



CURRENT AFFAIRS for UPSC

13TH JANUARY TO 19TH AUGUST 2023

DREAMIAS



INTERNATIONAL

IS THE U.S.-IRAN HOSTAGE SWAP FINALLY MATERIALISING?

The story so far:

On August 10, Iran moved five Iranian Americans from prison to house arrest as part of a tentative deal that is still being negotiated and could lead to their full release. Iran agreed to the release in exchange for around \$6-\$7 billion frozen in South Korea because of sanctions on the country. However, Mohammad Jamshidi, the Iranian President's Deputy Chief of Staff for Political Affairs, said that the American detainees will remain in Iran until the full transfer of frozen funds, the Islamic Republic News Agency (IRNA) reported.

Has Qatar played any role?

Qatar and Oman have acted as mediators between the U.S. and Iran in the past, including efforts to salvage the 2015 Nuclear Deal that former U.S. President Donald Trump pulled out of in 2018. Quoting sources familiar with the matter, U.S. media outlets like The New York Times and AP have said that the frozen funds will be transferred to the central bank in Qatar. The account will be regulated by the government of Qatar so that the funds can only be used for humanitarian aid, like medicine and food.

South Korea, on the other hand, declined to comment on the U.S.-Iran deal, but said it hopes for a smooth resolution of the issue of frozen Iranian funds, Yonhap News Agency reported.

What is the history behind the deal?

The tentative deal between the U.S. and Iran has been in the making for months. In February 2023, media outlets reported that the two countries were holding indirect talks for a possible prisoner swap. In March 2023, Iran's Foreign Minister Hossein Amirabdollahian told the country's State television service that an agreement for a prisoner swap has been reached with the U.S. The U.S., however, dismissed his comment at the time, calling it a "cruel lie".

The interaction between the two countries finally became public in June, confirmed by Foreign Minister of the Sultanate of Oman, Sayyid Badr Albusaidi.

Who are the detainees in Iran?

The U.S. government has identified the Americans as Siamak Namazi, Morad Tahbaz, Emad Sharghi, and two others who reportedly did not want to disclose their identities. Mr. Tahbaz is an Iranian-American businessman and wildlife conservationist who also holds a British passport. He was arrested in 2018 and is serving a ten-year sentence. Mr. Sharghi is a venture capitalist, also serving a ten-year sentence. Mr. Namazi, an Iranian-American citizen, was arrested in Tehran in 2015 for spying and cooperating with the U.S. government.

THE IMPORTANCE OF THE SULINA CHANNEL TO UKRAINE GRAIN TRADE

The Danube delta has provided Ukraine with an alternative passage for its grain after Russia withdrew from the Black Sea grain deal last month. Of particular importance in this 'new' trade route is the Sulina Channel. Here's why.



Russia, in overnight drone strikes on Wednesday (August 16), targeted ports and grain storage facilities along the Danube river in Ukraine.

The Danube delta has provided Ukraine with an alternative passage for its grain after Russia withdrew from the Black Sea grain deal last month. The deal, brokered by the UN and Turkey, used to provide safe passage for cargo ships carrying grain from Ukrainian Black Sea ports of Odessa, Chornomorsk and Pivdennyi. Of particular importance in this 'new' trade route is the Sulina Channel – a 63 km long tributary of the Danube, connecting major Ukrainian ports on the river to the Black Sea, lying completely within the borders of Romania, a NATO member.

Ukraine, often called the “breadbasket of Europe”, is among the world’s biggest grain exporters, with its economy heavily dependent on agricultural exports.

The path

The Danube, Europe’s second longest river, has historically been crucial for the movement of freight. Near Tulcea, Romania, some 80 km from the sea, the river begins to spread out into its delta which has three major channels – Chilia, Sulina and St George. Of these, the Sulina Channel, which has been dredged and straightened, is the only one deep and wide enough for freight transport. This makes it a sort of a riverine ‘expressway’ – crucial for transport of goods from inland to the Black Sea.

Ships carrying grain from Ukraine leave from Ukrainian ports such as Izmail and Reni on the mainstream (or the Chilia Channel), and head to the port of Sulina, at the mouth of the Sulina Channel. From there, they head around 140 km south to Constanta, Romania’s biggest seaport. Here the cargo is transferred to bigger ships that carry it out of the Black Sea into the Mediterranean through the Bosphorus straits. This route is under constant surveillance and protection of NATO.

Congestion and lack of capacity

While seemingly a silver bullet against Russia-caused disruptions to Ukraine’s grain exports, this route has its problems as well. Russia – as of now – has desisted from attacking NATO-controlled territories, but continued targeting of Ukrainian ports and grain facilities on the Danube can be crippling.

