



19th to 25th May 2024

CURRENT AFFAIRS FOR UPSC

DreamIAS





INTERNATIONAL

END THE PUNISHMENT

Julian Assange, founder of whistle-blower website WikiLeaks, has won a legal reprieve in the U.K., with permission to appeal against an extradition order that would see him transferred to the U.S. to face trial for allegedly leaking military secrets. The ruling came after the High Court ruled in March that the U.S. government would be given three weeks to assure that Mr. Assange – an Australian national – would, during trial, be allowed to rely on the First Amendment of the U.S. constitution that protects freedom of speech; that he would not be “prejudiced at trial” for being a foreign national in a U.S. court; and that the death penalty would not be applied in his case. Although his legal team did not contest the assurance provided by Washington that it was an “unambiguous executive promise” that the death penalty would be avoided in his case, the U.K. judges appeared to accept their argument of prejudice towards his nationality in the context of his right to free speech, especially after “a U.S. prosecutor had said the first amendment may not apply to foreigners when it came to national security issues”. Mr. Assange will now have a few months to prepare his appeal.

Several facts stand out in the case of Mr. Assange, which entered the global spotlight since April 2010, when WikiLeaks published leaked videos from a U.S. helicopter in Baghdad showing an airstrike that killed civilians. The organisation then published secret military documents on the U.S. wars in Afghanistan and Iraq and confidential cables of U.S. diplomatic missions. The key consideration regarding U.S. charges against Mr. Assange for allegedly violating the Espionage Act, brought against him in 2019 by the administration of former President Donald Trump, is that Mr. Assange has spent seven years holed up in the Ecuadorian Embassy and then a further five years in the U.K.’s Belmarsh Prison — a lengthy incarceration considering that Chelsea Manning, the erstwhile U.S. military analyst and whistle-blower who transmitted the confidential information from U.S. government servers to WikiLeaks, was sentenced to 35 years in prison in 2013, and then that sentence was commuted by former U.S. President Barack Obama in 2017. While Mr. Assange’s critics, including notably the U.S. government, point out that he did not redact names in his mega-scale exposé, thus allowing Washington to argue that the revelations placed individuals at “risk of serious harm, torture or even death”, the publication of the documents raised serious questions regarding human rights violations, for example in the targeting of civilians during war. In this sense Mr. Assange and WikiLeaks performed a public service akin to what journalism of conscience does. And considering that he has been punished enough already, he should be allowed to fly home.

ICJ ORDERS ISRAEL TO ‘HALT’ RAFAH OFFENSIVE

The top UN court on Friday ordered Israel to halt military operations in Rafah “immediately”, a landmark ruling likely to increase mounting international pressure on Israel more than seven months into the Gaza war.

The International Court of Justice (ICJ) also ruled Israel must keep open the key Rafah crossing for “unhindered” humanitarian aid and urged the “unconditional” release of hostages taken by Hamas during its October 7 assault.

ICJ rulings are legally binding but the court has no concrete means to enforce them. For example, it ordered Russia to halt its invasion of Ukraine, to no avail.



The court said Israel must “immediately halt its military offensive, and any other action in the Rafah Governorate, which may inflict on the Palestinian group in Gaza conditions of life that could bring about its physical destruction in whole or in part”.

Israel had argued before the court that an order to stop military activity would give free rein to Hamas extremists and prevent its Army from rescuing hostages taken in the group’s brutal October 7 attack.

Prime Minister Benjamin Netanyahu announced he would convene senior ministers after the ruling.

‘Provisional measures’

South Africa hailed the ruling, with Foreign Minister Naledi Pandor saying it was a “much stronger... set of provisional measures, very clear call for a cessation”.

The ICJ ruling comes hot on the heels of another highly charged decision on Monday by the International Criminal Court prosecutor to seek arrest warrants for top Israeli and Hamas leaders.

Prosecutor Karim Khan alleged that senior Israeli leaders, including Prime Minister Netanyahu, plus top Hamas officials, were guilty of war crimes and crimes against humanity related to the war in Gaza and the October 7 attack.

‘Unimpeded access’

South Africa brought the case before the ICJ last year alleging that Israel’s Gaza offensive breached the 1948 UN Genocide Convention — a charge strongly denied by Israel.

In a ruling on January 26 that made headlines worldwide, the ICJ ordered Israel to do everything it could to prevent acts of genocide during its military operation in Gaza.

The ICJ on Friday also ordered Israel to ensure “unimpeded access” to UN-mandated investigators to look into allegations of genocide. But South Africa has since returned several times to the ICJ arguing that the dire humanitarian situation in Gaza compels the court to issue further fresh emergency measures.

In public hearings last week, South Africa’s Ambassador Vusimuzi Madonsela alleged that “Israel’s genocide has continued apace and has just reached a new and horrific stage”.

“Although the present application was triggered by the unfolding situation in Rafah, Israel’s genocidal onslaught across Gaza has intensified over the past few days, also warranting the attention of this court,” he said.

South Africa argued the only way to enable humanitarian aid in to ease the crisis in Gaza was a full halt to Israel’s military operations. The court will take months if not years to rule on the broader South African genocide case.

The ICJ described the humanitarian situation as “disastrous” and that Israel’s evacuation efforts were insufficient.

Israel retorted during hearings that South Africa’s case was an “obscene exploitation of the most sacred convention” and the picture Pretoria paints to the court was “completely divorced from the facts and circumstances”.



JUSTIFIED BALANCE

In seeking arrest warrants against the leadership of Hamas as well as of Israel, the Office of the Prosecutor of the International Criminal Court (ICC) has taken a welcome first step towards accountability for the war crimes committed since October 7 last year. It was the day Hamas launched its deadly attacks, killing over 1,500 Israelis and taking at least 245 hostages. The Israeli military retaliation on Gaza has been brutal and relentless, and the death count has crossed 35,000 people, most of them women and children. The application for warrants, which will be decided by a Pre-Trial Chamber of ICC judges, will naturally have a greater impact on Israel than on the non-state group. Israel's immediate concern is the moral equivalence the prosecutor has made in levelling charges of war crimes and crimes against humanity against both the national leadership of a democracy and an armed group that wants to destroy it. Save for Israel's diehard supporters, including the U.S. and some other governments, few would disagree with the balance sought to be struck by ICC Prosecutor Karim A.A. Khan. It may not be flattering for Israeli Prime Minister Benjamin Netanyahu and Defence Minister Yoav Gallant to be named for war crimes and crimes against humanity alongside Yahya Sinwar, head of the Islamic Resistance Movement, or Hamas, Mohammed Diab Ibrahim Al-Masri alias Deif, commander-in-chief of the Al-Qassam Brigades, and Ismail Haniyeh, who heads the Hamas Political Bureau.

It would have been impossible, however, for the ICC prosecutor to ignore what the Israeli leadership has been accused of — starvation as a method of war and intentionally killing and directing attacks against civilians, among others. Hamas has been accused of extermination, murder, rape, torture and taking hostages. Israel has predictably questioned the application, repeating its position that it is engaged in legitimate self-defence. To many, the arrest warrants may appear futile. Those against whom warrants have been issued, but remain unexecuted, include Russian President Vladimir Putin and Sudan's President Omar al-Bashir. However, regardless of the efficacy of such measures in preventing or punishing war crimes, the step does entail diplomatic costs, as member-countries of the ICC are obliged to arrest and hand over those against whom warrants are pending under the Rome Statute, the treaty that created the ICC mechanism. It may increase Israel's isolation on the one hand, and harden the U.S.-Israeli position on the Palestinian question on the other. Israel, like the U.S., is not an ICC member-state; but as the Putin precedent shows, this may not be an impediment to the issuance of warrants against its leaders. On the flip side, Mr. Netanyahu will likely use this to shore up his position at home.

POWERFUL, SYMBOLIC

The announcement by Ireland, Norway, and Spain, of their intent to formally recognise the state of Palestine, next week, is one more important sign of the changing tide of international opinion that Israel Prime Minister Benjamin Netanyahu cannot afford to ignore. In just the past month, in the UN General Assembly, 143 countries, including India, passed a resolution calling for the recognition of the Palestinian state by the UN Security Council, where the U.S. has vetoed such a move. Earlier this week, the International Criminal Court Prosecutor moved applications for arrest warrants for Mr. Netanyahu and Defence Minister Yoav Gallant for operations after October 7 in Gaza as well as the Hamas leadership for the terror attack that killed 1,200 in Israel, terming these as "war crimes". On Friday, the International Court of Justice will pronounce another verdict in the petition by South Africa calling for additional measures in the prosecution of Israel for "genocide". The latest decision by the three countries, that have been vocal in their criticism of Israel — they join eight EU members that have already recognised Palestinian statehood — may not materially change the situation on the ground. But it is meant to be what the Irish Taoiseach



Simon Harris referred to as an “act of powerful political and symbolic value” to Israel, especially as it essays what could be the “final assault” on Rafah. While practically every country has condemned Hamas’s terror attacks, Mr. Harris said it would be a mistake to ignore the legitimate Palestinian government in the West Bank, saying that “Hamas is not the Palestinian people”. Norway’s Prime Minister Jonas Gahr Støre said that the move aimed to support “moderate forces that are on a retreating front in a protracted and cruel conflict”. Spain’s action followed its denial of port facilities to a Danish-flagged ship with explosive material from India meant for Israel, which it said was a firm policy now. Israel’s response, however, has been to recall its envoys and summon the envoys of all three countries for a dressing down.

In the immediate future, the multiple messages of near-global consensus are meant to push Israel’s government to rethink its plans for Rafah, to stop more civilian losses, and to allow humanitarian aid free access into Gaza. But in the longer term, they are meant to remind Mr. Netanyahu that even if he has disassociated himself from the “two-state solution”, this is something the world believes is the road map to peace. By turning deaf to these messages, Mr. Netanyahu is only furthering his isolation, especially from an international community that came out in full sympathy on October 7, but has grown increasingly horrified by the military campaign since then.

TALKING PEACE

Two years after Russia’s invasion of Ukraine, Switzerland has stepped in to organise a peace conference, making a special effort to broaden global consensus on the war by enlisting those who have not joined the western coalition thus far. As a close partner of Russia, a member of the BRICS and SCO groupings, a leader in the Global South, and an aspirant to world leadership, India is, no doubt, at the top of the list. And the Swiss Foreign Secretary Alexandre Fasel’s visit to Delhi this week, following closely those of two Swiss Ministers, and the Ukrainian Foreign Minister Dmytro Kuleba over the past few months, is evidence that the invitation to India at the head of state/head of government level is a priority. Of the 160 or so countries that invitations for the conference have gone to — it is to be held in the resort town of Bürgenstock on June 15-16 — about 50 have confirmed their attendance, mostly from the European Union, NATO alliance, G-7 countries and U.S. allies such as Japan, South Korea and Australia. Russia has not been invited, and Mr. Fasel made it clear that their diplomacy was hoping to bring over ‘BICS’ leaders (BRICS minus Russia) so they could convey the outcomes to Moscow, with a view to inviting Russia to a future round of talks. With Brazilian President Lula indicating that he would not attend, and South Africa’s citing its general elections on May 29 to formally decline the invitation, all eyes are on whether Chinese President Xi Jinping, and Prime Minister Narendra Modi, if he is re-elected, or official nominees would attend.

Convincing the rest of the world to attend a platform that appears stilted towards Ukraine remains a tall order for the organisers. While Switzerland prides itself on its “neutrality”, it has already chosen sides in the current conflict by imposing sanctions on Russia. Another venue may have appeared more impartial. The agenda for the conference is to build a framework for or road map to peace, and to discuss issues such as ensuring food security and freedom of navigation, nuclear safety and humanitarian issues. It seems unlikely that much headway can be made on any of these issues without both parties to the conflict at the table. It is also hard to foresee what else can be achieved as long as Russia and Ukraine believe they can make or consolidate more gains on the battlefield — a real negotiation begins when either one or both sides believe they have exhausted military options. If the aim of the conference then is, as Russian President Vladimir Putin says, to



“pressure” Russia into announcing a ceasefire or ceding territory it has won, then it is hardly likely to succeed, given the UN General Assembly’s failure to bring such pressure through multiple resolutions. New Delhi, that has thus far refused to join any statement that is overtly critical of Russia, and has not diluted ties with Moscow, may thus find it easier to hedge its bets, and only show its hand once a truly balanced and more inclusive peace effort gets under way.

SNAP POLL

Prime Minister Rishi Sunak sprung a surprise election announcement when he revealed that the United Kingdom would head to the polls on July 4. While the incumbent government of the Conservative Party was not required to call for an election until January 2025, almost since the day Mr. Sunak entered 10 Downing Street, most polls have suggested that his party would lose the next election by a margin of over 20%, the likes of which are “usually only seen at exceptionally bad moments in the midterm”. It is possible that Mr. Sunak and his team seized upon the political capital that may accrue to them from the recent announcement that the U.K.’s inflation rate has dropped to 2.3%, the lowest in at least three years. There might have been a few other factors including a positive assessment of Mr. Sunak’s cabinet in steadying the economic ship in the post-COVID-19 scenario, and a legal victory securing the government’s plans to implement immigration reforms that will see some asylum seekers sent to Rwanda to have their applications processed there.

While it is true that polls suggest voter frustration at the end of 14 unbroken years of rule by the Conservative Party, Mr. Sunak’s comment that this election will take place at a time where the world is “more dangerous than it has been at any point since the end of the Cold War”, is not without merit. Indeed, the denouement of the long-drawn Russian invasion of Ukraine could make or break the security paradigm for Europe and the U.K., including not only serious questions regarding territorial sovereignty on the eastern front but also energy security with knock-on effects for prospects for economic stability. Similarly, the churn in West Asia, including the humanitarian tragedy unfolding in Gaza and the strategic churn punctuated by the threat of war in the Iran imbroglio, will have echoes throughout the region and certainly for the U.K. Finally, it is unclear that even with the Rwanda plan receiving a legal green light, the Sunak government has been able to have a tangible impact on small boat crossings at a broad level. Contrarily, government statistics indicate that even though such arrivals dropped by around 33% during 2022 and 2023, boat crossings for 2024 are at a “record high” by comparison, and between January 1 and May 21 of this year more than 9,800 people crossed the U.K.’s border through such means. In this context, his remark that the Labour Party would want people to think “this election is over before it’s even begun” might not be wrong, but he and his colleagues would do well to ask where the opposition’s confidence in this regard stems from.

CHINA’S MILITARY EXERCISES AROUND TAIWAN: POWER PLAY AT SEA

On the face of it, the message from China’s military exercise — which included units from the People’s Liberation Army, the PLA-Navy, Air Force and Coast Guard — is unambiguous. According to China’s defence ministry, the drills around Taiwan’s main island are meant to test the military’s ability to “seize power” in key areas — in essence, facilitate an annexation.

The drills, which began suddenly on Thursday, also conducted mock missile strikes targeting key offshore islands as well as strategically and commercially important sea lanes. The provocation is the election of Lai Ching Te — who assumed office on May 20 — as President of Taiwan. Lai is



from the pro-sovereignty Democratic Progressive Party, which Beijing considers a “separatist” group.

It is easy to view the current exercise as a part of the uneasy equilibrium around Taiwan. In fact, similar drills were conducted by China in 2022 and 2023. Beijing keeps rattling the cage to intimidate the significant section of Taiwan’s leadership that is, at least in principle, committed to independence. Taiwan’s leadership has stopped short of forcing a change in the status quo as well.

After all, it has functional de facto autonomy even though China keeps making a de jure claim to its territory. In fact, the military escalation that would inevitably follow any attempt at annexation is bound to inform Beijing’s strategic calculus. Two factors in the current moment, however, complicate this picture and are cause for caution.

It may be that China’s power projection is not merely about intimidation. President Xi Jinping has repeated on numerous occasions that the “re-unification” of China and Taiwan is on his agenda, a likely component of his legacy. He has also refused to rule out the use of force. Even if such a maximalist position is political rhetoric, meant as much for domestic audiences as Taipei and Western capitals, it does not bode well.

Second, military drills and Chinese navy and coast guard patrols do not just project power, they try to assert it. There is little doubt that an expansionist China has been “slicing” territory from its neighbours and trying to expand its zone of influence in the South China Sea and the Indo-Pacific as a whole. This has caused much alarm in littoral states, many of which have deep economic ties with the aggressor. It is in this context of intimidation and expansion that the drills are taking place. Great and middle powers with stakes in the region must keep a close watch.

DEATH OF A PRESIDENT

The death of Iran’s eighth President, Ebrahim Raisi, and Foreign Minister Hossein Amir-Abdollahian, in a helicopter crash in northwestern Iran amid bad weather has sent shockwaves across West Asia. Raisi and others, including local officials, were travelling to Tabriz after inaugurating a dam with Azerbaijan’s President Ilham Aliyev, on the countries’ shared border when his chopper went down in Iran’s East Azerbaijan province. Raisi, a conservative cleric, rose to power in 2021 after eight years of rule by moderate President Hassan Rouhani, who signed the 2015 nuclear deal with the U.S. and other world powers. Mr. Rouhani’s promise of change and prosperity through dialogue did not materialise as the then U.S. President, Donald Trump sabotaged the deal in 2018 and reimposed sanctions on Iran. When moderates lost their face and morale, the conservatives tightened their grip on the state through Raisi. A confidant of Supreme Leader Ayatollah Ali Khamenei, Raisi escalated a crackdown on civil rights at home, strengthened Iran’s ties with Russia and China, doubled down on its support for non-state militias such as Hamas and Hezbollah and expanded Iran’s nuclear programme. In three years, he emerged as one of Iran’s most powerful men and was seen as a potential successor to Mr. Khamenei.

The death of the President could not have come at a worse time for Iran. It is already struggling to stabilise a stricken economy, battered by U.S.-imposed sanctions, and trying to calm social tensions. The nuclear deal remains dead and West Asia is on fire. In April, Raisi oversaw an unprecedented attack on Israel following Israel’s strike on the Iranian consulate in Damascus. Israel’s meek response avoided an all-out war but tensions remained high. In recent years, Iran has also lost key officials. In the deaths of Raisi and Amir-Abdollahian, the Islamic Republic has lost an experienced, crisis-hardened cleric administrator and a seasoned diplomat. It is



understandable that Iran would need time to get over the shock that it is in now. Given the geopolitical tensions, Raisi's death could also fuel conspiracy theories, which could further inflame the region. So, it is imperative for Iran to get to the bottom of the crash. Another priority is that the transition to a new presidency is handled smoothly. First Vice-President Mohammed Mokhber will assume interim presidential powers and the country is expected to hold a presidential election within 50 days. A change in presidency is unlikely to alter Iran's foreign policy direction, but the loss of one of the most experienced and ideologically disciplined defenders of the revolution and a transition amid domestic and regional uncertainties, is an added challenge to the Islamic Republic.

WHAT IS COPERNICUS EMERGENCY MANAGEMENT SERVICE, CALLED IN TO LOCATE RAISI'S CHOPPER?

Soon after Iranian President Ebrahim Raisi's helicopter crashed on Sunday, the European Union (EU) activated its rapid satellite mapping service to help search efforts, following a request for assistance from Iran.

- The rapid mapping service is one of the crucial components of the Emergency Management Service (EMS), which comes under the EU's Copernicus programme.
- The Copernicus programme is part of the EU's space programme and aims to monitor the Earth and its environment by collecting data from a set of satellites known as the Sentinels.
- Launched in 1998, the Copernicus programme was earlier called Global Monitoring for Environmental Security (GMES).
- The Copernicus EMS has been in operation since 2012, and provides geo-spatial information derived from satellite remote sensing and in situ data sources to help manage natural disasters, man-made emergencies, and humanitarian crises.
- According to the Copernicus website, the RM service can supply four different "products"—
 - i. Reference Product: It gives quick information on the area of interest and assets before the emergency/disaster takes place.
 - ii. First Estimate Product: It provides a quick assessment of the most affected locations after the disaster has taken place.
 - iii. Delineation Product: It supplies information on the impact, extent, and update on the situation after the disaster has taken place.
 - iv. Grading Product: It provides damage assessment, spatial distribution, and extent after the disaster has taken place.



NATION

PUTIN AND XI: A WORRY FOR DELHI

The 43rd meeting between the Russian President, Vladimir Putin, and the Chinese leader, Xi Jinping, last week in Beijing underlines the growing anti-Western convergence of strategic interests between two of the world's longest serving leaders.

The expansive agenda outlined by the two leaders demands that Delhi carefully recalibrates its own great power relations and compensates wherever necessary to blunt the negative consequences of the Sino-Russian entente.

Since he took charge of Russia in 2000, Putin has made a sustained effort to boost ties with China even as he explored a modus vivendi with the West. At the turn of the 2000s, a rising China was celebrating its special ties to the United States and Europe but found it useful to develop strong ties with Russia. Since his ascent to the top in Beijing, Xi Jinping has challenged the US primacy in Asia and doubled down on a strong partnership with Russia.

As their contradictions with the US began to deepen over the last decade, both Putin and Xi have elevated their bilateral collaboration into a comprehensive strategic partnership. On the eve of his invasion of Ukraine in February 2022, Putin travelled to Beijing to proclaim an "alliance without limits".

Since then, Putin and Xi have surprised the Western observers who had been arguing that Russia and China can't get too close to each other given the range of their competing regional geopolitical interests and the intensity of their stakes in economic engagement with the West.

Yet, Putin and Xi have shown that they can put their divergences aside in building a new axis rooted in their shared interest in challenging the West. The latest summit has highlighted their efforts at political coordination and mutual support on their respective national priorities — Ukraine for Russia and Taiwan for China.

Putin and Xi also denounced the US interventions in Europe and its effort to build new coalitions like the Quadrilateral Forum (in which India is a member along with Australia, Japan and the US). Putin and Xi also underlined their commitment to build a "multipolar world".

They reaffirmed their ambition to counter American hegemony over the domain of international finance. If America has been pressing China to limit its cooperation with Russia, the usually wooden Xi thumbed his nose against Washington with a rare hug to Putin.

Delhi, like many Western chancelleries, had been betting on the thesis that Moscow and Beijing would not collaborate beyond a point. In a corollary to this thesis, Delhi has been hoping that Putin will not ignore India's concerns in drawing too close to a China that has emerged as India's principal external challenge. The time has come for Delhi to reexamine its Russia thesis and its corollary.

Moscow today is more dependent than ever before on Beijing, especially since Putin burned its bridges with the West in invading Ukraine. There is no doubt that China is the senior partner in the relationship with Russia. Delhi has strong reasons to worry that Putin's support for China's positions in the Indo-Pacific, would undermine India's effort to build a 'multipolar Asia' and magnify India's security vulnerabilities in relation to China.



KYRGYZSTAN VIOLENCE: GOVT ASKS INDIAN STUDENTS TO STAY INDOORS, CONTACT EMBASSY

The government on Saturday urged Indian citizens in Kyrgyzstan to stay indoors amid reports of attacks on foreign students and protests by local residents in Bishkek on Friday night over concerns about “growing numbers of migrants from Pakistan, Bangladesh, India, Egypt and other countries”.

“We are in touch with our students. The situation is presently calm but students are advised to stay indoors for the moment and get in touch with the Embassy in case of any issue. Our 24×7 contact number is 0555710041,” the Indian Consulate posted on X.

Foreign Minister S Jaishankar also advised Indian students in Bishkek to stay in regular touch with the embassy. “Monitoring the welfare of Indian students in Bishkek. The situation is reportedly calm now. Strongly advise students to stay in regular touch with the embassy,” he said.

