



CURRENT AFFAIRS for UPSC

28th April to 4th May 2024

DreamIAS



INTERNATIONAL

POLICY MISMATCH

When the Israel-Hamas war began on October 7, the immediate priority of United States President Joe Biden was to prevent the conflict from widening into a regional war involving Israel and its rivals. Mr. Biden adopted a two-fold strategy. He offered unconditional support for Israel's war on Gaza, launched after Hamas's attack on October 7, in which at least 1,200 people were killed, and unleashed a diplomatic effort to keep tensions low between Tel Aviv and its neighbours. But when the war raged on for months, with huge civilian casualties in Gaza, the Biden policy started falling apart. Today, as the war is set to enter its eighth month, Mr. Biden looks increasingly vulnerable to its regional and domestic consequences. Over 34,000 people, a vast majority of them women and children, have been killed by the Israeli Defense Forces in Gaza; Israel vows to invade Rafah, the southernmost town in Gaza where more than 1.4 million Palestinians have taken refuge, despite Mr. Biden's warning against such a move; with Houthi attacks on ships in the Red Sea and strikes and counterstrikes between Israel and Iran, the conflict has already spread beyond the borders of Palestinian territories and Israel, though a full-scale regional war has been avoided so far; the conflict has triggered massive protests by university students in the U.S., piling up pressure on Mr. Biden to reconsider his policy towards Israel.

To their credit, Biden officials have been working relentlessly to achieve a ceasefire and hostage deal between Israel and Hamas. Mr. Biden's timely response to shoot down the drones and missiles fired by Iran against Israel and his warning to the Prime Minister of Israel, Benjamin Netanyahu, that the U.S. would not join Israel's retaliation against Iran, helped ease regional tensions. But his overall approach towards the crisis is flawed. The way Israel is carrying out its war on Gaza is against all the values America preaches about wars and human rights. The U.S. kept supplying weapons to the Jewish nation even amid mounting allegations and evidence that Israel was indiscriminately bombing and destroying Gaza. Even when Mr. Biden seemed frustrated with Mr. Netanyahu's intransigence, he signed a Bill offering \$17 billion in defence aid to Israel. Mr. Biden's words and diplomatic efforts for truce are actually not matched by strong actions to pressure Israel. And, by continuing to arm and bankroll Israel's genocidal war on Palestinians, Mr. Biden is debilitating his own moral arguments about foreign policy. Not just morality, Mr. Biden's inability to rein in Israel is weakening America's standing in West Asia and sully his already fragile candidacy in the U.S. presidential elections in November. If the 81-year-old President is serious about peace in West Asia, he should first address the flaws in his policy towards Israel and Palestine. There were several examples of American Presidents using hard pressure on Israel for peace. Mr. Biden should at least show the courage to call for a permanent ceasefire in Gaza and adopt policies, including suspending arms sales to Israel, to meet that goal.

COMPETITION, CONFLICT

U.S. Secretary of State Antony Blinken's marathon talks with top officials in China, which includes President Xi Jinping, have underscored the desire of the two countries to stabilise their relationship and the resultant challenges. Mr. Blinken stressed that the U.S. would make sure that the competition between the world's two largest economies "doesn't veer into conflict". Mr. Xi said they should seek common ground "rather than engage in vicious competition". But the Blinken visit also exposed the structural fault lines in the Sino-American competition. He raised America's concerns about what he called China's "support for Russia's defence industry" and threatened actions if Beijing "doesn't address this problem". China slammed the "hypocrisy and



irresponsibility” of the U.S., which just decided to send military aid worth \$61 billion to Ukraine and then made “groundless accusations” against normal economic and trade exchanges between China and Russia. China also attacked the U.S. policy towards Taiwan and the South China Sea and urged Washington to look at China’s development “in a positive light”.

Both the U.S. and China have mutual deep misgivings. U.S. National Defence Strategy documents name China as a “revisionist power” and a pacing technological and military challenger. The U.S. has imposed export controls to limit China’s growth in strategic sectors, particularly semiconductors, and imposed high tariffs on Chinese goods. It has also doubled down on its support for Taiwan and bolstered defence cooperation with the Philippines, which has disputes with China in the South China Sea. Beijing has blamed the U.S. for South China Sea tensions and called Washington’s support for Taiwan as an intervention in its internal affairs. While it is practically impossible to reset ties given these structural challenges, there are areas of cooperation as well. In November 2023, when Presidents Xi and Biden met in California, both sides decided to resume bilateral military-to-military communication, cooperate in addressing the risks of artificial intelligence and launch efforts to control the production of fentanyl. Tackling climate change and global food security are also areas of cooperation. A key lesson from the Cold War is that if competition between superpowers turns ugly, it could affect the world through proxy conflicts, economic wars and diplomatic crises. As the two most powerful countries, they should stay away from repeating history. Even if they are not able to resolve their ideological and geopolitical differences, they should build the guardrails that could prevent the competition from turning ugly and stay focused on the areas of cooperation, addressing the common challenges of the world.

POTENTIAL ICC ARREST WARRANTS ELICIT CONCERN AMONG ISRAEL’S TOP OFFICIALS

Israel is voicing concern that the International Criminal Court could be preparing to issue arrest warrants for government officials on charges related to the conduct of its war against Hamas.

— The ICC – which can charge individuals with war crimes, crimes against humanity and genocide – is investigating Hamas’ October 7 cross-border attack and Israel’s devastating military assault on Hamas-ruled Gaza.

— Israeli officials are worried that the court could issue arrest warrants against Netanyahu and other top officials for alleged violations of international humanitarian law in Gaza, Israeli media have reported. Israel is not a member of the court and does not recognise its jurisdiction, but the Palestinian territories were admitted with the status of a member state in 2015.

— The ICJ, also known as the World Court, is a United Nations court that deals with disputes between states, while the ICC is a treaty-based criminal court focusing on individual criminal responsibility for war crimes.

For Your Information:

— The 1949 Geneva Conventions are a set of international treaties that ensure that warring parties conduct themselves in a humane way with non-combatants such as civilians and medical personnel, as well as with combatants no longer actively engaged in fighting, such as prisoners of war, and wounded or sick soldiers.

— All countries are signatories to the Geneva Conventions.



NATION

NHRC ACCREDITATION STATUS FACES REVIEW IN GENEVA THIS WEEK

The National Human Rights Commission (NHRC) is preparing to defend the Union government's human rights processes at a meeting in Geneva this week, where a decision on whether India's human rights body will retain its "A status" is expected to be made.

The NHRC's ratings were put on hold in 2023 after concerns were raised on its composition procedure, the presence of police personnel in human rights investigations, and the lack of gender and minority representation in the committee.

The decision over whether the NHRC is given an A or B rating will affect its ability to vote at the UN Human Rights Council and some UNGA bodies.

The meeting of the Sub-Committee on Accreditation (SCA) of the UN-recognised Global Alliance of National Human Rights Institutions (GANHRI) worldwide will be held on May 1, official sources told The Hindu, as part of the five-year peer review for each member of the 114-member alliance.

While the NHRC Chairperson, retired Supreme Court judge Justice Arun Kumar Mishra, had travelled to Geneva last year for the GANHRI SCA meeting on India, this year, the NHRC is expected to attend the review meeting on Wednesday online.

The Ministry of External Affairs (MEA) is understood to have reached out to various countries involved in the review process to make its case through diplomatic channels.

This is the second time the Modi government is facing a possible listing downgrade. Since being accredited in 1999, India had retained its A ranking in 2006 and 2011, while its status was deferred in 2016 and restored after a year. According to a 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".

In the submission, the committee had slammed India for the involvement of police officers in its investigative process, calling it a "conflict of interest".

In its response, the NHRC had said that the presence of government officials, including the Secretary-General and CEO, NHRC — former Gujarat-cadre IAS officer Bharat Lal, adds to the "effectiveness" of the body.

The SCA also cited the lack of "pluralism" and "gender representation". The SCA had also pointed out that the composition of the committee should reflect the "diversity of the society" it operated in, indicating the lack of any member representing India's largest minority religions. In addition, local civil society activists have pointed out that most members are politically affiliated with the ruling party, with five of the 10 members belonging to the BJP or RSS.

When asked about Wednesday's meeting, the sources said although the government is confident of having its A status restored, it was not focused on "external certifications" of India's human rights record.

In a letter to GANHRI dated March 26, 2024, nine human rights groups, including Amnesty International, Human Rights Watch and CIVICUS wrote a joint letter to the international grouping



raising concerns about “increasing restrictions” on civil society and “discrimination against minorities ahead of the country’s General Elections”. They also cited various development and human rights indices that have downgraded India’s ratings in the past few years, and UN Human Rights Council reports that the government has rejected.

“We strongly urge GANHRI-SCA to amend the current ‘A’ rating of the NHRCI to accurately reflect its failure to comply with the Paris Principles and address the deteriorating human rights situation in India,” the letter said.

SC RESERVES 33% SEATS FOR WOMEN IN BAR ASSOCIATION COMMITTEE

The Supreme Court on Thursday reserved one-third of the seats in the executive committee of the Supreme Court Bar Association (SCBA) for women.

Accordingly, a minimum of 3 out of 9 positions in the Executive Committee and 2 of 6 Senior Executive Member posts will be reserved for women, a bench of Justices Surya Kant and K V Viswanathan directed.

It also directed that “at least one post of the Office-Bearer shall be reserved for women candidates exclusively by turn and on rotation basis” and “in the ensuing election for 2024-2025, the post of Treasurer of the Executive Committee is reserved for women”.

— The bench clarified that the “reservation is only to guarantee a minimum and women members of the SCBA, subject to their eligibility, shall be entitled to contest the election for all the posts in the Executive Committee”.

For Your Information:

— The latest India Justice Report (IJR) points out that the gender gap remains wide in each of the subsystems that make up the justice delivery system — police, judiciary, prisons, legal aid, and human rights commissions.

— A quick, back-of-the-envelope estimation shows there are only about three lakh women in the justice delivery system. Quotas have helped them get in, but even when they are included, inevitably, women’s place remains restricted to the lower echelons: If 35 per cent of subordinate judges are women, the number comes down to 13 per cent in the high courts. In the Supreme Court today, there are only three women judges.

— Until now, there has been no woman Chief Justice of India. The first woman judge on the Supreme Court bench was Justice Fathima Beevi in 1989. In the high courts too, in over seven decades there have been only 16 women chief justices. So leading by example is not on the cards.

— Research across the world shows that the induction of women — and indeed other diversities- into male-dominated mono-cultural institutions changes the internal dynamic and public response for the better.

— Justice requires that it is not women who must twist and turn to be more like men to be able to “fit into” institutions. Mono-cultural male dominant institutional sub-cultures must acknowledge that they will always be sub-par when they are gender imbalanced.



SC ISSUES NOTICE TO GOVT. ON PETITION OF NON-BELIEVER MUSLIM

The Supreme Court on Monday sought the Union government's response to a petition filed by a Kerala-based woman, who said she, though born a Muslim, is now a non-believer, and should be governed by the secular statutes rather than the Sharia law.

Chief Justice of India D.Y. Chandrachud, heading a three-judge Bench, said P.M. Safiya, a resident of Alappuzha district and represented by advocate Prashant Padmanabhan, has raised an "important issue". The court issued formal notices to the Centre and the State of Kerala. The case was posted for detailed hearing in July.

Mr. Padmanabhan submitted that the Supreme Court has already underscored the "fundamental postulate of secularism which treats all religions on an even platform and allows to each individual the fullest liberty to believe or not to believe".

To realise the full meaning of what the top court intended, Mr. Padmanabhan submitted that a person who leaves her faith should not incur any disqualification in matters of inheritance or other important civil rights.

"Persons who do not want to be governed by the Muslim Personal Law must be allowed to be governed by the secular law of the country, viz, the Indian Succession Act, 1925 both in the case of intestate and testamentary succession," the petition said.

Inheritance right

Ms. Safiya said that once she leaves her faith in Islam, she will be ousted from her community and is not entitled to any inheritance right in her parental property.

"The petitioner wishes to get a declaration that she shall not be governed by Muslim Personal Law for any of the matters listed in Sections 2 or 3 of the Muslim Personal Law [Shariat] Application Act, 1937, but there is no provision either in the Act or in the Rules wherein she can obtain such a certificate. There is a clear vacuum in the statute that can be plugged by judicial interpretation," the petition noted.

It noted that the legal vacuum would leave the petitioner with no recourse to succeed to her parental property even if she officially got a no-religion, no-caste certificate from an authority.

This state of affairs was a direct violation of the fundamental right to believe (or not to believe) in a religion under Article 25 of the Constitution, Mr. Padmanabhan said.

CAN'T REFUSE INFORMATION UNDER RTI BECAUSE IT IS 'BULKY': DELHI HIGH COURT

The High Court has held that a public authority cannot deny information under the Right to Information (RTI) Act on the grounds that the information sought is "bulky".

The court said that denying information on the grounds that the information sought by an individual is bulky "will amount to adding one more exemption under Section 8 of the RTI Act".

The court made the remarks while rejecting a petition by the Indian Institute of Foreign Trade (IIFT), a Centre-run institute, challenging a January 2016 order of the Central Information Commissioner (CIC) directing it to provide the "complete and categorical information" to a former employee Kamal Jit Chibber.

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IIFT case

Mr. Chibber had sought year-wise details of income and expenditure with respect to various programmes run by the institute. He had also sought year-wise details of grants received from the Centre and details of how the institute spent these grants.

The High Court noted that the “only reason given” by IIFT for not providing the information sought by Mr. Chibber was that the information is “bulky”.

It ruled that the information sought by the former employee of the institute does not fall under any of the exemptions under Section 8 of the RTI Act.

Section 8 of the Right to Information (RTI) Act lists several grounds on which a public authority can refuse to disclose information.

“In view of the above, this court does not find any reason to interfere with the order of the CIC,” the court said in its April 26 order.

WHY BOMBAY HIGH COURT SAID BANKS CAN'T SEEK LOCS TO STOP DEBTORS FROM GOING ABROAD

The Bombay High Court has held that public sector banks (PSBs) cannot recommend or request the issuance of Look Out Circulars (LOCs) against loan defaulters and has set aside the provisions of the central government's Office Memoranda (OM) that empowered PSBs to do so.

On April 23, a division Bench of Justice Gautam S Patel (who has since retired) and Justice Madhav J Jamdar quashed LOCs issued to restrain PSB debtors from travelling abroad, saying they are “strong-arm tactics” used to get around legal processes, and violative of fundamental rights guaranteed under Articles 14 and 21 of the Constitution.

The legal challenge

The LOCs under challenge were issued by the Bureau of Immigration of the Ministry of Home Affairs (MHA), and allowed the authorities at any port of departure to prevent a debtor to a PSB from leaving India. The LOCs were based on OMs issued by the Ministry from October 27, 2010 onward.

In September 2018, a ground was introduced to issue an LOC to restrain a person from going abroad if their departure was detrimental to the “economic interest” of the country. The following month, a new clause was introduced empowering the chairperson of the State Bank of India (SBI) and the managing director and chief executive officers of all other PSBs to request immigration authorities to issue LOCs against default borrowers.

The default borrowers included not only the borrowers but also the guarantors for repayment of loans, and the principal officers or directors of corporate entities in debt.

Petitioners' argument

The aggrieved petitioners contested the portion of OMs that allowed PSBs to request an LOC against a “defaulting borrower”.



Senior advocate Birendra Saraf (who is now Advocate General for Maharashtra) argued that the OMs infringed upon the petitioners' fundamental rights, including the right to life with dignity under Article 21.

The petitioners argued that the "economic interest of India" cannot be the same as "financial interests" of a PSB, and that the government's action was a "classic case" of "improper and impermissible" classification between public sector and private banks, both of which are regulated by the Reserve Bank of India (RBI).

Centre's submission

Senior advocate Anil Singh, who was Additional Solicitor General at the time, argued for the MHA that deprivation of life or personal liberty can be done only through procedure established by law, and the impugned circulars contained such "checks and balances".

Singh argued that the steps were taken after a surge in the number of wilful defaulters and economic offenders, some of whom had fled the country after "usurping" public money.

What the court said

The court observed that the government had failed to show that debt had been recovered because the person had been denied permission to travel abroad. "...The LOCs boil down to nothing but a strong-arm tactic to bypass or leapfrog what public sector banks clearly see as inconveniences and irritants — the courts of law," it said. (Viraj Chetan Shah v Union Of India & Anr)

The court held that the fundamental right to travel abroad cannot be curtailed by executive action without any government statute or controlling statutory provision:

"The fact that the public sector bank is directly concerned with the recovery of debt and is yet armed with this unilateral power only makes matters worse... The right to Article 21 cannot be abrogated in this fashion. Here, the public sector bank becomes judge and executioner at once.

"...In effect, the Chairpersons, MDs and CEOs have been elevated to the same status as high-ranking police officers. This is simply incomprehensible," the court said.

The court noted that except SBI, there is no PSB among India's top five banking companies. It noted that "If a borrower arranges its or her or his affairs so that the dealings are only with non-public sector banks, no LOC can ever be issued against the borrower... But if there is even one public sector bank, then there is a risk of an LOC being issued."

It is not that only PSBs were affected, the court said. The entities that Nirav Modi and Vijay Mallya, whom the Centre had mentioned in its written submissions, controlled "also had exposure to other banks", it said. The court disagreed with the "wholly artificial distinction between those who borrow from one or more public sector banks and those who borrow only from private sector banks". Thus, the "inclusion of only PSBs is ultra vires Article 14 as being an impermissible and invalid classification, and being manifestly arbitrary", the court held.

What happens now

The court clarified that its order would not affect any existing restraint order issued by a competent authority, court, Debt Recovery Tribunal, or investigative or enforcement agency. "The invalidation of the present LOCs cannot and will not affect such orders," it said.



The court said banks were “always at liberty” to apply to any court or tribunal for an order against an individual borrower, guarantor, or indebted person, restraining them from travelling overseas. Banks can also invoke their powers under the Fugitive Economic Offenders Act, 2018, where applicable.

The Bench turned down the Centre’s request to stay the operation of the verdict, but the Centre has the option of challenging the judgment in the Supreme Court.

The HC also clarified that its judgment will not prevent the central government from framing an appropriate law and establishing procedure consistent with Article 21 of the Constitution.

ARTICLE 31C: WHY THE SC IS DECIDING IF A FUNDAMENTAL RIGHT STILL EXISTS IN A CASE ABOUT PRIVATE PROPERTY?

Last week, while hearing a case to decide whether the government can acquire and redistribute private property, a nine-judge Bench of the Supreme Court led by Chief Justice of India D Y Chandrachud decided to take up another issue of “radical constitutional consequence”: does Article 31C still exist?

Article 31C protects laws enacted to ensure the “material resources of the community” are distributed to serve the common good (Article 39(b)) and that wealth and the means of production are not “concentrated” to the “common detriment” (Article 39(c)).

Article 39 of the Constitution lists certain directive principles of state policy, which are meant to be guiding principles for the enactment of laws, but are not directly enforceable in any court of law.

As per Article 31C, these particular directive principles (Articles 39(b) and 39(c)) cannot be challenged by invoking the right to equality (Article 14) or the rights under Article 19 (freedom of speech, right to assemble peacefully, etc).

So why is the continued existence of Article 31C now under question? How is this article related to the question of private property that the court is considering? What arguments have the parties made?

Introduction of Article 31C

Article 31C was introduced by The Constitution (Twenty-fifth) Amendment Act, 1971. The Statement of Objects and Reasons for the amendment specifically mentioned the “Bank Nationalisation Case” (Rustom Cavasjee Cooper vs Union Of India, 1970), in which the Supreme Court stopped the Centre from acquiring control of 14 commercial banks by enacting The Banking Companies (Acquisition and Transfer of Undertakings) Act, 1969.

An eleven-judge Bench struck the Act down by referring to the now-repealed Article 31(2), which said that the government could not acquire any property for public purposes under any law unless the law fixes compensation for the property, or specifies the principles on which compensation will be based.

In the Bank Nationalisation case, the court held that the ‘right to compensation’ was not appropriately ensured by the Banking Act.



Noting that the court could now question the adequacy of compensation and the principles used for determining compensation, the government, through the 25th Amendment sought to “surmount the difficulties placed in the way of giving effect to the Directive Principles of State Policy”.

One of the means employed to do so was the introduction of Article 31C, which stated at the time:

“...no law giving effect to the policy of the State towards securing the principles specified in clause (b) or clause (c) of article 39 shall be deemed to be void on the ground that it is inconsistent with, or takes away or abridges any of the rights conferred by article 14, article 19 or article 31; and no law containing a declaration that it is for giving effect to such policy shall be called in question in any court on the ground that it does not give effect to such policy”.

The journey of Article 31C

The 25th amendment was challenged in the seminal Kesavananda Bharati case (1973) in which 13 judges held by a narrow 7-6 majority that the Constitution has a “basic structure” that cannot be altered, even by a constitutional amendment.

As a part of this verdict, the court struck down the last portion of Article 31C, i.e., the part that states “...and no law containing a declaration that it is for giving effect to such policy shall be called in question in any court on the ground that it does not give effect to such policy”.

This opened the door for the court to examine laws that had been enacted to further Articles 39(b) and 39(c), to determine whether the purpose of those laws actually lined up with the principles espoused in these provisions.

In 1976, Parliament enacted The Constitution (Forty-second) Amendment Act, which expanded the protection under Article 31C to “all or any of the principles laid down in Part IV of the Constitution”, under clause 4. As a result, every single directive principle (Articles 36-51) was protected from challenges under Articles 14 and 19 of the Constitution.

The Statement of Objects of Reasons for the amendment stated that it was meant to give precedence to the directive principles “over those fundamental rights which have been allowed to be relied upon to frustrate socio-economic reforms for implementing the directive principles”.

In 1980, in its judgment in *Minerva Mills v. Union of India*, the SC struck down clauses 4 and 5 of the amendment. The five-judge Bench held that Parliament’s power to amend the Constitution was limited, and it could not be used to remove these limitations and grant itself “unlimited” and “absolute” powers of amendment.

However, this ruling birthed a conundrum that the apex court must now address. By striking down part of the 25th amendment, did the court strike down Article 31C as a whole, or did it restore the post-Kesavananda Bharati position wherein Articles 39(b) and (c) remained protected?

The ongoing case in SC

The court is hearing a challenge to Chapter VIII-A of the Maharashtra Housing and Area Development Act, 1976 (MHADA). This chapter, introduced by an amendment in 1986, allows the government to acquire “cessed” properties in Mumbai at the request of the occupants, citing the obligation under Article 39(b) of the Constitution to distribute “material resources of the community...to subserve the common good”.



Occupants of cessed properties — old, dilapidated buildings that house poor tenants despite becoming increasingly unsafe — are required to pay a cess to the Mumbai Building Repair and Reconstruction Board which oversees repair and restoration projects.

In 1991, the Property Owners' Association in Mumbai challenged the 1986 amendment at the Bombay High Court. But the Bombay High Court upheld the amendment, citing the protection granted by Article 31C to laws enacted in furtherance of Article 39(b).

This decision was appealed at the SC in December 1992, where the question eventually became whether “material resources of the community” under Article 39(b) included private resources such as cessed properties.

Arguments in the SC

When the hearing finally began, on the first day (April 23), the nine-judge Bench seemed to agree with the Centre's submission that the case should be restricted to interpreting Article 39(b). CJI Chandrachud said, “It's very clear that the ambit of the reference to nine judges is squarely only on the content of 39(b),” according to reporting by the Supreme Court Observer.