Moreover, Ukraine has historically not used the Danube for grain exports, relying instead on its rail network and Black Sea ports. This has meant that the capacity of Ukrainian ports to handle the volume of grain suddenly coming their way is fairly limited.

One solution, suggested Sorin Grindeanu, Romania’s transport minister, is to transport the grain from Ukraine to Romania via rail and use Romanian ports instead. This would, however, lead to considerable loss of revenue in the form of loading fees and other expenses for Ukraine.

Another problem, given the sheer traffic on the Channel, has been congestion at its mouth. Boats are having to wait for days before they can enter the Channel, causing major delays in shipping.

THE MYANMAR JUNTA’S EMPTY GESTURES

In a general amnesty announced on military television last week, Myanmar’s military junta removed six years from the jail term of Aung San Suu Kyi, the 78-year-old leader of the government removed by a coup in February 2021. This came a week after the junta moved her

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into house arrest following a year in solitary confinement. But it still leaves Aung San Suu Kyi facing a 27-year jail term on bogus charges. The junta also lopped four years off former president Win Myint's sentence, and reportedly released more than 7,000 other prisoners.

But we shouldn't be persuaded that the junta has changed its stripes. It regularly uses mass amnesties in attempts to cultivate goodwill, either at home or abroad. But any major figures released in these amnesties shouldn't have been locked up in the first place. The day before the amnesty, the junta extended its state of emergency for a fourth time, further delaying elections, due to relentless opposition to its February 2021 coup. The coup sparked ongoing and widespread violence, and shredded the military's last claims to social esteem. This has left Myanmar impoverished, largely friendless, and without any plan for a positive future.

IN THE NAME OF GOD

The attack by protesters on churches and houses of the Christian minority in Faisalabad on Wednesday over allegations of blasphemy is yet another example of how dangerously sectarian Pakistan is. Triggered by reports that a Christian man from Jaranwala had desecrated the Koran, the incident took place just weeks after a man was shot dead by gunmen on an allegation of blasphemy in Balochistan. In February, a man was lynched over allegations that he had desecrated the Koran in Punjab. The authorities have largely remained spectators when mobs have taken it upon themselves to punish the "blasphemers". In the Jaranwala incident too, according to reports, the authorities were slow to respond, raising questions on whether the state is willing to protect Pakistan's religious minorities from repeated mob violence, especially when it comes to attacks in the name of blasphemy. In Pakistan, blasphemy is punishable by death, though nobody has been executed to date. But it has remained a deeply polarising issue with extremist sections raising allegations and often violently targeting those accused of the crime.

According to the Islamabad-based Centre for Research and Security Studies, at least 89 Pakistanis, including 18 women, have been killed in 1,415 accusations or cases of blasphemy since 1947. There has been a major jump in blasphemy accusations over the past decade. Civil society groups, international rights organisations as well as Pakistan's judiciary have in recent years expressed their concerns over the misuse of the blasphemy laws. The Islamabad High Court had once suggested that Parliament amend the laws to give stronger punishment to those who raise false blasphemy allegations. But the rising violence and growing criticism have done nothing to push Pakistan's leaders to address the menace. On the contrary, the Senate passed a Bill in August to increase punishment for those using derogatory remarks about the Prophet's family members, close companions and the first four Caliphs, further tightening the blasphemy laws. It is this pampering of extremist sections of society by the state and the impunity with which Islamists and other parties have misused the laws that are empowering extremists who are unleashing violence against the defenceless in the name of blasphemy. This law with its colonial origins should not have any place in a modern state. But in Pakistan, where religion has been used by all stakeholders to maximise their interests, there is no commitment to tackle the real problem. The authorities should at least take urgent measures to stop the violence in the name of blasphemy. Such incidents only reinforce the sectarian fault lines of Pakistan's state and society.

ANWAAR-UL-HAQ KAKAR NAMED PAKISTAN'S NEW CARETAKER PM

Senator Anwarul Haq Kakar was on Saturday appointed the caretaker Prime Minister of Pakistan to head a neutral political set-up to run the cash-strapped country until the next general elections.



Mr. Kakar's name was agreed upon during the final day of consultations between outgoing Prime Minister Shehbaz Sharif and the Leader of the Opposition in the dissolved National Assembly, Raja Riaz Ahmad, according to a statement from the Prime Minister's Office.

"The Prime Minister and leader of the opposition jointly signed the advice (to appoint Kakar) and it was sent to the President," read the PMO statement.