Around 15,000 Indian students are estimated to be in Kyrgyzstan, mostly enrolled in medical colleges and universities. As per reports, an altercation took place between some local students and foreign students at a hostel on May 13, after which people started gathering on Friday to protest what they called was “lax treatment of foreigners involved in the fight”.

While the Kyrgyz government said the situation had been brought under control, police in riot gear remained deployed in parts of Kyrgyzstan’s capital overnight as large crowds gathered to protest the alleged fight between the students. The police were able to disperse the crowd by early Saturday morning.

Pakistan too has issued a similar advisory for its students, asking them to stay indoors. While some posts on social media claimed that three Pakistani students were killed in the attack, Islamabad said it has not received a report of any deaths yet.

Pakistan’s Kyrgyzstan consulate posted on X, “So far, a few hostels of medical universities in Bishkek and private residences of international students including Pakistanis have been attacked. The hostels are inhabited by students from India, Pakistan, and Bangladesh. There have been reports of light injuries to several students from Pakistan.” “Despite social media posts about alleged death and rape of Pakistani students, so far, we have not received any confirmed report.”

In a statement issued on Saturday, the Kyrgyz Ministry of Foreign Affairs said “destructive forces are deliberately disseminating untrue and false information about the situation in the Kyrgyz Republic in foreign mass media and social networks, especially in the territory of the Islamic Republic of Pakistan.”

The ministry said at present the situation in Bishkek, Kyrgyz Republic, is “absolutely calm and fully under control”. All necessary measures have been taken to ensure security and maintain peace and stability, the ministry said. “In this regard, the ministry asks representatives of the media, the blogging community and foreign colleagues to be guided only by official and verified information from the competent authorities of the Kyrgyz Republic,” the statement said.

State National Security Committee Chairman Kamchybek Tashiev was quoted by AKIpress news agency as saying that young people, between 18 and 25 years, gathered in Bishkek on Friday night over concerns about the growing number of migrants from Pakistan, Bangladesh, India, Egypt and other countries.



Kyrgyzstan is among the favoured destinations for students from South Asian nations for top-notch medical training. As per the Migration Data Portal, Kyrgyzstan hosted the highest number of international students (61,418) in 2021 among the five Central Asian countries. There are about 14,500 Indian and 10,000 Pakistani students in the country, as per estimates.

WILL EXPEDITE DECISION ON GUPTA'S EXTRADITION TO US: CZECH OFFICIAL IN PANNUN ASSASSINATION PLOT CASE

A day after the Constitutional Court of the Czech Republic rejected Indian citizen Nikhil Gupta's plea against being sent to the US to face trial for allegedly plotting to kill Khalistan separatist Gurpatwant Singh Pannun at the behest of an Indian government official, a spokesperson for the Czech Ministry of Justice told The Indian Express his extradition will now be decided "expeditiously, without undue delay".

On Wednesday, the Czech Republic's top court upheld the decisions of the District Court in Prague and the Municipal Court in Prague that Gupta can be extradited to the US. In an emailed response to this newspaper, spokesperson Kamila Abbasi said that "the decisions of the Constitutional Court are final" with no room for further appeal.

The matter has now been referred to the Czech Minister of Justice for a final call, Markéta Andrová, spokesperson of the Czech Ministry of Justice said.

"All criminal cases in which the person concerned is held in custody, including cases of extradition to a foreign country, shall be dealt with most expeditiously without undue delay," said Andrová. However, the spokesperson added that according to the applicable laws of Czech Republic, no exact time limit is provided for the decision of Minister of Justice.

Gupta had challenged the decisions of the two lower courts before the Constitutional Court on the ground that these courts had not examined all the relevant circumstances that could prevent his extradition, including political nature of the crime he is accused of.

Andrová said that "the Constitutional Court rejected the complaint lodged by Nikhil Gupta as prima facie unfounded". It decided the lower courts had thoroughly examined the extradition documents provided by the US authorities and based their decisions on sufficient evidence.

As for Gupta's argument on the political nature of the crime that he is accused of and its implications for the extradition request, Abbasi said, "In the Czech system of criminal law, it is not possible to raise new argumentation (for the first time) in the constitutional complaint – it is required to submit all the argumentation already before the district and municipal courts, which Mr. Gupta did not. Therefore, his argumentation concerning the political subtext of his case included in the constitutional complaint failed."

Abbasi added, "However, the Constitutional Court states that neither the charge, nor the description of the offence, nor the legal qualification is indicative of a political context as alleged by the complainant. The alleged political and military dimension of the complainant's act cannot be a reason that would prevent the extradition of Mr. Gupta. The complainant is not a political activist and the act was not aimed at changing the order of things."

Initially, the Czech Republic top court stayed the lower courts' decisions permitting the extradition of Gupta, citing no significant harm to public interest if this action is delayed. In its interim decision dated January 30, 2024, the Constitutional Court in Prague said Gupta's



extradition to the US for criminal prosecution would result in disproportionately greater harm to him than anyone else. Further, it emphasised that this action would be irreversible, even if it upholds Gupta's challenge.

However, as per the Ministry of Justice, the court finally didn't find any circumstance that the extradition would violate his fundamental rights.

"The Court did not find any circumstance for which the decision on the admissibility of the extradition would constitute a violation of any of the fundamental rights and freedoms guaranteed by the Charter of Fundamental Rights and Freedoms of the Czech Republic," Androva said. Gupta was transferred to solitary confinement in Pankrác prison after Czech authorities were alerted by the US that there was a threat to his life.

A TIME FOR PARA DIPLOMACY

"In its manifesto issued last week, the Shiromani Akali Dal (SAD) promised to get back Kartarpur Sahib, the final resting place of Guru Nanak, less than five kilometres across the Pakistan border. This might sound as rash as the BJP leaders' promise to bring Pakistan occupied Kashmir (PoK) into India's fold. No, the SAD is promising to work with the Centre to negotiate an "exchange of territory" with Pakistan, in return for Kartarpur Sahib."

— "The SAD's proposals on engaging Pakistan bring to the fore the idea of "para diplomacy" or "sub-state diplomacy" in promoting national interests. This involves formal interactions between entities below the federal level — provincial and local governments — in pursuit of shared national goals."

— "The conduct of para diplomacy is not in opposition to the national governments, which have a monopoly over the engagement with other sovereigns. Federal governments are quite nervous about sharing, let alone ceding, authority to engage across borders, especially when there is a danger of cross-border criminal and terror networks casting a shadow over the process."

— "Para diplomacy, conducted in tandem with the central government, can often produce openings that can't be generated between the congealed positions of the national governments."

— "Not all Indian border states have been as keen on cross-border cooperation as Punjab. The context on each border is different with unique burdens of history and different degrees of political difficulty. West Bengal, under Mamata Banerjee, for example, had, in fact, complicated Delhi's engagement with Dhaka."

— "The Tamil parties in Chennai have often exercised their veto over Delhi's ties with Colombo. A weak UPA government (2004-14) had to often walk back from productive initiatives with the neighbours because of resistance from its coalition partners in the states."

— "The next government must return to reconsidering para diplomacy as a valuable tool of India's statecraft. To succeed, India's neighbourhood policy must work with the interests of the people in the border provinces."

— "This, in turn, demands the construction of a consensus between the centre and the regional parties in the border provinces on developing a productive relationship with the neighbours."



WHY HEMANT SOREN'S BAIL PLEA TO SUPREME COURT WAS DENIED, BUT KEJRIWAL'S ACCEPTED

The Supreme Court on Wednesday (May 22) refused to grant interim bail to former Jharkhand Chief Minister Hemant Soren to campaign in the Lok Sabha elections.

Soren, who has challenged his arrest in a money laundering case, had sought parity with Delhi Chief Minister Arvind Kejriwal, who was given 21 days' interim bail on May 10 to campaign.

Voting will take place for seven seats of Jharkhand in the last two phases on May 25 and June 1.

After a Bench of Justices Dipankar Datta and Satish Chandra Sharma refused to hear the case, Soren's lawyers withdrew the petition. Why was Soren's plea denied, while Kejriwal's was accepted?

What is the case against Arvind Kejriwal?

The Delhi Chief Minister was arrested on March 21 in a money laundering case relating to the Delhi excise policy. Within two days, Kejriwal moved the Delhi High Court, challenging the legality of the arrest. This was a crucial move.

In the normal process, a regular bail application is moved before the trial court, and can then go to the High Court and Supreme Court. However, the bar for granting bail under the stringent Prevention of Money Laundering Act (PMLA) is high, making the grant of bail extremely unlikely.

Section 45 of the PMLA, which deals with the power to grant bail, requires the accused to satisfy the court that the case passes a "twin test" — that there is no prima facie case against the accused, and that the accused is not likely to commit any offence while on bail.

Challenging the legality of the arrest itself yields the same relief — but the bar is set differently here. The accused has to prove that the Enforcement Directorate (ED) had no "necessity to arrest", and did not validly exercise its power to arrest under Section 19 of the PMLA.

A plea against an illegal arrest is filed before a constitutional court. This means that the accused can directly approach the High Court and then the Supreme Court, saving the time that might have been spent before the trial court in seeking bail.

On April 9, the HC upheld Kejriwal's arrest, after which he moved the SC. Since the case was pending before the top court and final arguments would take more time, the SC considered releasing Kejriwal on interim bail, keeping in mind the Lok Sabha polls.

Although the SC said that by granting bail it was not creating special circumstances for politicians, Kejriwal's political status was not lost on the court. It did note that "Arvind Kejriwal is the chief minister of Delhi and a leader of one of the national parties."

In the trial, the ED filed a chargesheet against Kejriwal on May 17.

What was the case against Hemant Soren?

The former Jharkhand Chief Minister was arrested on January 31 on money laundering charges in a land scam-related case. The same day, Soren's lawyers had moved a writ petition in the High Court, challenging the legality of the arrest.



The Jharkhand HC reserved its verdict on February 28 and, two months later, dismissed Soren's case.

In the meantime, the ED had filed a chargesheet — and the trial court took cognizance of it on April 4. This is a routine step in the pre-trial stage — and essentially means that the court is made aware that the prosecution has a prima facie case against the accused. Later, the court has to examine the chargesheet and frame charges, after which trial commences.

While the HC reserved its order for weeks, Soren had moved a bail application before the trial court. This has now been dismissed by the trial court.

The SC felt that Soren was pursuing parallel remedies by filing this bail application while also moving an appeal against the HC order on the legality of arrest. The top court observed that Soren should have instead pursued his bail remedy before the HC.

This led to his lawyers withdrawing the plea challenging the arrest. However, senior advocate Kapil Sibal, who appeared for Soren, argued that these are distinct remedies leading to the same effect — the release of the accused.

Unlike Kejriwal's AAP, Soren's JMM is not a national party. Soren had resigned as Chief Minister before his arrest. Unlike Kejriwal, he is not the president of his party — that post is held by his father, Shibu Soren.

RELIGION AS SOLE FACTOR: WHY CALCUTTA HC QUASHED OBC QUOTA FOR MUSLIMS

The Calcutta High Court has struck down a series of orders passed by the West Bengal government between March 2010 and May 2012 by which 77 communities (classes), 75 of which were Muslim, were given reservation under the Other Backward Classes (OBC) category.

A division Bench of Justices Tapabrata Chakraborty and Rajasekhar Mantha found that religion had been the “sole” basis for the West Bengal Backward Classes Commission and the state government to provide reservation, which is prohibited by the Constitution and court orders.

The HC's order happens to come in the middle of an election campaign in which reservation for Muslims has been a hot-button issue. The BJP, led by the Prime Minister, has accused the opposition of seeking to take away reservation and other benefits from Hindus and giving them to Muslims.

Forty-two beneficiary classes, including 41 Muslim classes, were identified by West Bengal's previous Left Front government in 2010; the remaining 35, including 34 Muslim classes, were given reservation in 2012, after the Trinamool Congress came to power (in 2011).

Facts of the case

In its judgment delivered on May 22, the High Court noted that between March 5 and September 24, 2010, the West Bengal government issued several similarly-worded notifications, including “42 classes, of which 41 were from the Muslim community, as OBCs, entitling them to reservation and representation in Government Employment under Article 16(4) of the Constitution...”.

Also, on September 24 of that year, an order was issued sub-categorising the 108 identified OBCs in the state (66 pre-existing and 42 newly identified) into 56 “OBC-A (more Backward)” and 52 “OBC-B (Backward)” categories.



The first challenge in the HC was filed in 2011 on the ground that “the declaration of 42 classes as OBCs was...based purely on religion”, that “the categorisation is not based on any acceptable data, and that the survey conducted by the Commission was unscientific, and a prefabricated hat was made to fit the head”.

In May 2012, the Mamata Banerjee government classified another 35 classes as OBC, 34 of which were from the Muslim community. This too was challenged in the HC.

In March 2013, the West Bengal Backward Classes (Other than Scheduled Castes and Scheduled Tribes) (Reservation of vacancies and posts) Act, 2012, was notified. All 77 (42+35) new OBCs were included in Schedule I of the Act. Two petitions were filed challenging the Act.

Not solely religion

As with most cases where reservations have been challenged, the HC relied heavily on the Supreme Court’s judgment in *Indra Sawhney v Union of India* (Mandal judgment).

A nine-judge Bench had held in 1992 that OBCs cannot be identified and given reservation only on the basis of religion. The SC also held that all states must establish a Backward Classes Commission to identify and recommend classes of citizens for inclusion and exclusion in the state OBC list.

In the present case, both the Commission and the government submitted that the Commission had identified the 77 classes based on applications received from citizens, and then recommended their inclusion to the government.

The HC noted that the Commission’s recommendation had been made with “lightning speed” after the then Chief Minister publicly announced a quota for Muslims (in February 2010), without using any “objective criteria” to determine the backwardness of these classes.

“Religion indeed appears to have been the sole criterion for declaring these communities as OBCs”, and the reports that the Commission submitted were meant only to “curtain and hide such religion specific recommendations”, the court said.

“This court’s mind is not free from doubt that the said community has been treated as a commodity for political ends”, and that the 77 classes identified were being treated as a “vote bank”, it said.

Sub-classification of OBCs

The court also struck down portions of West Bengal’s 2012 Act, including (i) the provision that allowed the state government to “sub-classify” OBC reservations into OBC-A and OBC-B categories for “more backward” and “backward” classes respectively, and (ii) the provision allowing the state to amend the Schedule of the 2012 Act to add to the list of OBCs.

The Commission conceded that the government did not consult it before creating the sub-classification within OBC reservations — but argued that such an action was outside its “purview”.

The court held that the state government must consult the Commission to make a fair and impartial classification, including sub-classification.

Sub-classification is meant to address the different levels of deprivation faced by different communities, which the court held could only be done by referring to material collected by the Commission.



HOW INDIA GOT THREE PRIME MINISTERS IN TWO YEARS, FOLLOWING 1996 ELECTION

After the BJP made history by emerging as the largest party in Lok Sabha, Atal Bihari Vajpayee became Prime Minister. But his government lasted only 13 days, and was followed by a coalition of 13 parties. Read more in part 11 of our series on the history of India's Lok Sabha elections.

From winning a record mandate in 1984 to suffering humiliation five years later, from clawing back in a coalition in 1991 to sinking to its worst Lok Sabha performance until then — the 1980s and 90s were a political rollercoaster for the Congress.

The election of 1996 was historic also because it brought the BJP to power for the first time, albeit for only 13 days. What followed was a third attempt at building a coalition government at the Centre after 1977 and 1989 — those experiments had lasted until 1979 and 1991 respectively; the 1996 edition would collapse in 1998.

BJP makes history

The 11th Lok Sabha election was held between April 27 and May 7, 1996. Of the 59.25 crore eligible voters, 57.94% or 34.33 crore voted at more than 7.67 lakh polling stations. A total 13,952 candidates ran for 543 seats; the longest list of contestants — 480 — was at Nalgonda in Andhra Pradesh, a seat that was won by the CPI's Bommagani Dharma Bixam.

The Congress's tally of 140 was its lowest since Independence — 14 fewer than in the Janata wave of 1977. Twenty-two of those seats were won in P V Narasimha Rao's Andhra Pradesh.

With 161 seats, the BJP became the biggest party in Lok Sabha. It won 52 of the 85 seats in undivided Uttar Pradesh, and 27 out of 40 seats in undivided Madhya Pradesh.

The Janata Dal won 46 seats, CPI(M) 32, DMK and Samajwadi Party 17 each, CPI 12, and Bahujan Samaj Party (BSP) 11.

Rao, the outgoing Prime Minister, won in Nandyal, AP, and Berhampur, Odisha, and retained the latter seat. Kanshi Ram (BSP) won in Hoshiarpur, Chandra Shekhar (Samata Party) in Ballia, Maneka Gandhi (Janata Dal) in Pilibhit, and Vijaya Raje Scindia and her daughter Vasundhara Raje (both BJP) in Guna and Jhalawar respectively.

Mulayam Singh Yadav, who would be Chief Minister of UP in a little more than three years, entered Lok Sabha for the first time. The former bandit Phoolan Devi became the SP MP from Mirzapur.

Vajpayee's 13-day govt

After President Shankar Dayal Sharma invited the BJP to form the government, Atal Bihari Vajpayee was administered the oath of office on May 16, 1996.

The Babri Masjid had been demolished by kar sevaks only three and a half years earlier, and the BJP was the political untouchable of the time. Its only allies were Bal Thackeray's Shiv Sena in Maharashtra and Parkash Singh Badal's Shiromani Akali Dal in Punjab.

On May 27, Vajpayee tabled the Motion of Confidence in Lok Sabha. After two days of debate, it was clear the motion would not pass. The Prime Minister told the House that he bowed to the numerical strength of his opponents but he would not rest until the larger national objective had been achieved.



“I am going to the President to submit my resignation,” he said, and left the House.

Gowda’s 10 months

An anti-BJP 13-party United Front had already been formed by then. N Chandrababu Naidu, who had become Chief Minister of Andhra Pradesh after leading a party rebellion against his father-in-law N T Rama Rao in 1995, was its convener. Once Vajpayee resigned, H D Deve Gowda, who was Chief Minister of Karnataka at the time, took oath as Prime Minister on June 1. He was not a Member of Parliament then, and was elected to Rajya Sabha in September.

Several stalwarts who had fought the Congress and BJP in their states got ministries in Deve Gowda’s government. Mulayam became Defence Minister, P Chidambaram, who had formed the Tamil Maanila Congress along with G K Moopanar earlier that year, became Finance Minister, and CPI’s Indrajit Gupta and Chaturanan Mishra became Home Minister and Agriculture Minister respectively.

Murasoli Maran (DMK) was given the Industry portfolio, and I K Gujral, Ram Vilas Paswan, and S R Bommai of the Janata Dal got External Affairs, Railways, and Human Resource Development respectively.

However, the United Front did not have a majority in Lok Sabha. To survive, Deve Gowda’s government found itself dependent on the outside support of the Congress.

The Congress was led at the time by Sitaram Kesri, an old loyalist of the Nehru-Gandhi family who had been treasurer of the party since 1979. After Narasimha Rao lost the Lok Sabha election and was forced to give up the party leadership that September, Kesri emerged as the only candidate acceptable to all camps within the party.

Gujral’s short tenure

On March 30, 1997, 10 months after Deve Gowda was sworn in, the Congress withdrew support to the government. The Prime Minister was forced to move a motion of confidence, which was rejected 292-158 on April 11.

Kesri said he was willing to support another United Front government under a new leader. Among the front runners were Mulayam and Moopanar, but it was the mild-mannered Gujral who unexpectedly emerged as the choice of the coalition. The CPI(M)’s Harkishan Singh Surjeet later revealed to The Indian Express in an interview that Mulayam had been cut out of the race by Lalu Prasad Yadav and Sharad Yadav who refused to accept him as Prime Minister.

Gujral took oath on April 21, 1997, and decided to continue with Deve Gowda’s cabinet. But he too, would not last in the post.

In November 1997, more than six years after Rajiv Gandhi was killed, the report of the Justice Milap Chand Jain Commission, set up to investigate the assassination, was leaked. The findings, which were subsequently tabled in Parliament, raised questions on the role of the DMK, a constituent party of the United Front — and handed the Congress a fresh reason to pressure the government.

It demanded the removal of DMK members from the government. When Gujral refused, Kesari pulled the plug on November 28, 1997. Gujral resigned, and Lok Sabha was dissolved.



THE CURIOUS CASE OF DECLINING VOTERS IN THE 2024 ELECTIONS

It is generally well-accepted that prices of essential goods, population, GDP, agricultural production, professionals' salaries and many such parameters only increase every year in a developing and growing country like India unless there is an abnormal, rare event such as Covid-19, which can cause GDP or population or salaries to decline that year. The percentage or rate of increase for each may vary year to year but the absolute number only goes up, barring exceptional conditions.

Similarly, the total number of people who come out to vote in an election is expected to only increase over a five-year election cycle. This is because India's population continues to grow and the number of people who reach the voting age of 18 increases every year unless there has been a rare demographic disaster resulting in higher numbers of deaths or people fleeing. The total number of people who voted in a constituency in 2024 should then be higher than the number who voted in that constituency in 2019. Just as percentage increase in GDP or salary may vary yearly, voter turnout percentages can go up or down between elections. But the actual number of voters generally only rises between two five-year election cycles in India.

Is it then not intriguing that in nearly one-third of all constituencies in the 2024 election, the total absolute number of voters declined vis-à-vis the 2019 election? An analysis of the 427 constituencies until Phase 5 reveals that in 115 (27%) constituencies, fewer number of people came out to vote than in 2019. It is almost unparalleled in India's electoral history that in such a large number of constituencies, there is a decline in total voters from the previous election held five years ago. Remember, these are not voter turnout percentages but absolute total numbers of people who voted.

There is much hullabaloo over voter turnout percentages in the ongoing election. But here is the rub – voter turnout percentage is an insufficient measure to compare across elections. It is because turnout percentage depends on the total number of electors on the electoral rolls. The total number of electors in a constituency for an election depends on the number of new voters registered as well as the number of dead or emigrated voters deleted. Both these vary widely from election to election depending on the intensity of electoral roll cleaning by the Election Commission. This is why the more meaningful and intuitive measure for comparison is the change in total number of people who came out to vote across elections.

Until Phase 5, more than 505 million people voted in 2024 versus 485 million in 2019, an increase of just 4%. In 2019, there was a 12% increase in total voters in these same constituencies vis-à-vis 2014. Clearly, there is a significant decline in the total number of voters in the current election than the norm in previous elections. But the even more baffling finding is that in 115 constituencies, the total number of voters declined from 2019, which is a rarity in a growing country like India. To put it in context, none of these constituencies experienced a decline in total voters in 2014 and only 19 did in 2019. How is it possible that so many constituencies had such a dramatic drop in total voters? Even if one were to adjust by removing small States and Union Territories that one may argue skews the analysis, the finding is still the same – in one-third of all constituencies, the total voters declined vis-à-vis 2019.

Delving further, most of the constituencies where there is a decline in total voters are in six States – Kerala, Madhya Pradesh, Rajasthan, Tamil Nadu, Maharashtra, and Uttar Pradesh. A change in total voters in a constituency from the previous election is largely a function of three factors – number of new eligible electors, number of electors who have emigrated out, and percentage of



electors who come out to vote. Surely it cannot be the case that there was an inexplicable drop in the number of eligible electors, which normally only follows broad population trends? Neither can it be the case that there was a sudden alarming increase in emigration of people from these 115 constituencies due to economic or other compulsions. None of these constituencies saw a decline in total voters in either the 2014 or 2019 election from the previous election.