However, the very next day, the Bench stated that the question of whether Article 31C still lives following the *Minerva Mills* decision has to be decided to avoid “constitutional uncertainty”.

Senior Advocate Zal Andhyarujina, appearing for the petitioners, argued that the original version of Article 31C was ‘substituted’ with the expanded version provided in the 42nd Amendment. This, Andhyarujina argued, means the older version of the provision ceased to exist once the Amendment came into force. Therefore, when this new Article 31C was struck down in *Minerva Mills*, the older provision would not automatically be revived.

On the other hand, Solicitor General Tushar Mehta, appearing for the Centre, argued that the doctrine of revival must apply in this case, and the post-*Kesavananda Bharati* position on Article 31C must be restored. To explain the doctrine and justify its application, Mehta relied on Justice Kurian Joseph's observations in the case where the court struck down the Constitution (Ninety-ninth) Amendment Act.

Justice Joseph held that the old collegium system for judge appointments would be revived once the 99th amendment (which introduced the National Judicial Appointments Commission) was struck down. He observed, “Once the process of substitution and insertion by way of a constitutional amendment is itself held to be bad and impermissible, the pre-amended provisions automatically resurface and revive. That alone can be the reasonably inferential conclusion.”

SEXUAL CRIMES, VIDEOS

The Karnataka police and the State administration must act with utmost sensitivity, professionalism, and swiftness to ensure the safety and the privacy of the women who have complained of multiple counts of rape and sexual harassment by Prajwal Revanna, the now suspended Janata Dal (Secular) party leader, the sitting Member of Parliament from Hassan, Karnataka, and grandson of former Prime Minister H.D. Deve Gowda. While the State government acted promptly by seeking cancellation of Mr. Revanna's diplomatic passport, the Special Investigation Team (SIT), formed to inquire into the rape and sexual harassment charges, must ensure the videos of these allegedly forced sexual acts that show Mr. Revanna with several women are immediately taken down and the identities of the women protected. In the past few years,



allegations of sexual misconduct by those holding high office have made distressing headlines. These are a reminder of the highly unequal power dynamics and political influence that make it difficult to bring the perpetrators to account. The multiple complaints and charges against sitting Member of Parliament from the Bharatiya Janata Party in Kaiserganj, Uttar Pradesh, and former President of the Wrestling Federation of India, Brij Bhushan Saran Singh, serve as an example.

Survivors of sexual abuse rarely come forward to complain. And when they do, it is often when their trauma is unbearable, or when they have familial support, or if they feel confident that justice is likely to be served, while they seek privacy and safety. When a survivor files a complaint, it emboldens others to speak up, especially when it involves serial offenders. The police are finding it difficult in getting many of the women in the videos to register a complaint. Both Mr. Revanna and his father and sitting Member of the Legislative Assembly, H.D. Revanna from Holenarasipur in Karnataka, have been summoned by the SIT — Prajwal Revanna on rape charges, and his father for kidnapping an alleged victim-turned-complainant. Given such grave charges, it would be in the fitness of things for both leaders to resign from public office till the investigation is complete.

ART 361: IMMUNITY SHIELD UNTIL GOVERNOR IN OFFICE

Even as a complaint alleging sexual harassment has been filed in Kolkata against West Bengal Governor C V Ananda Bose, Constitutional immunity bars the police from naming the Governor as an accused or even investigating the case.

— Article 361 of the Constitution that deals with immunity to the President and the Governors states that they “shall not be answerable to any court for the exercise and performance of the powers and duties of his office or for any act done or purporting to be done by him in the exercise and performance of those powers and duties...”

— The provision also has two crucial sub-clauses: (1) that no criminal proceedings whatsoever shall be initiated or continued against the President, or the Governor of a State, in any court during the term of his office. (2) No process for the arrest or imprisonment of the President, or the Governor of a State, shall issue from any court during his term of office.

— In the landmark 2006 ruling in *Rameshwar Prasad v Union of India*, that outlined the immunity enjoyed by the Governor “even on allegation of personal malafides,” the Supreme Court held that “the position in law, is that the Governor enjoys complete immunity.”

— “Governor is not answerable to any Court for the exercise and performance of the powers and duties of his office or for any act done or purporting to be done by him in the exercise and performance of those powers and duties,” the Court said. The ruling is indeed not for criminal complaints but for exercising discretionary constitutional powers.

BREAKING THE GLASS CEILING

The appointment of Professor Naima Khatoon as the first woman Vice-Chancellor of the Aligarh Muslim University (AMU) by President Droupadi Murmu has broken a hundred-year-old glass ceiling.

Ms. Khatoon, the principal of AMU Women’s College before the appointment, is seen as a level-headed team player who loves to delegate responsibility. Her colleagues see her as a progressive person who will uphold the secular character of the university and will find her way around the challenges that dot the campus.

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To those who followed the long-drawn selection process, her appointment did not come as a surprise. Since Naima Akhtar, an alumna and senior staff at AMU, made it as the VC of Jamia Millia Islamia, there was a demand for a woman VC at AMU. From the time her name was proposed by the Executive Council, Ms. Khatoon was seen as a front-runner among the five candidates, including legal luminary Faizan Mustafa.

The move is being seen as the BJP government's Muslim women outreach. In fact, the appointment letter was released from the Ministry of Education on the day when PM Narendra Modi addressed an election rally in Aligarh.

Ms. Khatoon took charge from her spouse professor Mohammad Gulrez, who was officiating as the Vice-Chancellor after the regular appointee Tariq Mansoor, who was on a one-year extension, retired in April 2023 and joined the ruling BJP.

Interestingly, the founding chancellor of the university, established in 1920, was Sultan Jahan, the Begum of Bhopal. Over the years, at least three alumnae of AMU went on to helm prestigious universities, including Neelima Gupta, the incumbent at Sagar University in Madhya Pradesh. However, it took more than 100 years for the AMU court to propose the name of a deserving woman for the coveted post. Old-timers say certain customs and the residential nature of AMU perhaps prevented a woman from getting the top post.

It is noteworthy that the concept of a woman VC is relatively new as the academia is also not free of patriarchy in the region.

Ms. Khatoon, hailing from Odisha, came to Aligarh in 1977 after completing high school. "She stayed with us for a few days before shifting to the hostel. It was rare for an Odia girl to travel to shift to Aligarh for education those days," retired AMU professor Kafeel Ahmed Qasmi, also from Odisha, recalls.

She completed her PhD in psychology from AMU. She was appointed a lecturer in the same department in 1988 and was elevated to professor in 2006. She continued being promoted in the department before being appointed the principal of the Women's College in 2014.

HOW INDIRA GANDHI RETURNED TO POWER IN 1971 LOK SABHA POLLS, AMID POLITICAL TURMOIL AND CONGRESS SPLIT

The fourth Lok Sabha was dissolved late at night on December 27, 1970, almost 15 months before the expiration of its term. In an address to the people of India, Prime Minister Indira Gandhi said "there comes a time in the life of a nation when the government...has to take an unusual step to cut through difficulties in order to solve...pressing problems".

She wanted to turn the election into a referendum on her social and economic reforms, including the nationalisation of banks, and abolition of the privy purses of former princes. Polls were held between March 1 and 10, 1971.

Split in the Congress party

Even when Jawaharlal Nehru was alive, several Congress leaders had been unhappy with the Kamaraj Plan, which required them to give up government positions and commit themselves to rebuilding the party. Their grievances deepened after Indira manoeuvred her way to the prime ministership after the death of Lal Bahadur Shastri in January 1966, and remained in the post after



the 1967 election. The demise of President Zakir Husain on May 3, 1969, provided the circumstances for a faceoff between the rival factions.

The Congress old guard proposed the name of former Andhra Pradesh Chief Minister Neelam Sanjiva Reddy to succeed Husain, while Indira pushed for Scheduled Caste stalwart Babu Jagjivan Ram. Vice President V V Giri too threw his hat into the ring. With the Congress 'Syndicate' led by Kamaraj, party president S Nijalingappa, and Atulya Ghosh backing him, Reddy approached Opposition parties like Swatantra Party and Bharatiya Jana Sangh (BJS) for support.

Indira decided to throw her weight behind Giri. In July 1969, she divested Deputy Prime Minister Morarji Desai of his Finance portfolio "without any consultation", prompting a "humiliated" Desai to resign. Soliciting support from the Communist Party of India (CPI), Indira made a sharp left turn — announcing, on July 19, the nationalisation of banks.

In the presidential election held on August 16 that year, Giri, who contested as an Independent with Indira's backing, defeated the official Congress nominee Reddy. The old guard responded by expelling the Prime Minister from the party and, on November 12, 1969, the Congress formally split into the Congress (Organisation) led by the Syndicate, and Indira's Congress (Requisitionists) faction.

Nijalingappa joined the Congress (O), and this faction continued until 1977, when it merged with the Janata Party. Jagjivan Ram was appointed president of Congress (R).

Political turmoil, a new symbol

On March 25, 1966, Pravir Chandra Bhanj Deo, the Maharaja of Bastar, was shot dead by police. The opposition accused the Congress Chief Minister of Madhya Pradesh, Dwarka Prasad Mishra, of the king's murder.

While the assassination helped the opposition, especially the BJS, consolidate in MP, the Samyukta Vidhayak Dal (SVD) governments in Haryana, Punjab, Uttar Pradesh, Bihar and West Bengal, ran into a series of crises, which led to mid-term elections in 1968-69. Also in 1968, the opposition lost two of its tallest leaders, Deendayal Upadhyay of the BJS in February, and socialist Ram Manohar Lohia in October.

As Indira Gandhi struggled to establish her faction as the 'real' Congress after the split, her minority government faced a no-confidence motion on July 28, 1970. She, however, managed to survive in the House with support from the CPI and some other groups.

Having successfully turned the tide of public opinion in her favour with the nationalisation of banks, and with the CPI and almost 225 Congress MPs with her, Indira decided to seize the moment in an early election. She gave the simple, catchy slogan of "Garibi Hatao" (Let's get rid of poverty), which resonated widely.

Even as the two factions of the Congress fought to retain the party's original symbol, 'two bullocks with a yoke', President Giri dissolved Lok Sabha. On January 11, 1971, the Election Commission of India (ECI) decided that the Jagjivan Ram-led Congress, supported by Indira, was the 'real' Congress. However, the Supreme Court stayed the order, and ruled that neither group would get the symbol of the undivided party. On January 25, 1971, the ECI allotted 'Charkha being plied by woman' to Congress (O); 'Calf and cow' to Congress (R).



Massive violence, Indira's return

The fifth Lok Sabha election was conducted by Chief Election Commissioner S P Sen Verma, who had replaced K V K Sundaram in October 1967. According to the ECI, 27.31 crore people voted for 518 seats at 3.42 lakh polling stations across the country. The political turmoil after 1967 had disrupted election schedules, and Assembly polls were held in only three states — Orissa, West Bengal, and Tamil Nadu.

There was unprecedented violence and murders of several candidates in West Bengal, where four Assembly elections were held in five years — 1967, 1969, 1971, and 1972. In Bihar, there was “booth-capturing by mobs of hooligans and goondas armed with lathis, rifles and other lethal weapons”, the ECI said in its report on the election.

Counting started everywhere except West Bengal on March 10, 1971, and results were declared by March 15. Indira rode her ‘Garibi Hatao’ promise to a two-thirds majority of 352 seats. The CPI(M) won 25, CPI and DMK won 23 each, and the BJS won 22 seats.

There were several prominent losers: Chaudhary Charan Singh, who had left the Congress in 1967 to form the Bharatiya Kranti Dal, lost in Muzaffarnagar; Mahant Avidyanath, guru of UP Chief Minister Yogi Adityanath, lost in Gorakhpur; and Sucheta Kripalani, wife of J B Kripalani, lost as the Congress (O) candidate from Faizabad (now Ayodhya).

Among the prominent winners were BJS candidates Vijaya Raje Scindia (Bhind) and her son Madhavrao Scindia (Guna), and Atal Bihari Vajpayee (Gwalior). Swaran Singh won from Jullundur (now Shaheed Bhagat Singh Nagar), Karan Singh from Udhampur, A K Gopalan of the CPI(M) from Palghat, Madhu Dandavate of the PSP from Rajapur, V P Singh, who would become Prime Minister later, from Phulpur, and H N Bahuguna, who would become UP Chief Minister, from Allahabad. Indira herself defeated Raj Narain by a large margin of more than 1 lakh votes.

Indira took oath as Prime Minister once again on March 18, 1971. In December that year, the Indian Army handed Pakistan a crushing defeat in war, which led to the birth of Bangladesh. Indira's popularity was at its peak.

The first big blow to the Prime Minister came on June 12, 1975, when the Allahabad High Court found her guilty of electoral malpractice and misuse of state machinery, and declared her election from Rae Bareilly invalid. Less than two weeks later, on June 25, 1975, Indira announced the Emergency — an action that would change politics in India forever.

EXPERT EXPLAINS: WHAT ELECTION COMMISSION CAN DO IF NORMAL POLLING PROCESS IS DISRUPTED

The Election Commission of India (EC), under Sections 58(2) and 58A(2) of the Representation of People Act, 1951 (RPA), declared void the poll on April 19, in 11 polling stations of Manipur, and 8 polling stations of Arunachal Pradesh. Repolls were conducted on April 22 and April 24 respectively.

Elections were also adjourned in Madhya Pradesh's Betul Lok Sabha constituency due to the death of a candidate on April 9. The polling, originally scheduled on April 26, will now be held on May 7.

India's election laws provide a framework for handling situations where the normal polling process is disrupted for any reason, including damage to EVMs, booth-capturing, natural disasters,



or a candidate's death. The provisions for repolls, adjournments, and the voiding of polls ensure that the democratic process remains fair, transparent, and uninterrupted.

Here is a quick rundown of some circumstances when the normal polling process is disrupted — and the options before the EC in each case.

Intentional destruction, taking away of EVMs

Under Section 58 of the RPA ('Fresh poll in the case of destruction, etc., of ballot boxes'), the EC can declare the poll at a polling station to be void if:

- a) an unauthorised person has unlawfully taken away any EVM;
- b) any EVM has been accidentally or intentionally destroyed, or lost, or damaged, or tampered with; or
- c) a mechanical failure develops in any EVM during the recording of votes.

In such cases, the Returning Officer (RO) immediately informs the EC and the Chief Electoral Officer of the state about the relevant facts and material circumstances, after considering which, the EC can declare the poll void and formally fix the date and time for a new poll.

The contesting candidates or their election agents are then informed, in writing. A notice is also posted in public places along with an announcement by the beat of the drum in the polling area to inform the voters. All electors will be allowed to vote at the fresh poll. During the repoll, the voters' left middle fingers are inked to distinguish between the mark made during the original poll (on their left forefinger).

Booth capturing

Booth-capturing, defined in Section 135A of the RPA, includes all or any of the following activities by any person or persons:

- a) seizure of a polling station, affecting the conduct of elections;
- b) taking possession of a polling station, allowing only his or their supporters to vote;
- c) intimidating or threatening any elector and preventing him from going to the polling station;
- d) seizure of a counting place affecting the counting of votes;
- e) involvement of any person in government service in any of the above activities.

Booth capturing is punishable for a term of not less than one year, which may extend to three years for lay people, and not less than three years, extending to five years for government servants.

Under Section 58A ('Adjournment of poll or countermanding of election on the ground of booth capturing') in case booth capturing has taken place at a polling Station, the Presiding Officer of a polling station immediately closes the Control Unit of EVM and detaches the Ballot Unit(s) from the Control Unit under Rule 49X of the Conduct of Election Rules, 1961.



He then informs the RO, who reports the full facts to the EC through the fastest means of communication. The EC, based on the material facts, may

- a) declare the poll at that polling station to be void and direct a fresh poll on a new date; or
- b) countermand the election in the constituency in case booth capturing has taken place in a large number of polling stations, or if it has affected the counting of votes.

Natural disasters, other disruptions to polling

The Presiding Officer of a polling station can adjourn the poll at a polling station under section 57(1) of the Representation of the People Act, 1951, in case of:

- a) a natural calamity like a flood, a severe storm;
- b) non-receipt or loss or damage to essential polling materials like EVM, electoral roll etc;
- c) interruption or obstruction due to any riot or, open violence;
- d) non-arrival of the polling party due to obstruction or any other serious difficulty; or
- e) non-commencement of the poll within two hours from the scheduled time due to malfunctioning of EVM, or any other reason.

After seeking the EC's approval on the date and hours, the adjourned poll will recommence from the stage at which it was left immediately before the adjournment. Contesting candidates or their agents are informed, and only electors who have not already voted before the poll was adjourned are permitted to vote.

Death of a candidate

As per Section 52 of RPA, amended in 1996, the poll shall be adjourned only in case of the death of a recognised political party's candidate. A "recognised political party" refers to either a recognised national party, or party recognised as a state party in the state concerned, for which the EC reserves a symbol under the Election Symbols (Reservation and Allotment) Order.

The above provision applies if the candidate with a valid nomination dies at any time after 11.00 a.m. on the last date for making nominations, until the commencement of the poll. The RO reports the fact to the EC and orders the adjournment of the poll to a date to be notified later by the Commission.

The EC then calls upon the concerned political party to nominate another candidate for the said election in place of the deceased candidate. The political party must make the nomination within seven days. If the list of contesting candidates has already been published before the adjournment of the poll, a fresh list of contesting candidates is prepared and published, including the name of the candidate nominated in place of the deceased candidate.

In Betul, the candidate's death occurred one day after the last day for withdrawing candidature. Therefore, the polls were adjourned. However, in the Moradabad Lok Sabha constituency, the candidate died after voting, in which case a by-election will be held if he emerges as the winner of the seat after counting.



EC BRINGS OUT PROTOCOL ON SYMBOL LOADING UNITS AS MANDATED BY TOP COURT

The top court issued directions to seal and store the SLUs in a container, and store them in a strongroom along with the electronic voting machines (EVMs) for at least 45 days after the declaration of results.

The SLU uploads the name and symbol of the candidates contesting a particular seat on Voter Verified Paper Audit Trail (VVPAT) or paper trail machines.

The SLUs had till now been handed over to local election officials by engineers of Bharat Electronics Ltd. (BEL) or the EC before voting. A day after the polls, the SLUs used to be returned to the engineers of the two public sector undertakings that manufacture the ballot unit, the control unit, and the VVPAT, along with the SLUs.

The EC, in a statement on Wednesday, said that it had directed all State Chief Electoral Officers to create the necessary infrastructure for the handling and storage of the SLUs in the EVMs in accordance with the new protocols being implemented from May 1 as mandated by the SC.

“Enough number of SLU containers, generally two to four per Assembly constituency, are to be kept ready in advance based on the requirements,” the EC said.

The revised protocols are applicable in all cases of completion of the symbol loading process in VVPATs undertaken on or after May 1. The top court had also paved the way for verification of micro-controllers embedded in the EVMs.

WHEN IS A CANDIDATE ELECTED UNOPPOSED?

The story so far:

On April 22, the ruling Bharatiya Janata Party opened its tally in the Lok Sabha when its nominee for the Surat constituency in the western State of Gujarat, Mukesh Dalal, was elected unopposed. This followed the rejection of the nomination papers of the Congress candidates [main and substitute nominees] the previous day and the withdrawal of other nominees. This means Gujarat's second largest city will not go to the polls on May 7.

How is a candidate declared elected before polling?

Section 53 (3) of the Representation of the People Act, 1951 deals with the procedure in uncontested elections. According to this proviso, if the number of such candidates is less than the number of seats to be filled, the returning officer (RO) shall forthwith declare all such candidates to be elected. In this regard, the RO's actions are governed by Section 33 of the Act which pertains to the presentation of nomination papers and requirements for a valid nomination.

Sub-section 4 says: “On the presentation of a nomination paper, the returning officer shall satisfy himself that the names and electoral roll numbers of the candidate and his proposer as entered in the nomination paper are the same as those entered in the electoral rolls...” In the given instance, three proposers of the Congress' candidate for Surat, Nilesh Kumbhani, claimed in an affidavit to the district election officer (DEO), Sourabh Pardhi, that they had not signed his nomination form. They did not also turn up before the DEO on April 21 to support the candidate's nomination form.



Besides, the Handbook for Returning Officers (Edition 2) issued by the Election Commission (EC) in August 2023, in the chapter titled uncontested election, states that “if in any constituency, there is only one contesting candidate, that candidate should be declared to have been duly elected immediately after the last hour for withdrawal of candidature. In that event, a poll is not necessary.” It also says that “all those candidates, who are returned as uncontested and [who] have criminal antecedents, must publicise the details in the prescribed format as per timeline.”

What is the scope for negative voting in the election system?

There is ample scope in the system. While the NOTA (none of the above) option has been in force since 2013, the Conduct of Election Rules, 1961, allows electors to decide not to vote through Rule 49-O. A remark to the effect that the elector has decided not to record his or her vote would have to be made in the “remarks column” against the entry relating to the elector in the Register of Voters by the presiding officer, after which the signature or thumb impression of the elector would have to be obtained against such a remark.

The option of NOTA, introduced through the Supreme Court’s intervention, has been available on electronic voting machines (EVMs) since November 2013. This became a reality in the wake of a verdict given by a Bench of the Supreme Court comprising Chief Justice P. Sathasivam and Justices Ranjana Desai and Ranjan Gogoi in September 2013, while allowing a petition filed by the People’s Union for Civil Liberties. The then CJI, who wrote the judgment, said: “Giving right to a voter not to vote for any candidate while protecting his right of secrecy is extremely important in a democracy. Such an option gives the voter the right to express his disapproval of the kind of candidates being put up by the parties.” He expressed the hope that “gradually, there will be a systemic change and the parties will be forced to accept the will of the people and field candidates who are known for their integrity.”

There is a difference between an elector exercising Rule 49-O and one using the NOTA option. In the case of the former, the likelihood of such an elector compromising his or her secrecy is high, as there is a procedure to be followed manually at a polling booth. However, in the case of the latter, there is no such issue.

But, according to the Handbook for ROs, the NOTA votes are not to be taken into account for calculating the total valid votes polled for the return of the security deposit. The EC’s stand has been that the person getting the largest number of votes in any constituency will still be declared the winner, regardless of the number of NOTA votes.

But, with respect to local bodies’ polls, the situation is different, at least in Maharashtra. Through an order in November 2018, the Maharashtra State Election Commission said that NOTA would be regarded as a fictional electoral candidate for the polls to urban local bodies, and wherever NOTA gets the highest votes, the Commission would go for re-poll.

What are the developments post NOTA?

There have been instances wherein votes obtained by political parties were lower than the NOTA votes. But, a section of activists and constitutional experts has been critical, calling NOTA a “toothless tiger” with no implications on the results, despite the fact that NOTA was reported to have netted over 1.29 crore votes in the State Assembly elections and the Lok Sabha elections combined in the last five years.



On April 26, the Supreme Court, which had in the past refused to direct the EC to hold fresh polls if the majority of the electorate exercised NOTA, asked the poll panel to respond to a plea seeking fresh elections to constituencies where NOTA votes were in majority. The prayer of the petitioner-author Shiv Khera was that the court should direct the EC to frame rules, stating that candidates who polled fewer votes than NOTA should stand debarred from contesting elections for five years.

