AlphaFold, DeepMind has not released the code for AlphaFold 3, restricting its independent verification, broad utilisation and use for protein-small molecule interaction studies.

**What about India?**

Developing new AI tools for drug development requires large-scale computing infrastructure, especially ones with fast Graphics Processing Units (GPUs) to run multiple tasks with longer sequences. GPU chips are expensive, and with newer and faster ones being produced by hardware makers every year, they have a quick expiration date. India needs such large-scale computing infrastructure. That, along with a lack of skilled AI scientists, unlike in the U.S. and China, is the second reason why researchers in India could not establish a first-mover advantage in developing AI tools for drug development despite the country having a rich history in protein X-ray crystallography, modelling and other fields of structural biology. However, with a growing number of pharmaceutical organisations, India can lead the way in applying AI tools in target discovery, identification, and drug testing.

## NEGATIVITY BIAS: WHY BAD NEWS STICKS

### WHAT IS IT?

Negativity bias is a psychological tendency ingrained in humans. It is characterised by a heightened sensitivity to negative stimuli over positive ones. Thanks to this bias, we notice negative events more readily as well as dwell extensively on them. It manifests in various aspects of life, from our ability to retain memories to social interactions.

This bias is also why a negative first impression can be challenging to overcome while past traumas tend to have enduring effects. Psychologist Rick Hanson has attributed this bias to millions of years of evolution — during which our ancestors faced constant threats in their environments. In these hostile conditions, their bodies and minds placed a premium on being able to spot and respond to threats.

The resulting evolutionary strategy ensured the survival of our species as well as selected for those individuals who were better able to sidestep or survive threats than others. These members then passed on their genes to modern humans, reinforcing the need for the bias in subsequent generations.

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Today, the negativity bias affects how we perceive and remember events, interactions, and feedback. It explains why criticism sticks much more than praise and why negative news items often garner more attention than optimistic, affirmative stories.

Understanding negativity bias offers insight into human behaviour and cognition, and highlights the interplay between evolutionary heritage and modern psychological phenomena.

## FIRST HUMAN RECIPIENT OF PIG KIDNEY TRANSPLANT DIES: WHAT IS XENOTRANSPLANTATION, WHY PIGS ARE USED

The first recipient of a modified pig kidney transplant passed away on Saturday (May 11), around two months after the surgery was carried out. The family members of 62-year-old Richard "Rick" Slayman and the Massachusetts General Hospital, where the procedure was performed, did not link the transplant operation to his death.

"We have no indication that it (Slayman's death) was the result of his recent transplant," the hospital said in its statement. His family also thanked doctors for their work and said: "Their enormous efforts leading the xenotransplant gave our family seven more weeks with Rick…"

We explain what the procedure is, the promise it holds, and the complications associated with it.

**What is xenotransplantation?**

According to the US Food and Drug Administration (FDA), "Xenotransplantation is any procedure that involves the transplantation, implantation or infusion into a human recipient of either (a) live cells, tissues, or organs from a nonhuman animal source, or (b) human body fluids, cells, tissues or organs that have had ex vivo contact with live nonhuman animal cells, tissues or organs."

Essentially, it is the use of animal cells and organs to heal humans. Xenotransplantation involving the heart was first tried in humans in the 1980s. The need for such a procedure was felt because of the significant gap between the number of transplantations needed by patients and the availability of donor organs.

A 2024 article in Nature notes: "In the United States alone, there are nearly 90,000 people waiting for a kidney transplant, and more than 3,000 people die every year while still waiting."

The website of Columbia University's Department of Surgery also points to evidence of neurodegenerative disorders and diabetes being treated with the help of animal cells and tissues.

**How does xenotransplantation happen?**

In 2023, Dr. Robert Montgomery, the chief of New York University Langone's Transplant Institute, told Associated Press that sewing a pig kidney into a donated body isn't much different than a regular transplant, and "post-surgery immune-suppressing drugs are standard, too."