So, the only logical explanation is an extreme decline in turnout to cause a reduction in total absolute voters vis-à-vis 2019. The natural follow-up question then is – why is there a decline in voters in a significant number of constituencies that the Opposition won in 2019 or is expected to get stronger in 2024? Was the reduced turnout voluntary or implicitly coerced? If voluntary, what demographic or other explanations justify such a large and sudden drop in turnout in so many constituencies in States that are seemingly ‘in play’ for 2024? It is not even the case that voters in the initial phases of the elections were apathetic and the turnout started to pick up as elections progressed. The share of constituencies that saw a decline in total voters from 2019 fluctuates up and down across phases.

It is a rarity in the Indian context for constituencies to see a decline in the absolute number of voters between two five-year election cycles. But nearly one-third of all constituencies experienced such a decline in 2024 vis-à-vis 2019. It is best to avoid conjectures and let the Election Commission explain this mysterious trend.

VOTE FOR A CHANGE

The voter turnout in the Srinagar and Baramulla constituencies in the Kashmir valley — Anantnag-Rajouri is to vote on May 25 after the Election Commission of India postponed the election — is well below the national average. While Srinagar registered only 38.5%, preliminary figures from Baramulla indicate a turnout of 59.1%. The national average for the first four phases was 66.95% and 61.61% in the fifth phase, according to early trends. Yet, these numbers in the Valley are salubrious compared to the past — 13% in Srinagar and 34.6% in Baramulla in 2019. Baramulla registered its highest turnout since 1984 (61.1% participation). In the last six years, the elected Assembly was dissolved, the erstwhile State of Jammu and Kashmir bifurcated into two Union Territories, the special status of the province abrogated by the BJP-led Union government, and the Valley subjected to months of Internet shutdowns. Scores of politicians were also arrested. Kashmir still remains India’s most securitised region with recurring militant violence. While local body elections have been held since then, the general election is the first major poll with significant contestation involving the Valley’s mainstream polity.

Should the increase in turnout be read as a significant reduction in the alienation of the Kashmiri people? The answer is not unambiguous. A substantive section of the voters who turned out have sought a change in the status quo. The limitations on political activity in the Valley since 2018 have constrained citizens who have had little recourse to airing their grievances due to the absence of legislative representation in the Assembly. Thus, livelihood concerns have not been sufficiently addressed, and the greater electoral participation now reflects the need for representation of the electorate’s voices. Union Home Minister Amit Shah has stated that the higher polling in these two constituencies is the “greatest testament to rightness” of abrogating the special status that was enshrined in Article 370 — a statement devoid of reason. A truer reflection of the support for the abrogation would have been a favourable mandate for parties endorsing the move, but the BJP did not even field candidates in the Valley. It is clear that it saw the writing on the wall in terms of how it was perceived in the region. Mr. Shah and the BJP should not misinterpret the reasons for the increase in voter participation. The voices in the Valley have



given way to some using the ballot box as a medium to get the region out of its political morass. The Indian state must listen and make amends.

SETTING THE BAR

The Election Commission of India (ECI) asking the BJP and the Congress to desist from raising divisive issues in campaigning in the general election is a case of better late than never. The ECI has, in recent years, disappointed the Indian electorate by its inability to be effective, impartial and prompt in its role as the watchdog of elections. This is partly a function of the mechanism of the appointment of the ECI's members, which is entirely a partisan decision of the executive. The ECI has now written to BJP President J.P. Nadda to ask "star campaigners" of the party to refrain from making statements which "may divide the society". Its letter follows his response on May 13 to a notice issued to him over a complaint against Prime Minister Narendra Modi's speech in Banswara, Rajasthan — Mr. Modi had referred to Muslims as "infiltrators" and "people with more children." The letter to Congress President Mallikarjun Kharge asks him to ensure that the party's star campaigners desist from making any statements which may cause tensions between different castes and communities. These rebukes from the ECI to the parties come a day after it censured the former Calcutta High Court judge turned BJP candidate from Tamluk, West Bengal, Abhijit Gangopadhyay, for his remarks against Trinamool chief Mamata Banerjee. He was barred from campaigning for 24 hours.

Earlier, the ECI had acted against YSRCP chief, Y.S. Jagan Mohan Reddy, BRS chief K. Chandrashekar Rao, Telangana Minister Konda Surekha, BJP leaders Shobha Karandlaje and Dilip Ghosh, and Congress leaders Supriya Shrinete and Randeep Surjewala. Complaints against U.P. Chief Minister Yogi Adityanath and Assam Chief Minister Himanta Biswa Sarma, last week, for their alleged violation of the model code of conduct (MCC) are pending. Overall, these measures might give an appearance of impartiality but that is not enough. The ECI is assuming a false parity between legitimate debates on policies that impact various social groups differently and an incitement of xenophobia for social polarisation. The MCC cannot be a ruse to muffle political debates and disagreements which are, and should be, at the heart of campaigning. Misuse of power and creation of disharmony fall in a different basket. The integrity and the credibility of the ECI is central to the legitimacy of elections. Reinforcing its independence should be a priority for all stakeholders in Indian democracy, particularly political parties and the judiciary. The ECI is too important to be left to itself.

WHY WAS PURKAYASTHA'S ARREST INVALIDATED?

The story so far:

On May 15, the Supreme Court ordered the release of the online portal NewsClick's founder Prabir Purkayastha from custody after concluding that his arrest and remand under the draconian Unlawful Activities Prevention Act, 1967 (UAPA) by the Delhi Police were "invalid in the eyes of law". A Bench of Justices B.R. Gawai and Sandeep Mehta pointed out that neither Mr. Purkayastha nor his designated counsel were provided the grounds for his arrest in writing, which is "sacrosanct and cannot be breached under any situation". The ruling emphasises the need for law enforcement agencies to adhere to proper procedure and due process, especially in stringent UAPA cases where there is a reverse burden of proof on the accused. This makes obtaining bail extremely difficult in such cases.



Why was the arrest 'illegal'?

As per the arrest memo, Mr. Purkayastha was arrested on October 3, 2023, at 5.45 p.m. by invoking stringent UAPA provisions on the ground that he had allegedly received funds through Chinese firms to spread pro-China propaganda. Earlier on August 17, 2023, an FIR was lodged by the Delhi Police envisaging serious offences under Sections 13 (unlawful activities), 16 (terrorist act), 17 (raising funds for terrorist acts), 18 (conspiracy), and 22(C) (offences by companies, trusts) of the UAPA, and Sections 153A (promoting enmity between different groups) and 120B (criminal conspiracy) of the Indian Penal Code, 1860 (IPC).

During the proceedings, senior advocate Kapil Sibal, appearing on behalf of Mr. Purkayastha, contended that the FIR was neither made available in the public domain nor was a copy supplied to him until his arrest and remand, in violation of the fundamental right guaranteed under Article 22(1) of the Constitution. Further, the Court was apprised that on the morning of October 4, 2023, Mr. Purkayastha was produced before the remand judge at his residence without intimating his designated lawyer Mr. Arshdeep Khurana. He was instead represented by a legal aid lawyer whom he had never engaged before.

Mr. Purkayastha's lawyer was finally informed about the remand proceedings at 7.07 a.m. through a WhatsApp message — after the remand order granting seven days of police custody had already been passed. However, two sentences were subsequently inserted in the remand order to give the impression that the lawyer had been heard before the passing of the order. This, Mr. Sibal argued, violated the Supreme Court's verdict in Pankaj Bansal versus Union of India and Others (2023) wherein it was held that to give effect to constitutional safeguards, "it would be necessary, henceforth, that a copy of such written grounds of arrest is furnished to the arrested person as a matter of course and without exception."

On the other hand, Additional Solicitor-General S.V. Raju, appearing for the Delhi Police, pointed out that the ratio of Pankaj Bansal applied only to money laundering cases under the Prevention of Money Laundering Act, 2002, (PMLA), and not those under the UAPA. The law officer argued that the UAPA required the police to only "inform" the accused of the reasons for arrest, without needing to provide them in writing to him.

What does Article 22 stipulate?

Mr. Purkayastha's case is based on the constitutional safeguard provided under Article 22(1) of the Constitution, which dictates that no person who is arrested can be detained in custody without being promptly informed of the grounds for their arrest. It further stipulates that an arrested person cannot be denied "the right to consult, and to be defended by, a legal practitioner of his choice."

Notably, both the PMLA as well as the UAPA contain similar provisions, which mandate the intimation of the grounds of arrest to an accused. Under Section 19 of the PMLA, the Enforcement Directorate (ED) officer should not only have material with him giving him "reasons to believe" that a person is guilty of an offence under the law but such reasons should also be "recorded in writing before effecting arrest of any person." Further, these written grounds of arrest must be communicated to the accused for a valid arrest to take place. This, according to the Supreme Court's verdict in Pankaj Bansal, affords an opportunity to the arrested person to prove before a trial Court that there are grounds to believe that he/she is not guilty of such offence, to avail the relief of bail. Similarly, Sections 43A and 43B of the UAPA mandate the furnishing of the grounds of arrest to an accused at the earliest.



Mr. Sibal had pointed out that the language of both the statutory provisions is *pari materia* (upon the same subject matter) and thus the law laid down in Pankaj Bansal squarely covers Mr. Purkayastha's case.

What was the Delhi High Court's verdict?

In a verdict delivered on October 13, 2023, Justice Tushar Rao Gedela of the Delhi High Court agreed with the Delhi police that the ratio of Pankaj Bansal would not apply to the facts of Mr. Purkayastha's case. He underscored that the verdict in Pankaj Bansal was delivered purely in relation to PMLA provisions and that it cannot "by any stretch of imagination, be made applicable, *mutatis mutandis*, to the cases arising under UAPA."

Justice Gedela also noted that the offences alleged in the NewsClick case directly impact "the stability, integrity, and sovereignty of the country" and bear significant national security implications. He further reproduced Solicitor General Tushar Mehta's submission that the email exchanges between Mr. Purkayastha and other entities indicated an attempt to portray Jammu and Kashmir and Arunachal Pradesh as "disputed territories."

However, the Court added that considering the stringent provisions of the UAPA, it would be advisable that the investigating agencies, henceforth, provide grounds of arrest in writing, after redacting what in their opinion would constitute "sensitive material."

What about the Supreme Court?

The top Court ruled that there is "no significant difference" in the language employed in Section 19(1) of the PMLA and Section 43B(1) of the UAPA which can support the Delhi Police's contention that the law laid down in Pankaj Bansal should not be applied to an accused arrested under the UAPA.

"...The requirement to communicate the grounds of arrest is the same in both the statutes. As a matter of fact, both the provisions find their source in the constitutional safeguard provided under Article 22(1) of the Constitution of India," it reasoned. Thus the judges emphasised that the "salutary and sacrosanct" requirement of informing the arrested person of the grounds of arrest in writing will henceforth apply to all UAPA cases as well. It will not suffice to convey them orally only. This, according to the Court, is the "only effective means" for the arrested person to consult his lawyer, oppose the police custody remand and seek bail.

It further asserted that the mere fact that a charge sheet has been filed "would not validate the illegality and the unconstitutionality committed at the time of arresting the accused and the grant of initial police custody remand to the accused." The Bench also differentiated between the meaning of the terms 'reasons of arrest' and 'grounds of arrest'. While the former relates to general parameters based on which a person had to be arrested, the latter requires the police to list out specific facts necessitating the arrest of the individual concerned, so that he/she could effectively oppose the plea for remand or seek bail, it said.

Notably, the judges expressed serious reservations that Mr. Purkayastha's lawyer was not informed about the remand proceedings despite the Delhi police having access to his phone number. The Court further remarked that the "charade of informing" the NewsClick founder's lawyer after the remand order had already been passed was an exercise in futility.

The judges also pointed out that the two sentences inserted in the remand order to give the impression that Mr. Purkayastha's lawyer Arshdeep Khurana was heard before its issuance was



an afterthought. “A bare perusal of the remand order is enough to satisfy us that these two lines were subsequently inserted in the order because the script in which these two lines were written is much finer as compared to the remaining part of the order and moreover, these two lines give a clear indication of subsequent insertion,” the Bench underscored.

What happens next?

After the pronouncement of the verdict, Mr. Raju sought a clarification from the Bench as to whether the ruling would preclude the police from exercising its “correct powers of arrest” in the case in the future.

In response, Justice Gavai said, “We have not said anything about that. Whatever you are permitted under the law, you can do.”

WHEN THE SYSTEM IS BROKEN

While the country mourns the loss of two young lives and shares the grief of the families whose children were mercilessly mowed down by an irresponsible youth in Pune, we also stare at the stark reality of a defunct criminal justice system. If the drunk rich boy was reckless, one wonders how responsible was the Juvenile Justice Board that handled his criminal act with kid gloves.

— ‘Crime in India (2022)’ published by the National Crime Records Bureau (NCRB) shows that more than 90 percent of cases of deaths due to negligent driving and hit-and-run cases are pending in courts with the conviction rate being as low as 30 percent in metropolitan cities. It is only slightly better in the rest of India.

— Delays result in the police not being able to trace witnesses when trials do start eventually, and citizens do not recollect the sequence of events in courts. These damage the prosecution of criminal cases.

— In December 2023, Parliament was informed that India has 21 judicial officers per one million population as against the Law Commission’s (1987) recommendation of 50 judges per million. Similarly, the police population ratio is around 152 per lakh citizens while the internationally accepted norm is around 222 per lakh.

— The ‘Data on Police Organisation as of January 1, 2022’, recently released by the Bureau of Police Research and Development (BPR&D), shows around four lakh vacancies of police persons in the country.

— Despite the low ratio and high rate of vacancies, the disposal of criminal cases by state police organisations is fast – there is much scope for improvement in quality, though. ‘Crime In India 2022’ indicates that 75 percent of cases of deaths in road accidents were due to rash and negligent acts and 65 percent of hit-and-run cases had been charge-sheeted by police within a year.

— More investigating officers and prosecutors, their regular training in the use of technology, and well-equipped forensic laboratories will no doubt lead to an improved detection rate, better-quality investigation, and the conviction of the accused.

— The Juvenile Justice (Care and Protection of Children) Act, 2015, allows for children between 16-18 years of age who are accused of heinous crimes to be tried as adults under the Indian Penal Code.



EXPLOSION IN CHEMICAL UNIT IN THANE: AFTER THE BLAZE

The Maharashtra government has ordered an investigation into Thursday's chemical factory blaze which killed at least 11 people in an industrial complex in Thane and injured more than 60 others. By all accounts, the food colouring factory used highly reactive chemicals. Maharashtra's Industry and Labour Department has said that the unit's boiler was not registered under the Indian Boiler Act, 1950. Chief Minister Eknath Shinde has promised "strict action" against those at fault.

Culpability for the incident should, of course, be fixed. But safety-related concerns about the Thane industrial complex are not new. In 2016, a fire accident at the complex claimed five lives. Explosions have been reported from the area in 2018, 2020 and 2023 as well.

CM Shinde has said that the highly hazardous units would either be shut down or "given the option to shift to another location". That's a knee-jerk reaction. Shutting down industries or relocating them causes economic disruption and livelihood losses. The Maharashtra government should nudge these factories to follow industrial safety and environmental rules.

India is among the top six chemical manufacturing countries in the world. Diverse industries — pharmaceuticals, pesticides, fertilisers, paints and petrochemicals — collectively account for more than 70,000 of the products that are made from chemicals. The sector contributes about 11 per cent of India's exports and employs more than two million people.

Although the country has 15 Acts and 19 rules governing different aspects of the chemical industry, none of them deals exclusively with the sector. At the same time, the overlapping jurisdictions of different ministries work to the detriment of effective regulation. Monitoring and inspection are weak and most often, these exercises involve imposing fines on erring units — which, by all accounts, breeds corruption. The NDMA website shines a light on the chemical industry's regulatory deficits. The industry, it says, comprises "1,861 major accident hazard (MAH) units" and "thousands of registered hazardous factories (below the MAH criteria)". The agency's figures do not include factories in the unorganised sector.

NDMA estimates that the country reported 130 chemical accidents in the last decade, which claimed more than 250 lives. It, however, gives no details of these accidents. Studies with smaller sample sizes — such as that conducted by scientists from IIT Kanpur's Department of Industrial and Management Engineering in 2023 — conclude that industrial accidents result from inadequate regulation, a lack of awareness of how to act when a mishap occurs and poor investment in worker safety. However, the country lacks a comprehensive database of chemicals used by industry and the risks associated with them.

The horrors of the Bhopal Gas Tragedy in 1984 did lead to a rethinking on industrial safety, but accidents have not been followed by serious stock-taking — these include the Jaipur oil depot fire of 2009, Thane explosion of 2016, Visakhapatnam gas leak of 2020 and the blaze at a natural gas well in Tinsukia in 2020. A rapidly-industrialising country cannot afford such a knowledge deficit.

WHAT ARE THE NIA'S ALLEGATIONS AGAINST NSCN?

The story so far:

On March 7, the National Investigation Agency (NIA) filed a chargesheet in a Guwahati court where it accused the "China-Myanmar module" of the Isak-Muivah faction of the National Socialist Council of Nagaland (NSCN) of supporting cadres of two banned Meitei outfits, the People's

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



Liberation Army (PLA) and Kanglei Yaol Kanba Lup (KYKL), to infiltrate India. The NIA alleged that their aim was to exploit the current ethnic unrest in Manipur, which began in May 2023, with a larger goal to destabilise the State and wage a war against the Government of India.

Which are the main ethnic groupings?

The Meitei, Naga and Kuki-Zomi-Mizo are the three main ethnic groupings in Manipur. The Meiteis, the largest community, account for about 53% of the State's total population of 27.21 lakh (2011 Census). The Nagas and the Kuki-Zo which are categorised into 34 Scheduled Tribes constitute 17% and 26% of the population respectively. India and Myanmar share a 1,643 km unfenced border of 398 km along Manipur. In January, the Government decided to fence the entire border and end the Free Movement Regime (FMR) which allowed people to cross over without any documents or passport. People on both sides of the border share ethnic ties prompting the arrangement since 1968.

What is the NSCN's stand?

After The Hindu reported the NIA findings on May 14, the NSCN issued a statement, accusing the Indian security forces of helping the Kuki militant groups to wage war against the Meitei revolutionary groups in Myanmar. It said: "It is sensitive to the propaganda war waged by the Government of India against NSCN who had signed ceasefire with GOI and engaged in political talks for the last 27 years." Distancing itself from the violence in Manipur, the NSCN had said in a statement in August 2023 that "no ethnic blood should flow in Naga areas in the name of Meitei-Kuki-Zo ethnic conflicts."

NAVY DOES AWAY WITH SHIP TERMS 'JACKSTAFF' AND 'JACK', REPLACES WITH NATIONAL FLAG STAFF, NATIONAL FLAG

Doing away with yet another colonial vestige, the Navy has changed names of 'Jackstaff' and 'Jack' on board ships to 'National Flag Staff' and 'National Flag'.

— 'Jack' refers to a flag in naval parlance, usually the national flag, and 'Jackstaff' is a short pole on the bow of a ship from which it is flown. Both terms have their origins in British naval traditions.

— The Regulations for the Navy (Ceremonial, Conditions and Service and Miscellaneous Regulation) 1963 has been amended by the central government using its powers under the Naval Act 1957. The amendment was notified in the Gazette of India on May 22.

— The move comes on the heels of a change in naval ensign which was effected in September 2022 and new badges of ranks of Admiral ranked officers, which came into effect in December 2023. Both changes were made to do away with the British colonial legacy.

— In September 2023, in a move to distance itself from the colonial past, the Indian Navy adopted a new naval ensign or a naval flag doing away with the British-inspired George's Cross.

For Your Information:

— In a bid to do away with the "colonial past", the Saint George's Cross has been removed from the Indian Navy's new flag. Instead, it now features the national emblem with the Tricolour on the upper canton (top left corner of flag). The national emblem is encompassed by an octagonal shield and sits atop an anchor. Beneath it is the Navy's motto 'Sam No Varunah'.



— The golden border surrounding the national emblem draws inspiration from the seal of Indian emperor Chhatrapati Shivaji Maharaj and depicts steadfastness. The octagonal shape of the national emblem has been designed to represent eight directions, symbolising the multi-directional reach and multi-dimensional operational capability of the Indian Navy.

WHY INDIAN ARMED FORCES WILL SHIFT TO INTEGRATED THEATRE COMMANDS

India's ambitious defence reform plan aims to integrate the Army, Navy, and Air Force for joint operations in specific adversary-based theatres with defined military goals during a limited conflict or war.

The Indian Armed Forces have been finetuning the final draft for the creation of integrated theatre commands.

The ambitious defence reform is aimed at integrating the three defence services — the Indian Army, the Indian Navy, and the Indian Air Force (IAF) — to operate jointly in specific adversary-based theatres with defined military goals during a limited conflict or war.

The government had set the ball rolling on the reform in 2019 by creating the post of Chief of Defence Staff (CDS), and setting up the Department of Military Affairs (DMA) to oversee the transition. In its manifesto for the Lok Sabha election, the BJP promised to “further establish the military theatre commands for more efficient operations”.

Over the last five years, multiple drafts have been prepared to zero in on the best possible model for India's theatre commands. The government is yet to give its final approval on the implementation of the plan.

Depending on the outcome of the elections, further discussions on fine-tuning the existing plan to iron out possible issues are expected to take place in the coming months. Other initiatives to integrate the services at the lower levels have, meanwhile, been implemented.

Where India and the world stand on theatre commands. Where India and the world stand on theatre commands.

Services working together

The three defence services currently operate individually under their individual operational commands.

Theaterisation would entail putting specific units of personnel from all the three services under a single theatre commander so that they fight jointly as a single unit in a war, or conflict, rationalising the manpower and resources of individual services in the process.

Each of the three services has its own culture and ethos. With the creation of the theatre commands, their personnel, assets, infrastructure, and logistics would be integrated, so they can operate cohesively to attain defined military goals in specific theatres covering laid-down operational areas.

The Armed Forces have already been taking steps to bring in greater integration among the three services. There are plans to make Mumbai the first tri-service common defence station, and to set up additional joint logistics nodes across the country to boost integration in logistics needs, and to streamline supply chains and inter-service postings of officers.



Commands & headquarters

The Indian Express had reported in January 2023 that the latest draft with the military envisions three adversary-based theatre commands — a western theatre command facing Pakistan, a northern theatre command facing China, and a maritime theatre command for threats emanating from the Indian Ocean Region.

There are plans to set up the western theatre command in Jaipur, and the northern theatre command in Lucknow. The maritime theatre command could be headquartered in Coimbatore, even though Karwar and Thiruvananthapuram have also been under consideration.

Earlier drafts drawn up in the past have undergone several changes based on inter-services discussions within the military.

There were some plans to have an Air Defence Command, other theatre commands in the eastern, northern, and western commands alongside a Joint Logistics Command, a Space Command, and a training command.

However, a lack of consensus among the three services over the shape, structure, and number of theatre commands resulted in the plans being changed multiple times over the past few years before the current plan was arrived at.

Rationalisation process

How will the creation of theatre commands rationalise the existing service commands?

Currently, the Army and the IAF have seven commands each, while the Navy has three. In addition, there are two tri-service commands — the Andaman and Nicobar Command, and the Strategic Forces Command (SFC). There is also the Headquarters Integrated Defence Staff (HQIDS).