TURNOUT AND TROPES

A comparative assessment of polling in the second phase of the general election on Friday, for 88 seats from 13 States/Union Territories, shows that high turnout (more than 70%) in the East and the North East (Assam, Manipur, Tripura, and West Bengal) and low turnout (less than 60%) in Bihar and Uttar Pradesh have followed earlier trends. The turnout seems to be lower in Kerala, Madhya Pradesh, Maharashtra and Rajasthan too, but any parsing of the reasons should wait for comprehensive post-poll surveys. That said, voter turnout has indeed reduced in comparison to 2019 in the first phase as well, compelling the Election Commission of India to look into whether the heat-wave conditions in many States were responsible. That could be a factor but one cannot rule out the notion that voters seem to be less compelled about their choice this time in comparison to 2019. Considering the fact that the BJP won a comfortable majority and its highest vote share in 2019 coinciding with the higher voter turnout, a lower turnout could be a sign of worry for it, even if, conventionally, a higher turnout has generally been a message about anti-incumbency in earlier polls before the BJP became the pole of the Indian party system.

Prime Minister Narendra Modi, the lynchpin of the BJP, and whose leadership of the party and the Union government is marshalled by the party as a key campaigning tool, had taken recourse to coarse communal rhetoric and criticising the Congress party's manifesto. This suggests a two-pronged ploy. To whip up the sentiments of the ardent support base of the party who believe in the Hindutva agenda and to seek higher participation in voting by these sections. And, to discredit the Congress's studied pivot to the agenda of social justice (although it hinged on an idea of recognition made possible by a caste census) and expanded welfare (through neo-Keynesian policies). The Congress lost its base in the Hindi heartland to the parties that favoured "Mandal" politics of intermediate and lower caste-based mobilisation and patronage since the 1990s. The BJP, then, successfully managed to upend these parties by mobilising sections of the OBCs, who felt left out due to the hegemony of select intermediate castes in the Mandal parties, besides using Hindutva to form a solid base of support. Now, the Congress seeks to revive itself in alliance with the Mandal parties who also seek a new resurgence. This has led the BJP and Mr. Modi to take to slandering the grand old party's manifesto, particularly its emphasis on welfare, using familiar communal tropes. It remains to be seen whether the electorate will be emotionally swayed by this rhetoric or logically match it against its expectations of better jobs and livelihoods. This will decide the course of the election as it moves on to the next phases.

THE PHYSICS AND MATHS OF KEEPING ELECTIONS FAIR AND REPRESENTATIVE

While mathematical analysis helps sharpen an algorithm for the election, a physics perspective can diagnose if it is fairly implemented in practice. The science of elections has a long way to go but for millions across the world, the elections of 2024 provide hope that the future is in their hands

There are about 60 national elections in 2024 involving two billion people, including the biggest of them — the national elections underway in India — and the election to the U.S. presidency.



Across the world, elections are a volatile mixture of emotions, aspirations, competing ideologies, and sometimes even violence. It might then surprise many that, despite the cacophony, there is science behind the election's processes.

About 2,500 years ago, the earliest form of elections in ancient Athens was a system that ultimately depended on the candidate's luck. Among all the suitable candidates, one was randomly chosen. Since the winning criterion was based on random choice, campaigning or influence couldn't help the candidate.

Tenth-century Chola inscriptions at Uthiramerur in Tamil Nadu reveal the practice of choosing village representatives through a 'Kudavolai' system. The final choice was made by randomly picking one among the candidates the people had voted for.

The 'first past the post' system?

Today, social choice theorists and mathematicians who study elections call this the approval voting system followed by a random choice. As a means of electing candidates, this process fails to reflect the will of the people. If this is a flawed process, what would be the right way to elect candidates? Surprisingly, mathematics tells us that there is no simple answer to this question.

The first-past-the-post (FPTP) system followed in India, the U.S., the U.K., and several other countries has many drawbacks. Critics have pointed out the disproportionate difference between the popular vote share and the seat share in many Parliaments. For example, in the 2015 Delhi Assembly elections, the Aam Aadmi Party received 54% of the popular vote but won 96% of the seats, whereas the Bharatiya Janata Party won 32% and 4%, respectively.

Second, winners in the FPTP system often secure far less than 50% of the vote share. No government in India, irrespective of its strength in the Lok Sabha (i.e. number of seats), has ever surpassed 50% vote share. Since 1918, only once, in 1931 in the U.K., did a government command more than 50%. So by the vote-share metric India and the U.K. were always ruled by "minority" governments. Expectedly, social choice theorists disfavour the FPTP system, though it continues to find wide use for its simplicity.

Condorcet and Borda systems

Are there better alternatives? Mathematical analysis to design better electoral systems dates back to the 13th century in the works of Ramon Llull, a missionary and theologian. His book *De Arte Eleccionis*, in the Catalan language, gives a detailed algorithm for a two-stage election process for church officials. It ensures that the winner, when pitted against each of the other contenders, receives more than 50% votes and is the most preferred candidate. This work was lost for centuries until it was discovered in the late 1980s.

Today, Llull's method is called the Condorcet system after the 18th-century French mathematician Nicolas de Condorcet, who rediscovered it in the 1780s. While better than FPTP, the Condorcet system can be difficult to understand and isn't used in any national election, not least because its mechanism allows participants to prevent the election of a particular candidate. Some smaller organisations use it to elect their leaders and board members, however.

The Borda electoral process, proposed by French mathematician Jean-Charles de Borda in 1784 — but first described by the 15th-century German astronomer Nicolas of Cusa — is a rank-based voting system (RVS) similar to the points table in sporting tournaments like the Indian Premier League.



It allows voters to rank each candidate on the ballot paper, and through a process of vote redistribution, the winner is guaranteed to have at least 50% of the vote.

Redistribution of votes can take several forms; the most common is to add the second and even third preference votes until one of the candidates crosses 50% vote share.

Are there problems with RVS?

The President of India is elected with the RVS system. In 1969, none of the 15 presidential candidates secured 50% of the first-preference votes. After adding second preference votes, V.V. Giri (who had 48% first preference votes) reached 50.8% and was declared the winner, defeating Neelam Sanjeeva Reddy.

Like Condorcet, the original Borda method is complex and challenging to implement in large elections such as those in India.

In 1951, the American economist and Nobel laureate Kenneth Arrow proved that RVS can conflict with certain fairness criteria required of elections. This doesn't imply such systems are unfair, even if occasionally the most popular candidate may fail to get elected.

Consider an RVS election with three candidates, A, B, and C, with nine voters ranking their preferences.

The results can read thus: four voters prefer B over C, and prefer A over both B and C. This information can be represented as $A > B > C$ (4). Similarly, other voters may yield different combinations: $B > C > A$ (3) and $C > A > B$ (2). The distribution indicates A received the maximum number of first preference votes and C the least. Suppose B withdraws from the election. In a fair election, we should expect the result to remain unaffected — but this isn't the case with RVS.

Here, with the same vote distribution, the result will now read $A > C$ (4 votes) and $C > A$ (5 votes). So C has the most first preference votes now and wins. Arrow's theorem asserts that such outcomes are unavoidable in an RVS election.

How can maths, physics help?

Ironically, while the cold rigour of mathematics sheds light on the inherently boisterous election processes, more grounded physics approaches draw on this lack of order to seek universal patterns irrespective of electoral systems. This is not unusual in physics. For example, inside a balloon, billions of molecules, moving randomly and bumping against one another, conspire together to produce a constant pressure that keeps the balloon puffed up.

This is the central lesson of statistical physics: order can emerge at the large scale even if dominated by disorder at smaller scales. Two decades of election data analysis has revealed emergent patterns in the form of the distributions of quantities that matter to an electoral process. Despite the superficial chaos surrounding the elections, these patterns are robust and independent of details, such as where elections were held, the voting paradigm or the cultural context.

Axiomatically, the absence of such order would suggest that elections are/were not fair and could be used to diagnose and flag electoral malpractices.



In short, while mathematical analysis helps sharpen an algorithm for the election process, a physics perspective serves to diagnose if the algorithm is fairly implemented in practice. The science of elections has a long way to go, but for millions of people across the world, the elections of 2024 provide hope that the future is in their hands.

AI-GENERATED REAL-TIME CALLS TO VOTERS BLUR LINES AMID LOK SABHA ELECTIONS

A prospective voter gets a call. On the other end is a local leader, asking them what issues they are facing and would like addressed if the leader were elected to power. The voter says electricity cuts are a big issue. Immediately, the leader apologises for the power cut situation and vows to make the situation better.

This perfectly normal piece of conversation has one catch: the leader on the other end of the phone never made the call, with his voice being generated by artificial intelligence (AI). And generative AI was used to process what the voter said and prepare an output to accurately respond to that.

This technology is out in the wild in India amid the ongoing Lok Sabha elections.

“For now we have deployed the technology on a pilot basis in some areas in Rajasthan,” Divyendra Singh Jadoun, founder of the Ajmer-based AI services company, Polymath Solution, which is pitching the technology to political parties, told The Indian Express.

The technology, he said, was deployed on behalf of “a local leader, who is not contesting in the current election but wanted to send calls to the people of his constituency where he will be fighting in next term”. He did not reveal the name of the politician. “The technology currently is not very reliable for languages like Marathi, Marwari etc. As part of the pilot, we have collected the data and are training the system to fine tune it,” he said.

In a sample video showing how the real-time conversational technology works Jadaoun shared with this paper, a manipulated voice of Barack Obama is first heard addressing the person by their name, before proceeding to tell them that they wanted to get feedback on some of the local issues the person was facing which he could help with.

The person responds saying frequent electricity cuts are a big problem in their area, following which the deepfake voice of Obama responds – almost in real time – that he regrets the fact that the person was facing the power supply issue and then proceeds to ask for a detailed version of the problem.

The technology by no means is perfect and is prone to inaccuracies in languages apart from English and Hindi, Jadaoun said.

Politicians are also using technologies like augmented reality (AR) to reach out to voters, in what can be described as a micro-targeted rally. The technology superimposes a computer-generated image on a user’s view of the real world. Parties are putting up QR codes on their promotional material, which upon being scanned, open up an interface where a politician can be heard addressing them in the real-world environment of wherever their phone’s camera is pointing at.

The Indian Express came across one such QR code which linked to a website on which the computer-generated video of the chief minister of a North Eastern state showed up, delivering a short message. This paper could not ascertain whether this particular QR code has been deployed publicly.



Politicians can now reach the homes of their potential voters in unprecedented ways, owing to technologies like AI and AR, but also raising concerns on where the line should be drawn in a country like India, which has more than 800 million internet users but with varying degrees of online literacy.

Beyond deepfakes of politicians circulated on social media platforms, these kinds of outreach mechanisms add a new dimension to the role AI-generated content can play in the mammoth Indian election process.

On social media platforms and private messaging platforms like WhatsApp, parties' campaign machinery is continuing to work in overdrive to woo voters. AI-based deepfakes are being increasingly used to deliver messages with positive and negative undertones.

A deepfake of Prime Minister Narendra Modi, where he is purportedly addressing voters by their individual names before seeking their names has recently been shared across several WhatsApp groups operated by the party's workers.

Last month, The Indian Express had reported that voice clones of candidates, party workers, and those hopeful of gaining prominence within a party generated by AI, were expected to be used by political parties for targeted messaging to woo voters ahead of the elections.

Earlier this month, deepfakes of popular Hindi film actors Aamir Khan and Ranveer Singh went viral on social media where they were purportedly heard criticising Prime Minister Modi and urged people to vote for the Congress party instead.

Both AI-generated videos end with the Congress election symbol and slogan: "Vote for Justice, Vote for Congress".

ONE YEAR AFTER MANIPUR VIOLENCE, WHAT THE STATE NEEDS

A year after it was jolted by ethnic violence, Manipur continues to be on the edge. The state has not seen large-scale violence in the last eight months. However, lives continue to be lost in clashes between Meiteis and Kuki-Zomis, belying Chief Minister Biren Singh's repeated claims of peace "gradually returning" to the strife-torn areas. The scars created by the conflict are admittedly deep – more than 200 people have lost their lives, families languish in refugee camps and there have been reports of gruesome violence against women. Vigilante groups continue to take the law into their hands. But great harm has also been done by the state government's lack of will to initiate a meaningful dialogue between the warring communities. That much needs to be done to repair the broken trust between neighbours was underscored by an incident two days after the conclusion of round two of the Lok Sabha polls. One person lost his life and two others were injured after residents of two adjoining villages waged a gun battle in the early hours of Sunday. A day earlier, two CRPF personnel were killed and two others sustained injuries following a blast at the paramilitary force's outpost in Bishnupur district — one of the most brazen attacks on security forces in the past year. Violence against security forces has, in fact, been one of the recurring features of the conflict, highlighting that force alone cannot quell a situation that requires sensitivity and compassion in equal measure.

After the first conflagration on May 3 last year, Union Home Minister Amit Shah announced the formation of a committee with representatives from different ethnicities, political parties and civil society, to begin the process of healing. That the committee ran into internal differences soon after does have much to do with the complexities of Manipur's society. The situation is also made more

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



fraught by landholding patterns and the continuing impact of colonial policies that segregated the state's tribal-dominated hill areas from the Meitei-dominant Imphal Valley. But in the past year, Singh's government has done very little to assure communities, especially the hill tribes, that his administration is above the identity politics that has pushed the state to the brink. His regime has, instead, stoked tensions and aggravated faultlines with its incessant evocation of the insider-outsider trope.

The Manipur government has done well to crack down on drug smugglers. But it continues to gloss over political and administrative failures by blaming the problem on illegal migrants from Myanmar with whom the Kuki-Zomis share a common ethnicity. In all this, measures to improve livelihoods in a state that has the third lowest per capita income in the country — it ranked the highest in the northeastern region in the 1990s — have taken a backseat. The healing touch Manipur requires must necessarily be a combination of economic, political and administrative measures. The Biren Singh government would be failing its mandate if it did not recognise this imperative, even after a year of strife in the state.

TELANGANA STUDENT SUICIDES: LISTEN TO THEIR CRY FOR HELP

The alleged death by suicide of at least seven students, six of them girls, in different parts of Telangana after the declaration of intermediate (equivalent of Classes XI and XII) results is another grim reminder that despite several progressive interventions in recent years, much work needs to be done to alleviate the anxieties of the country's youth. The Telangana State Board of Intermediate Education had arranged for counsellors for students in junior colleges to deal with exam-related stress. State government representatives had also asked students to not be dejected by adverse results and make use of the supplementary examinations. However, the loss of young lives speaks of serious systemic shortcomings that cannot be mitigated by reaching out to students just before the examinations.

Year after year NCRB data has provided significant pointers about the stress faced by students. In 2022 according to the Bureau, over 13,044 Indian students ended their lives — 7.6 per cent of the total suicide fatalities in that year. The data shows a 70 per cent increase in the number of students who took their lives in the last decade. Suicidal behaviour is, of course, the culmination of several factors. It's no secret, however, that competition pressures and burdens of parental expectations take a toll on the well-being of students — this is especially so because today, more than ever before, diverse sections of people see academic excellence as a ticket to a better life. Schools, too, are harbingers of the competitive mentality and teachers push their wards to higher levels of performance. This routine disincentivises a child from searching for meaning in what is taught, encourages rote learning and pushes the young to coaching centres where the demands are even more punishing. Instead of being empathetic tests of the student's aptitude, examinations continue to be purveyors of a ruthless elimination system that dehumanises the learners and drives many of those who fail to make the cut to despondency. Designing flexible evaluation mechanisms for school goers, one of the objectives of NEP, 2020, is at an early stage. The endeavour requires greater urgency.

Emotional well-being is a key part of the NEP's thrust on creating an enabling atmosphere for students. However, most schools today aren't equipped to recognise a cry for help. Round-the-year support systems that enhance the resilience and coping skills of students — especially those from marginalised communities — are extremely rare in the Indian school-education landscape. Educationists have also emphasised the importance of counselling parents and teachers. For long, it has been clear that the gruelling system does not prepare the student for the country's economic



realities. At the same time, the expansion of the economic pie hasn't kept pace with the rise in aspirations. The manifestos of most political parties in the ongoing elections seem to be cognisant of this deficit. The urgent task after June 4 will be to translate words into action and make sure that the system doesn't fail its young.

HANGOR CLASS SUBMARINE

The first Hangor class submarine, built by China for Pakistan, was launched on April 26 at a Wuhan shipyard. This was the first of eight submarines of this class that the Pakistan Navy is set to induct into its fleet by 2028. Here is all you need to know.

— The Hangor-class, an export variant of the Chinese Type 039A Yuan class, is a diesel-electric attack submarine, named after the now decommissioned PNS Hangor, which famously sank Indian frigate INS Khukri during the 1971 war.

— “Diesel-electric” refers to the mode of propulsion — diesel engines power the submarine when surfaced or snorkelling (as they need air to operate), while a battery, charged by the diesel engine, allows the vessel to operate while submerged.

— Pakistan's Hangor class is the direct counterpart of India's Kalavari class of submarines, based on the French Scorpene-class. India currently operates six Kalavari class submarines, with three more set to be inducted into service by the early 2030s.

— In terms of size, the Hangor class is significantly bigger than the Kalavari class. The Kalavari class, like the Hangor class, runs on diesel-electric propulsion. However, the models India currently operates do not come with built-in AIP. This means that in terms of underwater endurance, the Hangor class potentially has an edge on the Kalavari class. Both submarine classes carry state of the art sensor suites, although details of Hangor's capabilities in this regard are not out in public.

For Your Information:

— India got its first submarine, INS Kalvari of the Foxtrot Class, from the USSR in December 1967.

INDIA, UK CLOSER TO PACT ON ELECTRIC PROPULSION SYSTEM FOR WARSHIPS

The Centre and the UK government are discussing the possibility of an agreement to develop an electric propulsion system in India to power domestic warships

— Indian warships are currently powered by diesel engines, gas turbines or steam turbines. The electric propulsion capability is meant to power larger warships with a displacement of over 6,000 tonnes.

— Once the agreement is signed, officials said, the key capability will be developed through a collaboration between the UK's GE Power Conversion and state-owned Bharat Heavy Electricals Ltd (BHEL).

— Both companies have signed a memorandum of understanding on developing the 'Integrated Full Electric Propulsion System'.



For Your Information:

— India and UK are planning to sign the Free Trade Agreement, it would be the first full fledged deal with a western country that would see deeper economic integration with a major global service sector leader.

— The bilateral trade between India and the UK increased to \$20.36 billion in 2022-23 from \$17.5 billion in 2021-22.

DRDO SUCCESSFULLY TESTS MISSILE-ASSISTED TORPEDO RELEASE SYSTEM

The Defence Research and Development Organisation (DRDO) Wednesday tested a next-generation torpedo release system aimed at boosting the Navy's anti-submarine warfare capabilities, the Defence Ministry said.

The Supersonic Missile-Assisted Release of Torpedo (SMART) system has been designed and developed by the DRDO. This missile-based mechanism to launch lightweight torpedoes can target submarines hundreds of kilometres away — far beyond the conventional range of lightweight torpedoes. It will be particularly employed in the absence of other assets for immediate action when an enemy submarine is detected.

The system, which can be launched from both coasts and warships, was successfully flight-tested at around 8.30 am from a ground mobile launcher from the Dr APJ Abdul Kalam Island off the Odisha coast, according to the ministry.

The canister-based missile system comprises several advanced subsystems including two-stage solid propulsion and precision inertial navigation. It carries an advanced lightweight torpedo missile as a payload along with a parachute-based release mechanism.

Several state-of-the-art mechanisms, such as symmetric separation, ejection and velocity control, have been validated with this test. Defence Minister Rajnath Singh praised the DRDO on the successful flight test and said SMART would enhance the Navy's strength.

THE SIGNIFICANCE OF CARRIER AVIATION

The story so far:

On March 5, both aircraft carriers of the Indian Navy, INS Vikramaditya and INS Vikrant, showcased "twin carrier operations" with MiG-29K fighter jets taking off simultaneously from both and landing cross deck as Defence Minister Rajnath Singh looked on from onboard one of them. This demonstrated an ability that only a handful of nations can boast of. Further one of the carriers, INS Vikrant is indigenously designed and constructed. Commissioned in September 2022, INS Vikrant has been fully operationalised and integrated into the operational cycle in record time. As the two carriers sailed, they were joined by a flotilla of frontline warships of the Indian Navy, a combined tonnage of around 1,40,000 as well as aircraft.

What does INS Vikrant signify?

A carrier is a floating city. The design work on the Indigenous Aircraft Carrier (IAC)-I, later christened Vikrant, began in 1999; however 2005-2006 were probably the most crucial years for the carrier and for India's war shipbuilding. The crucial decision was on the warship grade steel,



which till then was procured from Russia. After much brainstorming, it was decided that it would be developed and produced in India, a collaborative effort between the Steel Authority of India, the Defence Research Development Organisation (DRDO) and the Indian Navy. The decision on the development of DMR-249 steel was a commercial decision, Madhu S. Nair, Chairman and Managing Director (CMD), Cochin Shipyard Limited (CSL) said speaking to The Hindu shortly after the commissioning of Vikrant. DMR-249 steel is now being used for the construction of all warships in the country.

The construction also ushered in several new processes and spin-offs benefiting the shipbuilding industry at large. For instance, in 2002, 3-D modelling was introduced for the first time in India and a joint team of 200 personnel from the Navy's Warship Design Bureau and CSL began work. The keel of Vikrant was finally laid in 2009, launched into water in 2013 and went through extensive user acceptance trials between August 2021 and July 2022 before its eventual commissioning.

What is the composition of INS Vikrant?

Delays notwithstanding, Vikrant is an engineering marvel. It has a total area in excess of 12,450 m² which equals to about two and a half hockey fields. The 262m long and 62m wide ship is powered by four General Electric LM2500 engines generating 88 MW of power giving it a maximum speed of 28 Knots and an endurance of 7,500 nautical miles. Built at an overall cost of around ₹20,000 crore and 76% indigenous content, the ship has around 2,200 compartments, for a crew of around 1,600 that include specialised cabins to accommodate women officers and sailors. Vikrant houses two galleys which cater to all onboard, preparing upto 4,500-5,000 meals every day. The galleys start operation at 3 am every morning and continue for almost 20 hours a day, an official said. "It is equipped with state of the art automatic chapati making machines, capable of making 6,000 chapatis per meal, large cooking boilers capable of preparing 4,00 kgs of rice, dal, vegetables and other dishes." Additionally, in order to cater for a variety of items on the menu, it is also fitted with combi-steamers, a dosa machine and ovens for preparing, idlis, dosa, breads and other bakery items.

Noting that among manufacturing activities, shipbuilding has one of the highest employment multipliers of 6.48, the economic Survey 2022-23 said that Vikrant alone engaged approximately 500 MSMEs, 12,000 employees from ancillary industries, and 2,000 CSL employees.

What are its capabilities?

Vikrant can operate an air wing of 30 aircraft comprising MiG-29K fighter jets, Kamov-31, MH-60R multi-role helicopters, in addition to indigenous Advanced Light Helicopters and Light Combat Aircraft (Navy). It uses the STOBAR (Short Take-Off but Arrested Recovery) method to launch and recover aircraft for which it is equipped with a ski-jump to launch aircraft, and three 'arrestor wires' for their recovery. About 200 men start the day by preparing the flight deck for flying operations. "First we clean the entire flight deck of any debris or left overs. Simultaneously, the pilots are briefed for the missions in the briefing room," one official onboard explained. "After all the aircraft are started up, the entire deck vibrates and generates noise in excess of 200 decibels."