But there are several crucial additional steps. For one, the animal organ selected has to undergo genetic modifications, so that the human body does not reject it.

A report from the Harvard Medical School, whose physicians were involved in Slayman's operation, said 69 genomic edits were made to the pig kidney in his case. The gene editing technology CRISPR-Cas9 was employed to "Remove certain pig genes that produce sugars with

antibodies our immune systems react to" and "Add certain human genes to improve the kidney's compatibility with humans."

Even after the operation, constant monitoring needs to be done to check the body's response to the organ.

**Why are pigs often used for xenotransplantation?**

Pig heart valves have been used for replacing damaged valves in humans for over 50 years now. The pig's anatomical and physiological parameters are similar to that of humans, and the breeding of pigs in farms is widespread and cost-effective.

Also, many varieties of pig breeds are farmed, which provides an opportunity for the size of the harvested organs to be matched with the specific needs of the human recipient.

In January 2022, the first xenotransplantation of a genetically-modified pig heart was done. However, the patient passed away after two months due to a range of factors, including being tainted with a latent virus in the pig heart, which may have contributed to the dysfunction of the transplant.

**What are the complications in xenotransplantation?**

First, it has to be ensured that the body does not reject the organ. According to the NYU Langone website, one method of doing this is embedding the pig's thymus gland, responsible for "educating" the immune system, underneath the outer layer of the kidney. This helps keep away any new or delayed immune responses.

The FDA also notes concerns of potential infection of recipients with both "recognised and unrecognised infectious agents and the possible subsequent transmission to their close contacts and into the general human population."

Another public health concern is the possibility of cross-species infection by retroviruses, "which may be latent and lead to disease years after infection."

## WILL CATTLE BE THE NEXT LAB FOR FLU HOST-SWITCHING?

Cattle have so far not been associated with being infected on large-scale, and as a result, cattle have not been well studied as domestic hosts for influenza A virus species. In contrast to the notion that cattle are considered to be almost resistant to infection with influenza A virus, H5N1 virus, which was first detected in dairy cattle in Texas in late March, has rapidly spread to 37 herds in nine States in the U.S. as of May 7.

On April 24, the U.S. FDA said that in a nationally representative commercial milk sampling study of pasteurised milk, about one in five of the retail samples tested positive for bird flu viral fragments. A greater proportion of positive results were in milk from areas with infected herds. An NIH-funded study had found an absence of infectious virus in milk samples. The April 23 report of the FAO noted that the H5N1 virus was detected in "high concentrations in milk from infected dairy cattle and at levels greater than that seen in respiratory samples". That the concentration was less in the respiratory samples of the infected cows compared with the milk samples strongly suggests that the pathogenesis of the H5N1 virus in cattle differs from other mammals, says a study posted as a preprint; preprints are yet to be peer-reviewed.

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## THIS WORM DEVELOPS FOOD HABITS AND ITS OFFSPRING 'INHERIT' THEM

Researchers fondly call the roundworm Caenorhabditis elegans "the worm" because of its widespread use in research to understand neuronal and molecular biology. It was the first multicellular organism to have its full genome sequenced and neural wiring mapped. C. elegans grows within 3-5 days from a fertilised egg to a millimetre-long adult, and it has informed profound insights into the human body, as well as biology more broadly.

On March 28, researchers from Princeton University in the U.S. reported that after C. elegans worms ate a disease-causing strain of bacteria, its children inherited the 'knowledge' to avoid making the same mistake — up to four generations. Their findings were published in the journal PLoS Genetics.

Given the mechanism by which this transmission occurs, the study raises questions about whether humans could have the same ability.

**Message in a bottle**

Pseudomonas vranovensis is a disease-causing bacterium found in C. elegans's natural environment.