Post the creation of the theatre commands, three command headquarters of the services are likely to be transformed into theatre command headquarters.

The existing Andaman and Nicobar Command may be subsumed into one of the theatre commands (in the maritime theatre command, as per current plans), and the HQIDS will likely operate under the CDS.

The SFC will continue to operate independently, as per the plan.

Command leadership

The three theatre commands will be headed by three theatre commanders who would likely be of the rank of General or equivalent.

According to current plans, the theatre commanders will report to a National Defence Committee, which is likely to be headed by the Defence Minister.

Additionally, there are plans to appoint a Vice CDS and a Deputy CDS.

The Vice CDS is likely to look after strategic planning, capability development, and procurement-related matters, and will likely be an officer of the rank of General or equivalent.

The Deputy CDS will be responsible for operations, intelligence, and coordination of the allocation of assets among theatres. The Deputy CDS is likely to be a Lieutenant General or equivalent.



The three service Chiefs would be responsible for raising, training, and sustaining the individual services. It is not known whether they would continue to retain some operational roles. The three theatre commanders would be responsible for operations.

However, none of these plans have got the final nod from the government yet.

ARMY GETS 27,000 AK-203 RIFLES THROUGH JOINT VENTURE

The Indian Army has started receiving the Russian AK-203 assault rifles after the deal with Russia saw back-to-back delays, partly due to the war in Ukraine and payment delays. As many as 27,000 rifles have been handed over to the Army so far by the Indo-Russian joint venture established at Korwa in Uttar Pradesh, according to official sources.

“Everything is on track after initial delays, and 27,000 rifles have been given to the Army. Another 8,000 will be handed over in the next two weeks. Indigenisation level achieved is around 25%,” an official in the know said.

Under an over ₹5,000-crore contract signed in July 2021, over 6.1 lakh AK-203 assault rifles are to be manufactured in India with technology transfer from Russia, by a joint venture Indo-Russian Rifles Private Ltd. (IRRPL).

The IRRPL was set up in 2019 between the erstwhile Ordnance Factory Board [now Advanced Weapons and Equipment India Limited (AWEIL) and Munitions India Ltd (MIL)] from India and Rosoboronexport (RoE) and Kalashnikov concern of Russia.

As reported by The Hindu earlier, as per contractual terms, the first 70,000 rifles will be produced in India with a phased increase in the extent of localisation from 5% to 70%. The remaining rifles will be produced with 100% localisation.

The full-scale production of the AK-203 rifles is expected to be reached within two to three years.

‘Systematic manner’

On the ongoing process of indigenisation, the source stated that it was being done in an “extremely systematic manner”. “So, the process will be slow. Even our initial timelines catered for two years for this process of 70% indigenous content,” the source said, adding, “We are aiming to achieve it before that.”

As reported earlier, against the backdrop of repeated delays in concluding the deal, India had procured and inducted 70,000 AK-103 assault rifles off the shelf under a deal signed in August 2021.

For a while, the Army has been looking to replace the indigenous INSAS (Indian National Small Arms System) rifles in use with a modern rifle.

The Army has inducted 66,400 of the 72,400 SIG-716 assault rifles which have been provided to frontline troops involved in counter-insurgency operations.

The AK-203 rifles were to meet the larger demand for assault rifles.



39 FLAMINGOS KILLED AFTER BEING HIT BY AIRCRAFT LANDING AT MUMBAI AIRPORT

Around 39 flamingos were found dead in different locations of Ghatkopar East, spanning Pant Nagar, Laxmi Nagar and Ghatkopar–Andheri Link Road late Monday evening, after they collided with an Emirates aircraft landing at the Mumbai airport.

— Since flamingos are a protected species under the Wildlife Protection Act (1972), the rescuers handed over the carcasses of the flamingos to the forest department conducting the necropsy.

— Flamingos have never been spotted earlier anywhere around Ghatkopar. “The flamingos seemingly were flying to the north and had to change their path because of the high rises all across. It is poor urban planning that has claimed these lives,” said B N Kumar, Director, NatConnect Foundation.

For Your Information:

— According to experts, nearly 1-1.5 lakh flamingos start migrating from Kutch, Bhavnagar, and other scattered areas of Gujarat to Mumbai in November to search for food. After entering Mumbai, the flamingos settle into their feeding ground at the Thane Creek area, which stretches from Vitawa to Uran.

— BNHS researcher Prabhu told The Indian Express, “While Gujarat is their breeding ground, Thane Creek area is their feeding ground. They start arriving in November and the peak season is between January and February. The flamingos primarily feed on the algae which grow on the mudflats, and start emerging when the water from the creek starts drying up during the low tides.”

— Arriving in Mumbai at an average speed of 40-50 kmph, these flamingos comprise primarily two types of species — the greater flamingos and lesser flamingos.

TO BOOST SHELF LIFE OF ONION BUFFER STOCK, GOVT PLANS TO EXPAND IRRADIATION PROCESS

The Union government is planning to significantly scale up the irradiation of onions this financial year to increase the shelf life of its buffer stock, a senior official said. This low, regulated dose of radiation — which poses no health risk — stops sprouting in onions, making them less perishable.

— As per data from 2020-21, India grew a total of 26.64 lakh metric tonnes of onion over 16.24 lakh hectares. Maharashtra is the leading onion-producing state, followed by Gujarat, Madhya Pradesh, Karnataka and Bihar.

— The NCCF and NAFED have already started procurement operations.

— The procurements are happening under the Price Stabilisation Fund, which is used to build up the country’s buffer of key food commodities and release the stocks in the market when prices rise.

For Your Information:

— Onion is perishable and storing it for a long period is a challenge. During storage, sprouting of onions takes place, which causes losses. As per some estimates, the post-harvest losses in onions can be up to 40 per cent. This is the reason the government is increasing its use of irradiation. In India, irradiated food is regulated in accordance with the Atomic Energy (Control of Irradiation of



Food) Rules, 1996. The irradiation costs may range from `0.5 to 1.0 per kg for low-dose applications, such as sprout inhibition in onions.

SII SHIPS FIRST SET OF MALARIA VACCINE DOSES TO AFRICA

Serum Institute of India (SII), the world's largest manufacturer of vaccines by number of doses, marked a significant milestone on Monday with the shipment of the first set of R21/Matrix-M malaria vaccine to seven-eight countries in Africa.

— The low-cost, high-efficacy R21/Matrix-M malaria vaccine was developed by the University of Oxford and SII leveraging Novavax's adjuvant technology.

— The vaccine has demonstrated high efficacy with a reassuring safety profile. It is the second malaria vaccine to be authorised for use in children in malaria-endemic regions.

— "...We are giving the vaccine at a very affordable price. This will be widely available and accessible to all the African countries and also the other lower-middle-income countries," Adar Poonawalla, CEO, SII, said.

— On a vaccine for India, Poonawalla pointed out that the particular parasite (found in Africa) was not in India. "Hence for India, it will take another five years for a malaria vaccine... We are working towards a dengue vaccine, clinical trials are underway and after two-three years we can expect a dengue vaccine in India," Poonawalla said.

— "We expect that this vaccine will not only reduce mortality in children but also dramatically shift the economic burden in a country facing the crisis," Silvia Taylor, Executive Vice President, Chief Corporate Affairs and Advocacy Officer, Novavax, said.

For Your Information:

— The recently released World Malaria Report shows that the number of cases and deaths due to the mosquito-borne infection in India has continued to decline. India's downward trend was reflected in the larger WHO South East Asian region that remained on track to achieving the 2030 target of reducing cases and deaths by 90 percent, the report said.

QUALITY CONCERNS: NEPAL BANS SALE OF INDIAN SPICE-MIX PRODUCTS

After Singapore and Hong Kong, Nepal has also banned the sale and import of certain spice-mix products manufactured by popular Indian brands over quality concerns.

— Four spice-mix products by MDH and Everest have been banned in Nepal with immediate effect due to suspected ethylene oxide or EtO contamination, according to the Department of Food Technology and Quality Control here.

— "As residue contents of ethylene oxide are found to be exceeding the prescribed limit in these four products, the import and sale of these products are banned within the country as per Article 19 of the Food Regulation 2072 B.S.," the department said in a notice issued on Friday.

For Your Information:

— "Ethylene oxide is a pesticide that has been classified as a Group 1 carcinogen by the International Agency for Research on Cancer, meaning there is sufficient evidence from human



studies that it can cause cancer,” says Kanika Narang, nutritionist at Indraprastha Apollo Hospitals, New Delhi.

— It is used by the spice industry as a fumigant to reduce microbial contamination, such as E. coli and Salmonella. It is a colourless, highly flammable and very reactive gas that kills bacteria, viruses and fungi. It is an industrial chemical.

SPICES BOARD INSPECTING MDH, EVEREST PLANTS; EFFORTS ON TO IMPROVE COMPLIANCE

The Spices Board of India is carrying out inspections in several MDH and Everest processing plants in the country to ensure that spice exports meet the requirement in the respective export destination, senior government officials said on Monday, adding that corrective actions such as use of steam sterilisation technology and tracking of the food supply chain is being looked at to prevent future rejections.

— In 2023-24, India’s spice exports totalled \$4.25 billion against 3.7 billion in 2022-23. India’s exports account for a 12 percent share of the global spice exports.

— The major spices exported from India include chilli powder, which topped the list with \$1.3 billion in exports, followed by cumin at \$550 million, turmeric at \$220 million, cardamom at \$130 million, mixed spices at \$ 110 million, and spice oils and oleoresins at \$1 billion.

— Most of the countries have different MRLs (Minimum residue limits) for ethylene oxide (EtO). Countries fix their MRLs for pesticides based on their country-specific good agricultural practices and consumption patterns.

WHAT IS NAEGLERIA FOWLERI OR ‘BRAIN-EATING AMOEBEA’, WHICH LED TO A 5-YEAR-OLD GIRL’S DEATH IN KERALA?

A five-year-old girl undergoing treatment for primary amoebic meningoencephalitis (PAM), a rare infection caused by Naegleria fowleri or “brain-eating amoeba”, died at the Government Medical College Hospital in Kozhikode on Monday (May 20).

In the past too, the rare yet deadly infection has claimed several lives. What are the circumstances under which one can be affected by it and what are the symptoms associated with it? We explain.

What is primary amoebic meningoencephalitis?

Primary amoebic meningoencephalitis (PAM) is a rare brain infection that is caused by Naegleria fowleri. It is a free-living amoeba or a single-celled living organism.

Naegleria fowleri lives in warm fresh water and soil around the world, and infects people when it enters the body through the nose. Higher temperatures of up to 115°F (46°C) are conducive to its growth and it can survive for short periods in warm environments.

The amoeba can be found in warm freshwater, such as lakes and rivers, swimming pools, splash pads, surf parks, or other recreational venues that are poorly maintained or minimally chlorinated.



How does Naegleria fowleri infect people?

Naegleria fowleri enters the body through the nose, usually when people are swimming. It then travels up to the brain, where it destroys the brain tissue and causes swelling.

In the recent Kozhikode case, it is being suspected that the girl was infected while swimming in a local river. On May 1, she bathed in the river along with four children, but the others did not develop symptoms and their test results were negative.

Notably, people cannot get infected with Naegleria fowleri from drinking water contaminated with the amoeba. PAM is also non-communicable.

What are the symptoms of primary amoebic meningoencephalitis?

In the initial stage, the symptoms include headache, fever, nausea and vomiting. Later on, the patient may have a stiff neck and experience confusion, seizures, hallucinations and slip into a state of coma.

According to the US Centers for Disease Control and Prevention (CDC), "Most people with PAM die within 1 to 18 days after symptoms begin. It usually leads to coma and death after 5 days."

What is the treatment for primary amoebic meningoencephalitis?

As earlier reported, scientists haven't been able to identify any effective treatments for the disease yet. At present, doctors treat it with a combination of drugs, including amphotericin B, azithromycin, fluconazole, rifampin, miltefosine, and dexamethasone.

Past incidents of infection

There have been 20 reported cases of PAM in India, with the Kozhikode case being the seventh such infection in Kerala. In July 2023, a 15-year-old boy died of it in Alappuzha. The first incident in Kerala was also reported in Alappuzha in 2016, perhaps due to the large number of water bodies here. Since then, infections have been reported in Malappuram, Kozhikode and Thrissur.

SHOULD MEDICAL PROFESSIONALS BE PROTECTED FROM CONSUMER COURT PROCEEDINGS? SC TO RECONSIDER 1995 RULING

Almost 30 years before the Supreme Court, on Tuesday (May 14) held that lawyers, as 'professionals', could not be subjected to legal proceedings for providing faulty 'service' under the Consumer Protection Act, 2019 (CPA), the apex court rejected similar arguments for those in the medical profession.

In Indian Medical Association vs V P Shantha (1995), a Bench of Justices S C Agarwal, Kuldeep Singh, and B L Hansaria ruled that medical professionals provide a "service" as defined in older CPA (containing an identical definition of "service" as the current one), and could thus be sued in consumer court for providing faulty service. After Tuesday's ruling, this decision has now been referred to a larger bench for reconsideration.

In 1995, the court determined that medical professionals provide a "service" and can be liable for deficiencies in this service. The court held that despite the skilled nature of medical work, doctors owe specific duties of care to their patients and can be held accountable if these duties are breached.



Recently, Justices Bela Trivedi and Pankaj Mithal suggested that medical practitioners should not be held to the same standards as other occupations under the CPA, which aims to protect consumers from unfair trade and unethical business practices.

The 1995 ruling also addressed concerns about the complexity of medical cases being handled by consumer courts, which may lack medical expertise. The court concluded that requiring specific expertise for each case would be impractical, placing the burden on parties to provide necessary evidence.

Additionally, the court clarified that medical services, even when provided free of charge under certain conditions, could still be liable under the CPA. It differentiated between services given free to all, paid services, and services free for some but paid by others. The court ruled that the third category falls under the CPA to prevent inequities in service quality.

Lastly, the court noted that medical care does not constitute a "contract of personal service," which typically involves an employer-employee relationship, thus affirming that doctors and patients do not have such a relationship.

CONSISTENT, COORDINATED: EVOLUTION & ESSENTIALS OF INDIA'S CLIMATE POLICY

J R Bhatt writes- "The 1990s were a time of great change in India and the world, which led to the forging of new policies in many areas, including on the environment."

— "The Rio Summit of 1992 saw the emergence of the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity and Forest Principles. After Rio, the divisions of climate change and biodiversity in India's then Ministry of Environment and Forests came to life slowly and steadily."

— "India's climate policy is based on five major determinants: geography, population, impacts, worldview, and actions."

— "India's climate policy is informed by its vision of inclusive growth for all-round economic and social development, the eradication of poverty, declining carbon budget, firm adherence to the foundational principles of the UNFCCC, and climate-friendly lifestyles. India's climate policy has always been clear, consistent, and coordinated."

— "India has been a consistently strong voice of the Global South: the CBDR-RC (Common But Differentiated Responsibilities and Respective Capabilities) principle was developed largely through Indian interventions at the Rio Summit, 1992."

— "India recognises that development and environment are two sides of the same coin, and must be taken together for all-round holistic development. India's model of sustainable development must act as a rallying cry for developing countries to counter the narratives presented by the developed world, bringing science and evidence to the forefront of policy-making."

GROWING UP WITH PINES & NEEDLES IN UTTARAKHAND

Devyani Onial writes-"A conifer that can grow up to a height of about 30 metres, the chir pine covers almost 16.5 per cent of Uttarakhand's total forested area. It owes its scientific name, *Pinus roxburghii*, to William Roxburgh, a Scottish doctor and naturalist, who went on to become



superintendent of the East India Company's botanic garden at Calcutta and who is widely regarded as the father of Indian botany."

— "Native to the Himalayas, chir pine or the longleaf Indian pine, was not introduced to the Himalayas by the British, as is often believed, though they certainly gave it preference for its commercial use, mainly lumber and resin."

— "Found all over the Western Himalayas at an elevation between 1,000 and 2,000 metres, it covers large parts of Garhwal and Kumaon where it can be seen growing on steep slopes and can be identified by its three needles and its round cone (unlike the elongated cones of other pines)."

— "Chir pine has been here for centuries but during the British period, it was promoted for tapping its resin. For a long period in the middle hills, oak forests were cut mainly to make coal and wood charcoal and that allowed the chir pine to expand more," says Dr G S Rawat, emeritus scientist, Uttarakhand Council for Science and Technology.

— Historian and environmentalist Shekhar Pathak says, "In the days before artificial resin, turpentine was made from resin from pine. In fact, in the colonial period, the first industry was a leesa (resin) factory in Kashipur around 200 years ago," says Pathak. Since the chir is hardy and fast growing, says Pathak."

— "While its needles tend to catch fire easily because of their high resin content, the bark of the tree doesn't catch fire easily since it has a very high ignition temperature — which is why blacksmiths use the bark of the chir pine in their furnaces to melt metal."

— "A few years ago, the Uttarakhand government had considered cutting pine trees to combat forest fires, an idea it later abandoned."

— "For the short-term and long-term management of the forests in Uttarakhand, the dense chir pine forest, more like monocultures, must be converted into mixed forests. More broad-leaf species should be promoted and the dense chir pine forests should be effectively managed and their wood used. The state could effectively manage the chir forests and earn some revenue as well as local people can be given some areas under Van panchayats," says Rawat.

'SEVERE' CYCLONE HEADED FOR BENGAL BY MAY 26: IMD

The India Meteorological Department (IMD) on Thursday said that a cyclone is likely to develop in the Bay of Bengal and head towards West Bengal and Bangladesh.

— This will be the first cyclone to form in 2024 in the North Indian Ocean basin. When the prevailing system intensifies into the cyclonic storm category, it will be identified as Cyclone Remal, a name proposed by Oman.

— This will be for the fifth consecutive year when cyclones developed in the Bay of Bengal in May during the pre-monsoon phase. The storms were Amphan (2020), Yaas (2021), Asani (2022) and Mocha (2023), whereas Nisarga (2020) and Tauktae (2021) developed in the Arabian Sea.

For Your Information:

— A cyclone is a large-scale system of air that rotates around the centre of a low-pressure area. It is usually accompanied by violent storms and bad weather. As per NDMA, a cyclone is



characterised by inward spiralling winds that rotate anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

EXPLAINED: THE HISTORY OF SUPREME COURT ORDERS AGAINST ILLEGAL MINING IN SARISKA RESERVE

The Supreme Court has ordered the Rajasthan government to shutter 68 mines operating within a 1-kilometre periphery of the critical tiger habitat (CTH) of the Sariska reserve. The order, passed on May 15, is the latest of many attempts by the country's top court since the 1990s to halt the mining of marble, dolomite, and limestone in Sariska in violation of laws.

— Both the Wildlife Protection Act, 1972 and Environment Protection Act, 1986 prohibit quarrying in and around a tiger reserve.

— A decade after Sariska became a tiger reserve in 1978, Rajasthan issued mining leases inside the reserve to many who had obtained no-objection certificates (NOCs) from the then field director of Sariska, even though he did not have any authority to issue such NOCs.

— A senior official in the Rajasthan Forest Department said the latest SC order was yet another opportunity to thwart illegal mining in the state. "Whatever mistakes were made in the past can be set right by demarcating the no-go zones around Sariska and also other mining-affected reserves of the state," he said.

'ICE CREAM MAN OF INDIA' RAGHUNANDAN KAMATH DIES AT 70

Raghunandan Srinivas Kamath, the founder of Naturals Ice Cream, passed away on Friday night. He was 70. His last rites were performed on Saturday evening at Amboli, Andheri West.

Born to a mango vendor in a village in Mangaluru, Kamath went on to establish Naturals, an ice cream parlour estimated to be worth Rs 400 crore today, becoming a well-known figure in the industry and an inspiration to many.

As soon as the news of his death spread, many paid tribute to the 'ice cream man of India' on social media. "A few years ago I did a top five ice cream brands of Mumbai feature for YouTube and I learned a great deal about the history of the Naturals Ice Cream brand I did not know and it made me appreciate their product even more," wrote actress, writer and home chef Tara Deshpande on Instagram.

As the legend goes, a young 14-year-old Kamath boarded a train from Mangaluru (then Mangalore) and came to Mumbai (then Bombay). After working at his brother's restaurant, Kamath had an idea — if ice creams have fruit flavours, why can't they have real fruits. He decided to fill this void in the market. But unsure of whether customers would come, he began his business with serving pav-bhaji as the main dish and the ice cream as an add on. His first ice cream parlour was launched in Juhu, with the initial menu featuring around 12 flavours, each being a testament to the knowledge he acquired during the time he assisted his father in Mangaluru.

His story was captured expansively in 'Intelligent Fanatics of India', a book co-authored by Mumbai-based journalist Pooja Bhula.

Kamath is survived by his wife and two sons, including Siddhant, the director of Naturals.



BUSINESS & ECONOMICS

YELLEN WANTS G7 'WALL OF OPPOSITION' TO CHINA'S EXCESS INDUSTRIAL CAPACITY

U.S. Treasury Secretary Janet Yellen said on Thursday that she wants market-driven countries to present a “wall of opposition” to China over its state-driven industrial policies, a key issue she is pushing at a G7 finance meeting this week.

— Yellen also told a news conference that she is looking for “general agreement on the concept” from G7 finance ministers and central bank governors on a plan to bring forward the earnings from some \$300 billion in frozen Russian assets that could provide Ukraine with significant financial support beyond 2025.

— Yellen said that many countries beyond the G7 advanced industrial democracies were concerned about China’s overinvestment in electric vehicles, solar products, semiconductors, steel, and other strategic industries, including Mexico, India, and South Africa.

— Without changes in Chinese policy, including a shift from increasing production to boosting domestic demand, Yellen said market-driven economies face a flood of cheap exports from China that will threaten the viability of their manufacturers.

JAPAN, CHINA RAISE QUESTION OVER INDIA'S LAPTOP IMPORT MONITORING SYSTEM AT WTO

Japan and China have formally raised concern over India’s laptop import licensing measure which was announced in August last year but was soon reversed, a statement released by World Trade Organization’s (WTO’s) Committee on Import Licensing (CIL) that met on May 21 showed.

India’s move to restrict laptop imports had earlier too gathered attention particularly from the US as United States Trade Representative (USTR) Ambassador Katherine Tai raised the issue during the G20 meet in India. Tai had urged India to ensure that the end-to-end online system currently in operation and related policies do not restrict trade going forward.

However, a senior government official told The Indian Express that questions raised by countries have no merit since there is no restriction on laptop and tablet imports in the country. He said that since India is a large market for laptops, countries keep raising questions in committee meetings.

“There are far more important concerns that global trade is impacted by such as the Carbon Border Adjustment Mechanism (CBAM) and Inflation Reduction Act (IRA) launched by the European Union and US but there is no movement on that front in the WTO. But India is being questioned for a policy that is imposing no restriction on laptop imports at all,” the official stated.

This came as the regime could have impacted the exports of laptops and tablets manufactured by American companies in China as nearly 90 per cent of the laptops and personal computers (PCs) imported by India came from China. However, other countries that eye fast growing domestic market for laptops are increasingly questioning any move made by India that resembles a restriction.

Notably, the WTO licensing committee had gathered last week to discuss ways to improve the transparency of import licensing regimes among WTO members and to encourage members to make use of the WTO’s Import Licensing Notification Portal launched on October 31 last year.