The flight deck has an independent lighting system to assist for bad weather and night operations. Once the aircraft finishes the mission, they are safely vectored back to the ship and guided for a precision landing, the official stated. "The fighters which have a hook under the belly pick up one of the three arresting gear wires on flight deck. The aircraft with a speed of more than 250 kmph



is stopped within a distance of just 90m in just 2-3 seconds.” Vikrant has larger deck space and visibly larger hallways compared to previous carriers including Vikramaditya, which is of similar size. India is currently negotiating with France for the purchase of 26 Rafale-M carrier jets as the MiG-29Ks are in short supply while an indigenous twin engine deck-based fighter is currently under development. Navy Chief Admiral R. Hari Kumar had expressed confidence that they will receive it by 2034 or so.

While the present Vikrant was the first carrier built in the country, India has had a long history of operating carriers. The erstwhile 19,500 tonne Vikrant was India’s first carrier purchased from the U.K., which arrived in 1961 and played a vital role in the 1971 war. Then came the 28,700 tonne INS Viraat commissioned in 1987, formerly HMS Hermes, also from the U.K. INS Vikramaditya procured from Russia and commissioned in 2013 is India’s third carrier.

After Vikrant, what next?

An aircraft carrier is fundamental to command, control and coordination of operations from the sea and to project combat power ashore, over the seas or in the air, Adm Kumar told The Hindu, noting that the fragile maritime security situation across the Indian Ocean Region (IOR) and India’s stature as the largest resident naval power necessitate a strong and robust Navy. “Aircraft carriers play a pivotal role in this and concurrent availability of two Carrier Battle Groups facilitate credible presence and preparedness on both Western and Eastern seaboard.” The Navy has already moved a case for a second Indigenous Aircraft Carrier (IAC-II), a repeat of a Vikrant-like carrier. The proposal was cleared by the Defence Procurement Board last September and has since been forwarded for approval by the Defence Acquisition Council, expected to be taken up once it meets after the elections.

The IAC-II displacing 45,000 tonnes will see some modifications and newer technologies incorporated in the original design of the Vikrant and will also be manufactured by CSL. It will take around eight to 10 years to build a new carrier, Mr. Nair said recently, as long as the basic design, engines and propulsion are kept intact. The Navy has shelved its earlier plans for a 65,000 tonne carrier given the whole new technology cycle involved and the resultant cost and timelines.

The proposed IAC-II has often been referred to as India’s third aircraft carrier. However, that is not entirely right. Design, construction and operationalisation of a carrier takes a long time and the IAC-II, if it comes in time, will be a timely replacement for INS Vikramaditya. Adm Kumar acknowledged this last year. “We are of the view that we will go for a repeat order with improved capabilities and in the meantime we will study whether we need to go for a larger carrier. Till a third aircraft carrier gets ready and is commissioned, the life of INS Vikramaditya may also come to the end of its lifetime. Then we would need to build another carrier,” he said on the sidelines of Aero India 2023. Therefore effectively, for the foreseeable future, the Indian Navy will have only two aircraft carriers in operation while it has long envisioned a force structure around three carriers, two at sea while one is in maintenance. Any delay in decision making could risk India losing its expertise of building and operating carriers, reminiscent of the submarine debacle of the 1980s.

While debate around carriers versus submarines continue, there is a renewed global interest with several countries now going for carriers of varying sizes. The U.S. is fielding new super carriers, and the U.K. has inducted new carriers while France and Russia have announced plans to build new ones. Japan has begun converting its helicopter carriers to operate F-35 fighter jets. Last month, China announced that it is building its fourth aircraft carrier, likely a nuclear-powered



super carrier. From commissioning its first carrier, Liaoning, in 2012, launching second carrier Shadong in 2017, third carrier Fujian in 2022 and the fourth to be unveiled soon, China's pace is absolutely unprecedented.

It is not an either/or between carriers and submarines. Each has its merits in naval warfare with profound ability to influence wars. The current global trajectory shows that, the growing carrier targeting missiles and drones notwithstanding, the days of carrier aviation seem to be bright for the foreseeable future.

WHY ARE UNCLASSIFIED FORESTS 'MISSING'?

The story so far:

In compliance with a February 19, 2024, Supreme Court order, the Ministry of Environment, Forests and Climate Change (MoEFCC) uploaded the various State Expert Committee (SEC) reports on its website earlier in April. This interim order was in response to a public interest litigation challenging the constitutionality of the Forest (Conservation) Act Amendment (FCAA) 2023. A key concern in the petition was that the status of unclassified forests, which were to be identified by the SEC reports, wasn't known or if they had been identified at all.

What does the FCAA stipulate?

With the enactment of FCAA, unclassified forests — which have legal protection under the landmark T.N. Godavarman Thirumalpad (1996) case — would lose this protection, leading to their inevitable diversion. The SEC reports were to be prepared in pursuance of the order, which specified that 'forests' as per their dictionary meaning and all categories of forests irrespective of ownership and notification status would be included under the ambit of the Forest (Conservation) Act, 1980. As a result, unclassified forests, also known as deemed forests, would require the Central government's approval in case a project proponent sought to divert that land for non-forest use. Unclassified or deemed forests may belong to forests, revenue, railways and other government entities, community forests or those under private ownership, but are not notified.

Have these forests been identified?

The status of the reports were unknown from 1996 until they shot back into prominence when the MoEFCC told a Joint Parliamentary Committee that the SECs had identified unclassified forests that had been taken on record. This was in response to criticism that the proposed law undermined the Godavarman judgment and would exclude all unclassified forest land from its purview. The MoEFCC had assured the Committee that "the amended Act would be applicable" to the SEC-identified unclassified forests. However, in response to an RTI application filed on January 17, the MoEFCC said it "did not have the requisite reports".

While the MoEFCC has now uploaded the SEC reports on its website, they reveal a grim picture: no State has provided verifiable data on the identification, status, and location of unclassified forests. In fact, seven States and Union Territories — Goa, Haryana, Jammu & Kashmir, Ladakh, Lakshadweep, Tamil Nadu, and West Bengal — appear not to have constituted the SEC at all. Twenty-three States have shared their reports but only 17 are in line with the Court's directives.

Many States have said the one month provided by the top court was too short and "the nature of work voluminous", and as a result haven't undertaken physical cadastral surveys nor demarcation of unclassified forest lands.



What do the reports say?

Only nine States have provided the extent of unclassified forests. Most states and UTs only shared the extent of different types of forest areas specified in the order: under government ownership, either with forest or revenue and in a few cases under other government departments.

Also, almost no State or UT specified the geographic locations of forests. Any identifying geographical information of forest land, where given, is only of reserve or protected forests, which isn't useful because this information is already available with Forest Departments. The SEC reports also question the veracity of the reports of the Forest Survey of India, the only government agency to survey and assess forests. For example Gujarat, whose SEC report says its unclassified forests cover 192.24 sq. km while the Survey has reported it as significantly higher at 4,577 sq. km (1995-1999).

The treatment of SECs without on-ground verification is likely to have resulted in the large-scale destruction of forests — which ought to have been identified, demarcated, and protected 27 years ago. But with no baseline data from 1996-1997, we have no idea how much unclassified forest has been lost. For example, Kerala's SEC didn't include the Pallivasal unreserve, an ecologically fragile area in Munnar; this area was also devastated during the 2018 floods.

What would be the effects of FCAA?

The loss of such forests is likely to be a recurring theme in all States, and needs to be investigated. It is also clear the reports were hastily put together, using incomplete and unverified data collected from readily available records, and submitted to the Supreme Court in order to fulfil their obligations.

The Godavarman order of the SC was to be implemented in letter and spirit. The failure to do this is a lost opportunity to achieve the requirements of the Indian Forest Policy, which envisages 33.3% forest cover in plains and 66.6% in the hills. Promulgating the FCAA without examining the SEC reports displays a lack of diligence on the MoEFCC's part and will have consequences for India's ecosystems and ecological security. Those responsible need to be held to account, and the national government needs to take ameliorative action to re-identify, retrieve, and protect forest areas as per the 1996 judgment.

FROM MDH TO CERALAC AND CADBURY – WHERE IS THE REGULATOR?

In the past few weeks, questions have been raised about India's food safety regime in the wake of allegations against products as varied as infant food, "health drinks" and spices. The country's food business regulator, FSSAI, is probing charges of unhealthy sugar content in Nestle's baby food products. The agency has also begun collecting samples of powdered spices of several brands, including market leaders MDH and Everest, after regulatory authorities in Singapore and Hong Kong raised concerns over carcinogenic additives. The authorities in the Southeast Asian countries are not the first to raise red flags. A report in this newspaper has revealed that over the past six months, US customs declined entry to 31 per cent spice-related shipments of MDH over salmonella contamination. Data obtained by this newspaper from the US FDA shows that the refusal rate has doubled in the past one year. The EU too has, reportedly, placed food items originating from India under the scanner. The contaminants in question are different. But the brands in question are amongst the most well-known. The controversies have raised fears that a large section of the Indian market could be bypassing the regulatory radar.



The FSSAI came into being in 2008, two years after the enactment of the Food Safety and Standards Act. Its remit extends to multinationals like Nestle and Cadbury, established Indian companies like MDH and Everest and thousands of small and medium-sized food businesses who have razor-thin profit margins. The agency has had a chequered record. It has consistently been hamstrung by staff and infrastructure shortage. This has meant that a large section of the market views regulation as paperwork rather than regular inspections followed by expert guidance. The FSSAI is mandated to educate businesses and consumers on food safety. It is also tasked to “collect and collate data regarding food consumption, incidence and prevalence of biological risk, contaminants in food, residues of various contaminants in foods products, and identify risks”. The frequent controversies around food items indicate that the agency has done scarce justice to its remit. In instances such as the Vital Neutraceuticals case in 2015, the food authority’s actions have been struck down by courts for procedural shortcomings.

Regulations must contend with scientific uncertainty and the variance in rules amongst nations. That’s why the food authority must regularly update standards, and handhold exporters. The FSSAI has fallen short on both counts. The failure of MDH’s plants to meet the USFDA sanitary standards shows the Indian regulator in poor light. A country with a growing food market and an aspiration to increase its footprint in the global market needs a more proactive regulator.

WHY ARE INDIAN SPICES FACING THE HEAT?

The story so far:

At least five countries — including Singapore, Hong Kong and the U.S. — have announced an investigation into possible contamination of spice mixes sold by Indian brands, MDH and Everest. The complaints cite the presence of ethylene oxide (EtO), a toxic chemical used as a food stabiliser, beyond permissible limits. The Spices Board of India in response has initiated mandatory testing of products shipped abroad and is reportedly working with exporters to identify the root cause of contamination.

Which countries have flagged safety of Indian spices?

The domino first shook on April 5, when Hong Kong’s Centre for Food Safety suspended the sale of three MDH spice blends (Madras curry powder, Sambhar masala and Curry powder masala) and Everest Fish curry masala. The spice mixes had high levels of ethylene oxide, the regulator said, and advised consumers against purchasing these products. Days later, Singapore ordered a recall of the Everest spice mix, stating that it is unfit for human consumption.

MDH has called allegations over EtO contamination “baseless and unsubstantiated”. “We reassure our buyers and consumers that we do not use ethylene oxide at any stage of storing, processing, or packing our spices,” the company said in a statement. It added that neither the Spices Board nor the Food Safety and Standards Authority of India (FSSAI) have received communication or test reports from Singapore or Hong Kong authorities.

The U.S. Food and Drug Administration (FDA), which had previously rejected food and spice imports from India, told Reuters that it is “aware of the reports and is gathering additional information about the situation”. Regulatory bodies in Maldives, New Zealand, Bangladesh and Australia have announced similar plans.



What are the health concerns?

MDH and Everest's spice mixes allegedly contain high levels of EtO, a prohibited pesticide. EtO is a colourless, flammable gas that was originally intended for sterilising medical devices. It is used as a chemical in industrial settings, agriculture, and as a sterilising agent in food products, including spices, dried vegetables and other commodities. The chemical lends life to the spice industry — it reduces microbial contamination, and in turn, extends products' shelf life.

However, this process is not always airtight. The improper and excessive use of EtO may leave behind residues, causing toxic and even carcinogenic compounds to form, thus contaminating the product. One such compound is ethylene glycol, an ingredient which was found in Indian-made cough syrups that were linked to the deaths of more than 300 children in Cameroon, Gambia, Indonesia and Uzbekistan. Long-term exposure to ethylene oxide is associated with cancers including lymphoma and leukaemia, some evidence shows.

Is there a history of rejections in U.S.?

A scrutiny of FDA's import refusal report, for the calendar year 2023, cites at least 30 instances wherein entry was refused because the products appeared to contain salmonella. These are agents known to cause salmonellosis — a common bacterial food-borne illness. Other than this, there have been at least 11 counts of products being rejected because of misbranding, adulteration, artificial colouring or incorrect labelling. The two causes have existed in combination as well. The report tabulates Ramdev Food Products to have had the maximum rejections in 2023 (about 30), followed by MDH (about 19), MTR (7), Everest (5), makers of Catch: DS Group (2) and Badshah (1).

In fact, in September 2019, a recall of MDH's Sambhar Masala was initiated in the U.S. after FDA discovered the product was contaminated with salmonella. The recall terminated in December 2021. Another such recall involved Everest's Garam Masala and Sambhar Masala, and Maggi's Masala-ae-Magic in June last year.

The U.S. Dept of Agriculture had in February 2022 stated that India and Mexico were the top sources of pathogen-based food import refusals. Their study, from 2002-19, held Indian imports had the maximum number of pathogen-related violations. With 5,115 refusals — the figure represented 22.9% of overall import refusals for pathogen/toxin related violations.

How has India responded?

On April 25, the Spice Board in India announced a slew of corrective measures including initiating mandatory testing of consignments shipped to Singapore and Hong Kong and gathering technical details and analytical reports from the relevant food and drug agencies. It also sought to propose corrective measures to the concerned exporters and initiate inspections to ensure adherence to relevant standards. A circular dated April 30 contains guidelines to exporters on preventing EtO contamination. The guidelines prescribe norms for testing at raw and final stages, storage of EtO treated products and use of alternate methods curtailing the use of the chemical compounds. The Spices Board issued a similar advisory in September 2021, after the EU observed EtO contamination in certain Indian exports. Furthermore, the FSSAI has directed state regulators to collect samples of major spice brands, including MDH and Everest, to test for EtO.

Activists have called for stringent safety checks of curry powders and spices to detect and control the use of EtO in food products and ensure proper implementation of regulatory norms. A recent



CUTS report also recommended updating food safety standards to align with global practices, and improving information flow to food industries so that they better comply with regulations.

Is food safety in India lacking?

Simi T.B., who works with CUTS International, a global advocacy group for consumer welfare told The Hindu, notwithstanding stringent food laws in place, that the recent controversies “collectively underscore the persistent nature of food safety challenges across various sectors of the food industry”.

One challenge is operational — India’s diverse food landscape, the lack of standardised record-keeping and intentional food fraud may prevent manufacturers from tracing ingredients and assessing potential risks which compromise the safety of the entire food supply chain. Traceability is particularly challenging for small and medium sized businesses with limited resources.

Some are logistic barriers. At least 10 States/Union Territories lack government or private notified food testing labs, as mandated under the Food Safety and Standards Act 2006. These labs are distributed unevenly across regions; have insufficient number of food safety officers; and were found to operate ineffectively due to resource constraints, showed the FSSAI Annual Report of 2021-22. FSSAI’s operations often lack transparency, which “hinders efforts to meet safety standards”, build accountability and trust, adds Ms. Simi.

What next?

Delhi-based think tank Global Trade Research Initiative (GTRI) in a recent note held, “With nearly \$700 million worth of exports to critical markets at stake, and potential losses soaring to over half of India’s total spice exports due to cascading regulatory actions in many countries, the integrity and future of India’s spice trade hang in delicate balance.” According to the think tank, the issue demands urgent attention to uphold the reputation of the entire ecosystem.

Vijoo Krishnan, General Secretary of the All-India Kisan Sabha explained that the chain of events could put other small companies or co-operatives’ exports under a cloud of suspicion. Importantly, Mr Krishnan explained that in the event of potential losses, farmers of such crops too could find themselves at the receiving end. “We have instances where companies have not paid appropriate prices to farmers even when they were making profits,” he stated, adding, “Should the companies make losses now, it could be used as a pretext to reduce prices, thus, burdening the farmer.”

GTRI also assessed that if regulators in China follow their peers in Hong Kong, and ASEAN based on that by Singapore, Indian exports could see a “dramatic downturn”. This could affect exports valued at \$2.17 billion — about 51.1% of the country’s global spice exports. The paradigm could further worsen if the EU, which it states, “regularly rejects Indian spice consignments over quality issues”, follows suit. The impact could be an additional \$2.5 billion, bringing potential losses to 58.8% of India’s global exports.

For Your Information:

— Escherichia coli (E.coli) is a bacterial strain that is commonly found in the intestines of people and animals, faecal waste of cattle and humans.

— Salmonella is a group of bacteria that can cause food-borne illnesses known as salmonellosis. The World Health Organisation (WHO) identifies Salmonella as one of four key global causes of



diarrhoeal diseases. Individuals who develop salmonellosis may show symptoms such as nausea, diarrhoea, fever, and abdominal cramps 12-72 hours after contracting the infection.

LIQUID NITROGEN IN FOODS DRAWS TAMIL NADU'S IRE, YET AGAIN

A week ago, a video of a child screaming went viral on social media. There were visuals of adults spewing white smoke from their mouth and nose. What the child said was garbled but it was soon apparent the child had consumed a food item infused with liquid nitrogen.

Television channels and online media took up the issue. The Tamil Nadu government issued an advisory banning the use of liquid nitrogen in food and warned of stringent action against violators.

In 1991, The Hindu reported that a London-based company developed a system to improve the quality and shelf life of food by introducing droplets of liquid nitrogen in the packaging. When nitrogen evaporates, it displaces oxygen in the food pack, preventing microbial action and preserving freshness.

The technique was useful in packing coffee, potato crisps, peanuts and peanut butter, milk products, cheese, and dried potatoes, the article said.

As with every novelty, some chefs also experimented with liquid nitrogen to make food more interesting. In 2016, a few upmarket restaurants and eateries in Chennai and elsewhere used it to entice customers.

But in August 2017, the then Union Environment Minister Harsh Vardhan said in Rajya Sabha the government would investigate the addition of liquid nitrogen in food and drinks served in some restaurants.

Six months ago, in Tiruchirappalli, a vendor's shop was sealed after authorities found liquid nitrogen in food, the city's designated food safety officer said.

"Liquid nitrogen, an inert, colourless, odourless cryogenic fluid has traditionally been used in the management of many benign pre-cancers and cancers since the 1960s," Arvind Krishnamurthy, professor and head of surgical oncology at the Adyar Cancer Institute, said. "This form of treatment is generally used to manage cancers wherein conventional surgery is not possible or can be used as an adjunct to conventional surgery."

The procedure involves using the element at a frosty -196 degrees C to freeze and destroy cancer cells. "The treatment is scientifically described as cryotherapy. It can also be used to obtain biopsies from cancer tissues for further molecular analysis. Another application is to use it as cryo-adhesion to remove foreign bodies," he explained.

Cryotherapy has been attempted to treat many cancers, including those of skin, bone, breast, cervical, eye, kidney, liver, lung, and prostate.

"Liquid nitrogen should be handled by trained professionals with proper protective gear, preferably in a controlled lab or industry, as improper handling or consumption of liquid nitrogen can cause severe damage to the skin, mucous membranes, and internal organs," the surgeon said.



A day after the viral video, the Tamil Nadu Food Safety Department cited the Food Safety and Standards Regulations, and the Drug Administration department issued a circular on the use of liquid nitrogen saying the substance can only be used to preserve packaged food.

The department also warned of stringent action, including fines and legal proceedings, if it is used for other purposes.

SWELL WAVES LIKELY TO STRIKE COASTAL AREAS OVER WEEKEND: INCOIS

The Indian National Centre for Ocean Information Services (INCOIS) on Friday alerted the coastal States of Goa, Maharashtra, West Bengal, Odisha, Tamil Nadu, Kerala, Lakshadweep and Andaman & Nicobar Islands, of the possibility of high-energy swell waves over the weekend.

It also urged “total suspension of operational/recreational activities at beach/nearshore regions” on Saturday and Sunday.

Fishermen and coastal populations have been advised to be cautious about a possible surge of waves, such as gushing of sea water intermittently in the nearshore or beach regions, particularly in low-lying areas.

Senior scientist and Group Director T. Balakrishnan Nair said high-period swells had started approximately 10,000 km away from the Indian coast on April 26 in the southern Atlantic Ocean. This had caused “high-energy swell propagation” towards the Indian coastal regions which is expected to hit the southern tip of India in the early hours of Saturday. These long-period swells combined with high tide conditions can cause coastal flooding in low-lying areas, he said.

Small vessels should not be plying nearshore and boats may be anchored at a fair distance from each other to avoid damage, he added.

Meanwhile, coastal communities in Kerala were advised to remain vigilant with State being put on red alert for high-energy swell waves. The phenomenon, known locally as ‘Kallakadal’ (rogue sea), is likely to last till 11.30 p.m. on Sunday. Low-lying areas could experience 0.5 metre to 1.7-metre high swell waves.

The Kerala State Disaster Management Authority (KSDMA) issued directions for suspending recreational activities along the beaches. Coastal residents have also been advised to temporarily evacuate if the need arises. This is the first instance of a red alert being issued for the State in connection with the Kallakadal phenomenon, KSDMA member secretary Sekhar Kuriakose said.

SEA ALSO RISES

India may be roiling in heatwaves but the possibility of a munificent monsoon, as envisaged by the India Meteorological Department, may be contributing to some psychological relief. In the long run, however, there is much to be worried about. A recent study led by scientists at the Indian Institute of Tropical Meteorology, Pune, and other international institutions has forecast — based on expected global carbon emission trends — the likely impact on the Indian Ocean. They report that the Indian Ocean warmed 1.2° C and will likely heat up 1.7° C-3.8° C from 2020 to 2100. While heatwaves are a lived experience, the study warns of ‘marine heatwaves’, their counterparts in the sea and linked to the rapid formation of cyclones, as likely to increase tenfold from the current average of 20 days per year to 220–250 days per year. This will push the tropical Indian Ocean into a “near-permanent heatwave state”, accelerate coral bleaching and harm the fisheries sector.



The heating of the ocean would not be merely confined to the surface but actually increase the heat content of the ocean. When measured from the surface to 2,000 meters below, the thermal capacity of this ocean is now rising at the rate of 4.5 zetta-joules per decade, and is predicted to increase at a rate of 16–22 zetta-joules per decade in the future. Joule is a unit of energy and 1 zetta joule is a billion-trillion joules (10^{21}).

The consequences of a warming Indian Ocean extend very much into mainland India with the frequency of severe cyclones rising and the monsoon becoming more erratic and uneven with long spells of drought followed by intense rain and concomitant flooding. These are linked to global warming with anthropogenic sources such as fossil fuel burning playing a significant role in nudging the planet closer to cataclysmic tipping points. Current global commitments to stem greenhouse gas emissions are unlikely to make a significant dent in the state of the oceans capacity as unlike on land, the seas respond slower to changes in external inputs. Therefore, a realistic way out is to fine-tune the understanding of the Indian Ocean's local impact. India needs to form a collaborative association with countries bordering the Indian Ocean to invest in data gathering — currently this pales in comparison to what is in the Pacific, for instance — and projections to guide the development and protection of infrastructure and people.