The researchers found that P. vranovensis makes a small RNA molecule called sRNA. When the worms ingest this strain, they also take in the sRNA. The sRNA then altered the worm's feeding behaviour such that, from that point on, the worms 'know' to avoid feeding on this bacterium and save themselves from getting sick.

Remarkably, this learned avoidance behaviour was found to be transmitted to the trained worm's progeny, grand-progeny, great-grand progeny, and great-great-grand progeny. The ability decayed only from the fifth generation.

The same team of researchers had previously discovered this trans-generational ability in C. elegans worms against P. aeruginosa bacteria (which also cause disease in humans). In the new study, they were able to confirm C. elegans worms in the wild had the same ability.

**Understanding RNA, large and small**

A DNA molecule is like a big ladder. Its two side rails, or strands, are made of a long series of alternating units of phosphate and the sugar deoxyribose molecules. Each sugar unit is attached to one of four chemical bases: adenine (A), cytosine (C), guanine (G), and thymine (T). The As and Cs on one strand are bonded with Ts and Cs on the other by hydrogen bonds. These bonds form the rungs that hold the strands together.

A single P. vranovensis bacterium has 6-7 million rungs in its DNA, coding for about 5,500 genes. A gene is a segment of a few thousand base-pairs of the DNA molecule. Every gene is instructions that tell a cell how to make a protein.

In contrast to DNA, the RNA molecule is like a half-ladder or a comb. Its spine is made up of alternating units of phosphate and the sugar ribose. Each ribose molecule is attached to one of four bases: A, C, G or uridine (U), which jut out from the strand like the comb's tines. A cell copies the sequence of As, Ts, Cs, and Gs in a gene in the DNA into the sequence of Us, As, Gs, and Cs in an RNA molecule. This RNA is called the messenger (mRNA). The length of this mRNA is comparable

to that of the gene from which it is derived. The mRNA moves to structures called ribosomes, where the cell assembles the corresponding protein.

**Diet control**

But not all genes encode mRNAs and proteins. The end product of some genes, especially small genes that are only about a tenth as long (~100-200 rungs), is sRNA. These sRNA bind to other proteins and RNAs, and either enhance or reduce the expression of other genes.

The Princeton University researchers showed that a C. elegans worm took up a 124-tine sRNA from an ingested P. vranovensis. This sRNA reduced the expression of a gene in the worm called maco-1, which plays an important neurological role. As it happens, maco-1 is also found in humans.

In the laboratory, the researchers reared C. elegans worms on a diet of Escherichia coli bacteria. When the researchers engineered the E. coli to express the P. vranovensis sRNA and fed them to the worms, the worms learned to avoid the pathogenic strains of P. vranovensis. When these worms had children, the latter also had the ability to avoid pathogenic P. vranovensis.

**Good 'memory loss'**

Another Pseudomonas bacterium, P. mendocina, is also present in the worm's habitat but it doesn't cause disease. Instead, P. mendocina is a source of nutrition. C. elegans worms trained to avoid the pathogenic P. vranovensis strain avoided feeding on the non-pathogenic P. mendocina as well. The researchers have speculated that this is perhaps why the 'loss of memory' happens around the fifth generation — so they can re-remember the advantage of consuming P. mendocina.

The sRNA that triggered learned avoidance behaviour came initially from the bacteria and was taken up by the worm that fed on them. Thereafter, the sRNA was maintained in the worms' bodies, transmitted to their descendants, and maintained in them. This happened through a mechanism called RNA interference — which scientists first discovered by studying C. elegans worms.

**Food for thought**

In fact, discoveries based on studying C. elegans were recognised by Nobel Prizes in 2002, 2006, and 2008. This tiny worm has played an outsized role in the advancement of scientific and medical research.

For example, a gene that triggers a process during C. elegans's development has been found in the human genome, and mutations in it have been associated with limb deformities.

So a question arises: whether our bodies can also take up sRNA molecules from the microbes in our gut, mouth or vagina, and whether they can modify our behaviour, and possibly the behaviour of our children and later generations.