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The committee addressed three trade concerns in relation to India during the meeting, the statement said. While China and Japan raised concern over India's measures on personal computers, tablets and other electronic products, Indonesia questioned India's import monitoring on viscose staple fiber (VSF).

Chinese Taipei and Thailand sought to discuss India's import monitoring for pneumatic tyres. Earlier, India in its reply to the questions raised by the US in the WTO said that the present system has been put in place to "manage and monitor import" of specified IT hardware Goods to ensure supply chain resilience and address national security concerns.

New Delhi in its reply on December 12 last year also said that the issuance of license will be "automatic in nature" and that India has no plans to expand the use of import management system beyond the listed products as of date.

India had come up with the regime to limit import of laptop and tablets largely to cut reliance on China which is the largest exporter of the item. However, unlike in the case of mobile phones, a WTO commitment prevents India from raising tariffs to shore up manufacturing within the country.

As per the commitment made under the Information Technology Agreement in 1997 at the WTO, India cannot increase the duty on laptops, PCs and similar IT products, which currently come into the country at zero duty.

Limiting laptops import is also crucial for India since the production-linked incentive (PLI) scheme for IT hardware goods is moving in the slow lane, despite the Union Information Technology Ministry modifying the plan to increase budgetary outlay last May, and clearing 27 entities, including Acer, Asus, Dell, HP and Lenovo, under the scheme.

Last year the US, China, Korea and Chinese Taipei raised concerns about India's decision to impose import restrictions on laptops, and computers, in another WTO committee. During the meeting of WTO's Committee on Market Access, PTI reported that Korea stressed that the proposed measures by India seem inconsistent with WTO rules and could consequently create unnecessary trade barriers.

SHUFFLING OF TRADE NEGOTIATORS: GOVT LOOKS TO RETAIN INSTITUTIONAL MEMORY

Faced with tough negotiators from the United Kingdom (UK) and the European Union (EU), the Commerce and Industry Ministry has started looking at ways to strengthen India's negotiating capabilities. Among other things, this exercise is likely to focus on plugging loopholes that emanate due to the loss of institutional memory on account of the routine transfer of key civil servants steering extended trade negotiations.

— Among the multiple steps under consideration, the Ministry is working on preparing a set of fresh standard operating procedures (SOP) on streamlining trade talks.

— India is facing a systemic problem when it comes to negotiations amid fast-changing contours of trade talks that go beyond traditional areas such as tariffs concessions to labour and environment.

— Experts pointed out that the country's negotiating strategy cannot rely on transferable generalist civil servants and could need a separate service to handle trade negotiations.



— Due to the lack of permanent institutional structure and efficient file-keeping of negotiations held earlier, India's bilateral and multilateral talks fall short while facing subject matter experts, especially from developed nations who tend to deploy considerably larger teams of negotiators and researchers with decades of experience.

— India is currently in talks with the UK, EU, Oman, and Australia to sign FTAs and with the Association of Southeast Asian Nations (ASEAN) to review the trade deal signed in 2009.

— India had earlier decided to exit from the China-led Regional Comprehensive Economic Partnership (RCEP) deal after years of negotiations.

— According to experts, as new officers join the table with little knowledge on what was negotiated before, India loses out on institutional memory-wise. Experts suggest detailed reporting and periodically informing the parliament and cabinet about the negotiations.

— Abhijit Das, who has extensive experience of directly negotiating at the World Trade Organization says that India need not look at other countries to revive good practices in trade negotiations.

— India is currently negotiating with Australia to broaden the base of the trade deal.

For Your Information:

— India signed a trade agreement with the four-nation European Free Trade Association (EFTA) on March 10, 2024, an intergovernmental grouping of Iceland, Liechtenstein, Norway and Switzerland. The deal brings in \$100 billion in investment over 15 years, with the EFTA looking at joint ventures that will help India diversify imports away from China.

WHY IS RBI KEEPING AN EYE ON GOLD LOANS?

The story so far:

The Reserve Bank of India (RBI) earlier this month asked gold loan lenders to stick to regulatory norms while lending in a bid to tighten its grip over Non-Banking Financial Companies (NBFCs). The RBI has increased its scrutiny of NBFCs after it found certain NBFCs to be flouting regulatory norms. In March, the RBI banned IIFL Finance from issuing fresh gold loans after the firm was found violating lending norms.

What are the RBI's gold loan norms?

The RBI stipulates lenders to comply with certain norms while lending money in lieu of gold. For instance, lenders are not allowed to lend any amount of money that is greater than 75% of the value of the gold that is submitted as collateral by the borrower. This is to ensure that banks have sufficient cushion to absorb any losses by selling the gold in case the borrower defaults on the loan.

And in order to comply with income tax rules, the RBI also mandates that when a loan is disbursed to a borrower, no more than ₹20,000 can be disbursed in the form of cash; the remaining loan amount needs to be deposited in the borrower's bank account. It also instructs lenders to conduct the auction of any gold (in case a borrower defaults) in a fair and transparent manner in locations that are accessible to the borrowers.



It is believed that the RBI is working on detailed guidelines for gold loans that lenders will have to follow.

WELCOME BOUNTY

The decision by the Reserve Bank of India's board to transfer a record surplus of almost ₹2.11 lakh crore to the Union Government for 2023-24 will serve as a welcome shot in the arm for the new government when it presents its Budget in July. More than double the previous year's ₹87,416 crore payout as well as the ₹1.02 lakh crore dividend-cum-surplus receipts from the banking and financial system and RBI that was pencilled into the interim Union Budget for 2024-25, the transfer should give the next Finance Minister a fair bit of elbow room when computing the spending and fiscal math. The surge in transferable surplus reflects the prudent asset management approach adopted by the Indian central bank, at a time of lingering global uncertainty and widespread policy tightening by central banks worldwide seeking to restore price stability. While the specifics of the RBI's 2023-24 balance sheet will be known in the coming days, clearly a combination of substantial gains from higher interest income earned on its holdings of overseas securities and the gains from its interventions in the foreign exchange market to smoothen volatility in the rupee's moves must have contributed in swelling the surplus. The weekly statistical supplement shows that as on March 29, total foreign exchange reserves had increased by \$67.1 billion over the course of 12 months to \$645.58 billion.

The RBI's prudence has also extended to the crucial provisioning done under the Contingent Risk Buffer (CRB), where it has raised the level of funds set aside to cover for any unforeseen contingencies and risks to the economy. By raising the level of provisioning by 50 basis points to 6.5% of its balance sheet size for 2023-24, the central bank has clearly signalled its increased confidence in the health of the domestic economy even as it strengthens the buffer against any sudden threats to stability from unexpected developments in the global financial system. For the new government that will assume office after the results of the ongoing general election are declared on June 4, the bountiful surplus transfer from the RBI will give it an opportunity to raise capital spending, especially at a time when the key engine of private consumption expenditure is still in search of sustained tailwinds. The opportunity to use some of the additional bonanza to bridge the fiscal gap can also help strengthen the government's finances and reassure investors of its commitment to the fiscal consolidation road map. The RBI has in its own quiet way paved the path for the next government to start with confidence in the resilience of the economy.

TAX PACKAGE FOR ULTRA-WEALTHY; REDISTRIBUTIVE POLICIES NEEDED FOR POOR, LOWER AND MIDDLE CLASS: REPORT

A tax package for the ultra-wealthy in India including an annual wealth tax and an inheritance tax for those with net wealth exceeding Rs 10 crore accompanied by redistributive policies to support the poor, lower castes, and middle classes has been proposed by a report of the World Inequality Lab.

Economists Nitin Kumar Bharti, Lucas Chancel, Thomas Piketty, and Anmol Somanchi in a note released Friday said the tax package proposal can help tackle the massive concentration at the very top of the wealth distribution and create fiscal space for crucial social sector investments.

This note follows up on an earlier paper, co-authored by the same economists and released by World Inequality Lab in March, which had stated that India's top 1 per cent income and wealth shares have reached historical highs and are among the very highest in the world.

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The report proposes an annual wealth tax and an inheritance tax for those with net wealth exceeding Rs 10 crore, equivalent to the top 0.04 per cent of the adult population (~370,000 adults), who currently hold over a quarter of the total wealth.

It suggests raising phenomenally large tax revenues while leaving 99.96 per cent of the adults unaffected by the tax. Outlining a baseline scenario, the report said, a 2 per cent annual tax on net wealth exceeding Rs 10 crore and a 33 per cent inheritance tax on estates exceeding Rs 10 crore in valuation would generate a 2.73 per cent of Gross Domestic Product (GDP) in revenues.

“To fight these growing inequalities and create fiscal space for crucial social sector investments, we propose a tax justice package comprising an annual wealth tax and an inheritance tax. Much has been written about the possible pros and cons of such taxes and the debate must continue. Given the extreme concentration of wealth at the very top, coupled with deeply rooted caste inequities, we believe such policies would be an important step towards a more equitable growth path for India,” the report said.

An inheritance tax would directly tackle the unfair advantage that unearned dynastic wealth renders to individuals solely based on the accident of birth, which is only exacerbated by the caste system, it said. However, the report noted that since the inheritance tax comes into force when wealth is bequeathed (i.e. upon the death of the dynast), hence, it delivers relatively small tax revenues on an annual basis.

Tax Justice proposals for India Tax Justice proposals for India

On the other hand, a small wealth tax would deliver significant annual revenues (given the larger base) while also dampening accumulation at the very top, it said.

The tax package needs to be accompanied by redistributive policies to support the poor, lower castes, and middle classes. The report cited an example of how the baseline scenario would allow doubling the current public spending on education, which has stagnated at 2.9 per cent of GDP over the past 15 years.

“It needs to be extensively debated, with a consensus on specific details of the design emerging from a broader democratic debate on tax justice and wealth redistribution in India,” the report said.

According to the earlier paper released by World Inequality Lab in March, India’s top 1 per cent income and wealth shares have reached historical highs and are among the very highest in the world. The paper titled “Income and Wealth Inequality in India, 1922-2023: The Rise of the Billionaire Raj” had stated that the “Billionaire Raj” headed by “India’s modern bourgeoisie” is now more unequal than the British Raj headed by the colonialist forces.

The paper had pointed out there is evidence to suggest the Indian tax system might be “regressive when viewed from the lens of net wealth”. A restructuring of the tax code is needed, the paper had said, suggesting that a levy of a “super tax” of 2 per cent on the net wealth of 167 wealthiest families would yield 0.5 per cent of national income in revenues and create space for investments.

Recently, the debate on inheritance tax had picked up after Sam Pitroda, a former adviser to Rajiv Gandhi and an associate of Rahul Gandhi, described the inheritance tax in the United States as an “interesting law”. Prime Minister Narendra Modi had then stated that the Congress would snatch property left behind by people for their children — the party’s mantra, he said, was to “loot”, “zindagi ke saath bhi, zindagi ke baad bhi (both when you are alive and when you are dead)”.

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HOW PUNJAB AND HARYANA REMAIN KEY TO NATIONAL FOOD SECURITY

An El Niño-induced agricultural output decline has underscored, yet again, the importance of Punjab and Haryana to India's food security.

The two breadbasket states, whose farmers led the protests against the Bharatiya Janata Party-led government's now-repealed three agricultural reform laws during 2020-21, have together accounted for 75.5% of the total wheat procured for the Central foodgrain pool in the current marketing season.

Government agencies have so far bought about 25.5 million tonnes (mt) of the 2023-24 winter-sown crop harvested from late-March. Out of that, 12.2 mt has come from Punjab and over 7 mt from Haryana. The 75.5% combined share of the two states, which are still to vote in the ongoing Lok Sabha elections, has been the highest since the 75.8% of 2015-16.

Wheat lynchpins

Till the mid-2000s, Punjab and Haryana contributed 90% or more of the wheat for feeding the public distribution system (PDS) and other government programmes.

With the Green Revolution (the cultivation of high-yielding varieties) spreading to other states, and their governments also establishing infrastructure for buying grain at minimum support prices (MSP) from farmers, the ratio dipped to roughly 65% by the early 2010s.

In 2019-20 and 2020-21, which were bumper production years, not only did total wheat procurement hit record 39-43.3 mt levels, the share of Punjab and Haryana in that fell to just over 50%. Madhya Pradesh (MP) even briefly emerged as the country's No. 1 wheat procurer in 2019-20, overtaking Punjab.

This has all changed in the last three years, which have seen production setbacks from climate shocks. These took the form of an unseasonal temperature surge in March 2022 and heavy rain in March 2023, both times during the final grain formation and filling stage of the crop.

In 2023-24, it was not the "Ides of March", but an unusually warm November-December that has impacted wheat yields, particularly in central India. The winter's delayed arrival this time, attributed to El Niño, resulted in premature initiation of flowering and cutting short of the crop's vegetative growth (of roots, stems and leaves) phase. The effect was felt most in MP, Gujarat, Maharashtra and many parts of Rajasthan, where sowing happens early — from the last week of October to the first week of November.

Not surprisingly, wheat procurement from MP has plunged from 12.8-12.9 mt in 2019-20 and 2020-21 to hardly 4.6 mt this time. UP and Rajasthan, too, have posted steep drops from their 2020-21 highs. Punjab and Haryana have weathered the climate shocks better, because of longer winters and farmers there sowing mainly from early to mid-November. Uttar Pradesh (UP) and Bihar, where sowing extends till mid-December, have also reported good production due to near-normal temperatures this March. But much of the produce from those states has been purchased by private traders and millers paying more than the Centre's MSP of 2,275 per quintal.

Punjab and Haryana have played saviour at a time when wheat stocks in government godowns, at 7.502 mt on April 1, were the lowest since the 5.803 mt on the same date of 2008. The stocks were



also only a shade above the minimum operational-cum-strategic reserve of 7.46 mt necessary at the start of the marketing season.

The rice situation

In rice, government procurement was traditionally concentrated in Punjab and Haryana, plus the Godavari-Krishna and Kaveri delta regions of Andhra Pradesh (AP) and Tamil Nadu (TN).

Like with wheat, there has been a diversification here as well, with new states — especially Telangana, Chhattisgarh, Odisha and even UP — becoming major contributors to the Central pool. In the process, the combined share of Punjab and Haryana in total rice procurement has fallen from 43-44% in the early 2000s to an average of 28.8% in the four years ended 2022-23.

But the current crop year has again witnessed an increase in that ratio to around 32.9% (some procurement is still left in Telangana, AP and TN). Assured access to irrigation has meant that Punjab and Haryana farmers have taken no production hit from last year's patchy monsoon, courtesy of El Niño. This isn't the case with states such as Telangana, where farmers planted less area under rabi (winter-spring) paddy and also struggled to irrigate their crop owing to depleted groundwater levels.

Policy implications

Under the National Food Security Act (NFSA) passed by the previous Congress-led United Progressive Alliance government, some 813.5 million persons are entitled to receive 5 kg of wheat or rice per month through the PDS at highly subsidised prices. The current government has, since January 2023, been providing this grain to all NFSA beneficiaries free of cost.

It is unlikely that any government would dispense with the above scheme, even post the elections. The Congress, if anything, has promised to double the monthly ration quota to 10 kg for "poor" persons.

The NFSA in its present form, along with other welfare schemes (midday meals for school children, allocations for anganwadi care centres, etc) and open market sale operations (to cool down prices in inflationary episodes), would require 60-65 mt of grain to be annually procured by state agencies.

In most years, that requirement is more than comfortably covered. In 2020-21, total rice and wheat procurement crossed 103.5 mt. It is in the rare bad monsoon or climate shock year that Punjab and Haryana prove their worth.

Given their average per hectare wheat and paddy yields of 4.8 tonnes and 6.5 tonnes respectively – way above the corresponding all-India levels of 3.5 tonnes and 4.1 tonnes – the two states will continue to matter for national food security even with some desirable acreage shifts to other crops.

EXPLAINSPEAKING: HOW JOBLESSNESS IN INDIA HAS HURT ALL COMMUNITIES OVER THE LAST 8 YEARS, WITH NONE BETTER OFF IN 2023-24

In April this year, CSDS-Lokniti, a leading research organisation tracking the behaviour of India's voters for decades, came out with the results of its pre-poll survey. It found that the single most important issue for voters in 2024 is unemployment. As many as 29% of the people surveyed said unemployment will be the biggest factor as they decide their vote. The second biggest issue was

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price rise; as many as 23% of the people surveyed said it was the biggest factor. Taken together, these two issues were quoted as the most important ones by 52% of the people surveyed.

In other words, regardless of one's voting preference, there is a growing unanimity that two of the biggest policy challenges facing Indians are joblessness and higher prices. Regular readers of ExplainSpeaking would recall that these are the two most common topics that this column has tracked since its inception.

The Lok Sabha election campaign has been shrill, and the narrative is more focused on dividing voters into religious and caste identities. But little is said about how unemployment and price rise affect different sections.

On price rise, which stays the same for all communities, ExplainSpeaking had found a simple formula to help readers figure out whether or not their salary beat the inflation rate in the Modi years. Read this detailed explainer. But simply put, if your salary or income has not increased by at least 32% since 2019 and at least 64% since 2014, then you are worse off than before the start of the Modi years (2014 to 2024).

However, even though inflation does hit the poor more than the rich, it does not, thankfully, directly differentiate between religion and caste.

Joblessness has also hurt all, but to varying degrees. Data from the Centre for Monitoring Indian Economy (CMIE) provides a good understanding of how employment-related metrics diverge among different religious groups as well as different caste groups. CMIE has data for eight years, from 2016-17 to 2023-24. As such, it provides a good understanding of who was the worst hit in the employment-related problems.

But before looking at the data, here is some basic conceptual understanding. four variables:

1. The working-age population: This is simply the total population over the age of 15 years.
2. Labour Force Participation Rate (LFPR): The LFPR is the percentage of the working-age population that is demanding a job. As such, it excludes people like a 35-year-old married woman who is not actively looking for a job or a 22-year-old who is busy pursuing higher education or a 65-year-old who no longer wants to work. Thus the LFPR represents the demand for jobs in an economy.
3. Unemployment Rate (UER): The UER is the percentage of people looking for a job but are as yet unemployed. The UER is expressed as a percentage of the labour force. All over the world, the UER is often the most widely used metric to assess the health of the labour market.

However, it is important to note that in India it can often give misleading results. That's because India's LFPR has been falling. Often this can happen if people who have been unemployed for a long time decide to stop looking for (demanding) a job.

In such a case, the UER falls not because the economy has created more jobs but because fewer people are demanding them. As such, it is best to read the UER movement in conjunction with the LFPR movement.

4. The Employment Rate (ER): The ER is often considered the best metric to assess the health of employment in the Indian context. That's because it is simply the ratio of the



total number of employed people and the total size of the working-age population. By definition, it circumvents the analytical problem posed by reading UER in an economy where the LFPR rises or falls substantially over time.

The ER provides a neat, single-shot number that best captures the health of employment in any economy. If it is going up, it implies more and more people (as a percentage of the total working-age population) are getting jobs and if it falls it shows that the percentage of people with jobs is falling.

Lastly, data here only takes into account the main religions and the main castes.

GREEN CREDITS: GOVT NOD TO 12 PROJECTS, 24 UNDER CONSIDERATION

The Centre has approved 12 greening projects under the Green Credit Program (GCP), which was notified last year as a market-based mechanism designed to incentivize voluntary environmental actions across diverse sectors, officials aware of the development said.

— The GCP, notified on October 13, 2023, seeks voluntary participation in “environmental positive actions” such as afforestation, water conservation, waste management among others from PSUs, private industries, non-profits and individuals. The GCP’s governance framework is supported by an inter-ministerial Steering Committee, and Indian Council of Forestry Research and Education (ICFRE), Dehradun, which serves as GCP administrator, responsible for program implementation, management, monitoring, and operation.

— Those investing in these initiatives will earn green credits that they can trade on a platform. The greening activities will happen on degraded land parcels and state forest departments have identified over 10,000 hectares of degraded land so far.

— The GCP has provided for exchanging the credits meeting compliance of compensatory afforestation. This refers to the legally mandated afforestation that industries and government agencies have to undertake on non-forest land equivalent to the size of forests that are felled.

MOBILE PLI MAY BE EXTENDED BEYOND 2026

Smartphone PLI (production-linked incentive), the most successful of all 14 such schemes, may be extended by a couple of years beyond 2025-26 when it officially ends.

The five-year PLI scheme, which started in 2020 ends in 2026, and each company has the flexibility to choose any five consecutive years. While Apple has chosen the period of 2021-2026, for Samsung it’s between 2020-2025.

Officials sources said that while it’s not a good practice for any industry to be perpetually supported by subsidy, ending the same abruptly could also be counter-productive.

Therefore, the thinking in the government is that a component scheme should replace the PLI in the sector. While the current smartphone PLI is for the finished products, the component-incentive scheme will be for inputs, which today are largely imported, adding to to the current account deficit.

“However, manufacturers would need time to scale up in components and in the interim would continue to need support for finished products. That’s the reason that the PLI scheme may be



extended by a couple of years. Once the scaling up in components happen, the finished product subsidy would end,” officials said.

The smartphone PLI has seen domestic production of phones rising to Rs 4.1 trillion in FY24 from Rs 2.14 trillion in FY20, the year before the scheme was announced. Smartphones exports from the country rose to Rs 1.2 trillion in FY24, compared to Rs 27,225 crore in FY20.

Apple and Samsung are the biggest beneficiaries of the scheme. Apple assembles iPhones in the country via contract manufacturers – Foxconn, Pegatron, and Wistron. Besides global companies, local contract manufacturer Dixon has also been benefiting from the scheme. The company manufactures smartphones and feature phones for companies such as Xiaomi, Samsung, Motorola, Jio, itel, among others, at its four plants in Noida. Dixon is also expected to soon start manufacturing Google Pixel phones in the country.

The component scheme will be worked out once the new government assumes office next month. The finalisation of the details and announcement would take a couple of months, after which the industry would need two-three years to take-off. “The idea behind incentive schemes, be it for finished products or components is to reduce cost for the industry, which relocates from China, Taiwan, etc,” officials said.

For components, the government is targeting to increase the domestic value addition to around 35-40% initially taking it finally around 50%. Currently, domestic value addition stands at 15-18%.

“Once an industry becomes a part of a global value chain, domestic value addition can’t go beyond a point,” officials said.

Broadly the component scheme will be on the lines of plug and play model and aim at domestic production of printed circuit boards, electronic components such as resistors, diodes, camera modules, lens, metallics, etc.

Under plug and play model, the government will acquire land and build factories. Global companies manufacturing such products can then install machinery and use the facilities to roll out the identified items.

Officials said the investments made by the government in acquiring land and building factories will automatically get recouped through goods and services taxes. Further, the import bill on electronic components will come down, thereby reducing the current account deficit.

Countries like China, Thailand and Vietnam, which are competing economies for India as far as electronics trade is concerned and where most of the component manufacturers are located, have trade surplus.

The domestic electronics manufacturing was at \$102 billion in FY23 and has risen to around \$115 billion in FY24. The government has set a target of achieving \$300 billion by 2025-26. In FY24, India’s electronics goods exports jumped 23.6% to \$29.12 billion, even as the country’s total exports contracted by 3%.

SC AGREES TO WAIVE TELCOS’ INTEREST ON I-T DUES ON LICENCE FEE

The Supreme Court has given a major relief for telecom service providers, including Bharti Airtel, Reliance and Vodafone Idea, by waiving off interest due on income tax arising from an October 16,

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2023 judgment, which held that telecom licence fee should be treated as entirely “capital in nature”.