SOUTH ASIA TO RECEIVE 'ABOVE NORMAL' RAIN THIS YEAR: SASCOF

Above normal' rainfall is predicted in most of the South Asian countries during the upcoming monsoon season, which is little over a month away. The forecast was shared at the 28th South Asian Climate Outlook Forum (SASCOF) meet which is underway in Pune.

— According to the SASCOF rainfall outlook 2024 consensus, "Except some northern and north, east and northeastern parts, above-normal rainfall is expected over South Asia during June to September season this year. The seasonal rainfall is most likely to be normal,"

— Multiple favourable ocean-atmospheric factors are responsible are aiding in good rainfall in the upcoming season- weakening El Nino condition, neutral condition of El Nino Southern Oscillation (ENSO), positive Indian Ocean Dipole (IOD), and favorable La Nina condition.

— El Nino is the warmer-than-normal sea conditions prevailing along the equatorial Pacific Ocean and is known to suppress the summer monsoon rainfall over India.

— On the contrary, La Nina is the cooler sea conditions over the same region and is associated with normal or above rainfall during the southwest monsoon season.

— The SASCOF forecast on temperatures suggested that during the ongoing summer season, above-normal day temperatures will be recorded over most regions.

— ENSO is an interaction of ocean and atmospheric conditions. The 'southern oscillation' part in the term ENSO refers to a specific atmospheric condition that is a measure of the difference in sea-level air pressure over the western and eastern sides of the Pacific Ocean.

— Another atmospheric condition that plays a key role in ENSO is the strength and direction of winds.

— The ocean part of the ENSO is measured by what is known as the Oceanic Nino Index or ONI. The atmospheric part is monitored through the Southern Oscillation Index, or SOI.



HOW DO EXTREME CLIMATE EVENTS IMPACT ASIA?

The story so far:

Asia has warmed faster than the global average since 1960, the World Meteorological Organization's 2023 'State of the Climate in Asia' report said. It also reiterated that 2023 was the warmest on record around the world. The climate report also noted an "alarming gap" between climate projections and the ability of Asian countries to adapt to and mitigate climate change and its impacts.

What toll did heat exact on Asia?

More than 2,000 people were killed and more than nine million were affected by extreme climate events across Asia in 2023. More than 80% of these events were related to storms and floods. The report also recorded several parts experiencing severe heat waves, leading to multiple fatalities, but acknowledged that heat-related mortality is widely under-reported. In India, severe heat waves in April and June killed around 110 people. A prolonged heat wave engulfed large parts of South and South-East Asia in April and May, affecting areas from Bangladesh and eastern India to southern China.

How did floods and storms affect Asia?

Tropical cyclone Mocha, which affected Myanmar and Bangladesh in May 2023, was the strongest cyclone in the Bay of Bengal in the last decade. Shortly after, floods, landslides, and lightning killed around 600 people across India, Pakistan, and Nepal in June and July 2023. In India, floods and landslides in August 2023, primarily in Himachal Pradesh and Uttarakhand, killed at least 25. Lightning accounted for 1,200 deaths around India through the year.

How well can Asia spot a coming disaster?

An early-warning system is an integrated process that monitors, predicts, and forecasts hazards. It also includes activities related to risk-assessment, communications, and preparedness that allow individuals, communities, governments, businesses, etc. to take timely action to mitigate risks.

Thanks to such systems, for example, authorities in Bangladesh had a day's head-start to prepare for cyclone Mocha and take anticipatory action in Cox's Bazar, which allowed local communities to better survive its landfall. Twenty-one Asian countries reported the status of their early warning systems to the UN. According to the UN Office for Disaster Risk Reduction, the average composite score for the availability of and access to multi-hazard early warning systems was 0.46 out of 1 in Asia; 0.58 for preparedness to respond; and 0.50 for observation and forecasting. To compare, the world scored 0.35, 0.78, and 0.33, respectively, on average on these counts. Warning and dissemination was the strongest area under the framework for Asia while risk knowledge was the weakest. According to the report, fewer than half of all Asian countries have the tools to mitigate climate change impact.

What do these findings mean for India?

"The findings of the report are in sync with the analysis of our agency," Sreejith O.P., scientist with the India Meteorological Department, Pune and a lead author of the State of the Climate in Asia report, told The Hindu. "Extreme climate events are rising globally, including in India. But with



improved preparedness, we can minimise the damage. We used early warnings when cyclone Mocha, one of the strongest in the Bay of Bengal, was about to hit. Earlier, similar cyclones have killed thousands of people,” he added. While Dr. Sreejith commended India’s early preparedness when dealing with cyclones, he said managing deaths and destruction caused by lightning needs improvement. “The response time for lightning is very less. Although we have built mobile applications and other tools, marginalised communities are unable to utilise it,” he said. According to Dr. Sreejith, some groups like farmers who work in fields, are already out and away from sources of information by the time an alert can be sent.

“While India has historically demonstrated commendable resilience in responding to floods, storms, and droughts, the new and escalating challenges posed by climate change — such as unprecedented heatwaves, the retreat of glaciers, and rising sea levels — reveal that our preparedness is alarmingly inadequate,” said Harjeet Singh, Global Engagement Director at the Fossil Fuel Treaty Initiative. “These emerging threats require urgent attention and a strategic overhaul of our current policies and adaptation strategies. It is crucial that we empower our communities with the necessary resources and policies to effectively combat these evolving climatic adversities,” he added.

HEALING THE SOIL

India, with only 2.4 percent of the world’s geographical area, 4 percent of global freshwater resources, and 18 percent of the world’s population, is under huge stress, be it its soils, water, air (GHG emissions) or biodiversity.

Agriculture was brought into the Conference of Parties (COP) agreement for the first time in COP 28, Dubai. However, India didn’t sign it.” “The demands for feeding the rising human population are responsible for much of the biodiversity loss on this planet.”

“As Norman Borlaug, the father of the Green Revolution, once said, this planet can four billion people at the most on its own. If science had not come to rescue the situation, many would have starved to death.” “The issue of harming the planet by inappropriate policies has, however, remained largely unaddressed. For example, the policy of heavily subsidising the use of chemical fertilisers, especially urea, has led to skewed use of nitrogen (N), phosphate (P) and potash (K).”

— “This has led to a reduced level of Soil Organic Carbon (SOC). More than 60 percent of soils have SOC of 0.5 level. (Ideal: 1.5 to 2 percentage).” “Our soils are literally in the ICU, but our policymakers appear to be blind to it.” “Depleting groundwater level in Punjab, Haryana, and Rajasthan is largely because of free power for irrigation, minimum support prices and open-ended procurement of paddy (rice).”

— “These policies are also leading to the loss of crop diversity. For example, in 1960 in Punjab, only 4.8 per cent of the cropped area was under rice. Today, it is more than 40 per cent, displacing maize, millets, pulses and many oilseeds.”

— “Unless we change our policies that are peasant-positive but also planet-positive, we will be committing a crime towards our children and grandchildren.”

— According to “The State of the World’s land and Water Resources for food and Agriculture: Systems at Breaking Point (SOLAW 2021)” report, “Climate change has increased pressure on rain-fed and irrigation production over and above the environmental consequences of decades of unsustainable use.”



BUSINESS & ECONOMICS

THE TRADE PUSH

Over the past few years, global trade has been very volatile, first on account of the Covid-19 pandemic and then due to geopolitical conflicts. Since the middle of 2022, the value of global merchandise trade has shrunk continuously as per data from the United Nations Conference on Trade and Development.

“India’s performance has been largely in line, with merchandise exports falling 4.7 per cent in 2023. This, however, was better than developing Asia as a whole, which saw merchandise exports decline by 6.8 per cent.”

— “Besides an uncertain global environment, India has also had to deal with lower international commodity prices, which have reduced its export bill measured in dollars.”

— “Excluding petroleum and gems and jewellery exports, core exports were up 1.4 per cent, despite the broad-based decline in international commodity prices. This indicates that India was able to ship a higher volume of goods.”

— “The impressive 24 per cent growth in electronics goods exports last year reflects surging exports of telecom instruments or mobile handsets, spurred by the Production Linked Incentive scheme.”

— “Other large core categories such as drugs and pharmaceuticals, engineering goods and agricultural goods also saw healthy export growth.”

— “In terms of the country of destination, oddly, goods exports to the US contracted in 2023-24 as its growth was largely led by the services sector.”

— “India’s exports to the Gulf Cooperation Council (GCC) countries also rose, reflecting a further increase in exports to the UAE — the largest export destination of Indian goods in the GCC region.”

— “However, it is a matter of concern that exports of labour-intensive sectors such as gems and jewellery, textile products (largely ready-made garments), leather and leather products, marine products and plastics, declined last year.”

— “Bilateral free-trade agreements with major economies and the ongoing push to manufacturing should spur India’s exports in the near to medium term. In the base-case scenario, exports should grow at a healthy rate and contribute to the overall growth momentum.”

For Your Information:

— According to the World Bank’s latest Commodity Markets Outlook, the conflict in West Asia, which comes on top of disruptions caused by the Russian invasion of Ukraine, has resulted in limited impact on commodity prices but could bring “dual shock” to commodity markets as energy market turmoil could intensify food insecurity.

— The World Bank said developing countries should avoid trade restrictions such as export bans on food and fertilisers. The ban on exports of non-basmati rice by India has “roiled global markets since mid-July.”



THE CASE FOR CAUTIOUS OPTIMISM OVER STATE OF INDIAN ECONOMY

Last year, the Indian economy fared better than expected. The National Statistical Office's second advance estimates have pegged growth for the full year at 7.6 per cent. As per the International Monetary Fund's Regional Economic Outlook report, India has been a "source of repeated positive growth surprises". There are expectations of the growth momentum continuing this year as well. In its most recent World Economic Outlook, the IMF has upped its growth projections for the country. The Fund now expects the Indian economy to grow at 6.8 per cent in 2024-25, up from its earlier projection of 6.5 per cent. The Reserve Bank of India is more optimistic. In the last monetary policy committee meeting, the central bank had projected growth at 7 per cent. The Asian Development Bank has also upped its estimate of growth this year to 7 per cent. The World Bank has pegged the economy to grow at a marginally lower rate of 6.6 per cent in its recent South Asia Development update. Rating agency Crisil expects growth at 6.8 per cent, while ICRA is less optimistic at around 6.5 per cent. This range of GDP growth estimates from 6.5 to 7 per cent does suggest that the Indian economy is likely to remain the fastest growing large economy in the world.

There are several reasons to be optimistic about the country's growth prospects. As per the India Meteorological Department, the southwest monsoon this year is "most likely to be above normal". There is a 60 per cent chance of La Nina conditions developing by June-August as per the most recent update from the US National Oceanic and Atmospheric Administration. A good monsoon would bode well for food production, and, as a consequence, possibly provide a fillip to rural demand. There are also expectations of a firm pickup in private investment activity as capacity utilisation rates rise. Both bank and corporate balance sheets are healthy — bank non-performing loans fell to 3.2 per cent in September 2023, while the corporate debt-to-equity ratio has fallen from 1.16 in 2014-15 to 0.85 in 2022-23 as per a report from Nomura. However, there is a possibility of government capex slowing down in the first few months of the year due to the elections. On the trade front, while the IMF does expect world trade volume in both goods and services to pick up, uneven global growth and geopolitical conflicts do create uncertainty.

There are, however, several sources of concern. As per the IMF, growth in the global workforce will be driven by India and sub-Saharan Africa, with these regions accounting for "nearly two in every three entrants over the medium term". Creating more productive forms of employment opportunities for the millions entering the labour force each year should be a top priority for the next government. Alongside, it must also commit to the path of fiscal consolidation and bring down its debt.

HOW THE RUPEE HAS 'STRENGTHENED' UNDER MODI GOVERNMENT

Between April-end 2014 and now – roughly the time the Narendra Modi government has been in office – the rupee has depreciated by 27.6% against the US dollar, from Rs 60.34 to Rs 83.38. That's marginally higher than the 26.5% from April-end 2004 to April-end 2014: The rupee fell from 44.37 to 60.34 to the dollar during that period when the previous Congress-led United Progressive Alliance (UPA) was in power.

— As India engages in global trade, the strength or weakness of the rupee is a function of the exchange rate with the US dollar and other global currencies.

— The rupee's "effective exchange rate" or EER is an index of the weighted average of its exchange rates vis-a-vis the currencies of India's major trading partners. The currency weights in the index

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



are derived from the share of individual countries in India's total foreign trade. There are two measures of EER, nominal and real.

Nominal EER: The RBI has constructed NEER indices of the rupee against a basket of six and also of 40 currencies. The NEER indices are with reference to a base year value of 100 for 2015-16: Increases indicate the rupee's effective appreciation against these currencies and decreases point to overall exchange rate depreciation. The NEER does not factor in inflation, which reflects changes in the internal value of the rupee.

— **Real EER or REER:** The REER is basically the NEER that is adjusted for the inflation differentials between the home country and its trading partners. If a country's nominal exchange rate falls less than its domestic inflation rate – as with India – the currency has actually appreciated in “real” terms.

— Any increase in REER means that the costs of products being exported from India are rising more than the prices of imports into the country. That translates into a loss of trade competitiveness – which may not be quite a good thing in the long run.

THE SERVICES STORY

A deep-dive research report from global investment banking major Goldman Sachs, evocatively titled 'India's rise as the emerging services factory of the world', has captured India's recent success in providing global services and sought to forecast growth prospects and risks in the medium term. The take-off trajectory of the country's IT services sector, unleashed after critical economic reforms in 1991, is well known. The firm takes a broader view of India's services exports over the last 18 years, including professional consulting, that have grown the fastest, travel services which have grown the slowest, and financial services that could gain if initiatives such as the GIFT City click. While global services exports tripled over 18 years, such intangible exports from India grew at twice the pace to reach nearly \$340 billion last year. In fact, its exports growth has been the third fastest globally since 2005, behind Singapore and Ireland. The country's share in global services outflows has risen from under 2% in 2005 to 4.6% in 2023. India's share in goods exports increased from 1% to 1.8% during this period.

The services trade boom has also served as an invaluable cushion for India's external account balances against shocks such as pricey oil imports. Goldman Sachs expects that buffer to remain in play with services exports projected to rise to \$800 billion by 2030. While this is slightly lower than the government's target of \$1 trillion by 2030 for both services and merchandise exports, a continuing uptick in high-value services would also drive top-end discretionary consumption and real estate demand, the firm reckoned. In the immediate term, the outlook is tentative as top firms in IT services, still India's most dominant export segment, have shed employees over the past year and their growth guidance for this year is far from bullish. Infosys, for instance, expects revenues to rise 1% to 3% this year in constant currency terms. The rise of global capability centres offers some comfort. However, the firm's analysts stress it would be imprudent to take India's services growth for granted. Constraints that need attention include training graduates to be job ready, and the stress on natural resources in regions where growth is concentrated, as reflected in the water crisis at Bengaluru. A protectionist tendency in destination countries could hurt exports, just as irrational domestic policy interventions such as attempts to “manage” IT hardware imports. India needs a calibrated approach to sustain the services success story. That should include a hard push for global market access and opportunities for all professional services, as



well as a light-touch regulatory approach to let new ideas and enterprises bloom across areas such as artificial intelligence, manufacturing-linked services, and blockchain applications.

TIPPING POINT

Revenues from the Goods and Services Tax (GST) crossed the ₹2 lakh crore mark for the first time in April. The month of April has usually delivered the highest GST kitty as it involves taxes paid for activity undertaken in March, when taxpayers close their books for the year, scurry to meet tax filing deadlines, and make adjustments to square off dues sought by the revenue department owing to oversights or interpretation differences. With slightly over ₹2.1 lakh crore of gross revenues, last month's GST collection was 12.4% higher than the April 2023 tally of ₹1.87 lakh crore, which marked the highest monthly intake prior to the latest data set. Minus the year-end effect, revenues in subsequent months will moderate so the ₹2 lakh crore figure may not be the new normal for monthly GST collections just yet. However, assuming the present momentum of the economy continues and GST revenue growth persists in last year's 11%-12% range, last April's high of ₹1.87 lakh crore could well be this year's monthly average. Bear in mind that the average monthly revenues last year were ₹1.68 lakh crore, and before the year began, the highest monthly collection was seen in April 2022, at ₹1,67,540 crore.

Finance Minister Nirmala Sitharaman has termed last month's ₹2 lakh crore-plus GST revenues a "landmark", attributing them to a strong economy and efficient collections. This should put to rest the Centre's concerns from a few years ago that returns from the GST regime, now 82 months old, had been underwhelming. No doubt, sustained action against frauds, such as fake invoicing, and stricter compliance norms have helped shore up revenues. With central GST revenues overshooting last year's targets, meeting the goals set in the interim Budget for 2024-25 now requires less than 10% revenue growth. For the next government, the easy part would be to upgrade revenue targets in the full Budget. The more critical imperative is to plan and execute the expansion of the GST net, and expedite the long-awaited reboot of its complex rate structure to make it a truly simple tax for consumers and investors, now that revenue worries are relatively muted. Incidentally, the BJP's election manifesto, which takes credit for ringing in GST, only promises to make its portal simpler for small businesses to use. The Congress has assured a switch to a single, moderate tax rate with few exceptions, no levies on farm inputs, and sharing of revenues with panchayats and municipalities. Smart GST reforms, informed by stakeholder consultations, need to be at the forefront of the agenda of whoever comes into office, to correct anomalies that hold consumption back and set the foundations for the next virtuous cycle of investment and growth.

THE RISING SHARE OF PERSONAL INCOME TAX AND INDIRECT TAX IS A CONCERN

Over the last week, during the election campaign, the Congress' manifesto and the party's emphasis on social justice and welfare were suddenly thrust into the limelight. Prime Minister Narendra Modi sought to give the Congress' demand for a caste census and its plans to study distribution of surplus government land to the poor, among others, a communal turn. The Congress defended its manifesto saying the rising wealth inequality in the country needs to be addressed and dismissed Mr. Modi's claims that its plans intended to favour a particular religious group. In the midst of this political controversy, the Chairman of the Indian Overseas Congress, Sam Pitroda, floated the idea of an inheritance tax, which is not in place in India and is also not mentioned in the Congress' manifesto.



Almost concurrently, the Finance Ministry released provisional data that showed an uptick in net tax collections. This is mostly driven by an increase in personal income tax and securities transaction tax collections. On the other hand, net corporate tax collections have reduced marginally. The data also show that revenues from personal income tax and securities transaction tax grew at almost double the pace compared to revenues from corporate tax last year.

The sharp fall in corporate tax after FY19 can be attributed to the deep corporate tax cuts introduced by the Bharatiya Janata Party-led government in September 2019.

The data also show that the share of direct taxes has been decreasing, while that of indirect taxes has been increasing. Direct taxes, which include taxes levied directly on the incomes of corporations and individuals, are said to be “progressive” because those who earn less are taxed less and vice-versa. On the other hand, indirect taxes, which include union excise duties and the Goods and Services Tax, are considered “regressive” as all consumers, regardless of their income levels, pay the same amount.

The share of indirect taxes, which had been falling steadily since the 1980s, has increased in the past decade. On the other hand, the share of direct taxes, which had been increasing, has consistently recorded a downturn in recent years.

A bulk of those who file personal income tax earn an annual income of ₹1 lakh-₹5 lakh. Richer individuals who earn more than ₹50 lakh are few and far between.

Moreover, a comparison with BRICS economies, for which data are available, shows that the effective personal income tax rate in India is among the highest.

Put together, the data show that poorer citizens and those in the middle-class category are increasingly shouldering a higher share of the tax burden. This is due to the combination of the rising share of personal income tax and indirect taxes in total revenue.

THE PARADOX OF THRIFT: DOES A RISE IN SAVINGS CAUSE A FALL IN INVESTMENT?

The paradox of savings, also known as the paradox of thrift, refers to the theory that a rise in the savings rate of individuals can surprisingly cause a fall rather than a rise in the overall savings in an economy. This is in contrast to the general belief that a rise in individuals' savings rates will cause a rise in the overall savings in the economy. So even though savings may be good for an individual household, it is believed that it may not be good for the wider economy. The idea is part of the under-consumption theories of the business cycle which attribute economic downturns to weak consumption and high savings.

Origins of the theory

The concept was popularised by British economist John Maynard Keynes in his 1936 book *The General Theory of Employment, Interest, and Money*. Prior to Keynes, it was discussed by economists William T. Foster and Waddill Catchings in works such as *Business without a Buyer* and *The Dilemma of Thrift*.

Keynesian economists believe that higher savings is bad for the wider economy, and that boosting consumer spending is the way to grow an economy. They argue that savings are invested by capitalists with the ultimate aim of selling their output in the form of final goods and services to consumers. So, if consumers fail to spend enough money on the output that capitalists bring to the



market to sell, it can cause losses to capitalists and discourage further investment. On the other hand, a rise in consumer demand for final goods and services is expected to encourage people to save more and invest.

So, Keynesian economists argue that a rise in individuals' savings, by reducing the amount of money that is spent on final goods and services, can in effect cause a significant fall in overall savings and investment. In fact, many economists today believe that fluctuations in consumer spending are the primary reason behind the business cycle. They recommend that the government should take various measures, including increasing government spending, to put more money in the hands of consumers during economic downturns. Basically, in the Keynesian view of the economy, the primary challenge that fiscal and monetary authorities need to solve is how to get people to spend enough money on final goods and services to justify the costs that capitalists incur to produce these goods and services.

Criticisms of the idea

Critics of the idea argue that saving more is not bad for the economy and that a fall in consumer spending does not actually cause a fall in investment. In fact, they argue that a fall in consumer spending leads to a rise in savings and investment. This is simply because any money that people don't spend on consumer goods or hoard under their beds has to go towards their savings, which in turn gets invested.

A rise in savings, they further note, causes an increase in entrepreneurial demand from capitalists for various factors of production. So, lower consumer demand for final goods and services gets offset by higher demand for factors of production, and hence there is no drop in aggregate demand in the economy as a result of higher savings.

Secondly, critics argue that it is not really true that a drop in consumer spending will lead to a drop in investment owing to a lack in consumer demand for the final goods and services produced by businesses. Instead, they argue, a drop in consumer spending will simply cause a change in the way capitalists allocate their savings across time. In other words, these economists note that there won't be any adverse consequences due to lower consumer spending.

When people spend less on consumer goods and save more, they note, this will cause capitalists to invest a greater amount of available savings to satisfy consumer demand in the more distant future. So, longer-term business projects which were earlier unviable due to people's preference to consume goods and services in the near future rather than in the distant future suddenly become viable.

Now, the greater time allowed for capitalists to bring finished products to the market is a major reason why economic output is much higher in an advanced economy, these economists point out.

Put another way, the critics argue that capitalists in a free economy will effectively reallocate higher savings in accordance with the greater preference that consumers show for goods in the distant future than in the near future.