## WAX TREATMENT FOR JOINT INJURY

Q: I fractured my ankle five months ago. Under continuous stress, say when you leave your legs dangling for over an hour, they swell up. On the doctor's advice, I underwent wax treatment. What is the basis for using wax? Can one not use hot water instead of wax?

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A: The swelling in the ankle and foot is due to an increased accumulation of lymphatic fluid around the injured area. This is because of gravity.

The principle behind wax treatment is the latent heat given off by the molten wax (above 45 degrees C) during its cooling process.

This heat enlarges the blood vessels (a process called vasodilation) below the applied area and helps to effectively drain the accumulated fluid.

This temperature is quite bearable and soothing.

But the latent heat given off by hot water, at about 100 degrees C, is certainly harmful to the human body.

Hot water can also be used at bearable temperatures but it cools far more rapidly than molten wax.

In the case of molten wax, moreover, the latent heat given off during its change of state, from liquid to solid, helps in vasodilation as well.

## GENERAL, CENTRAL OBESITIES LINKED TO HIGHER RISK OF COLORECTAL CANCER

The risk of colorectal cancer seems to be higher in those who are 'generally obese' and those who are 'tall and centrally obese', a study has found. Different genetic pathways may explain this. Data from the study could also be used to develop new screening tools for these cancers in future

Obesity rates are rising worldwide. In India, a 2022 study in The Lancet estimated the percentage of obese women and men to be 9.8% and 5.4% respectively. Along with higher risk of heart disease and diabetes, obesity has been linked to a higher susceptibility to colorectal cancer (CRC), among others.

CRC refers to cancers of the colon or the rectum. The CRC incidence is relatively low in India, but the percentage of people who are alive five years after a CRC diagnosis is reportedly under 40% — one of the lowest in the world. According to a 2017 study in the Indian Journal of Surgical Oncology, CRC patients in India are generally young and present more frequently with advanced stages of the disease.

## GUT BACTERIA CAN CHEW UP YOUR CHOLESTEROL

"Nowadays, we hear many conversations on gut bacteria being the pivot of our health and well-being, impacting our key lifestyle markers like cholesterol, blood sugar, triglycerides, body fat and haemoglobin. In fact, latest research by the Broad Institute of MIT and Harvard, along with Massachusetts General Hospital, has found that specific bacteria in the gut can chew up cholesterol, lowering its levels in the blood and consequently eliminating the risk of plaque formation in the heart arteries."

**Key takeaways:**

— Over a decade-long study, researchers found that people who had Oscillibacter bacteria in their gut had lower cholesterol levels than those with poor levels of the same.

— They break down cholesterol so that it cannot be absorbed into bloodstream. Rather the end product passes through stool. Earlier research has also shown similar effects. Several strains of Lactobacillus bacteria — a common gut bacteria — entrap cholesterol from their surroundings and incorporate it into their membranes. This is another way of eliminating cholesterol from bloodstream.

— Oscillibacter bacteria influence bile acids, which are essential for fat digestion and absorption. Once they finish their functions, bile acids return to the liver for recycling. But some amount remains in the gut, becoming the food for gut bacteria and growing them. In this process, the gut bacteria break down bile acids into secondary bile acids, which regulate cholesterol metabolism.

— Furthermore, bacteria break down dietary fibres through fermentation and produce short chain fatty acids. These inhibit cholesterol formation and keep their levels low.

## WHY BREAST CANCER SCREENING IS BEST DONE AT 40

As more and more younger women are being diagnosed with breast cancer across the world, the US Preventive Services Task Force has recommended that they start mammography screening at age 40 instead of 50 as previously mandated.

This guideline is significant, given the panel's influence in public health policies and their adoption across the US, its message to insurers and its cascading effect in other countries.