A Bench of Justices B.V. Nagarathna and Ujjal Bhuyan agreed to a waiver of the interest levy after the assesseees (telcos) said payment of the tax demand from the year 2000-2001 was itself a “heavy burden”. The telcos had urged the court to at least waive the interest payable on the tax for the period.

Centre objects

Additional Solicitor General N. Venkataraman, appearing for the income tax department, had objected to the request. He had contended that it was only logical for the assesseees to pay the interest if they were meeting the tax demand.

After giving thoughtful consideration to the submissions, the Bench, in a four-page order dated May 17, published on Monday, directed that “since the judgment of this court is dated October 16, 2023, and having regard to the Telecom Policy, which commenced from the year 1999, the payment of interest for the period for which the tax demand is now to be met in respect of these cases stands waived”.

‘Not a precedent’

However, the court made it clear that the order would not act as a precedent.

“The order shall not be a precedent in any other case as we have passed this order bearing in mind the peculiar facts of this case and having regard to the lapse of time in litigation,” the Bench underscored.

The National Telecom Policy of 1994 was substituted by the new Telecom Policy in July 1999.

Telecom Policy 1999

The 1999 policy had stipulated that a licensee (telco) would be required to pay a one-time entry fee, and additionally, a licence fee on a percentage share of gross revenue.

The October 2023 judgment had concluded that the payment of the licence fee was “intrinsic to the existence of the licence as well as trade itself. Such a payment has to be treated or characterised as capital only”. “Consequence of non-payment would result in ouster of the licensee from the trade,” the Supreme Court had observed in its October judgment.

The apex court judgment was based on appeals against a Delhi High Court judgment of December 2013. The High Court had confirmed an Income Tax Appellate Tribunal finding that the variable licence fee paid by telcos under the 1999 policy was revenue expenditure and not capital.

FLIGHT CANCELLATIONS AFFECTED 1.5 LAKH PEOPLE SINCE DEC. 2023

Since December 2023, hundreds of cancellations and poor on-time performance of airlines have left thousands of people stranded at airports across India. Between March 31 and April 3 this year, 150 Vistara flights were cancelled and 200 flights were delayed by more than two hours. On May 8, Air India Express cancelled 90 of its 360 flights. Similar cancellations, though not at this scale, were recorded across many large airlines at various points this year.



The recent crisis to hit the aviation industry is fuelled by the unavailability of crew. In the case of Air India Express, about 200 cabin crew reported “sick”. In the case of Vistara too, crew unavailability was cited as the reason. There has been a mismatch between demand and supply of crew amid the expansion of the network.

The new troubles have come just as the aviation industry has started shrugging off the effects of the COVID-19 pandemic, which resulted in record losses for all airlines. During the first few months of the pandemic, in 2020, passenger flow came to a halt as airlines were grounded. In later months, passenger flow trickled in as airlines had to follow pandemic-related protocols. Despite that, airlines continued to pay salaries, airport fees, and aircraft and engine rentals and thus faced heavy losses. Later in 2022, when passenger flow returned to pre-COVID-19 levels, aviation fuel prices shot up. Airlines continued to suffer since passing on the fuel price to customers was not an option.

Chart 1 shows the cancellation rate of various airlines month-wise in the January 2022-March 2024 period. The bigger and darker the box, the higher the cancellation rate. In January 2024, 5% of IndiGo’s flights, 3.4% of SpiceJet’s flights, and about 2% of Air India’s flights were cancelled. Even in the month prior, cancellations ranged between 1% and 2% for these airlines.

While the cancellation rate may statistically appear insignificant, the absolute number of passengers affected even when 1-2% flights get cancelled in a month is staggering. For instance, in the four months between December 2023 and March 2024, 1.5 lakh passengers couldn’t travel due to cancellations. Chart 2 shows the number of passengers affected by cancellations. When an airline with a significantly higher number of scheduled flights cancels even 1% of its flights, the number of passengers affected too is considerably higher. which explains the bigger boxes for IndiGo. In total, since January 2022, 6.5 lakh passengers have been affected by cancellations.

Cancellations result in a demand for refunds by passengers. Data show that the refund process has not been smooth. Chart 3 shows complaints about refunds as a share of total complaints received by airlines month-wise in the January 2022-March 2024 period. In 2022, across many months, over 25% of the total complaints were about refunds. In 2023 and 2024, this share reduced to 15%, which is commendable given the high number of cancellations. But problems persist.

The on-time performance of airlines has also been drastically falling in the past two years. Chart 4 shows the on-time performance of airlines, based on data from the Bengaluru, Delhi, Hyderabad, and Mumbai airports. The figure in the chart corresponds to the % of on-time (with some margin) landings and take-offs. In December 2023, the on-time performance of all major airlines fell to the lowest level in two years (SpiceJet: 30%, Air India: 47.6%, IndiGo: 60%). The poor on-time performance continued in 2024 as well. In the last two years, 45 lakh passengers have been impacted by this issue.

**LIFE & SCIENCE****AN OVERLOOKED MOLECULE COULD SOLVE THE VENUS WATER MYSTERY**

More than four billion years ago, Venus had enough water to cover its surface with an ocean 3 km deep. Today, the planet only has enough for this ocean to be 3 cm deep.

Scientists have been able to account for a lot of the water Venus lost in this time — but not all of it. Now, a team of scientists in the U.S. may have made a crucial advance.

The team's findings, reported in a paper in *Nature*, could plug a long-standing gap between the amount of water scientists expected Venus to have lost in the last 4.5 billion years and how much satellite observations say the planet has actually lost, which is a lot more.

"We have a pretty cool thing here," co-author Eryn Cangi, a planetary scientist at the University of Colorado Boulder, told *The Hindu*. "And it was time to release it into the community and see what they make of it."

"The bigger picture is about planetary habitability, and more specifically the history of water on Venus compared to the earth," Emmanuel Marcq, a planetary scientist at France's Laboratoire Atmosphères, Milieux, Observations Spatiales, who was not involved in the study, said.

Following the water trail

There are two reasons why Venus lost its water. The first is its hellish atmosphere — a result of its carbon dioxide-rich composition, which causes a strong greenhouse effect. The planet's surface is hotter than water's boiling point, simmering at 450 degrees C. So water can only exist as vapour in Venus' atmosphere.

Second, water was a victim of the planet's proximity to the Sun. The Sun's heat and ultraviolet radiation combined to shred water molecules into their constituent hydrogen and oxygen atoms in Venus's ionosphere — the upper region of the atmosphere, where charged atoms, molecules, and their electrons zoom around at high speeds.

However, we don't know the rates at which these processes happened. "There's a couple different theories about how [water levels] changed over time," Dr. Cangi said. The two theories broadly blame thermal and non-thermal processes for the water loss.

The thermal process refers to hydrodynamic escape. As the Sun heated Venus's outer atmosphere, it expanded, allowing hydrogen gas to leak to space. This escape lasted until the outer atmosphere sufficiently cooled, by about 2.5 billion years ago.

Dr. Cangi and her colleagues' research focused on how water loss occurs in the present day, specifically via a non-thermal process.

They focused on hydrogen atoms escaping Venus to space. Water levels drop as a result because the oxygen atoms left behind have fewer hydrogen atoms with which to form water.

However, estimates of the water-loss rate before Dr. Cangi's study suggested the planet had more water than what satellite observations indicated.



NUCLEOSYNTHESIS: THE ELEMENT FACTORY

WHAT IS IT?

Stellar nucleosynthesis is the process by which stars forge elements inside their cores.

The only element not formed in this way is hydrogen, the most abundant and lightest element in the universe: it was formed in the initial aftermath of the Big Bang.

The cores of stars have crushing pressures and temperature. For example, the sun's core temperature is about 15 million degrees C. In these harsh conditions, the nuclei of atoms undergo nuclear fusion.

The hydrogen nucleus is just one proton. Inside the core, these nuclei come together to form helium nuclei (two protons and two neutrons). This is the p-p (short for proton-proton) process.

In more massive stars, however, stellar nucleosynthesis treads a different path — one dictated by the availability of energy. More massive stars have a higher core temperature. There, in the so-called carbon-nitrogen-oxygen (CNO) cycle, the nuclei of these elements come together in different ways to form elements from helium onwards.

When a star runs out of nuclei to fuse, its core contracts. This in return increases its temperature, triggering nuclear fusion yet again. This process goes back and forth until the star starts to produce iron in its core. Iron is the lightest element for which fusion consumes more energy than it releases.

Elements heavier than iron can only be synthesised outside a star when it goes supernova.

SECRET BEHIND CONSTRUCTION OF EGYPT'S PYRAMIDS: WHAT A NEW STUDY REVEALS

Moving things that weigh over two tonnes is a difficult task today — imagine doing so 4,500 years ago. Yet, that is exactly what the ancient Egyptians pulled off to build the iconic pyramids of Egypt. Take, for instance, the Great Pyramid of Giza. Scholars estimate that it contains roughly 2.3 million individual blocks of stone, each weighing 2.3 metric tonnes on average. Moving such heavy objects without mechanised equipment seems so implausible that some have even (dubiously) credited aliens for the feat. A new study, however, finds that it was the River Nile that made Egypt's pyramids possible.

River-power

Most of Egypt's pyramids can be found in a 50 km, north-south stretch of desert between Giza and the village of Lisht. These sites today lie several kilometres away from the Nile. While Egyptologists have long suspected that the river might once have been closer to the pyramids, and indeed contemporaneous literary evidence suggests the same, conclusive proof has been elusive — until now.

A study published in the journal *Communications Earth and Environment* on May 16 has identified segments of a major extinct branch of the Nile, which runs right adjacent to the pyramids and could have been used to move heavy material around.

A team led by geomorphologist Eman Ghoneim used radar satellite imagery, historical maps, geophysical surveys, and sediment coring — a technique used by archaeologists to recover

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



evidence from samples — to map the river branch, which was likely buried thousands of years ago by sandstorms and a major drought.

“Locating the actual [river] branch and having the data that shows there was a waterway that could be used for the transportation of heavier blocks, equipment, people, everything, really helps us explain pyramid construction,” Suzanne Onstine, one of the studies co-authors, told the BBC.

The Ahramat, as the Nile branch has been named by the researchers, ran for roughly 64 km, was 200-700 m wide, and 2-8 m deep. The study also reveals that several of the pyramids’ causeways led to the inlets connected to the channel, which researchers posit could have acted as riverine harbours.

Ancient marvels

Using “the river’s energy to carry these heavy blocks, rather than human labour just [takes] a lot less effort,” Onstine said. It explains the high pyramid density between Giza and Lisht in the inhospitable Sahara desert. It does not, however, make the construction of pyramids any less impressive.

After all, moving stones to the site of the pyramid was just one part of the process. Thousands of workers had to then precisely place these blocks, which, researchers believe, was done via large ramps greased with water or wet clay, sledges, sturdy ropes, and levers.

Even conceptualising the pyramids required advanced understanding of mathematics and architecture. For instance, each side of Giza’s Great pyramid has a precise and consistent gradient of 52 degrees — a testament to both the planning of the architects, and the execution of the workers.

These workers lived in massive, highly organised settlements right next to the pyramids. The remains of bakeries and piles of animal bones show that not only were workers well fed for their labour, the whole endeavour was controlled by a strong central authority.

“Many people think of the site as just a cemetery in the modern sense, but it’s a lot more than that,” Egyptologist Peter Der Manuelian told The National Geographic in 2023. Their construction, decoration, and existence shed light into “every aspect of life in ancient Egypt”, he said.

WHAT ARE AI AGENTS, WHICH POWER OPENAI’S GPT4O AND GOOGLE’S PROJECT ASTRA?

The recently launched GPT-4o by OpenAI and Project Astra by Google have one thing in common: both are capable of processing the real world through audio and visual inputs and provide intelligent responses and assistance. In other words, the new AI models can have instant real-time conversations with a user.

Known as ‘AI agents’, GPT-4o and Project Astra have been touted as far superior to conventional voice assistants such as Alexa, Siri, and Google Assistant. The launch of these models marks a new phase in AI — the transition from chatbots to multimodal interactive AI agents.

What are AI agents?

AI agents are sophisticated AI systems that can engage in real-time, multi-modal (text, image, or voice) interactions with humans. Unlike conventional language models, which solely work on text-



based inputs and outputs, AI agents can process and respond to a wide variety of inputs including voice, images, and even input from their surroundings.

“You’re not typing into a text box, waiting for a response and then reading the output. You’re actually interacting with the AI through voice just as you would a human,” according to Google CEO Sundar Pichai.

From the demonstration by OpenAI and Google, one can say that AI agents are nimble when it comes to adapting to new situations. This facet makes them incredibly versatile and capable of handling a wide range of situations.

AI agents perceive their environment via sensors, then process the information using algorithms or AI models, and subsequently, take actions. Currently, they are used in fields such as gaming, robotics, virtual assistants, autonomous vehicles, etc.

How are they different from large language models?

While large language models (LLMs) like GPT-3 and GPT-4 have the ability to only generate human-like text, AI agents make interactions more natural and immersive with the help of voice, vision, and environmental sensors. Unlike LLMs, AI agents are designed for instantaneous, real-time conversations with responses much similar to humans.

LLMs lack contextual awareness, while AI agents can understand and learn from the context of interactions, allowing them to provide more relevant and personalised responses. Also, language models do not have any autonomy since they only generate text output. AI agents, however, can perform complex tasks autonomously such as coding, data analysis, etc. When integrated with robotic systems, AI agents can even perform physical actions.

What are the potential uses of AI agents?

AI agents can serve as intelligent and highly capable assistants. They are capable of handling an array of tasks, from offering personalised recommendations to scheduling appointments. Reports suggest that AI agents can be ideal for customer service as they can offer seamless natural interactions, and resolve queries instantly without actually the need for human interventions.

In the field of education and training, AI agents can act as personal tutors, customise themselves based on a student’s learning styles, and may even offer a tailored set of instructions. In healthcare, they could assist medical professionals by providing real-time analysis, diagnostic support, and even monitoring patients.

Are there any risks and challenges?

While AI agents showcase immense potential for the future, they are not without risks. Privacy and security are a key area of concern as AI agents gain access to more personal data and environmental information. Just like any AI model, AI agents can carry forward biases from their training data or algorithms, leading to harmful outcomes. As these systems become more common, appropriate regulations and governance frameworks should be laid out to ensure their responsible deployment.



WHY IS THE EUROPEAN UNION PROBING FACEBOOK AND INSTAGRAM?

The story so far:

The European Union has opened fresh investigation into Meta's Facebook and Instagram over suspicions that they are failing to protect children on their platform, a violation that could result in fines of up to 6% of their annual worldwide revenue.

What led to the investigation?

The 27-nation bloc has said it is concerned that Facebook and Instagram's recommendation engine could "exploit the weaknesses and inexperience" of children and stimulate "addictive behaviour". The bloc's executive arm further said that these systems could reinforce the so-called "rabbit hole" effect that leads users to watch increasingly disturbing content. As part of the probe, the commission will look into Meta's use of age verification tools to prevent children under the age of 13 from accessing Facebook and Instagram. And also find out whether the company is complying with the bloc's Digital Service Act (DSA) and enforcing a high level of privacy, safety and security for minors.

What does the DSA mandate?

The bloc's DSA came into effect in February. It stipulates very large online platforms, which have over 45 million users in the EU, to provide an option in their recommender systems that is not based on user profiling and share their data with the Commission and national authorities to assess compliance under the law.

The platforms are also required to take measures to protect minors from content that may impair their physical, mental or moral development. Additionally, platforms must take targeted measures to protect the rights of minors, including age verification and parental control tools that are aimed at helping minors signal abuse or obtain support. Facebook and Instagram have more than the stipulated number of users, and so are designated as very large platforms, bringing them under the law's purview.

The EU regulator will now carry out an in-depth investigation as a "matter of priority" and gather evidence by sending additional requests for information, conducting interviews and inspections. The commission can also accept commitments made by Meta to remedy the issues raised during the investigation.

What has Meta done to protect children on its platforms?

Earlier this year, Meta announced it was testing an AI-driven "nudity protection" tool that would find and blur images containing nudity that were sent to minors on the app's messaging system.

Additionally, the company said it would roll out measures to protect users under 18 years of age by tightening content restrictions and boosting parental supervision tools

This is not the only investigation Meta's platforms are facing in the EU. In April, the regulator opened an investigation, accusing Meta of having failed to tackle deceptive advertising and disinformation in the run-up to the European Parliament elections.

The antitrust regulator's move against Meta stemmed from the platform being used as a potential source of disinformation by Russia, China and Iran to influence voters in EU.



Are these platforms under scrutiny of other countries outside the EU?

Even before the DSA was implemented in the EU, Meta's Instagram faced backlash in the U.S. after a report by the Wall Street Journal, published in June 2023, said the platform "helps connect and promote a vast network of accounts openly devoted to the commission and purchase of under age sex content".

At the time, the company said it was working on "improving internal controls", and that it had eliminated 27 paedophile networks in addition to removing 4,90,000 accounts that breached its kid safety regulations in just one month.

What are the general practices of protecting minors online?

With children growing up in an increasingly digital world, it has become increasingly difficult for parents and caregivers to ensure their online safety.

Parents are advised to ensure they are up to date with online risks and have set up safeguards to protect their child's digital experience.

These could include setting up of kid's profiles, choosing age-appropriate apps and games and setting up child-friendly sites and search engines, and ensuring age restricted content is inaccessible on the devices and platforms they are using. Parents are also advised to supervise and spend time with their children online to ensure they do not engage in harmful activities or fall prey to online predators.

And minors using social media platforms must ensure they know how to report and "block" accounts with offensive material and foster open conversations to ensure an adult is available if something doesn't feel right.

WHY A WATERFALL APPEARS WHITE

Q: Why does water appear white in a waterfall even though it is colourless?

A: When all colours are reflected from the surface of an object, it appears white. In a waterfall, water drops can be thought of as being suspended in air and as an inhomogeneous mixture of water and air.

We know that when light enters from a lighter medium (air) into a denser medium (water), some of it is reflected by the surface and the rest is refracted. In a waterfall, light suffers numerous such reflections and refractions.

The light refracted by a layer on top would also contribute to reflection at the next layer of drops. As a result, most of the light is reflected by the waterfall. This leads to whiteness.

Mist, paper, water vapour, colloidal solutions, clouds, talcum powder, snow, white paint, and sugar also appear white because of the same reason.

(There are no white pigments in white paint. White paint has transparent oxides of zinc, lead, and titanium suspended in a transparent solution.)

To see a waterfall white, light should not be directional, i.e. it should be coming from all directions. If it is directional, one would see colours as in a rainbow.



PERCEIVING COLOUR

How does the brain turn light waves into experiences of colour?

Researchers have discovered specific networks of neurons in fruit flies that respond selectively to various hues. Hue denotes the perceived colours associated with specific wavelengths, or combinations of wavelengths of light, which themselves are not inherently colourful. Scientists had previously reported finding neurons in animals' brains that respond selectively to different colours or hues, say, red or green. But no one had been able to trace the neural mechanisms making this hue selectivity possible. Now, the researchers have been able to find the fly brain connections. The intricate map details how some 130,000 neurons and 50 million synapses in a fruit-fly's poppy seed-sized brain are interconnected. With the connectome serving as a reference, the researchers used their observations of brain cells to develop a diagram they suspected represents the neuronal circuitry behind hue selectivity. The modelling helped reveal that these circuits can host activity required for hue selectivity.

THE GROWING COST OF CLIMATE CHANGE

The world GDP would be 37 per cent higher today had no global warming occurred between 1960 and 2019, says a new working paper by economists at the US's National Bureau of Economic Research (NBER). The research, which went online this week, takes a more holistic approach than the methods adopted by studies that aggregate countrywide impacts of climate change. By linking the global with the local, the authors argue that the economic costs of a hotter planet could be six times more than that suggested by previous estimates. This follows another research paper, published last month in the journal *Nature*, which concluded that average incomes will fall by almost a fifth in the next 26 years compared to what they would have been without climate change. Both papers are unequivocal that the costs of transition from fossil fuels, though considerable, pale in comparison to the costs imposed by global warming. They join the dots between the impacts of heat waves, floods, storms and other fallouts of climate change that impair people's health, reduce productivity and affect livelihoods.

Some regions are likely to get hit more than others. Poorly understood ecosystems like drylands, for example. A new report of the UN Convention on Combating Desertification, released on Tuesday, has flagged the fallouts of climate change on rangelands — these include desert shrublands, mountain pastures, tundra and plateaus. More than 50 per cent of these ecosystems have degraded, according to the report. These biospheres are recognised as vulnerable in most parts of the world and their role as carbon sinks is acknowledged. However, rangelands do not receive the same attention as forests in environmental conservation discourses. In India, for instance, it's only in the past two decades that policymakers have begun to recognise the socio-ecological role of pastoralists, who depend on these ecosystems. Protecting pastoralism as a way of life while integrating communities such as Maldharis, Van Gujjars and Rabaris in the modern economy remains a critical developmental challenge.

Global climate policy has, so far, rightly concentrated on mitigating climate change. In recent years, there have been feeble attempts to help deal with the ravages of floods, storms, droughts and other climate-related catastrophes. However, recent studies, whether on the macro-level by the NBER economists or the UN report on desertification, underline the need for building people's resilience against climate change — protecting them against heat waves, floods and landslides, drought-proofing agriculture and strengthening healthcare facilities. Adaptation continues to be



underfunded, despite the growing awareness of the need for it. Deliberations for a new climate funding paradigm slated for the next CoP in Azerbaijan's capital Baku will have to take this imperative into account.

INDIA HOSTS THE ANTARCTIC PARLIAMENT: THE HISTORY OF THE ANTARCTIC TREATY

The 46th edition of the Antarctic Treaty Consultative Meeting, also known as the Antarctic Parliament, kicked off on Monday (May 20) in Kochi, Kerala. It is scheduled to go on till May 30 and will see a wide range of Antarctica-related discussions, especially the rise of tourism in the continent, and its implications.

The event will be attended by the 56 member countries of the Antarctic Treaty. Originally signed by 12 countries on December 1, 1959, the treaty is a framework for peaceful coexistence and scientific cooperation in the continent.

Here is a look at what led to the treaty's enactment, and why it has been successful.

Tussle over territory

Parts of mainland Antarctica were first spotted by British, American, and Russian ships in the 1820s, but the region did not come under the spotlight until the race to reach the South Pole heated up, according to KM Shusterich's 1984 article, 'The Antarctic Treaty System: History, Substance, and Speculation', published by the International Journal (IJ). The competition was between Captain Robert Scott from the United Kingdom and Roald Amundsen from Norway — Amundsen won, becoming the first person to reach the South Pole on December 15, 1911.

By the 1950s, seven countries — Argentina, Australia, Chile, France, New Zealand, Norway, and the UK — made formal territorial claims over the continent. Some of these claims, however, overlapped with each other, leading to conflict. The United States, the Soviet Union, Belgium, Japan, and South Africa also explored the continent but did not make any territorial claims.

"Only five claimants (Australia, France, New Zealand, Norway, and the United Kingdom) mutually recognise[d] each other's claims. Of particular concern..[were] the claims of Argentina, Chile, and the United Kingdom," Shusterich wrote.

Between 1947 and 1955, Argentina and Chile twice rejected the British proposal to go to the International Court of Justice (ICJ), and sort out their overlapping claims. "Both nations insisted that their sovereignty was unquestionable and that no third power could judge their domestic territorial claims," Shusterich wrote.

As a result, several attempts were made to enact an international agreement over the control of Antarctica.