TOWARDS GREEN GROWTH

A notable feature of the Reserve Bank of India's (RBI's) latest Monetary Policy Report (included in its April Bulletin) is the primacy given to "extreme weather events" and "climate shocks" affecting not only food inflation but also likely having a broader impact on the natural rate of



interest, thereby influencing the economy's financial stability. Natural, or neutral, rate of interest refers to the central bank's monetary policy lever, which allows it to maintain maximum economic output, while keeping a check on inflation. The report mentions a "New-Keynesian model that incorporates a physical climate risk damage function" being used to estimate the "counterfactual macroeconomic impact of climate change vis-à-vis a no climate change scenario". The report's authors go on to warn that the "long-term (economic) output" could be lower by around 9% by 2050 in the absence of any climate mitigation policies. They ominously add that 'if inflation hysteresis gets entrenched, it may lead to a de-anchoring of inflation expectations, and the undermining of the central bank's credibility would warrant higher interest rates to curb inflation, leading to greater output loss'.

Beginning with its July 2022 discussion paper on 'climate risk and sustainable finance', the RBI has made incremental progress to address the transition to a green economy, even while admitting that India requires over \$17 trillion to achieve its net zero ambitions by 2070. Its peers in advanced economies, most notably the European Central Bank, have aided the formulation of a green taxonomy for the entire Eurozone's economic value chain. A green taxonomy is a framework to assess the sustainability credentials and possible ranking of an economic activity. The RBI and the Finance Ministry could take inspiration from the developing world, especially the ASEAN region, where a layered green taxonomy as a living document keeps getting updated with sectoral views of possible sustainable trajectories. While the issuance of ₹16,000 crore worth of Sovereign Green Bonds and expanding the resource pool by allowing Foreign Institutional Investors to participate in future green government securities are welcome steps, the RBI must undertake a thorough-going assessment on the quantitative and qualitative impact on economic and financial stability due to climate change. It must encourage administrative consultation to begin populating a layered green taxonomy that is reflective of India's fragmented developmental trajectories. The effort should be to mitigate the transitional risks to the financial system as the economy moves towards a sustainable future.

BUDGETS AND BILLS PASSED WITH LITTLE DELIBERATION

In 2023, of the ₹18.5 lakh crore budget presented by 10 States, close to 40% was passed without discussion. In five States, the Public Accounts Committee (PAC), which examines accounts of State governments, did not table any reports in the year considered. Moreover, five State legislatures passed all Bills on the day they were introduced or the next day. As many as 20 States also saw 84 Ordinances being promulgated in 2023.

These observations are based on PRS Legislative Research's Annual Review of State Laws 2023. The report analyses the performance of State legislatures in various key functions.

Once the Finance Minister announces the Budget, it goes for general discussion. Following this, there is a scrutiny of demands by committees. After this, there is discussion and voting on Ministry expenditure. However, in 10 States for which data was available, 36% of the expenditure demands were voted on and passed without being discussed. Madhya Pradesh passed 85% of its ₹3.14 lakh crore Budget without discussion, the highest among the ten States. Kerala came second with 78%, followed by Jharkhand (75%) and West Bengal (74%). The proportion of the Budget passed without discussion in 10 States.

The PAC, typically chaired by the Leader of the Opposition or a senior member from the Opposition, scrutinises the accounts of State governments and State reports of the Comptroller and Auditor General. However, in 2023, the PAC held 24 sittings and tabled 16 reports on average



in the States considered. In five of the 13 States for which data was available — Bihar, Delhi, Goa, Maharashtra and Odisha — the PAC did not table any reports. Alarming, the PAC in Maharashtra neither met nor released a report during the year. In contrast, the PAC in Tamil Nadu tabled 95 reports followed by Himachal Pradesh where the committee tabled 75 reports. Both Uttar Pradesh and Bihar had 50 sittings or more by the PAC though not a single report was tabled in the latter.

An analysis of the time taken by State legislatures to pass Bills shows that many were passed quickly with minimal debate. In fact, 44% of the Bills were passed either on the same day they were introduced in the Assembly or the next day. The figure is consistent with the trend observed in 2022 (56%) and 2021 (44%). In Gujarat, Jharkhand, Mizoram, Puducherry, and Punjab, all Bills were passed on the day of introduction or the next day. In 13 of 28 State legislatures, Bills were passed within five days of introduction. Kerala and Meghalaya took more than five days to pass more than 90% of their Bills. About 55% of Bills in Rajasthan were also passed after more than five days of deliberation.

The Constitution grants the Governor the power to promulgate Ordinances, ie, formally announce certain temporary laws, when the State Legislative Assembly is not in session.

The Ordinances promulgated by States in 2023. 84 Ordinances were promulgated in 20 States covering a range of subjects including, new universities (Uttar Pradesh), public examinations (Uttarakhand), and ownership of apartments (Maharashtra). The highest number of Ordinances was promulgated by Uttar Pradesh (20), followed by Andhra Pradesh (11), and Maharashtra (9). In 2023, only four Ordinances were promulgated in Kerala, compared to 15 in 2022, and 144 in 2021.

ABOUT THE REDISTRIBUTION OF WEALTH

The story so far:

There have been heated exchanges between the ruling government and the Opposition with respect to the redistribution of wealth during the ongoing election campaign. The Supreme Court has also constituted a nine-judge Bench to interpret the Directive Principles of State Policy (DPSP) with respect to ownership and control of material resources.

What does the Constitution provide?

The Preamble to the Constitution aims to secure to all citizens social and economic justice, liberty and equality. Part III of the Constitution lists down the fundamental rights that guarantee liberty and equality while Part IV contains the DPSP. These are principles that the central and State governments should follow to achieve social and economic justice in our country. Unlike the fundamental rights in Part III, the DPSP is not enforceable in court. They are nevertheless fundamental in the governance of the country. Article 39(b) and (c) in Part IV contain principles that are aimed at securing economic justice. They provide that ownership and control of material resources of the society should be distributed to serve the common good and that the operation of the economic system does not result in concentration of wealth to the common detriment.

What is the historical context?

The Constitution originally guaranteed right to property as a fundamental right under Article 19(1)(f). It provided under Article 31 that the state shall pay compensation in case of acquisition of private property. It is pertinent to note that at the time of independence, the main property



rights related to agricultural and other land. The government had to acquire the rights in such estates for carrying out land reforms and construction of public assets. Considering the inadequate resources with the government and in order to provide greater flexibility in acquiring land for public welfare, various amendments were carried out curtailing the right to property. Notable among them are exceptions under Articles 31A, 31B and 31C.

The Supreme Court in various cases has interpreted the relationship between fundamental rights and the DPSP. Most of these cases were against constitutional amendments made by the state that curtailed the right to property that was then a fundamental right. In the Golak Nath case (1967), the Supreme Court held that fundamental rights cannot be abridged or diluted to implement DPSP. Finally, in the Kesavananda Bharati case (1973), a thirteen-judge Bench of the Supreme Court upheld the validity of Article 31C but made it subject to judicial review. In the Minerva Mills case (1980), the Supreme Court ruled that the Constitution exists on a harmonious balance between fundamental rights and DPSP.

In 1978, in order to avoid excessive litigation directly in the Supreme Court by the propertied class, the 44th amendment act omitted right to property as a fundamental right and made it a constitutional right under Article 300A. The right to private property continues to be an important constitutional cum legal right. Any law to acquire private property by the state should be only for a public purpose and provide for adequate compensation.

What is the current debate?

Indian governments in the first four decades after independence followed a “socialistic model” of economy. There were many laws made by the Centre and States to acquire land from zamindars and big landlords for public purpose. The economic policies resulted in the nationalisation of banking and insurance, extremely high rates of direct taxes (even up to 97%), estate duty on inheritance, tax on wealth etc. There were also regulations that placed restrictions on growth of private enterprise like The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act). The rationale behind these measures during those times was to reduce inequality and redistribute wealth among the poorer sections who constituted majority of the population. However, such measures stifled growth and also resulted in the concealment of income/wealth. Taxes like estate duty and wealth tax generated revenue that was much less than the cost incurred in administering them.

The nineties saw the country move from a closed economy towards liberalisation, globalisation and privatisation. A new industrial policy was unveiled in July 1991 with the objective of empowering market forces, improving efficiency and rectifying deficiencies in the country's industrial structure. The MRTP Act was repealed and replaced with the Competition Act, 2002 and income tax rates were reduced considerably. Estate duty was abolished in 1985 and wealth tax in 2016.

The market driven economy has resulted in additional resources for the government that has helped in bringing people out of abject poverty. This economic system, nonetheless, has also resulted in growing inequality. A report by the World Inequality Lab states that the top 10% of the country's population have a share of 65% and 57% of the wealth and income respectively as of 2022-23. The bottom 50% on the other hand have a meagre share of 6.5% and 15% of the wealth and income respectively.

The manifesto for the current Lok Sabha elections of the Congress, the principal Opposition party, promises various measures for the poorer sections including payment of ₹1 lakh per annum to a

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woman from every poor family. Rahul Gandhi had also mentioned in his campaign that there would be a financial survey to ascertain the distribution of wealth among the people in the country and address the issue of inequality. The ruling party campaigners led by the Prime Minister have targeted the Opposition on this matter. They claim that the Opposition, if voted to power, would bring back inheritance tax laws that would tax even the poorer sections. The Supreme Court meanwhile has constituted a nine-judge Bench to interpret whether material resources under Article 39(b) include private resources as well.

What can be the way forward?

It is not just in India, but growing inequality is a worldwide problem of a liberalised open-market economic system. However, it is the responsibility of the government to protect the interest of the poorer classes who are most dependant on the state machinery for their livelihood. At the same time past policies of extremely high tax rates, estate duty, wealth tax etc., did not achieve their desired goals. Instead, they only led to concealment of income and wealth. Innovation and growth should not be curtailed but the benefits of growth should reach all sections especially the marginalised. The policies may vary and need to be framed after adequate debate in line with current economic models. The underlying principle to be achieved nevertheless remains the same — economic justice for all as enshrined in our Constitution.

WILL NEW INSURANCE RULES HELP SENIOR CITIZENS?

The story so far:

The Insurance Regulatory and Development Authority of India (Insurance Products) Regulations, 2024, came into force on April 1. Introduced as part of a wider reforms agenda that the IRDAI has been actively pushing for in recent months, the new norms covering various aspects of life, general and health insurance have generated considerable interest, particularly around a presumed change in the upper age limit to avail a new health cover.

What do the new regulations address?

The keenly watched new regulations are intended to enable provisions for insurers to respond faster to emerging market needs, improve ease of doing business and enhance insurance penetration while ensuring protection of policyholders interests. The last objective is sought to be achieved by encouraging insurers to conform to good governance while designing and pricing their products.

Specific to health insurance, the new norms are important, for instance, in reducing the “specific waiting period” from four years to three years. What this means is a reduced wait time, from the time the policy is purchased, to get insurance cover for specified diseases/treatments (except due to an accident). As per the new norms, on completion of the waiting period, diseases/treatments will be covered provided the policy has been renewed without any break. The time-frame for defining pre-existing disease has also been set to three years in the new regulations. Pre-existing disease refers to any health condition, ailment, injury or disease diagnosed by a physician not more than three years prior to the commencement of the policy or for which medical advice or treatment was recommended or received from a physician not more than three years prior to the date of policy issue.

AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy systems) treatment coverage is another aspect emphasised in the new norms. Mandating a Board approved policy for



the insurers, the regulator wants insurance companies to treat AYUSH on par with other treatment options. The previous regulation, which was in force till March 31, 2024, said: “all insurers may endeavour to provide coverage for one or more systems covered under AYUSH treatment, provided the treatment has been undergone in the hospitals or healthcare facilities subject to the guidelines as may be specified by the Authority from time to time”.

The regulator has also advised insurers against denying renewal of a health insurance policy on the ground that the insured had made a claim or claims in the preceding policy years, except for benefit based policies where the policy terminates following payment of the benefit covered under the policy such as in the case of a critical illness policy.

What changes are relevant to senior citizens?

The April 1 notification attempts to broaden insurance coverage from a demographic perspective, broadly in line with IRDAI’s ‘Insurance for All by 2047’ goal. In contrast, the Health Insurance Regulations, 2016, on entry and exit age, stipulated that “all health insurance policies shall ordinarily provide for an entry age of at least up to 65 years”. In other words, under the previous regulations health insurers could not deny cover to those aged up to 65. This, however, does not mean that all insurers were hitherto averse to providing health cover to those aged above 65 years. Siddharth Singhal, Business Head, Health Insurance, at Policybazaar.com, listed nine policies offered by different health insurers, where the maximum entry age is 99 years and five policies where the maximum entry age is 75 years. The new regulations have also asked insurers to establish a separate channel to address health insurance related claims and grievances of senior citizens.

How are insurance companies likely to respond to the new regulations?

Since it is more of a nudge from the IRDAI, many general insurers dealing in health insurance as well as stand-alone health insurers are likely to wait and watch, while some may start work on new products for those above 65. Industry officials expect health insurers to over time reformulate their products by resetting the maximum entry age to 99 years.

Hari Radhakrishnan, Regional Director, First Policy Insurance Brokers, observed that there had been no explicit age restriction in the previous regulations either. Every health insurance product has a minimum and maximum entry age, he noted, adding that the earlier regulations had a provision whereby the maximum entry age needed to be at least 65 years. Now, that provision has been dropped and so insurers are free to fix their minimum and maximum entry ages.

How significant are the changes?

While measures to enhance access are indeed welcome, affordability or the ability to pay premiums is crucial for senior citizens in terms of opting for health insurance, especially at a time when they require the cover most.

IRDAI, which does not interfere with the pricing of health products, has in the new regulations said the “premium shall remain unchanged for the policy term. Insurers may offer facility of premium payment in instalment, [also] devise mechanisms or incentives to reward policyholders for early entry, continued renewals, favourable claims experience, preventive and wellness habits and disclose upfront such mechanism or incentives in the prospectus and the policy document”.

In terms of buying health insurance, ‘earlier the better’, is something that those seeking cover should ideally keep in mind, underscored Amitabh Jain, COO, at Star Health & Allied Insurance,

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which is among the few companies that already provide health insurance to those above 65 at the time of entry. “Buying a policy early provides comprehensive coverage, especially as the risk of ailments increases with age. Insured customers who develop ailments like cancer and cardiac conditions are covered without an increase in premium and with guaranteed policy renewal. However, without insurance, and an increased risk of hospitalisation as you age, the risk needs to be priced into the premium,” he explained. Acknowledging the importance of affordability of the premium as being a key consideration for many customers, Policybazaar’s Mr. Singhal said health insurance policies were increasingly becoming modular with varying features depending on the paying capacity of customers. Also, buying health cover young would mean less waiting period.

Mr. Radhakrishnan said the changes give plenty of latitude to insurers to develop products for various demographic segments. The ability to develop products with better features and affordability will ultimately, to a large extent, depend on factors like disease incidence and medical inflation, he observed.

HOW THE NEXT GOVERNMENT WILL PUSH ‘BALANCED FERTILISATION’

Balanced fertilisation — discouraging farmers from applying too much urea, di-ammonium phosphate (DAP) or muriate of potash (MOP), which only have primary nutrients in high concentrations — is likely to be a key policy goal for the government taking over after the Lok Sabha elections.

The fiscal ended March 2024 saw urea consumption hit a record 35.8 million tonnes (mt), 16.9% higher than the 30.6 mt in 2013-14, the year before the Narendra Modi government came to power. The consumption of urea, containing 46% nitrogen (N), actually fell during 2016-17 and 2017-18, which was attributed to the mandatory coating of all urea with neem oil from May 2015.

Neem coating was intended to check illegal diversion of the highly-subsidised urea for non-agricultural uses, including by plywood, dye, cattle feed and synthetic milk makers. Neem oil supposedly also acted as a mild nitrification inhibitor, allowing more gradual release of nitrogen. Improved nitrogen use efficiency, in turn, brought down the number of urea bags required per acre.

Despite compulsory neem-coating, and the government reducing the bag size from 50 to 45 kg in March 2018, the consumption of urea has only gone up during the last six years (see table).

Nutrient-based subsidy

Fertilisers are basically food for crops, containing nutrients necessary for plant growth and grain yields. Balanced fertilisation means supplying these primary (N, phosphorus-P and potassium-K), secondary (sulphur-S, calcium, magnesium) and micro (iron, zinc, copper, manganese, boron, molybdenum) nutrients in the right proportion, based on soil type and the crop’s own requirement at different growth stages.

The nutrient-based subsidy (NBS) system, instituted in April 2010 by the previous United Progressive Alliance (UPA) government, was expected to promote balanced fertilisation. Under it, the government fixed a per-kg subsidy for N, P, K and S. The subsidy on any fertiliser was, thereby, linked to its nutrient content. The underlying idea was to induce product innovation and wean away farmers from urea, DAP (18% N and 46% P content) and MOP (60% K), in favour of complex fertilisers containing N, P, K, S and other nutrients in balanced proportions with lower concentrations.



NBS achieved its objective initially. Between 2009-10 and 2011-12, DAP and MOP consumption declined, while that of NPKS complexes and single super phosphate (SSP: 16% P and 11% S) rose. But NBS failed simply because it excluded urea. With its maximum retail price (MRP) being controlled, and cumulatively raised by just 16.5 per cent – from Rs 4,830 to Rs 5,628 per tonne – post the introduction of NBS, consumption of urea increased both through the UPA’s 10 years and the 10 years (so far) of the NDA government.

The challenge

The last couple of years have seen even non-urea fertilisers being brought under price control, first informally and formally since January 2024 in the run-up to the elections. The MRPs of these fertilisers were earlier set by the companies selling them, with the government merely paying a fixed per-tonne subsidy linked to their nutrient content.

The restoration of controls, industry sources say, has worsened the nutrient imbalances. The current MRP of DAP, at Rs 1,350 per 50-kg bag, is below the Rs 1,470 for the 10:26:26:0 and 12:32:16:0 NPKS complex fertilisers, notwithstanding their containing less N and P. Even 20:20:0:13, which accounted for nearly 5.4 mt out of the total 11.1 mt of NPKS complexes consumed in 2023-24, is retailing at Rs 1,200-1,225 per bag, only marginally lower than DAP. DAP has, thus, become the “new urea”, with farmers inclined to over-apply both.

It’s been the other way round with MOP. Its MRP of Rs 1,650 per bag now incentivises neither farmers to apply directly nor companies to incorporate it into complexes. The most widely consumed complex fertiliser, 20:20:0:13, contains no K. “That isn’t good, considering that potassium boosts the immunity of crops against pests and diseases as well as uptake of nitrogen,” a source pointed out.

An immediate challenge, he added, is to ensure proper “price hierarchy” among non-urea fertilisers. That would mean pricing DAP the highest, MOP the lowest and complexes in between. DAP use should be restricted mainly to rice and wheat. Other crops can meet their P requirement through complexes and SSP. The latter’s relatively low acceptability — in spite of an MRP of Rs 550-600 per bag — can be addressed by marketing it in granular, not powdered, form. Granules are less prone to adulteration with gypsum or clay, while also enabling slower release of P without drift during application.

The opportunity

India is heavily import-dependent in fertilisers, be it of finished products or intermediates and raw materials. High global prices add to the country’s foreign exchange outgo and also the government’s subsidy burden.

Landed prices of imported urea, DAP, and MOP have dropped to around \$340, \$520-525 and \$319 per tonne respectively, from their corresponding recent records of \$900-1,000 (in November-January 2021-22), \$950-960 (July 2022) and \$590 (till March 2023). Even prices of phosphoric acid, a DAP manufacturing input, are down to \$948 per tonne, from the \$1,715 levels of July-September 2022 following Russia’s invasion of Ukraine.

The above price dips would have been more but for the Houthi rebel attacks in the Red Sea, disrupting vessel movements from the Mediterranean through the Suez Canal. Ships carrying DAP and rock phosphate from Morocco’s Jorf Lasfar port, which reached India in 24-26 days, are taking 40 days at present.



The cooling of international prices, nevertheless, gives some flexibility for the next government to rationalise MRPs of fertilisers and promote balanced plant nutrition. This could involve bringing urea under NBS and mitigating the impact of a significant hike in its MRP by increasing the subsidy rates on other nutrients.

The Centre, in January, approved the launch of sulphur-coated urea, containing 37% N and 17% S. Its MRP has been fixed at Rs 266.50 per bag, the same as for regular neem-coated urea. But in this case, the bag will have only 40 kg, as against 45 kg for the latter – in effect, translating into a 12.5% price hike.

A SYSTEM THAT HEALS

The National Health Policy (NHP) 2017 envisions universal access to quality and affordable healthcare. The nation's commitment to increasing public expenditure on health in recent years is evident from the National Health Accounts (NHA) data, including the provisional estimates for 2020-21 and 2021-22.

— “According to the NHA data, government health expenditure (GHE) as a proportion of GDP increased by an unprecedented 63 per cent between 2014-15 and 2021-22. It rose from 1.13 per cent of GDP in 2014-15 to 1.35 per cent in 2019-20.”

— “The expenditure on government-financed insurance has increased 4.4 fold from Rs 4,757 crore in 2013-14 to Rs 20,771 crore in 2021-22. This reflects rising investments in the AB-PMJAY and state health assurance/insurance schemes.”

— “There has been a consistent decline in Out-of-Pocket Expenditure (OOPE) as a share of the total health expenditure — it dropped from 62.6 per cent to 47.1 per cent between 2014-15 and 2019-20.”

— “Drugs and diagnostics are a major driver of out-of-pocket spending. Free drugs and diagnostics services in facilities, including those at over 1,69,000 AAMs and Health and Wellness Centres have led to major financial savings for families.”

— “Today, through more than 10,000 Jan Aushadhi Kendras, over 1,900 quality generic medicines and nearly 300 surgical items are being sold at a low cost in practically all the districts.”

— “Safe drinking water and sanitation have remarkable positive health effects. As per a WHO report, once tap water is made available in every rural household, it would save four lakh lives over five years.”

— “The rising trends in public health expenditure and a steady decrease in OOPE alongside increasing shares of GHE and social security schemes on healthcare, indicate a move towards a more progressive health system.”

For Your Information:

— As many as 43 per cent of insurance policyholders had difficulties processing their “health insurance” claims in the past three years on an aggregate basis, says a survey.

— Six major issues faced by policy holders include lack of full disclosure about exclusions and eligibility for claims in their policies; ambiguity in contracts due to use of technical jargons and



complex words; claims rejected due to pre-existing disease; eligibility other than the preexisting disease and crop insurance rules tied to the scheme.

20 CRITICAL MINERAL BLOCKS TO BE ON SALE

The government will put on sale around 20 critical mineral blocks in the fourth round of auction by the end of June, mines secretary V L Kantha Rao said on Monday.

— Critical minerals such as copper, lithium, nickel, cobalt and rare earth elements are essential components in many of today's rapidly growing clean energy technologies -- from wind turbines and electricity networks to electric vehicles.

— Demand for these minerals is growing quickly with clean energy transitions gathering pace.

— Minister Joshi told Lok Sabha in August 2023 that in FY23, India imported 2,145 tonnes of lithium carbonate and lithium oxide at a total cost of Rs 732 crore.

— India also imported 32,000 tonnes of unwrought nickel at a cost of Rs 6,549 crore, and 1.2 million tonnes of copper ore at a cost of Rs 27,374 crore, in 2022-23.

— India is 100 per cent reliant on imports for its lithium and nickel demand. For copper, this figure is 93 per cent.

— India has identified 30 critical minerals in July 2023 depending upon their disruption potential, substitutability, cross-cutting usage across different sectors, import reliance, recycling rates etc.

ANALYSING LABOUR ON A WARMING PLANET

The story so far:

The International Labour Organization's (ILO) latest report, 'Ensuring safety and health at work in a changing climate', is an urgent call to ensure the future of labour is climate proofed and to address the constantly evolving work environment as the planet warms. The UN body states that well over a third of the world's population, are exposed to excessive heat annually, leading to almost 23 million work-related injuries.