**WHAT DO THE NEW RECOMMENDATIONS MEAN?**

Since breast cancer is treatable if detected early enough, it is imperative to lower the age of screening than consider it an unnecessary drill. "In fact, radiological societies globally have been arguing for earlier testing in the high risk group, which comprises women who have a family history of cancer and poor lifestyle parameters. Besides the recent epidemiological data from the US between 2015 and 2019 suggests two per cent increase in incidence among young women. This group also has faster-growing cancers and require annual screening although the panel is continuing with a two-year gap between screenings," says Dr Ramesh Sarin, senior consultant, oncology, Indraprastha Apollo Hospitals, New Delhi.

**WHAT ABOUT THE BREAST CANCER MAP IN INDIA?**

In India, oncologists like Dr Sarin and the Radiological Society of India have been recommending mammography from age 40, once in two years, and once every year post-50. "Over the last 10 to 15 years, breast cancer has become more frequent among the younger population, between the ages of 35 and 45. Eleven per cent of our younger women develop breast cancer compared to seven per cent in the West, that too several years earlier than Western women," she says.

**NOT JUST MAMMOGRAM, BUT DEEPER SCANS NEEDED**

Sometimes, cancers are too small and may not be picked up by the mammogram. At other times, the dense breast tissue may hide them completely. "Indian women tend to have denser tissue than their Western counterparts. Also less body fat makes it more likely that you'll have less fatty tissue and more dense tissue in your breasts. That's why we need to include some extra tests like ultrasound and MRI of the breast as part of the early screening package at age 40. There's no point missing out 20 per cent of these smaller cancers. But since breast MRIs can be expensive, these should be reimbursed by insurance companies," says Dr Sarin. She has seen women struggling

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with getting coverage for diagnostic tests, unless these are associated with their stay in the hospital as patients.
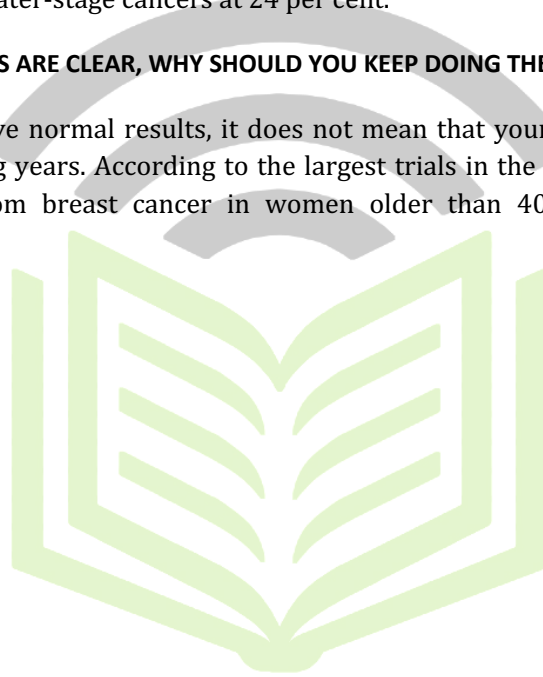
**WHY YOU NEED A COMPOSITE SCREENING PACKAGE**

All breast cancers are not because of family history. According to Dr Sarin, many women patients are the first in their families to have it because of mutation of genes and normal cells in their body. "Also, we must remember that symptoms may indicate disease progression and Stage 1 and Stage 2 usually show no symptoms. A mammogram at 40 can help women detect this cancer earlier, leading to less aggressive treatment and a higher rate of survival," she says.

According to the American Cancer Society, early-stage breast cancers have a survival rate of 99 per cent compared to later-stage cancers at 24 per cent.

**IF YOUR MAMMOGRAMS ARE CLEAR, WHY SHOULD YOU KEEP DOING THEM?**

While it is good to have normal results, it does not mean that your tissues will continue to be normal with advancing years. According to the largest trials in the US, there was a 33 per cent decrease in death from breast cancer in women older than 40 who went in for regular mammograms.