In 1956, India requested the United Nations to include 'the question of Antarctica' on the provisional agenda of the United Nations General Assembly. "India's goals were to ensure international agreement that the development of Antarctica resources would be for peaceful purposes, that the area would be non-militarised, that nuclear weapons testing would be banned, and that the future disputes would be referred to the International Court," Shusterich wrote.

The proposal fell apart due to the opposition from Argentina and Chile, and no support from the US and the Soviet Union.



A major breakthrough

A major breakthrough came during the 1957-58 International Geophysical Year (IGY), where 12 countries — Argentina, Australia, Chile, France, New Zealand, Norway, the United Kingdom, the United States, the Soviet Union, Belgium, Japan, and South Africa — agreed to not let their political and legal differences to hinder the scientific research in Antarctica. They also consented to allow countries working in Antarctica to place their scientific stations anywhere on the continent, regardless of territorial claims.

The success of IGY built momentum for an international agreement over Antarctica. On May 2, 1958, the US proposed other IGY participant countries to join “in a treaty designed to preserve the continent as an international laboratory for scientific research and ensure that it be used only for peaceful purposes,” Shusterich wrote. The countries were invited to Washington DC to negotiate this treaty.

The Conference of Antarctica went on from October 15 to December 1, 1959, and gave birth to the Antarctic Treaty. The agreement came at a time when the US and the Soviet Union were in the midst of the Cold War (1947-1991).

Speaking to The Indian Express over email, Donald R Rothwell, Professor of International Law at the Australian National University, said that the US and Soviet Union agreed to sign the treaty as they were anxious that their rivalry could spill over to Antarctica. “Given the absence of them having made a territorial claim, they were prepared to continue to engage in Antarctic affairs for scientific purposes,” Rothwell said.

The Antarctic Treaty was signed by all the 12 IGY participants and came into force in 1961. It contained only 14 articles and froze the disputes between territorial claims over Antarctica. Its key provisions limited countries from making new territorial claims, banned militarisation and nuclear testing, promoted scientific research, etc.

Currently, 56 countries are part of the treaty — 29 of which, including all 12 original signatories, are ‘Consultative Parties’, which are part of the decision making process. India, which joined the treaty in 1983, is also a Consultative Party.

Reasons behind the treaty’s success

The treaty has been able to survive over the years as it strikes a fine balance between specificity and vagueness, according to Shusterich.

“The treaty promotes compromise rather than conflict; it instils a sense of exclusivity for the consultative parties, yet invites all nations to join. The treaty states that ‘it is in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes,’” Shusterich wrote.

Another reason for its success is that the treaty has been able to evolve to address new challenges from time to time. Rothwell said several additional conventions and other legal protocols have dealt with issues like marine conservation, prohibition on mining, and protection of Antarctica’s environment.

Although the treaty has resolved several problems, it still faces a bumpy road ahead. The biggest challenge is climate change — the continent has been witnessing record-breaking high



temperatures and the ice coverage hit its lowest levels last year since the record keeping began. The spike in tourism-related activities in recent years is also a concern.

Paul Berkman, former head of the Arctic Ocean Geopolitics Program at Cambridge University in England, told NBC News: "It illustrates the bigger challenge we have as a civilisation and that's understanding the concept of time... Most of the decision-making is done in an electoral cycle, but the types of problems we need to address and solve as a civilization require that we look decades — even centuries — into the future."

SOUTHERN SOJOURN

Delegates from over 60 countries have convened in Kochi, Kerala to attend the 46th Antarctic Treaty Consultative Meeting (ATCM) that is expected to go on until the month end. An annual affair, this is in essence a meeting of the 'Consultative Parties,' or the 29 countries that have a right to vote on affairs concerning the management of the continent. Other attendees are countries with a non-voting 'observer' status as well as independent experts and invited functionaries. One of the interesting points on the agenda this time relates to tourism. A group of 'like-minded' countries, that includes India, pressed for a proposal to introduce a regulatory framework governing tourism in the continent. Unlike other continents, the Antarctica does not have its own indigenous population.

With millions of hectares of untrammelled ice and its geographical isolation, it is not a tourist's everyday jamboree or the elite's regular private-jet getaway. This makes it irresistibly alluring. In this day and age, where every navigable square inch of land is up for fleeting, visual consumption, the Antarctica is the only continent that can be described as wild, its secrets buried under kilometres-thick blankets of ice. Given that the creation, capture and marketing of the 'exotic' experience is an industry that guarantees exponential returns, the Antarctica is now the 'wild south' that the wealthy traveller aspires to. A recent joint study by universities in Tasmania, the U.K. and Australia said that the number of tourists rose from 8,000 in 1993 to 1,05,000 in 2022. This does not include all the scientific expeditions and the long-term presence of scientific personnel at research stations maintained by different countries. Reports now suggest that the number of tourists exceeds scientists. To be sure, concerns about rising tourists have been expressed since 1966 at the consultative meets, with the attendant worries that more ships and more people mean more man-made pollutants and rising instances of accidents and disasters that lead to upsetting the unique biodiversity of the region. This urge to preserve the pristine purity of the continent — estimated to be the size of the United States and Mexico combined — however conceals the underlying anxiety of all nations. Will, despite the treaty's commitment to disallowing territorial claims, unexpected future circumstances effect a change in terms? Will the presence of more people from one country influence terms in their favour? Though India's Antarctica-bound tourists are minimal, this could very well change in the days to come, thanks to growing lop-sided prosperity. While a proponent of the proposal, India must be wary of any deal that could undercut future opportunities from tourism.

HALF OF WORLD'S RANGELANDS ARE DEGRADED, UN STUDY FINDS: WHAT ARE RANGELANDS, WHY THEY MATTER

Millions of pastoralists in India who rear livestock and depend on grasslands, shrubs and plateaus for sustenance need better recognition of their rights and access to markets, a new United Nations report on degradation of rangelands said.



—The report by the UN Convention on Combating Desertification (UNCCD) said that almost half of the world’s rangelands are degraded due to climate change, population growth, land-use change and growing farmlands.

What are rangelands? Why are they important? What does the UNCCD report find?

What are rangelands?

The UNCCD report defines rangelands as natural or semi-natural ecosystems that are grazed by livestock or wild animals. Rangelands contain vegetation such as grasses, shrubs, bushes, open forests, and agroforestry systems (land which contains trees and crops or pastures). The exact nature of rangelands’ vegetation is influenced by rainfall, temperature, and other climate phenomena, according to the Rangeland Atlas, prepared by a consortium of international non-profits and United Nations agencies.

Currently, rangelands cover 80 million sq km of Earth’s terrestrial surface area (over half of Earth’s land), and are thus the largest land cover or land use type in the world, the UNCCD report said. They act as carbon sinks (which absorb more carbon from the atmosphere than they release), storehouses of freshwater, and prevent desertification of land. Millions of people worldwide depend on rangelands for food security, and livelihoods.

“Rangelands generate 16% of global food production and 70% of feed for domesticated herbivores, most significantly in Africa and South America,” the UNCCD report stated. In India, rangelands occupy about 1.21 million sq km, from the Thar Desert to Himalayan meadows, as per the UNCCD report.

What does the UNCCD report say?

The UNCCD report found that nearly 50% of the world’s rangelands can be considered “degraded” and are facing a “silent demise”.

Climate change, unsustainable land and livestock management practices, biodiversity loss, and the conversion of rangelands to farmlands are some of the primary drivers of rangeland degradation. Uncertainty over land rights among pastoralist communities, who depend on rangelands for their livelihood, also leads to their degradation.

This, in turn, severely affects the communities dependent on rangelands as their deterioration impacts soil fertility and biodiversity, leading to a dip in incomes and rise in conflicts with authorities over grazing rights.

Who are pastoralists?

Pastoralism is a livelihood system based on livestock production, according to the UN’s Food and Agriculture Organization (FAO). This includes livestock rearing, dairy production, meat production, wool production, and leather production.

The communities and groups, both indigenous and non-indigenous, who are involved in livestock production are known as pastoralists. These communities rear sheep, goats, cattle, horses, donkeys, camels, yaks, llamas, alpacas, and pigs. Some pastoralist communities also rear ducks and chickens.



Their livelihood is highly dependent on the quality of pasture (or rangelands) they have access to, and their rights over them. However, since they still remain on the margins of society, they have little say in policy-making.

Globally, an estimated 500 million pastoralists are involved in livestock production and allied occupations. In India, while there are no official figures, research and advocacy groups peg their population at around 13 million people, across 46 groups including Gujjars, Bakarwals, Rebaris, Raikas, Kurubas, and Maldharis, to name a few.

What are pastoralists' economic contributions in India?

India is home to 20% of the world's livestock population. Around 77% of these animals are reared in pastoralist systems, meaning they are either herded or left to range on common lands, according to the Accounting for pastoralists in India (2020) report. Pastoralists also protect indigenous livestock breeds, and protect traditional knowledge about animal rearing.

Currently, India is the largest producer of milk in the world, accounting for 23% of global dairy production. It is also the largest producer of buffalo meat and largest exporter of sheep and goat meat, according to the Department of Animal Husbandry and Dairying. Pastoralists are a major contributor in this sector.

— Some laws such as the Forest Rights Act 2006, though, have helped pastoralists obtain grazing rights across states in the country, the report said.

— One “success” the report underlined was the Van Gujjars winning grazing rights and receiving land titles in the Rajaji National Park, following a high court judgment.

— The report noted that there was a gradual shift towards recognition of the socio-ecological role of rangelands and pastoralism in India.

— It cited the example of welfare schemes and assistance provided to pastoralists under the National Livestock Mission, Animal Husbandry Infrastructure Development Fund and the Rashtriya Gokul Mission on sustainable dairy production.

For Your Information:

— Desertification is a natural disaster playing out in slow motion in areas that are home to a half-billion people, from northern China and North Africa to remote Russia and the American Southwest.

— The process does not generally lead to rolling sand dunes that evoke the Sahara. Instead, higher temperatures and less rain combine with deforestation and overfarming to leave the soil parched, lifeless and nearly devoid of nutrients, unable to support crops or even grass to feed livestock.

GOING GLACIER GONE: HOW VENEZUELA LOST ITS LAST GLACIER, WHY THIS MATTERS

If you think that climate change is a problem of the future, think again. Venezuela, for instance, has likely become the first country — it certainly won't be the last — in modern history to lose all its glaciers. This comes after scientists reclassified the Humboldt glacier, Venezuela's last remaining glacier, as an ice field earlier this month.



Venezuela used to be home to six glaciers, located at about 5,000 metres above sea level in the Andes mountains. By 2011, five of them had vanished. Scientists expected the Humboldt glacier to last another decade. But it melted at a faster rate than expected, and has shrunk to an area of less than 2 hectares, leading to its downgrade from a glacier to an ice field.

Much like the Humboldt glacier, other glaciers across the world are shrinking and disappearing faster than researchers thought, with two-thirds of them projected to melt out of existence by 2100 at current climate change trends, according to a 2023 study.

Here is a look at what glaciers are, why they are disappearing, and what can be the impact of their disappearance.

What are glaciers?

Glaciers are essentially large and thick masses of ice that are formed on land due to the accumulation of snow over centuries. According to the United States Geological Survey (USGS), they usually exist and form in areas where mean annual temperatures reach near the freezing point; winter precipitation leads to significant snow accumulations; and temperatures throughout the remaining year do not cause the complete loss of the previous winter's snow accumulation.

Due to their sheer mass and gravity, glaciers tend to flow like very slow rivers. Although there is no universal consensus on how large a mass of ice has to be to qualify as a glacier, the USGS says a commonly accepted guideline is around 10 hectares.

Why are glaciers disappearing?

The reason is quite obvious — it is global warming. Like an ice cube melts when exposed to heat, glaciers are melting due to warmer temperatures. And what is causing these warmer temperatures? It is the greenhouse gases (GHGs).

Since the Industrial Revolution kicked off in the 18th Century, human activities such as burning fossil fuels have been releasing GHGs like carbon dioxide and methane into the atmosphere. These invisible gases trap heat — they allow sunlight to pass through the atmosphere but prevent the heat that sunlight brings from returning into space — leading to a rise in global temperatures. In recent decades, the emission of GHGs has skyrocketed, which has resulted in the global average temperature to increase by at least 1.1 degree Celsius since 1880. The temperature rise may seem small but it has had devastating consequences. For instance, more frequent and intense heatwaves, floods, droughts, rise in sea level and — the subject of this explainer — glacier melting.

The Andes — a mountain range running through parts of Argentina, Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela — has witnessed a temperature increase of a high rate of 0.10 degree Celsius in the past seven decades. That is one of the major reasons why Venezuela has lost all of its glaciers.

In the case of the Humboldt glacier, the melting was accelerated by El Niño, which developed in July 2023. El Niño refers to an abnormal warming of surface waters in the equatorial Pacific Ocean and leads to warmer temperatures.

"In the Andean area of Venezuela, there have been some months with monthly anomalies of +3C/+4C above the 1991-2020 average, which is exceptional at those tropical latitudes," Maximiliano Herrera, a climatologist and weather historian, told The Guardian.



India is also at the risk of losing its glaciers. They are melting at unprecedented rates across the Hindu Kush Himalayan mountain ranges and could lose up to 80% of their volume this century if GHG emissions are not drastically reduced, according to a 2023 report.

What are the impacts of glacier loss?

Glaciers are a crucial source of freshwater, especially during hot, dry periods, for local communities, plants, and animals. Their disappearance would mean that one would have to be entirely dependent on spot rainfall for freshwater.

The cold water that runs off glaciers keeps downstream water temperatures cooler. This is crucial for many aquatic species in the region as they need cold water temperatures to survive, according to USGS. Glacier loss directly impacts such species, which are an essential part of the food web.

Melting glaciers can also contribute to the rise in sea level. The Greenland and Antarctic ice sheets — they are also considered as glaciers — are the largest contributors to global sea level rise. Experts suggest that Venezuela's Humboldt glacier did not have enough ice to substantially raise sea levels.

For the South American country, however, the biggest impact of losing all of its glaciers will be cultural, Luis Daniel Llambi, an ecologist, told The Guardian. "Glaciers were a part of the region's cultural identity, and for mountaineering and touristic activities," he said.

ANALYSING LOCAL ENVIRONMENTAL FOOTPRINTS

While climate change is a global concern, issues such as water scarcity and air pollution are often localised or regionalised. For example, excessive water use in one region may not directly affect water scarcity elsewhere. Focusing on local environmental issues is crucial; and herein comes the importance of understanding household environmental footprints.

How are household environmental footprints distributed in India?

A recent study titled 'Water, air pollution and carbon footprints of conspicuous/luxury consumption in India', of which the author is one of the contributors, highlights the environmental impact of affluent individuals, particularly those who engage in consumption beyond basic needs. This study specifically examines the CO₂, water, and particulate matter (PM_{2.5}) footprints associated with luxury consumption choices among households in India across different economic classes. The analysis contrasts these luxury consumption footprints with those associated with non-luxury consumption. The luxury consumption basket includes various categories such as dining out, vacations, furniture, social events etc.

How were environmental impacts assessed in this study?

Methodologically, the study employed an input/output analysis of the entire economy to map or link different components of household consumption to the resources or materials involved in their production. This approach enabled the capture and aggregation of the (indirect or embedded) environmental impacts associated with each stage of production. For example, the water footprint was utilised to quantify water usage throughout various stages of production of different goods and services, as well as direct water usage by households. The PM_{2.5} footprint encompassed both embedded emissions and direct emissions from household activities such as



the use of fuelwood, kerosene, and vehicular fuels. Similarly, the CO₂ footprint was used to capture both embedded and direct CO₂ emissions associated with household consumption.

What were the key findings?

The study reveals that all three environmental footprints increase as households move from poorer to richer economic classes. Specifically, the footprints of the richest 10% of households are approximately double the overall average across the population. A notable surge in footprints is observed from the ninth to the 10th decile, with the air pollution footprint experiencing the highest increase at 68% in the 10th decile compared to the ninth. Conversely, the rise in the water footprint is the lowest at 39%, while CO₂ emissions stand at 55%. This suggests that Indian consumers, particularly those in the top decile, are still in the 'take-off' stage, with only the wealthiest segment exhibiting substantial increases in consumption-related environmental footprints. The heightened footprints in the 10th decile are primarily attributed to increased expenditure on luxury consumption items.

What are the key contributors?

The study identifies eating out/restaurants as a significant contributor to the rise in environmental footprints, particularly in the top decile households, across all three footprints. Additionally, the consumption of fruits and nuts is highlighted as a factor driving the increase in water footprint in the 10th decile. Luxury consumption items such as personal goods, jewellery, and eating out contribute to the rise in CO₂ and air pollution footprints. Notably, the presence of fuels like firewood in the consumption baskets of poorer households is emphasised, showcasing contrasting impacts of modern energy transitions. While transitioning from biomass to LPG reduces direct footprints, the lifestyle choices associated with affluence lead to a rise in PM_{2.5} footprints (and subsequently, the CO₂ footprint).

The average per capita CO₂ footprint of the top decile in India, at 6.7 tonnes per capita per year, is noted to be higher than the global average of 4.7 tonnes in 2010 and the annual average of 1.9 tonnes CO₂eq/cap required to achieve the Paris agreement target of 1.5°C. While still below the levels of the average citizen in the U.S. or U.K., this disparity underscores the need for urgent attention from policymakers. Given the influence of elite lifestyles on broader societal aspirations, policymakers should prioritise efforts to nudge consumption levels of affluent households downwards to align with sustainability goals.

What are the implications?

The study emphasises that while sustainability efforts often focus on global climate change, global environmental footprints do not necessarily align with local and regional scale footprints. However, local and regional environmental issues exacerbated by luxury consumption disproportionately affect marginalised communities. For instance, water scarcity and air pollution disproportionately impact marginalised groups, further marginalising them, while affluent sections can afford protective measures such as air-conditioned cars and air purifiers. This underscores the importance of multi-footprint analysis in addressing environmental justice concerns and ensuring equitable sustainability efforts.

THE BAOBAB'S JOURNEY FROM MADAGASCAR TO AFRICA AND AUSTRALIA

The baobab tree is a distinctive sight on the landscape. When its contorted branches are leafless during the dry season, they resemble jumbled roots emanating from a thick trunk, making it

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appear as if someone had yanked the tree from the ground, flipped it on its head, and jammed it back into the earth.

But the origins and history of the baobab, found in Madagascar and parts of Africa and Australia, have been something of a mystery. A new study has resolved this based on genomic analyses of all eight recognised species as well as ecological and geological data.

The baobab lineage originated in Madagascar roughly 21 million years ago and reached Africa and Australia sometime in the past 12 million years, the researchers found. Madagascar, an island off Africa's southeastern coast, is a biodiversity hot spot and home to unusual flora and fauna.

Two baobab lineages went extinct in Madagascar, but not before establishing themselves elsewhere, one in Africa and one in Australia, the study found.

The tale of how a tree crossed the Indian Ocean to put down roots in two distant destinations is dramatic. It appears baobab seed pods floated from Madagascar to mainland Africa, located about 400 km to the west, and to Australia, situated more than nearly 7,000 km to the east.

"The plants almost certainly got to Africa and Australia floating on or with vegetation rafts," said botanist Tao Wan of the Wuhan Botanical Garden in China, one of the authors of the study published on May 14 in the journal Nature.

"The long-distance dispersal to Australia was probably facilitated by the Indian Ocean gyre, which is an oceanic current that circulates south past Madagascar, where it probably picked up baobab seed pods, before the current swings east to Australia, where it delivered the pods. The current then circulates north and then swings west past Mauritius and to Africa once again, where it completes the gyre," Dr. Wan added.

Baobabs, found in dry savannah habitats, provide food, shelter and nesting sites for wildlife. Their fruits also provide nutrients and medicines for people, and the leaves are edible. The trees produce large, sweet-smelling flowers whose sugary nectar attracts nocturnal pollinators as well as two types of primates, lemurs in Madagascar and bush babies in Africa.

"They can reach huge dimensions ... in both height and diameter, and are reported to live for thousands of years. The root systems are also massive, which are considered to play an important ecological role, helping to slow down soil erosion and enabling nutrient recycling," plant geneticist and study co-author Ilia Leitch of the Royal Botanic Gardens Kew in London said.

CAN HUMANS GET H5N1 BY CONSUMING RAW MILK?

Even while no case of H5N1 infection in humans has been reported after consuming raw milk, scientists believe that the virus can be transmitted via an infected cow's milk that has not been pasteurised. The lone reported human case in the current outbreak of cattle spread across 49 herds in nine States in the U.S. has been a dairy farm worker who had direct exposure to cows and developed conjunctivitis. The Atlanta-based CDC has advised people to desist from consuming uncooked dairy food products such as raw, unpasteurised milk, or raw cheeses from animals with suspected or confirmed H5N1 bird flu virus infection.

While FAO noted that H5N1 virus was detected in "high concentrations in milk from infected dairy cattle and at levels greater than that seen in respiratory samples", there are no reports of viable H5N1 virus being found in raw milk samples. "I have not come across any report of actual isolation



of influenza viruses from raw milk. Most reports on viral loads in milk are based on molecular sequencing data rather than actual isolation of the virus from milk. It will be RT-PCR or sequencing of fragments,” immunologist Dr. Vineeta Bal, a visiting faculty at IISER Pune says in an email to The Hindu.

Despite CDC warning people to avoid consuming raw milk, sales of raw milk in the U.S. has increased sharply since the H5N1 outbreak in cattle was first reported there on March 25 this year. Yet, there has not been any reported case of human infection after raw milk intake. Even as it makes eminent sense to avoid consuming raw milk, especially in places where H5N1 outbreak in cattle has been reported in the U.S., how likely are people to be infected with H5N1 via raw milk? “We need to remember that viruses outside a cell do not have life of their own. The biological plausibility of transmission through milk is very limited,” Dr. Chandrakant Lahariya, physician epidemiologist and a public policy and health systems expert says in an email to The Hindu.

“There are very few human cases reported so far and almost all of those were in farm workers who had come in close contact with infected animals. In these cases, the likely route of transmission was airborne. Raw milk from H5N1 infected cows may not cause illness in humans as the route of introduction of the virus is oral rather than nasopharyngeal,” says Dr. Bal. “Theoretical possibility of a human being catching H5N1 infection from infected raw milk is very low. Till date, there has been no documented evidence of H5N1 transmission from animals to humans via the oral route.”

Dr. Bal goes further to underscore the odds of H5N1 infection in humans through the consumption of raw milk. “Almost all human influenza virus infections are primarily respiratory infections unlike in some other mammals where gut infections are reported. Based on that it can be stated that consumption of heavily infected H5N1 containing raw milk is unlikely to cause illness in human beings.”

There are many reports of cats being infected with H5N1 in the current outbreak in the U.S. In a recent study, domestic cats fed with raw, unpasteurised colostrum and milk from affected cows developed fatal systemic influenza infection, thus demonstrating the oral route of transmission in cats. “Some birds (poultry) as well as cats do show susceptibility to influenza virus infections via oral route. So far humans have not been infected by faeco-oral route even if the virus is shed by humans in the excreta. We know this from the SARS-CoV-2 example too,” says Dr. Bal.

Despite the CDC’s warning, there is a growing misconception among people in the U.S. that immunity against H5N1 virus can be developed by drinking raw milk containing viable viruses. These notions have no scientific basis whatsoever. “There is no basis for this assumption at all. Drinking raw milk might prove more risky due to the presence of many other pathogens which are known to be present in raw, unpasteurised milk,” Dr. Bal cautions.