What are the emerging hazards?

The ILO has identified six key impacts of climate change. They are — excessive heat, solar ultraviolet radiation, extreme weather events, workplace air pollution, vector-borne diseases and agrochemicals. These could lead to a range of health issues such as stress, stroke and exhaustion. The ILO mentions agriculture workers, workers in the construction sector, conservancy workers in cities and those employed in transport and tourism as most affected by climate change. It is also important to take note of the global rise in gig employment, which is highly heat-susceptible. Gig workers constitute about 1.5% of India's total work force, which is projected to grow to about 4.5% by 2030, according to a Nasscom study. In the Indian context, all these segments put together suggest that about 80% of the country's 2023 workforce of 600 million is susceptible to heat-related hazards.



Which sectors are affected?

Agriculture is by far the most heat susceptible sector globally, particularly so in the developing world, where informal farm labourers work with little to no weather protection. The NSSO data of July 2018-June 2019 reveal that almost 90% of Indian farmers own less than two hectares of land, and earn an average monthly income of a little over ₹10,000 with farmers in the bottom three States of Jharkhand, Odisha and West Bengal earning as low as ₹4,895, ₹5,112, and ₹6,762. This leaves little room for them to invest in adapting to a warming planet.

Agriculture is followed by India's sprawling Micro, Small and Medium Enterprises (MSME) sector that employs about 21% of the country's workforce, or more than 123 million workers. The overwhelming informalisation of the sector has meant little to no oversight of worker conditions by State Occupational Safety and Health (OSH) departments, leaving them highly vulnerable to heat hazards. This sector is followed by the building and construction segment which constitutes about 70 million workers, almost 12% of India's workforce. Workers here must cope with the urban heat island effect, as construction is a highly urban-centric economy, with rising growth in cities. Construction workers are also the most prone to physical injuries and air pollution related health hazards, like asthma, as several Indian cities are among the most polluted globally.

What laws address workplace safety ?

A range of more than 13 central laws in India including, the Factories Act, 1948, the Workmen Compensation Act, 1923, the Building and Other Construction Workers Act, 1996, the Plantations Labour Act, 1951, the Mines Act, 1952 and the Inter-State Migrant Workmen Act, 1979, regulate working conditions across several sectors. These laws were consolidated and amended in September 2020 under one law — the Occupational Safety, Health and Working Conditions Code, 2020 (OSH Code, 2020). While several unions are critical of the new law for watering down safety and inspection standards, the Union government is yet to officially notify its enforcement. This has meant that unions and the judiciary continue to rely on the older laws to seek redress and accountability.

The Indian Factories Act defines a factory as an enterprise with "10 or more" workers, but those registered under this law are less than a quarter of a million based on the latest available data. The Labour Bureau in its 2020 report observes "an increase of 2.48% in the number of total registered factories that is, from 2,22,012 in the beginning of the year to 2,27,510 at the end of the year 2020." This means the overwhelming majority of India's 64 million MSMEs are not registered under this law, and are therefore outside the purview of governmental inspections.

What do they say about heat hazards?

When it comes to dealing with occupational heat, the Factories Act broadly defines "ventilation and temperature" and leaves it to the States to decide optimal standards based on specific industries. However, these regulations were framed more than five decades back. For instance, Maharashtra framed its rules under the law in 1963, while Tamil Nadu did so in 1950. Both these rules mention a maximum wet bulb temperature of 30°C on a shop floor with a height of 1.5 metres and also mention provisioning "adequate air movement of at least 30 meters per minute".

But these rules lack a breakdown of thermal comfort based on the level of activity, nor do they mention air conditioning, or other cooling alternatives. This is not surprising as the rules were framed much before air conditioning became common as a heat coping method. But in the developing world, air conditioning is still a luxury at homes and a significant expense for



businesses. With a warming climate, the government predicts 50% of Indian homes would have ACs by 2037, but we lack these numbers for businesses, indicating an urgent need to update India's Factories Act to incorporate technological changes in provisioning thermal comfort at businesses and add more categories of industries based on evolving production processes. Brazil for instance, mandates a stoppage of work "in cases where the WBGT (Wet Bulb Global Temperature) rises above 29.4°C for low intensity work, 27.3°C for moderate intensity work, 26.0°C for high intensity work, and 24.7°C for very high intensity work," the ILO mentions.

Speaking about extreme heat and instances of friction with top corporate management, S. Kannan, the leader of the recognised union at the BMW assembly plant at Mahindra World City, Chennai (which represents more than 200 of the 350 employees), pointed to an instance at the company where workers demanded additional "lemon juice, buttermilk, and tender coconuts at the canteen" to ensure hydration last year. He claimed that the workers concerns were scoffed at by the management as "petty" issues for "high income earners". Moreover, Mr. Kannan said that unions are pressured to submit not only from the management but from the State's bureaucracy who point to the "difficulty" in getting top class industries to set up shop in Tamil Nadu. They accuse unions of disincentivising MNCs from their expansion plans.

What about other climate hazards?

Amendments are also required to address the handling of effluents and byproducts disposal, as they could significantly impact human health based on temperature. Hindustan Unilever's thermometer manufacturing plant in Kodaikanal, Tamil Nadu was shut in 2001, as it was found disposing mercury-laced glass waste in the centre of the town. Frontline reports that the company dumped 7.4 tonnes, leaving townspeople exposed to a highly toxic and vapourable chemical that causes a range of diseases from birth defects to several types of cancer. "This was our main case in the Madras High Court against the company," tells S. Meenakshi, who was among a battery of lawyers representing retrenched workers and townspeople seeking redress for the serious illnesses caused across Kodaikanal that were attributed to Mercury exposure. A charge denied by Unilever, even as it reached an out of court settlement with workers in 2016 after a decades-long battle.

Another significant occupational illness to be addressed in the coming decades would be the possible rise in silicosis cases. Silicosis is a fatal and incurable pulmonary disease caused by what is commonly called "lung dust", the fine particulate matter emitted in the mines of coal, precious gems like quartz and diamonds and stone quarries. India is set to record its highest coal production ever in the financial year 2023-24 and has expanded the number of mines to meet rising power demand, leading to an increase in the probability of silica exposure. In 2016, the Supreme Court ordered the Gujarat government to pay ₹3 lakh as compensation to the families of 238 victims who died of silicosis while working at a quartz mine in Godhra. The Court blamed Gujarat's bureaucracy for 'neglecting' to protect the adivasi migrant labourers who worked in the mines.

It would have been the job of inspectors under the Factories Act to inspect and enforce the provisioning gears that protect employees from silica exposure. While the T.N. and Maharashtra rules under the Factories Act elaborate on silica exposure prevention, they do not mandate the use of silica removal technologies at stone quarries or mines. Again, these technologies were not available when these rules were framed. Mr. Kannan says that, "labour conciliation, industrial safety and worker welfare are weak wings of the government. There are several vacancies, both at the inspector level, and at the clerical level, and our main concern is training, sensitisation and



the competence of inspectors to conduct specialised inspections.” He spoke about instances where inspectors fear the “influence that private sector management, particularly, MNC’s wield” with State bureaucrats. However, a retired official from Tamil Nadu’s Directorate of Industrial Safety and Health, R. Jayakumar countered the charge of incompetence and unfilled job posts in the department he headed. He stated vacancies might have been temporary. “In fact, when the BOCW Act (Buildings and Construction Workers Act, 1996) was enacted, we formed a new wing and created new posts to look into its implementation,” Mr. Jayakumar said, referring to the law that regulates employment in the construction sector. But he admitted that climate change raises concerns about working conditions.

Often the link between labour productivity, human health and climate change gets scant attention, as the focus remains on economic and infrastructure resilience. The ILO report points to the need to ensure a universally accepted regulatory framework to climate-proof work and workers.

DGCA DEREGISTERS ALL 54 GO FIRST AIRCRAFT

The Directorate General of Civil Aviation (DGCA) on Wednesday deregistered all 54 Go First aircraft following a Delhi High Court order last week, in which the court had given the country’s aviation regulator five days to do so.

“All 54 aircraft... have been deregistered,” a senior DGCA official said.

A total of 14 aircraft lessors including SMBC Aviation Capital Limited, Sky Leasing, GY Aviation Lease, ACG Aircraft Leasing, BOC Aviation and China Development Bank Financial Leasing Company had moved the Delhi High Court last year seeking to regain control over the airline’s fleet of leased planes. This had followed the National Company Law Tribunal’s decision on May 10, 2023, to admit Go First’s plea for voluntary insolvency and the consequential moratorium to protect the airline from adverse actions by its creditors.

Allows maintenance

Last week, the Delhi High Court directed the DGCA to “forthwith and no later than the next five working days process the Deregistration Applications”, as well as facilitate their “export by providing an Export Certificate of Airworthiness, a Ferry Flight Permit and all other documents and permissions as the Petitioners/Lessors may require”. The court had also allowed lessors to inspect the aircraft and undertake maintenance of the planes.

Industry officials said while the court had asked the Airports Authority of India to inform the DGCA of the parking charges owed, it was not clear whether these dues would have to be paid by the lessors or the Resolution Professional overseeing Go Air’s affairs during the insolvency process.

Some said lessors were liable only for airport dues for three months preceding the filing of the insolvency plea as per the aeronautical information circular. The aircraft were also not expected to fly out soon, as at least half of them had engine issues at the time Go First had halted operations, adding that lessors had had very limited visibility into the maintenance status of these planes since then, the officials, who spoke on condition of anonymity, added.

Wednesday’s development marks exactly 365 days since Go First on May 2, 2023, announced it was filing for voluntary insolvency because of its dispute with Pratt and Whitney over the grounding of almost half of its fleet.



WHY IS CHINA MORE IMPORTANT FOR TESLA THAN INDIA?

Within a week of postponing his much-anticipated visit to India, Tesla CEO Elon Musk landed in Beijing to push for Full Self-Driving (FSD), underscoring the importance of China in the global supply chain for the world's most valuable electric vehicle maker.

Here is why China remains extremely important for Tesla — more than India.

China's dominance in battery production

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. Elon Musk's recent China visit saw him meet Robin Zeng, the chairman of Chinese battery giant China's Contemporary Amperex Technology Co Limited (CATL), Reuters reported. CATL accounts for two-thirds of global battery production, and is a supplier for Tesla, as well as other major automakers such as Volkswagen AG and Toyota Motor Corp.

Tesla's biggest plant is in Shanghai

When it comes to EV production, China has left the US and Europe way behind, and is now a key engine of growth for Tesla. The EV major opened its biggest manufacturing unit in Shanghai in 2018 after a new Chinese policy allowed foreign carmakers to establish fully-owned subsidiaries in the country.

The Shanghai plant alone produces over 1 million units of Tesla's most successful Model 3 and Model Y cars a year. The gigafactory, first outside the US, is also crucial for Tesla as it supplies its cars to New Zealand, Australia, and Europe.

India's EV push still at a nascent stage

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 historically relied on imports of batteries from elsewhere, and currently has a fragmented EV supply chain.

According to a Niti Aayog report, the biggest demand for lithium-ion batteries (LIBs) comes from consumer electronics such as laptops, mobile phones, and tablets. The LIB market through EV sales in India was only about 1 GWh (compared to 4.5 GWh for consumer electronics).

Taking note of booming demand for batteries, India is pushing for battery production through the production-linked incentive (PLI) scheme for advanced chemistry cell (ACC) battery storage. ACC is a crucial component of lithium-ion batteries. Niti Aayog says that India is well-positioned to capture a large share of the growing global market and could represent up to 13% of global battery demand by 2030.

Regulatory flip-flops on India's EV policy

India's EV policy was released last month after years of flip-flops. In 2018, the then Niti Aayog CEO Amitabh Kant had said that there was no need for an electric vehicle policy, and that technology should not be trapped by rules and regulations.



In 2018-19, the Centre had increased customs duty on CKD (completely knocked down) imports of motor vehicles, motor cars, motorcycles from 10% to 15%, much to the ire of global automakers. Last month when India finally released its EV policy, it eased duty on completely built-up (CBU) cars with a minimum investment limit for manufacturers at Rs 4,150 crore.

But, there is still opportunity for India

Despite China's dominance over the EV supply chain, its exports are increasingly coming under scrutiny in Europe and the US, presenting an opportunity for India.

The European Commission 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.

Meanwhile, United States Secretary of Commerce, Gina Raimondo has also warned that Chinese EVs are a threat to the US carmakers.



DreamIAS



LIFE & SCIENCE

ISRO FINDS PROOF OF ENHANCED POSSIBILITY OF WATER ICE IN POLAR CRATERS OF THE MOON

A study by Indian space scientists has found evidence of enhanced possibility of water ice occurrence in the polar craters of the moon.

The study was done by scientists of ISRO's Space Applications Centre (SAC) in collaboration with researchers of IIT Kanpur, University of Southern California, Jet Propulsion Laboratory and IIT (ISM) Dhanbad.

The study suggests that the amount of sub-surface ice in the first couple of metres is about five to eight times larger than the one on the surface in both poles.

As such, drilling on the moon to sample or excavate that ice will be primordial for future missions and long-term human presence. Moreover, the study suggests that the extent of water ice in the northern polar region is twice that in the southern polar region.

The study confirms the hypothesis that the primary source of sub-surface water ice in the lunar poles is out-gassing during volcanism in the Imbrian period. The results also conclude that the distribution of water ice is likely governed by mare volcanism and preferential impact cratering.

Accurate knowledge of the distribution and depth of water ice occurrence in the lunar poles, as presented in the investigation, is crucial for constraining the uncertainties in selecting future landing and sampling sites for missions aimed at exploring and characterising lunar volatiles. This study is crucial for supporting ISRO's future in-situ volatile exploration plans on the moon.

CHINA ALL SET FOR LAUNCH OF MISSION TO FAR SIDE OF MOON

China will send a robotic spacecraft in the coming days on a round trip to the moon's far side in the first of three technically demanding missions that will pave the way for an inaugural Chinese crewed landing and a base on the lunar south pole.

Since the first Chang'e mission in 2007, China has made big leaps in its lunar exploration programme, narrowing the technological chasm with the U.S.

In 2020, China brought back samples from the moon's near side in the first sample retrieval in more than four decades, confirming for the first time it could safely return an uncrewed spacecraft to the earth from the lunar surface.

This week, China is expected to launch Chang'e-6 using the backup spacecraft from the 2020 mission, and collect soil and rocks from the side of the moon that permanently faces away from the earth.

With no direct line of sight with the earth, Chang'e-6 must rely on a recently deployed relay satellite orbiting the moon during its 53-day mission, including a never-before attempted ascent from the moon's "hidden" side on its return journey home.



The same relay satellite will support the uncrewed Chang'e-7 and 8 missions in 2026 and 2028, respectively, when China starts to explore the south pole for water and build a rudimentary outpost with Russia. China aims to put its astronauts on the moon by 2030.

Beijing's polar plans have worried NASA, whose administrator, Bill Nelson, has repeatedly warned that China would claim any water resources as its own. Beijing says it remains committed to cooperation with all nations on building a "shared" future.

On Chang'e-6, China will carry payloads from France, Italy, Sweden and Pakistan, and on Chang'e-7, payloads from Russia, Switzerland and Thailand.

NASA is banned by U.S. law from any collaboration, direct or indirect, with China. Under the separate NASA-led Artemis programme, U.S. astronauts will land near the south pole in 2026, the first humans on the moon since 1972.

Chang'e 6 will attempt to land on the northeastern side of the vast South Pole-Aitken Basin, the oldest known impact crater in the solar system.

The southernmost landing ever was carried out in February by IM-1, a joint mission between NASA and the Texas-based private firm Intuitive Machines.

The south pole has been described by scientists as the "golden belt" for lunar exploration.

Polar ice could sustain long-term research bases without relying on expensive resources transported from the earth. India's Chandrayaan-1 launched in 2008 confirmed the existence of ice inside polar craters.

Chang'e-6's sample return could also shed more light on the early evolution of the moon and the inner solar system.

ROCKS WITH EVIDENCE OF THE EARTH'S MAGNETIC FIELD DISCOVERED

Geologists at MIT and Oxford University have found ancient rocks in Greenland that bear the oldest remnants of the earth's early magnetic field. The researchers determined that the rocks are about 3.7 billion years old and retain signatures of a magnetic field with a strength of at least 15 microtesla. The ancient field is similar in magnitude to the earth's magnetic field today.

The results of the study published in the Journal of Geophysical Research, represent some of the earliest evidence of a magnetic field surrounding the earth. Previous studies have shown evidence for a magnetic field on the earth that is at least 3.5 billion years old. The new study is extending the magnetic field's lifetime by another 200 million years.

"If the earth's magnetic field was around a few hundred million years earlier, it could have played a critical role in making the planet habitable," Benjamin Weiss from the Department of Earth, Atmospheric and Planetary Sciences at MIT and one of the authors told MIT News.

Magnetic shield

Scientists suspect that, early in its evolution, the earth was able to foster life, in part due to an early magnetic field that was strong enough to retain a life-sustaining atmosphere and simultaneously shield the planet from damaging solar radiation.



Exactly how early and robust this magnetic shield was was not known, though there has been evidence dating its existence to about 3.5 billion years ago. The objective of the researchers was to find rocks that still held signatures of the earth's magnetic field when the rocks first formed. To get to the rocks that were hopefully preserved and unaltered since their original deposition, the team sampled from rock formations in the Isua Supracrustal Belt in southwestern Greenland.

The team returned to MIT with whole rock samples of banded iron formations — a rock type that appears as stripes of iron-rich and silica-rich rock. Given their composition, the researchers suspect the rocks were originally formed in primordial oceans prior to the rise in atmospheric oxygen around 2.5 billion years ago.

They used uranium to lead ratio and found that some of the magnetised minerals were likely about 3.7 billion years old. Through this careful process of remagnetisation, the team concluded that the rocks likely harboured an ancient, 3.7-billion-year-old magnetic field, with a magnitude of at least 15 microtesla. Today, the earth's magnetic field measures around 30 microtesla.

PARTICLES CALLED QUARKS HOLD THE KEY TO THE FINAL FATE OF SOME STARS

We know that all matter is composed of atoms, and atoms are made of protons and neutrons inside the nucleus and electrons outside. But unlike electrons, protons and neutrons are composite particles because they are further made up of quarks.

Quarks can't exist in isolation. They can only be found in groups of two or three, if not more. Such clumps of quarks are called hadrons. Protons and neutrons are common examples. Physicists have mostly studied quarks based on the behaviour of hadrons, and are also interested in how quarks clump together.

MICROSOFT UNVEILS PHI-3-MINI, ITS SMALLEST AI MODEL YET: HOW IT COMPARES TO BIGGER MODELS

A few days after Meta unveiled its Llama 3 Large Language Model (LLM), Microsoft on Tuesday (April 23) unveiled the latest version of its 'lightweight' AI model – the Phi-3-Mini. Microsoft has described the Phi-3 as a family of open AI models that are the most capable and cost-effective small language models (SLMs) available.

What exactly are language models, and how does an SLM differ from an LLM? Are there any benefits of employing an SLM for developing AI applications? We explain.

What is Phi-3-mini?

Phi-3-Mini is believed to be first among the three small models that Microsoft is planning to release. It has reportedly outperformed models of the same size and the next size up across a variety of benchmarks, in areas like language, reasoning, coding, and maths.

Essentially, language models are the backbone of AI applications like ChatGPT, Claude, Gemini, etc. These models are trained on existing data to solve common language problems such as text classification, answering questions, text generation, document summarisation, etc.

The 'Large' in LLMs has two meanings — the enormous size of training data; and the parameter count. In the field of Machine Learning, where machines are equipped to learn things themselves



without being instructed, parameters are the memories and knowledge that a machine has learned during its model training. They define the skill of the model in solving a specific problem.

What's new in Microsoft's Phi-3-mini?

The latest model from Microsoft expands the selection of high-quality language models available to customers, offering more practical choices as they build generative AI applications. Phi-3-mini, a 3.8B language model, is available on AI development platforms such as Microsoft Azure AI Studio, HuggingFace, and Ollama.

The amount of conversation that an AI can read and write at any given time is called the context window, and is measured in something called tokens. According to Microsoft, Phi-3-mini is available in two variants, one with 4K context-length, and another with 128K tokens.

With longer context windows, models are more capable of taking in and reasoning over large text content such as documents, web pages, code, and more.

Phi-3-mini is the first model in its class to support a context window of up to 128K tokens, with little impact on quality. The model is instruction-tuned, which means that it is trained to follow the different types of instructions given by users. This also means that the model is 'ready to use out-of-the-box'.

Microsoft says that in the coming weeks, new models will be added to the Phi-3 family to offer customers more flexibility. Phi-3-small (7B) and Phi-3-Medium will be available in the Azure AI model catalogue and other model libraries shortly.

How is Phi-3-mini different from LLMs?

Phi-3-mini is an SLM. Simply, SLMs are more streamlined versions of large language models. When compared to LLMs, smaller AI models are also cost-effective to develop and operate, and they perform better on smaller devices like laptops and smartphones.

According to Microsoft, SLMs are great for "resource-constrained environments including on-device and offline inference scenarios." The company claims such models are good for scenarios where fast response times are critical, say for chatbots or virtual assistants. Moreover, they are ideal for cost-constrained use cases, particularly with simpler tasks.

While LLMs are trained on massive general data, SLMs stand out with their specialisation. Through fine-tuning, SLMs can be customised for specific tasks and achieve accuracy and efficiency in doing them. Most SLMs undergo targeted training, demanding considerably less computing power and energy compared to LLMs.

SLMs also differ when it comes to inference speed and latency. Their compact size allows for quicker processing. Their cost makes them appealing to smaller organisations and research groups.

How good are the Phi-3 models?

Phi-2 was introduced in December 2023 and reportedly equaled models like Meta's Llama 2. Microsoft claims that the Phi-3-mini is better than its predecessors and can respond like a model that is 10 times bigger than it.



Based on the performance results shared by Microsoft, Phi-3 models significantly outperformed several models of the same size or even larger ones, including Gemma 7B and Mistral 7B, in key areas.

Microsoft claims that Phi-3-mini demonstrates strong reasoning and logic capabilities. In its blog, Microsoft also said, "ITC, a leading business conglomerate based in India, is leveraging Phi-3 as part of their continued collaboration with Microsoft on the copilot for Krishi Mitra, a farmer-facing app that reaches over a million farmers."

THE PLANET'S PLASTIC PROBLEM: WHY WE NEED A GLOBAL PLASTICS TREATY

Plastic waste is everywhere, from the peak of Mount Everest to the floor of the Pacific Ocean, inside the bodies of animals and birds, and in human blood and breast milk.

On Tuesday (April 23), thousands of negotiators and observers from 175 countries arrived in Ottawa, Canada, to begin talks regarding the very first global treaty to curb plastics pollution. Scheduled to run till April 29, this is the fourth round of negotiations since 2022, when the UN Environmental Assembly agreed to develop a legally binding treaty on plastics pollution by the end of 2024. The final round will take place in November this year, in South Korea.

Experts believe that the proposed treaty will be the most important environmental accord since the 2015 Paris Agreement on climate change, in which nations agreed to cut greenhouse gas (GHG) emissions. Here is what you need to know.

Why is a global plastics treaty needed?