Mr. Kakar, 52, is an ethnic Pushtun from Balochistan province and a part of the Balochistan Awami Party (BAP) — a party considered close to the powerful establishment of the country.

In his first reaction, Kakar tweeted: "Thank you to Allah Almighty who gives me the opportunity to Serve the Nation as Caretaker PM of Pakistan. I.A (inshallah) will do the best which will be in favour of Pakistan." Speaking to the media, Opposition leader Riaz said: "We decided that the interim Prime Minister would be from a smaller province". He said that Mr. Kakar's name was suggested by him which was approved.

President Arif Alvi approved the appointment of Mr. Kakar as the caretaker Prime Minister under Article 224(1A) of the Constitution.

Mr. Sharif also thanked Mr. Riaz for his cooperation during the consultation process and for his excellent leadership of the Opposition during the past 16 months. Former Information Minister Marriyum Aurangzeb also confirmed that Mr. Kakar emerged as a consensus candidate during a discussion between the prime minister and the opposition leader.

The premier and the Opposition parties began rounds of meetings to pick a caretaker Prime Minister following the dissolution of the National Assembly on August 9.

The appointment of an interim government is a constitutional requirement and the outgoing Prime Minister is bound to choose his successor in consultation with the leader of the opposition within three days of the end of the National Assembly.

DreamIAS



NATION

INDIANS STRANDED IN NIGER CROSS BORDER, ENTER BENIN

Amid the deteriorating security situation in Niger – one of the most politically unstable and conflict-prone countries in West Africa – a group of Indians, including Keralites, who were stranded in Niamey, the capital of Niger, took the risk of crossing the country's border by road after their repeated pleas for evacuation from the Sahel region evinced no major response from the Indian Embassy.

According to the members of the group, comprising a dozen people, including eight Keralites, they reached the Benin border on Wednesday morning after there was no clarity on the evacuation mission by the Indian Embassy in Niger. "The only support we were given was a letter issued by the Indian Embassy directing us to cross the capital city border. Foreigners are generally not allowed to go beyond the capital city," said the members.

Although the group reached the Benin border, they were stopped by the Niger military, forcing them to take refuge in a nearby building on Wednesday night. Later, after repeated requests, they were allowed to cross the border on Thursday afternoon.

Their passports are now stamped with exit and entry to Benin by the authorities. The team will reach the Benin capital city of Porto-Novo on Friday. The members will have to take a flight to India on their own as the Indian Embassy has not made any arrangements for their evacuation.

Meanwhile, more than 300 Indians in Niger are still anxiously awaiting evacuation by the Indian government.

ARE 'POOR QUALITY' COURSES IN THE U.K. IMPACTING INDIANS?

An increasing number of Indian students are heading to the United Kingdom (U.K.), but the number of those who manage to stay in that country by securing jobs or pursuing further studies has been poor in recent years. Indians, like other foreign students, pay higher tuition fees than domestic students, so they are disproportionately impacted when they can't find jobs. Moreover, for foreign students, it's a double blow as it leads to the expiry of visas.

In 2022, two out of ten students migrated from India to the U.K. for a degree. In the U.K., Indians now form the second largest cohort of foreign students, behind China. Indians as a share of foreign students, surged from around 4% in 2015-16 to over 22% in 2021-22. The share of students from the European Union — which used to be the second-largest cohort — dwindled to 8%, post-Brexit. Indians filled this void following the graduate visa policy in 2019, which allowed foreign students to work in the U.K. for two years after completing their studies.

Immigration status

Of such Indian students who arrived in 2017, only 17% switched to work visas, while 5% managed to extend their study visas. In contrast, a majority of visas (76%) expired by 2022.

The trend of high expiry rates started after 2010. For instance, 35% of Indian students who came to the U.K. in 2004 had permission to work or study five years later. Moreover, 10% of them were on indefinite leave to remain (right to live, work and study in the U.K. for as long as they like) and only 50% of visas expired.

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Tuition fees collected from foreign students form a substantial part of the revenue for U.K. universities. Foreign students comprised nearly 24% of enrolment in higher education but their share in fees collected was 43% in 2021-22. The tuition fee from international students subsidises the education of domestic students whose fees were capped at £9,000 between 2012-13 and 2016-17 and increased to £9,250 thereafter.

Sunak's explanation

In mid-July, U.K. Prime Minister Rishi Sunak hinted at a possible reason for this trend. He blamed it on “low-quality” courses. His government declared a crackdown on courses that failed to deliver “good outcomes” by limiting student intake. These courses were defined as those that didn't lead to good jobs and left young people with poor pay and high debts. Data show that Indian students too may have borne the brunt of these “low-quality” courses. A high number of Indian students were enrolled in colleges ranked much lower in The Guardian University Guide's 2023 rankings.