CRITICAL PRIORITY PATHOGENS CONTINUE TO POSE THREAT: WHO

Critical priority pathogens present major global threats due to their high burden, and ability to resist treatment and spread resistance to other bacteria, noted the latest Bacterial Pathogens Priority List (BPPL) updated by the World Health Organization (WHO). This includes gram-negative bacteria resistant to last-resort antibiotics, and Mycobacterium tuberculosis resistant to the antibiotic Rifampicin. The list features 15 families of antibiotic-resistant bacteria grouped into critical, high, and medium categories for prioritisation.



Seven years since it published the last such list, the WHO stated that high-priority pathogens, including salmonella and shigella, are of particularly high burden in low- and middle-income countries, along with *Pseudomonas aeruginosa* and *Staphylococcus aureus*, which pose significant challenges in healthcare settings. Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi, and parasites no longer respond to medicines, increasing the risk of disease spread, illness and deaths. “AMR is driven in large part by the misuse and overuse of antimicrobials,” the document says.

Other high-priority pathogens such as antibiotic-resistant *Neisseria gonorrhoeae* and *Enterococcus faecium*, present unique public health challenges, including persistent infections and resistance to multiple antibiotics, necessitating targeted research and public health interventions.

“By mapping the global burden of drug-resistant bacteria and assessing their impact on public health, this list is key to guiding investment and for grappling with the antibiotics pipeline and access crisis. Since the first Bacterial Priority Pathogens List was released in 2017, the threat of antimicrobial resistance has intensified, eroding the efficacy of numerous antibiotics and putting many of the gains of modern medicine at risk,” Yukiko Nakatani, the WHO’s Assistant Director-General for Antimicrobial Resistance ad interim, said.

X CHROMOSOME REVIVAL IN OLDER WOMEN INCREASES RISK OF AUTOIMMUNE DISEASE

Researchers have suggested for a while that a number of immune diseases — including systemic lupus erythematosus, rheumatoid arthritis, and Sjögren’s syndrome — are more common in females than males. Of particular note are autoimmune diseases in which antibodies act against specific proteins

In mammals, the females have two copies of the X chromosome, while the males carry a single copy. The X chromosome is more significant for its role in determining sex. Recent genomic studies have shed light on the fundamental biological processes the X chromosome modulates and the genes it encodes. The gathering evidence suggests, in fact, that it plays a part in a variety of biological functions as well as controlling the sex-specific susceptibility to certain diseases.

The human X chromosome encodes around 800 genes, which in turn code for proteins. A loss of function for these genes could thus lead to a variety of genetic diseases. Broadly, the diseases whose onset and/or progression the X chromosome influences can be grouped into three types: (i) X-linked genetic diseases, (ii) diseases influenced by XCI escape, and (iii) those linked to X-chromosome aneuploidy.

There are more than 500 X-linked genetic diseases, and they mostly affect males. Many of the X-linked traits and diseases are not uncommon in the general population. For example, red-green colour blindness is X-linked, and affects around 8% of males. Duchenne muscular dystrophy, caused by mutations in the dystrophin gene and affecting 1 in every 3,500–5,000 boys born in India and agammaglobulinemia, an immunodeficiency disorder that affects around 1 in 200,000 live births, are also X-linked.

Scientists are also aware of numerical abnormalities — or aneuploidies — of the X chromosome. For example, Klinefelter syndrome is characterised by an extra X chromosome (XXY) and Turner’s syndrome by a loss of one X chromosome in females (X instead of XX).

Inactivation of X chromosome

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In mammalian species, females typically carry two X chromosomes, while males possess one X and one Y chromosome. Each of the X chromosomes is inherited from the parents. In 1961, an English geneticist named Mary Frances Lyon argued that since females have two copies of the X chromosome, one of the X chromosomes is randomly inactivated during early embryonic development, in a process called X chromosome inactivation (XCI), to prevent the overexpression of X-linked genes in females.

In this process, epigenetic changes silence most genes on one X chromosome (epigenetics refers to the processes by which genes are influenced by the environment in which they operate). XCI ensures a balance in gene expression, but scientists are also learning that it plays a role in various genetic disorders. Issues such as incomplete inactivation (a.k.a. escape) or skewed inactivation can lead to the abnormal expression of genes, which contributes to diseases including X-linked disorders, certain cancers, and autoimmune conditions.

Three decades after Dr. Lyon's hypothesis, researchers unravelled the molecular mechanisms of X inactivation when they discovered Xist, a non-protein-coding RNA. The body deactivates the X chromosome with the help of Xist and another non-protein-coding RNA, called Tsix (reverse of Xist). The differential regulation of these two genes means that in the X chromosome that is to be deactivated, the Xist RNA is overexpressed such that it coats or covers the chromosome.

However, inactivation of the X chromosome is not absolute. As many as a fourth of all genes encoded by the X chromosome could escape inactivation and express themselves, as researchers at the Whitehead Institute in the U.S. reported in a paper published in the journal Cell Genomics last year.

Autoimmune diseases

Researchers have suggested for a while that a number of immune diseases — including systemic lupus erythematosus, rheumatoid arthritis, and Sjögren's syndrome — are more common in females than males. Of particular note are autoimmune diseases, in which antibodies act against specific proteins.

In a paper published on May 3 in Science Advances, French researchers perturbed the expression of Xist — which triggers XCI — in female mice, and found that previously inactive genes on the inactive X chromosome were reactivated. This was particularly true of genes involved in the Toll-like receptor 7 signalling pathway in immune cells. The result was the spontaneous development of lupus-like inflammatory signs in the female mice, including an increased level of autoantibodies and altered immune cell populations.

The reactivation of specific X-linked genes in response to XCI alteration varies across immune cell types, which is to say diverse molecular pathways are affected. The resulting effects in autoimmune diseases are likely due to a combination of reactivation events in different cell types and global changes in gene expression. The findings reinforce the molecular link between altered XCI and autoimmune diseases, and pave the way for possible new drugs to treat them in the future.

X and Alzheimer's disease

Another disease with a sex bias and linked to the X chromosome is Alzheimer's disease. Women seem to have a higher risk of getting it; worldwide, almost twice as many women have Alzheimer's as men. In a study published in the journal Cell in October 2022, researchers from Case Western Reserve University in the U.S. suggest a gene called ubiquitin-specific peptidase 11 (USP11),



involved in a protein-modifying process, encourages tau protein to accumulate in the brain. Based on studies of mice brains, the researchers suggested the gene escapes X inactivation and is expressed more in females. This also opens new avenues to develop treatments for Alzheimer's.

In humans, the Y chromosome has been shrinking over time, so the X chromosome is possibly evolution's best bet and thus plays a pivotal role in human health and disease. Its evolutionary genomics and emerging insights into its participation in biological processes illuminate the complex interplay between genetic inheritance, epigenetic modifications, and disease manifestation. Cracking all this to get the full picture could also lead us to new drugs and therapies.

THE 'CHILLING COVER-UP' OF THE U.K.'S CONTAMINATED BLOOD SCANDAL

The Infectious Blood Inquiry led by former judge Brian Langstaff catalogues preventable failures by doctors and successive governments that led to decades of treatment disasters in the U.K. This was compounded by bureaucratic stonewalling. "The disaster was not an accident," said Langstaff in his report

Fifty years on, an inquiry report has shed some light on a medical tragedy in the U.K. Between the 1970s and 1990s, more than 30,000 people were infected with HIV, Hepatitis C and Hepatitis B after receiving contaminated blood and blood products imported from the U.S. — making it the "worst treatment disaster" in the history of Britain's state-funded National Health Service (NHS). "The disaster was not an accident," said Inquiry chair Sir Brian Langstaff while announcing the report. Those in authority — doctors, the blood services, and governments — committed the ultimate folly in healthcare and healing: they "did not put patient safety first".

The six-year-long inquiry is a dissection and diagnosis. It uncovers a coverup that was "more subtle, more pervasive, and more chilling in its implications" than an orchestrated conspiracy. It was undertaken "to save face and to save expense". The calamity was made more catastrophic by the "defensiveness of government...and its refusal over decades to hold a public inquiry."

"Affected individuals and families have been very stoic in their wait," says Kate Khair, a nurse and Director of Research at Haemnet. "Many now feel that the report gives them vindication."

The Infected Blood Inquiry

The public inquiry, the largest of its kind to be carried out in the U.K., was commissioned in 2017 to "examine the circumstances in which men, women, and children treated by National Health Services ... were given infected blood and infected blood products" since 1970. The affected included two groups: those with haemophilia (and similar blood disorders), and people who received blood transfusions during surgeries and childbirth. Between the decades in question, at least 3,000 people have died due to receiving infected blood. The Haemophilia Society estimates another 680 people have died since the inquiry began. An infected person still dies every four days in the U.K., per one estimate. Deaths and infections linked to tainted blood were also recorded in Australia, Canada, China, France, Ireland, Italy, Japan, Portugal, and the U.S.

Haemophilia is a rare genetic condition where the blood does not clot properly. Up until the 1970s, treatment options included administering the frozen blood product cryoprecipitate. It carried a low risk of passing on an infection since it was formulated from a single blood donation, but cryo was hard to store and harder to administer to patients. Enter Factor VIII, a revolutionary 'wonder treatment' made using concentrated pooled plasma from tens of thousands of donors. It was deemed to be a medical breakthrough. The caveat: Factor VIII had a high risk of infection. Even



one blood sample, if infected with HIV or Hepatitis C, could contaminate the entire batch. Demand rose within the U.K., prompting the NHS to import supplies from the U.S. American blood products were often sourced from high-risk donors including prisoners, and drug addicts.

The infections were not fully understood and identified at the time: the agent for Hepatitis C was identified in 1988, and the first case of AIDS in the U.K. was recorded in 1981. Research as early as the 1940s shows transfusions or the use of plasma could transmit “serum hepatitis,” which could be fatal or lead to long-term diseases such as liver failure and cancer. By the 1970s, researchers had identified the virus responsible for Hepatitis B and became aware of the risks. The ‘unexplained Hepatitis’, as Hepatitis C was understood then, was known to be responsible for “the majority of post-transfusion hepatitis cases and that just as Hepatitis B could have serious long-term consequences, so too might non-A non-B Hepatitis”. The WHO warned in 1974 and 1975 against importing blood products from countries with high rates of hepatitis, such as the U.S.

By 1984, when HIV was identified as a cause, experts grew concerned that people receiving Factor VIII blood concentrate were at risk of HIV infection. Evidence was, however, discarded and authorities failed to switch to safer options, Sir Langstaff’s review found.

Why was tainted blood used?

The inquiry revealed how contaminated blood plasma products imported from the U.S. were used to treat people with haemophilia. In January 1982, leading expert Arthur Bloom wrote an infamous letter to haemophiliac centres, suggesting “the most clearcut way” of testing the infectivity of the new treatments was on patients previously unexposed to large-pool concentrates – including children. Sir Langstaff vivisects the events at Treolar’s College in Hampshire, a specialist school for people with haemophilia. Children were used as “objects of research” and treated “unnecessarily with concentrates (especially commercial ones) rather than choosing safer treatments”. A BBC investigation found that of the 122 pupils who attended Treolar’s between 1974 and 1987, 75 died of HIV and hepatitis C infections.

The inquiry estimates that of the 4,000–6,000 people with bleeding disorders in the U.K., about 1,250 developed both HIV and Hepatitis C. Of them, 380 were children. Three-quarters of these individuals have died. Those who received blood transfusions during surgeries also went on to develop infections. The inquiry estimates that between 80 and 100 of them were infected with HIV, and about 27,000 with Hepatitis C. Reports showed the death toll rose among people infected with Hepatitis B, Hepatitis C and HIV for two decades, and by the 1990s, almost 3,000 people had died. On multiple occasions, government officials decided not to suspend the importation of commercially produced blood products. They insisted, repeatedly, that people received the best available treatment and that blood donations were tested when technology became available. “Both claims were untrue,” the Inquiry found.

What did the report find?

The six-year-long inquiry reviewed evidence from the government, NHS, pharmaceutical companies, and national blood services. It also took into account over 4,000 oral and written statements from people and families affected; some 2,000 people were appointed as “core participants” who worked with the team to pose questions to an expert group. The picture that emerged showed people were “failed not once, but repeatedly”. Patient safety was ignored; decision-making was “slow and protracted”; people’s autonomy and privacy were neglected; clinical freedom was abused; governments and NHS officials were defensive; the lack of



transparency and accountability amplified the injustice “to the people whose lives had been destroyed by infection”.

At a medical level, the opportunities to reduce risk were missed and new risks were created. There was a failure to achieve self-sufficiency in blood clot treatments in England and Wales; a failure to introduce surrogate screening for either HIV or Hepatitis C; delays in introducing screening for HIV and Hepatitis C despite mounting evidence. Doctors, haemophilia centres, pharma companies were guilty of “giving too many transfusions when they were not clinically needed, or when less would have sufficed, or overriding a patient’s wish not to be transfused”.

What next?

Mr. Langstaff has given the government a year to respond to its findings, noting that the inquiry is far from over. Its recommendations include immediate compensation, public memorials and for the learning to seep into medicine, government and civil services so that the tragedy is never repeated. Blood products should only be used when necessary, and should be regularly screened for known viruses. “We need to be sure that the products we use now are as safe as they can be”, Dr. Khair adds.

Chief among the Infected Blood Inquiry’s recommendations is to create an enabling environment where the “patient voice is heard”. Dr. Khair concurs. “We have to engage with and listen to patient opinions and concerns and act upon them,” she says. “We can, and should, learn from this — all care that we give needs to be assessed”.

AT THE UPCOMING WORLD HEALTH ASSEMBLY, A TOOLKIT TO PREPARE NATIONS FOR PANDEMICS

When the World Health Assembly (WHA) meets next week, it will create a historic milestone for global public health. A package of amendments, based on 300 proposals made by member countries after the pandemic, will be the star of the agenda. These amendments to the International Health Regulations will target improving the ability of countries to respond to public health emergencies of international concern.

The International Health Regulations (IHR), first adopted by the WHA in 1969 and last revised in 2005, were conceived to maximise collective efforts to manage public health events while minimising disruption to travel and trade. There are 196 State Parties to the IHR, comprising all 194 WHO Member States plus Liechtenstein and the Holy See. The IHR provides an overarching legal framework that defines countries’ rights and obligations in handling public health events and emergencies that have the potential to cross borders. They also introduce important safeguards to protect the rights of travellers and other persons in relation to the treatment of personal data, informed consent and non-discrimination in the application of health measures under the Regulations. Therefore, the IHR is an instrument of international law that is legally binding on 196 countries.

Surveillance systems

The IHR requires that all countries have surveillance systems capable of detecting acute public health events in a timely manner, assessing these events, reporting to the WHO those that may constitute a public health emergency of international concern, and responding to public health risks and emergencies. The goal of country implementation is to limit the spread of health risks to neighbouring countries and to prevent unwarranted travel and trade restrictions.

3RD FLOOR AND 4TH FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR



WHO Director General Tedros Adhanom Ghebreyesus said: “The IHR has served for 20 years, but our experience in using this vital tool for the management of multiple public health emergencies, including COVID-19, has demonstrated important areas in which they could be strengthened.”

Of the amendments, he added: “This is historic. Countries have come together around improved international mechanisms to protect every person in the world and future generations from the impact of epidemics and pandemics.”

IHR Working Group co-chair Ashley Bloomfield hoped the amendments would hold out. “It has been a long process to achieve consensus on the majority of amendments. This shows the importance the world places on being able to prepare effectively for and respond better to epidemic and pandemic threats, and that there is strong international consensus on how to go about international public health protection.” This process has been running in parallel with an intergovernmental process to develop an international agreement on pandemic prevention, preparedness, and response. The draft pandemic agreement, with its own Member State-led negotiating process, is also due to go to the World Health Assembly.

Building capacities

A potential new pandemic agreement and the amended IHRs would be complementary to international instruments designed and negotiated by Member States to help countries protect their peoples better from future pandemic threats. The IHR focuses on building countries’ capacities to detect and respond to public health events, which could take on international dimensions, while the draft pandemic accord focuses on a coordinated international response to pandemics, with equitable access to vaccines, therapeutics, and diagnostics at the centre.

HOW TO REJIG PROTEIN, CARB AND FAT COMBO TO CONTROL BLOOD SUGAR: HERE ARE A FEW TIPS

People are often confused about healthy eating. The conflicting nutrition advice on the internet/social media surely does not help! But the recently-released “Dietary Guidelines for Indians” by the Indian Council of Medical Research (ICMR) provide scientific information about nutritious eating and prevention of non-communicable diseases (NCDs), including obesity, diabetes and heart disease.

Eating healthy is not about very low-calorie diets or eliminating a particular food group. Rather, it’s about having balanced meals, including macronutrients and micronutrients from at least eight food groups. Any one food cannot act as a superfood. Rather it is the balanced meal approach and inclusion of diverse foods that helps in the prevention and management of NCDs. According to the guidelines, 56.4 per cent of NCDs are due to faulty dietary habits. Eighty per cent or more Type 2 diabetes would vanish if we could eat healthy and avoid obesity.

HOW TO MANAGE THE NUTRIENT PIE?

Vegetables, fruits, green leafy vegetables, roots and tubers should fill half of our plate. The ideal diet should limit cereals and millets to 45 per cent of calorie intake (actual intake currently ranges from 50-70 per cent), allocate 15 per cent of calories to pulses, beans, and meat (actual intake at 6-9 per cent) and source the remainder from nuts, vegetables, fruits and milk.

Avoid foods with high sugar, fat and those that are ultra-processed. These foods are depleted of fibre and nutrients and impact our health negatively.



HOW TO CUSTOMISE FOOD GROUPS

Carbohydrates: The trick is to eliminate refined carbohydrates like maida, refined flour and bran-free rice, and replace it with whole wheat, millets and rice with bran.

Fruits and vegetables: Fruits and vegetables are a rich source of vitamins, minerals, antioxidants, fibres and act like prebiotics. Indians have only 100 to 200 gm vegetable and fruits/day while the recommendation is 500 gm/day. Include seasonal greens, leafy vegetables and coloured vegetables in daily diet to meet the quota. Root vegetables like carrots, radish, knol knol and turnip should be preferred over tubers like potato, yam and colocasia. People who already have diabetes should limit their fruit intake to 30 gm daily, preferably divided into two servings containing 15 gm of carbohydrate each. Fruit juice is not recommended as it takes away the fibre and minerals and provides a large number of calories with a high glycemic index, or the rate at which blood glucose levels increase after consumption.

Fats: Include foods rich in polyunsaturated Omega 3 fatty acids (PUFA) such as nuts/oil seeds, soybeans, grains/millets, green leafy vegetables and fenugreek seeds. Marine fish like salmon, trout, mackerel and tuna provide long chain Omega 3 fatty acids, biologically more active than short chain fatty acids in plant foods. If one consumes adequate amounts of nuts, oilseeds, pulses and beans, the required amounts of Omega-3 and Omega 3 are easily met. Hence there is no nutritional need for extra oil/fat for cooking (visible fat). If impossible to avoid, we must ensure limiting visible fat to 4-10 tsp per person/day (depending on physical activity). It is advisable to limit or avoid ghee/butter. Limit ready-to-eat, bakery products that contain trans and saturated fats. Avoid repeated heating of oil.

Proteins: Maintaining higher muscle mass improves insulin sensitivity and decreases the risk of diabetes, stroke and heart attacks. Dietary protein is not used efficiently without adequate carbohydrates and fats or regular physical activity. The recommended dietary allowance is 0.83g protein per kg of body weight. The daily diet of an average adult should provide 60 to 70 g of protein. Plant diets, with a combination of cereals, pulses, nuts and seeds, can provide essential amino acids. Achieving optimum protein intake can be a challenge for those who avoid dairy completely. Eggs and lean meats provide high quality protein.

HYPERTENSION ALERT: LOWER BP WITH EXERCISE AS EVERY KG OF WEIGHT LOSS EQUALS EFFECTS OF A PILL

The normal blood pressure is 120/80 mm/Hg or slightly lower. For both, undiagnosed hypertension had damaged the vessels of their hearts over time, precipitating a heart attack. "That's because 90 per cent of the hypertension cases are essential, meaning they don't have one distinct cause and could be multifactorial. That's why you have got to manage it with medication and lifestyle correction measures like diet, exercise and sleep," he says. Worst of all, most patients experience no symptoms of hypertension. That's why it is referred to as the silent killer. "Left undiagnosed and untreated, hypertension increases the risk of stroke, heart attack and kidney failure. That's why young people should start regular screening, at least once a year, beginning at the age of 25," says Dr Roy.

Exercise is a key component of the early adoption of a heart-healthy practice. "Everyone should exercise at least 25 to 30 minutes for five to six days a week. Even if your weight doesn't go down, it can still bring down your BP. Every kilogram that a person sheds can bring down their BP by as much as a pill would," says Dr Roy.



Nearly 315 million Indians live with hypertension. However, only one in three get diagnosed and one in five get treated.

WHAT ARE RISK FACTORS

In Kotnala's case, unchecked hypertension had led to a clot in his kidneys. Once that was removed, his BP went down. Now he never misses taking BP-lowering medication, exercises regularly and has a healthy diet to keep his numbers in check.

Sharma didn't have common risk factors of hypertension like family history, cholesterol, obesity or diabetes. But he drank once a week and smoked a couple of times a day. Studies have shown how even one alcoholic drink per day constricts your blood vessels over time, pushing the heart to pump blood harder and raising BP overtime. Nicotine in cigarettes stimulates the release of hormones that increase blood pressure.

Sharma was stressed at work and slept poorly. And though he thought he was eating moderately, confining himself to two meals every day, he was overloading himself with carbohydrates and had little protein to build lean muscle mass and cut down fat. Worse, his twice-a-day dal-chawal or roti sabji combinations were fatty and salty. He had a caloric overload and imbalance. "Now, I eat everything with less salt and oil. I have stopped smoking and drinking altogether," says Sharma.

NEVER GIVE UP MEDICATION, STICK TO DIET

Once BP levels swing back in range, people make the classic mistake of lowering dosage or giving up drugs on their own. "It is a myth that long-term dependency on BP-lowering medicines will cause side-effects. Medicines keep your blood pressure in check. The only effect of long-term use of the medicine is a reduced risk of heart attack, stroke and heart failure," says Dr Roy.

When it comes to the diet, everyone should aim to include more fruits and vegetables in their diet — at least four to five servings. "It is a difficult ask — we have one of the lowest per capita consumption of fruits and vegetables. But seasonal fruits and vegetables are not very expensive. Having fruits like bananas that are rich in potassium brings down sodium levels. Use less salt, which is known to drive up blood pressure," he adds.

Above all this is stress, the threshold of which is difficult to measure. "Take some time each day to relax and calm down. This helps in bringing the balance back to the sympathetic (the system that controls the body's fight or flight response to crisis) and parasympathetic nervous system (the system that controls the at-rest functions). This balance is essential for keeping blood pressure in check," explains Dr Roy.

WHAT SHOULD YOUR SCREENING PROTOCOL BE

Beginning at 25 years, one should get at least an annual screening done. "Those with a lower BP reading of 110/70 mm/Hg may wait two years for their next screening. Those sitting on the fence at 120/80 mm/Hg, however, should be screened every six months for hypertension. In general, I would say, everyone should check their blood pressure at least once a year," says Dr Roy.

how to track blood pressure