Since the 1950s, plastic production across the world has skyrocketed. It increased from just 2 million tonnes in 1950 to more than 450 million tonnes in 2019. If left unchecked, the production is slated to double by 2050, and triple by 2060.

Even just in the last two decades, global plastic production has doubled. (Credit: Our World in Data)

Although plastic is a cheap and versatile material, with a wide variety of applications, its widespread use has led to a crisis. As plastic takes anywhere from 20 to 500 years to decompose, and less than 10% has been recycled till now, nearly 6 billion tonnes now pollute the planet, according to a 2023 study published by The Lancet. About 400 million tonnes of plastic waste is generated annually, a figure expected to jump by 62% between 2024 and 2050.

Much of this plastic waste leaks into the environment, especially into rivers and oceans, where it breaks down into smaller particles (microplastic or nanoplastic). These contain more than 16,000 chemicals which can harm ecosystems and living organisms, including humans — the chemicals are known to disturb the body's hormone systems, cause cancer, diabetes, reproductive disorders, etc.

Plastic production and disposal are also contributing to climate change. According to a report by the Organisation for Economic Co-operation and Development (OECD), in 2019, plastics generated 1.8 billion tonnes of GHG emissions — 3.4% of global emissions. Roughly 90% of these emissions come from plastic production, which uses fossil fuels as raw material. If current trends continue, emissions from the production could grow 20% by 2050, a recent report from the United States' Lawrence Berkeley National Laboratory said.



What can the treaty entail?

While none of the treaty's details have currently been finalised, experts believe that it can go beyond just putting a cap on plastic production in UN member states.

The treaty can theoretically lay out guidelines on how rich nations should help poorer ones meet their plastic reduction target.

It may also ban "particular types of plastic, plastic products, and chemical additives used in plastics, and set legally binding targets for recycling and recycled content used in consumer goods," according to a report by the Grist magazine.

The treaty can mandate the testing of certain chemicals in plastics.

It can also have some details on just transition for waste pickers and workers in developing countries who depend on the plastic industry for a living.

What are the roadblocks to the treaty?

Such an ambitious agreement, however, is far from guaranteed. Some of the biggest oil and gas-producing countries, as well as fossil fuel and chemical industry groups are trying to narrow the scope of the treaty to focus just on plastic waste and recycling.

Treaty negotiations, so far, have been deeply polarising. Since the first round of talks in Uruguay in November 2022, oil-producing nations like Saudi Arabia, Russia, and Iran have opposed plastic production caps, and are using myriad delay tactics (like arguing over procedural matters) to derail constructive dialogues.

For instance, countries are yet to decide if the plastics treaty would be agreed upon by consensus or through a majority vote, according to a report published in the journal Nature. Consensus would mean that a single country could veto the treaty, and prevent it from getting passed.

On the other end, there is a coalition of around 65 nations — known as the "High-Ambition Coalition" — which seeks to tackle plastic production. The coalition, which includes African nations and most of the European Union, also wants to end plastic pollution by 2040, phase out "problematic" single-use plastics, and ban certain chemical additives that could carry health risks.

The US has not joined the HAC. While it has said it wants to end plastic pollution by 2040, unlike the HAC, it advocates that countries should take voluntary steps to end plastic pollution. "The underlying reason why the US is not ambitious is we are a fossil gas country," US Senator Jeff Merkley (Democrat from Oregon) told the Associated Press.

Fossil fuel and chemical corporations are also working to water down the treaty, and have sent a record number of lobbyists to the negotiations in Ottawa. According to a recent analysis by the Centre for International Environmental Law (CIEL), 196 such lobbyists registered for the talks, a 37% increase from the 143 lobbyists registered in the previous round of the negotiations in Kenya last November.

"99% of plastics are derived from fossil fuels, and the fossil fuel industry continues to clutch plastics and petrochemicals as a lifeline. The chemical and fossil fuel industries oppose cuts to plastic production, falsely claiming that the plastics crisis is not a plastic problem, but a waste problem," the analysis said.



It is due to such roadblocks that the previous three rounds of negotiations have failed to make significant progress regarding the treaty.

MICROBES, NOT FOSSIL FUELS, PRODUCED MOST NEW METHANE: STUDY

A modelling study has found methane emissions from fossil fuels declined between 1990 and the 2000s and have been stable since, whereas microbes have been producing more methane of late. One reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia

Methane is the second most abundant anthropogenic greenhouse gas after carbon dioxide (CO₂) but it warms the planet more. Over a century, methane has a global warming potential 28-times greater than CO₂, and even higher over shorter periods like two decades.

It wasn't until recently that policymakers began to focus on methane vis-a-vis addressing global warming. At the U.N. climate talks in 2021, member countries launched the 'Global Methane Pledge' to cut the gas's emissions and slow the planet's warming. Yet our understanding of methane also continues to evolve.

The sources of methane

Scientists are increasingly recognising various sources of methane, most of which fit in two categories: biogenic and thermogenic. When fossil fuels such as natural gas or oil are extracted from deep within the earth's crust, thermogenic methane is released. Biogenic methane comes from microbial action.

The microbes that produce methane are archaea — single-celled microorganisms distinct from bacteria and eukaryotes — and are called methanogens. They thrive in oxygen-deficient environments, such as the digestive tracts of animals, wetlands, rice paddies, landfills, and the sediments of lakes and oceans.

Methanogens play a crucial role in the global carbon cycle by converting organic matter into methane. While methane is a potent greenhouse gas, its production by methanogens is an essential part of natural ecosystems. But human activities like agriculture, dairy farming, and fossil fuel production have further increased methane emissions.

Both biogenic and thermogenic activities produce different isotopes of methane. Tracking the isotopes is a way to track which sources are the most active.

Modelling with a supercomputer

According to Prabir Patra, principal scientist at the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) and one of the lead authors of the study, carbon-13 is key. (Atoms of this carbon isotope have 13 nucleons: 6 protons + 7 neutrons.)

If there are fewer carbon-13 atoms than a certain level in a group of 1,000 methane molecules, the methane is from a biological source. If the methane is from thermogenic sources, such as trapped fossil fuels or geological activities, there will be more carbon-13 atoms in 1,000 molecules.

In fact, the models said methane emissions from fossil fuels declined between 1990 and the 2000s and that they've been stable since. They also found microbes were producing more methane than fossil fuels.



One possible reason could be an increase in cattle-rearing in Latin America and more emissions from waste in South and Southeast Asia, Latin America, and Africa, the study's authors wrote in their paper. They added that the number of wetlands worldwide had increased as well.

COMBUSTION: A QUESTION OF FUEL

WHAT IS IT?

Internal combustion engines are everywhere, yet they are not a common sight. They power most cars and motorcycles by combusting a fossil fuel like petroleum (although these vehicles are slowly being replaced by electric vehicles).

Combustion is a type of chemical reaction called a redox reaction, short for 'reduction-oxidation'. Here, one substance loses electrons and the other gains them. The losing substance is called the oxidant. (Historically, the oxidant was a substance that provided oxygen atoms in a reaction. Over time chemists generalised the term to include all substances that participated in a chemical reaction the way oxygen did, by donating electrons.) The gaining substance is called the reductant. During combustion, the fuel is the reductant.

All combustion reactions release energy. Sometimes, the heat energy in this release will vaporise the fuel, producing a flame. The combustion reaction also releases a gaseous mix of highly oxidised matter called smoke. Combustion science is the branch of science devoted to studying combustion. The combustion of fossil fuels in internal combustion engines and industrial processes is an important cause of global warming.

Combustion scientists study the reaction in different ways — including in space — to understand the different ways it can be controlled and the reaction products made cleaner.

SHIVERING PRODUCES HEAT TO KEEP YOU WARM

Q: Why do we shiver when it is cold?

A: Shivering (physical thermogenesis) occurs when the tension of the skeletal muscles rises beyond a critical level or when the body temperature falls below the critical level of 37.1 degrees C.

Shivering is actually an involuntary contraction of muscles to maintain body temperature during fever and in cool environments. It involves oscillating skeletal-muscle contractions that occur at 10-20 per second. The movement is at first irregular, then assumes quick involuntary movements during which small groups of muscles contract asynchronously. Due to the asynchronous movement, they do not move the parts associated with them in a coordinated manner.

The posterior hypothalamus region in the brain harbours the primary motor centre responsible for shivering. When the body temperature falls below 37.1 degrees C, the skin sends cold signals to the spinal cord. These are picked by the hypothalamus, which takes advantage of the fact that increased skeletal-muscle activity generates heat. Acting through descending pathways that terminate on the motor neurons controlling the body's skeletal muscles, the hypothalamus gradually increases skeletal-muscle tone (constant level of tension within muscles).

Thus shivering begins throughout the body when the tension of the skeletal muscles rises beyond the critical level, producing heat and increasing the temperature of the body within a matter of



seconds. Studies reveal that shivering may produce as much as 42.5 cal/hr, almost seven times greater than man's normal resting metabolism at room temperature. In a resting person, most body heat is produced by the thoracic and abdominal organs due to ongoing metabolic activities.

Generally, shivering is seen only in birds and mammals.

BEHIND CANNIBAL STEREOTYPE: WHY JOE BIDEN'S COMMENTS OFFENDED PAPUA NEW GUINEA

Papua New Guinea Prime Minister James Marape, last week, criticised United States President Joe Biden for implying that his uncle was eaten by cannibals in New Guinea during World War II.

Biden, during a campaign event at Pittsburgh on April 17, had said that after his uncle's plane was shot down in New Guinea, "they never found the body because there used to be, there were a lot of cannibals, for real, in that part of New Guinea."

In response, Marape said: "President Biden's remarks may have been a slip of the tongue; however, my country does not deserve to be labelled as such [as cannibals]."

The people of New Guinea have long tried to shed the cannibal label. While there have been documented cases of cannibalism among tribes on the island, the use of the stereotype has as much to do with European ideas on race and civilisation.

Eating 'witches', not humans

The Korowai tribe of New Guinea (they live in the Indonesian province of Papua on the western side of the island) number between 2,000 and 4,000. Anthropologist Rupert Stasch wrote that "their spectacular treehouses, their limited possession of factory-made commodities such as cotton clothing, and their practice of cannibalism" make them "a perfect fit with Westerners' stereotypes of 'primitive' humanity" (Society of Others: Kinship and Mourning in a West Papuan Place, 2009).

Although some anthropologists say the practice has been discontinued, the Korowai gained global notoriety as cannibals. But they themselves do not identify as such.

"The Korowai have no knowledge of the deadly germs that infest their jungles, and so believe that mysterious deaths must be caused by khakhua, or witches who take on the form of men," a 2006 Smithsonian Magazine article said. When a member of the tribe dies, his or her male relatives kill the khakhua responsible (the dying person names him). And then they eat him. As a Korowai man told the Smithsonian Magazine: "We don't eat humans, we only eat khakhua."

Cannibalism as acts of love and grief

Cannibalism in New Guinea has also been documented among the Fore (pronounced FOR-ay) people who live in the highlands of Papua New Guinea. This tribe of approximately 20,000 individuals (today) consumed human flesh as part of mortuary rituals till about the 1960s.

For the Fore, this was an act of love and grief. "If the body was buried it was eaten by worms; if it was placed on a platform it was eaten by maggots; the Fore believed it was much better that the body was eaten by people who loved the deceased than by worms and insects," researchers Jerome Whitfield, Wandagi Pako, John Collinge, and Michael Alpers wrote in their paper 'Mortuary rites of the South Fore and kuru' (2008).



The Fore stopped consuming human flesh in the 1960s after it was discovered that it was this practice that was leading to the spread of a deadly disease — kuru (literally “shivering” or “trembling”), later identified as a form of transmissible spongiform encephalopathy — that was annually killing as many as 200 Fore in the mid-20th century. The incidence of kuru has now declined, and no Fore has succumbed to the illness since 2010.

The cannibal stereotype in New Guinea

In both the above cases, consumption of human flesh was a part of social custom, which helped the tribes make sense of the inexplicable, or process difficult emotions. New Guinea’s famous cannibal tribes did not eat just anybody, as Biden’s remarks appeared to imply. They were not “savages” — stereotype that has historically followed cannibals.

“At best, these ‘savages’ were pegged as souls to be saved... But far worse occurred throughout history, as those accused of consuming other humans, for any reason, were brutalised, enslaved, and murdered,” author Bill Schutt wrote in *Cannibalism: A Perfectly Natural History* (2017).

“During the last years of the 15th century... millions of indigenous people living in the Caribbean and Mexico were summarily reclassified as cannibals for reasons that had little to do with people-eating. Instead, it paved the way for them to be robbed, beaten, conquered, and slain, all at the whim of their new Spanish masters,” he wrote.

Biden’s remarks — and Papua New Guinea’s reaction to them — must be seen in this context, where the cannibal stereotype has been used to justify the excesses of European colonialism.

What explains cannibalism

In Darwinian terms, it is fairly simple to explain the cannibal taboo. Eating one’s own is looked down upon as it impacts the health of the species. If, as Darwin postulated, all species have a fundamental imperative towards survival and propagation, the practice of cannibalism is directly antithetical to this.

However, there is plenty of evidence of cannibalism across the natural world, from single-celled organisms, to dinosaurs, to polar bears, to humans.

Schutt argued that the incidence and frequency of cannibalism can be explained among various species — and different human communities — based on their local environmental conditions. “Cannibalism serves a variety of functions, depending on the cannibal. There are even examples in which an individual being cannibalised receives a benefit,” he wrote.

Palaeoanthropologist Carole A Travis-Henikoff explained in her book *Dinner with a Cannibal* (2008): “Starvation brings on ‘survival’ cannibalism, while the ingestion of dead relatives is known as ‘endocannibalism’ or “funerary” cannibalism [like in the case of the Fore, an act of mourning]. ‘Exocannibalism’ refers to the eating of one’s enemies [like the Korowai, also known to address skewed sex ratios], whereas ‘religious’ cannibalism relates to the actual or simulated partaking of human flesh as part of a religious rite.”

SHOULD THE MONA LISA BE GIVEN A ROOM OF ITS OWN?

There could be an idea here for a museum edition of the popular board game *Guess Who*, if only product designers would take note. From across the museums of the world, pick out its most distinguished showcase. Now, do a picture gallery of its neighbours. Guess which artwork abuts

4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



Picasso's 1937 masterpiece Guernica in room number 205.10 of Madrid's Reina Sofia museum? Who flanks Vermeer's Girl with a Pearl Earring in Hague's Mauritshuis? As for the dour Lisa Gherardini in Louvre's Salle des États, known to the world as the mysterious Mona Lisa, is she touched by the miracle and festivities in Veronese's canvas that hangs opposite? The Wedding Feast at Cana is, after all, one of the finest representations of late Renaissance painting.

As things stand though, only the first among equals seems to have recall value. The rest of the artwork — a wealth of them really — stand forgotten in the mad rush to catch a glimpse of the celebrity among them. It's one of the reasons Paris's Louvre has announced its decision to shift the Mona Lisa from its present location to an exclusive subterranean room of its own. Museum authorities are in consultation with France's culture ministry for a potential solution that gives both Leonardo da Vinci's masterpiece and those of other Renaissance masters currently sharing space with it, maximum display. According to the museum's estimate, about 80 per cent of its daily footfalls are for the Mona Lisa. In 2023, the museum had close to 8.9 million visitors.

A large part of contemporary museum experience involves a negotiation with new, participatory modes of cultural consumption. In 2023, for instance, after three decades, the Reina Sofia allowed for the Guernica to be photographed. From selfie-taking hordes to environmentalists hurling soup as protest, to the fleeting, underwhelming glimpse of the painting, wondering why the prima donna of the art world is such a letdown, the Mona Lisa's particular challenge has been multi-pronged. A room of its own might allow more elbow room for such deliberations.

WHY IS VENICE CHARGING AN ENTRY FEE FOR TOURISTS?

The story so far:

On April 25, Venice, a city in Italy, to control overtourism, introduced an entry fee for visitors who are coming in to visit the city.

What is the Venice access fee?

Day-trippers coming to the city between 8.30 am and 4 pm are now required to pay €5. Overnight visitors are not charged, nor are residents, commuters, students, or children under 14. As part of a trial period, the entrance fee, which can be paid online and is only necessary to enter Venice's historic centre, is applicable on 29 peak days from April 25 to July 14. Transgressors risk fines ranging from €50 to €300.

What has been the response?

Some locals consider it a "joke," arguing that it could turn Venice into a 'theme park'. A number of residents' associations have protested, claiming that it is a political ploy that most likely won't stop tourists from visiting St. Mark's Square and the Rialto Bridge. On its first day, 5,500 individuals purchased tickets, bringing in €27,500, which may just be enough to cover operating costs.

It's a "first-of-its-kind experiment," according to Venice Mayor Luigi Brugnaro, to lessen overcrowding, promote longer stays, and enhance the quality of life for locals in one of the most popular tourist destinations in the world. It's an effort to find a new equilibrium between residents and visitors. It would also aid in gathering basic data and controlling visitor flows. But some have also brought up privacy-related issues.



Is overcrowding an issue in Venice?

The introduction of the tourist tax comes after Venice just managed to avoid being included on UNESCO's danger list last year due to the harm that overtourism was causing to its fragile ecosystem. Due to mass tourism, Venice's main island, which was once the heart of a powerful maritime republic, has lost more than 1,20,000 residents since the early 1950s. The population shrank to fifty thousand. With 3.2 million overnight guests in the historic centre in 2022 and over 30 million day-trippers annually, the city experiences congestion when the number of day-trippers approaches 30,000-40,000. It is thought that day-trippers contribute very little to the local economy.

What about sustainability?

Venice has been making an effort to re-establish a more sustainable relationship with tourists. The insistence from UNESCO and other environmentalists' eventually forced the authority to forbid big cruise ships from passing through the Giudecca canal and past St. Mark's Square. A positive spillover effect of the Venice entry tax would be the reducing of the rapidly increasing number of unauthorised Airbnbs within the city. People operating illegal rentals will need to register legitimately (and pay tax) since anyone staying overnight will have to disclose where they are staying.

What about other popular spots?

Overtourism is a problem in many other European cities, including Amsterdam, Barcelona, and London. Tens of thousands of Spanish citizens recently protested in the Canary Islands, demanding a cap on the number of tourists allowed to visit the archipelago.

Seville's main Plaza de España also requires a fee to enter.

The small admission price might just be the beginning. The Italian town of Bagnoregio levied a fee on visitors in 2018 to collect funds for its rescue since portions of the town are collapsing and it was successful. The most visited place in Wales is the town of Portmeirion in north Wales, which is one of the few British towns which charges for admission.

Can India follow suit?

Similarly, India which is home to a large number of tourist spots can definitely earn a lot from tourism while simultaneously deterring insignificant revenue-generating tourists.

COVISHIELD COULD CAUSE BLOOD CLOTS IN VERY RARE CASES, MANUFACTURER ASTRAZENECA HAS SAID. WHAT DOES THIS MEAN?

Global pharmaceutical giant AstraZeneca has said that its AZD1222 vaccine against Covid-19, which was made under licence in India as Covishield, could cause low platelet counts and formation of blood clots in "very rare" cases.

AstraZeneca has accepted a link between the vaccine and Thrombosis with Thrombocytopenia Syndrome (TTS), a medical condition characterised by abnormally low levels of platelets and the formation of blood clots.



AstraZeneca's vaccine formula was licensed to Pune-based vaccine maker Serum Institute of India (SII) during the coronavirus pandemic for the manufacture of Covishield. More than 175 crore doses of Covishield have been administered in India.

What has led AstraZeneca to make this submission? What is known about the vaccines and TTS? And should Indians who received Covishield shots be worried?

What exactly has AstraZeneca said?

AstraZeneca spoke about TTS in court documents following a suit brought against the company in the United Kingdom. The pharmaceutical giant is being sued over health claims related to the vaccine that it developed in collaboration with the University of Oxford amid the Covid-19 pandemic in 2020.

The UK-based media organisation The Telegraph reported recently that a "case was lodged last year by Jamie Scott, a father of two, who was left with a permanent brain injury after developing a blood clot and a bleed on the brain that has prevented him from working after he received the vaccine in April 2021".

The report said that in all, "fifty-one cases have been lodged in the High Court (in the UK), with victims and grieving relatives seeking damages estimated to be worth up to £100 million".

In court documents from February, AstraZeneca denied that "TTS is caused by the vaccine at a generic level". However, it admitted to the possibility of TTS as a result of its vaccination in "very rare cases".

What are the symptoms of TTS?

A range of symptoms are associated with TTS, including breathlessness, pain in the chest or limbs, pinhead-size red spots or bruising of the skin in an area beyond the injection site, headaches, numbness in body parts, etc. TTS could mean a restriction in the flow of blood due to clotting.

The website of Johns Hopkins Medicine says, "Thrombosis can block the blood flow in both veins and arteries. Complications depend on where the thrombosis is located. The most serious problems include stroke, heart attack, and serious breathing problems."

Why have these concerns surfaced now, four years after the outbreak?

These concerns have in fact, been reported earlier. But this is the first time that AstraZeneca has confirmed the link between TTS and its vaccines.

Before the Covid-19 vaccines were rolled out in India, the Indian government had issued a fact sheet in January 2021, in which it specifically said that Covishield (the Indian variant of AstraZeneca's vaccine) should be given with "caution" to individuals with thrombocytopenia, that is, a condition of low platelet counts. Covishield and Covaxin were the two Covid vaccines given to Indians.

Then, in March 2021, the European countries France, Germany, Italy, Netherlands, Denmark, Norway, Iceland, Austria, Estonia, Bulgaria, Romania, Estonia, Lithuania, Luxembourg, and Latvia temporarily paused the use of the AstraZeneca vaccine after a few cases of blood clotting were reported.



The following month, the World Health Organisation (WHO) said TTS was being reported in some cases after vaccinations with Covishield and Vaxzevria (which was the other trade name for AstraZeneca's vaccine).

However, the WHO had added, "Based on latest available data, the risk of TTS with Vaxzevria and Covishield vaccines appears to be very low. Data from the UK suggest the risk is approximately four cases per million adults (1 case per 250,000) who receive the vaccine, while the rate is estimated to be approximately 1 per 100,000 in the European Union (EU)."

Were incidents of blood clots reported in India as well?

The Indian government said in May 2021 that 26 potential thromboembolic events, or formation of clots in blood vessels, had been reported since Covishield began to be administered.

India started administering the vaccines on January 16, 2021, and considering the total number of doses that had been administered until then, the number of potential thromboembolic events worked out to 0.61 cases per million doses, or a percentage of 0.000061.

According to more recent data, the government's committee on Adverse Events Following Immunization (AEFI) said at least 36 cases of TTS have been vetted and confirmed to have been caused due to Covishield. The committee's last report, which was made public in June last year, showed that of these cases 18 deaths were reported. Almost all of these TTS cases pertain to 2021, which was the first year of Covid-19 vaccination in the country.

The Union Health Ministry had termed this possibility as "minuscule", and said that Covishield "continues to have a definite positive benefit-risk profile" with "tremendous potential to prevent infections and reduce deaths" due to Covid-19.

In the case of Covaxin, which was India's indigenous vaccine manufactured by Bharat Biotech, it said "no potential thromboembolic events" had been reported.

The Ministry had added that scientific literature suggests "this risk (of blood clotting) is almost 70% less in persons of South and Southeast Asian descent in comparison to those from European descent".

In 2023, the WHO incorporated vaccine-induced immune thrombotic thrombocytopenia (VITT) into its classification of TTS.