In the past three years, about 30% of Indian students enrolled in universities ranked over 100 by The Guardian. The University of Hertfordshire (ranked 74) followed by The University of East London (ranked 113) were the top two destinations for Indian students. Only about 13% of Indians were enrolled in the 24 prestigious Russell Group universities which includes the University of Oxford and Cambridge.

EXPRESS VIEW ON INDIA-CHINA TALKS: STANDING THE GROUND

The latest round of border talks between India and China did not lead to any solution, according to the official readout after the meeting. More than three years and three months have passed since the border standoff started in eastern Ladakh. This has led to an unprecedented buildup of troops on both sides. Over the last three years, the Indian Air Force is estimated to have airlifted nearly 70,000 troops and heavy platforms including tanks, artillery guns weighing over 9,000 tonnes as part of efforts towards enhancing the overall operational preparedness in eastern Ladakh. The government has been making the case for the last couple of weeks that it has built infrastructure in the border areas over the last nine years, which has led to faster deployment of forces since the standoff. Indian and Chinese foreign ministers and national security advisors had met last month, before the Corps Commander level talks, raising hopes that there could be a breakthrough — before Prime Minister Narendra Modi and Chinese President Xi Jinping meet in Johannesburg for the BRICS leaders summit on August 22-23.

Hope has a precedent. In 2017, the two-and-half month Doklam border standoff was resolved just days before Modi and Xi met in Xiamen for the BRICS leaders' summit. The three-week-long 2013 standoff in Depsang was resolved weeks before then Chinese Premier Wen Jiabao was visiting India. The window of opportunity exists between now and Chinese President Xi's visit to India for the G20 summit. India has made it clear so far that the border standoff affects bilateral relations, and only a complete de-escalation will lead to normalcy in the ties. While disengagement at the specific friction points can be achieved, a broader de-escalation will take time. That is because troops and equipment will take time to be moved from the border areas. In that sense, this standoff is more complicated than the recent ones in the last 10 years. It is similar to the Sumdorong Chu standoff in 1986-87, which took almost seven years to completely disengage and de-escalate.



SELECT METRICS OF INDIA @76

Today, India observes its 77th Independence Day. This analysis measures India's relative performance in the past 76 years compared to other countries across four parameters — GDP per capita, Human Development Index (HDI), Infant Mortality Rate (IMR) and women's participation in Parliament. Owing to technological advancement and infrastructural development, India and other countries have made remarkable progress in the past seven and half decades. So it becomes imperative to look at where India stood compared to other nations around the time of independence and where it stands now among them.

India is compared with these countries: BRICS (Brazil, Russia, China, South Africa), G-7 countries (Canada, France, Germany, Italy, the United Kingdom, and the United States), emerging economies (Argentina, Chile, Colombia, Egypt, Hungary, Indonesia, Iran, Malaysia, Mexico, the Philippines, Poland, Saudi Arabia, Thailand, Turkey, and the United Arab Emirates) and the Indian subcontinent (Bangladesh, Bhutan, Nepal, Pakistan and Sri Lanka).

Let us compare GDP per capita (in \$) of 26 countries between the 1960s and 2022. India's GDP per capita ranking of 24 out of 26 nations analysed remained unchanged between the 1960s and 2022. While Indonesia and Nepal were lagging behind India in the 1960s, Pakistan and Nepal were lagging behind in 2022.

Let us compare the Human Development Index of 31 countries between 1950 and 2021. India's HDI increased by 0.11 points in 1950 to 0.633 in 2021. However, India's ranking slipped from 26 in 1950 to 29 by 2021. Of the five countries which lagged behind India in 1950, Saudi Arabia, Indonesia and Bangladesh—moved ahead by 2021, with scores of 0.87, 0.7 and 0.66 respectively.

Let us compare infant mortality rate in 32 countries between 1960-1975 and 2021. Between 1960 and 1975, India had the seventh-worst IMR among these 32 nations. In 2021, India regressed four spots and became the third-worst. Of the six countries which were behind India in 1960-75, five (Turkey, Bangladesh, Bhutan, Egypt and Nepal) surpassed India by 2021. However, South Africa regressed.

Let us compare the share of women in Parliament in 31 countries between 1997 and 2022. Women's participation in India increased from 7% in 1997-98 to 14.9% in 2022. Over 10 countries were behind India in this indicator in 1997-98. In 2022, only five remain below India.

In case of other indicators like access to electricity and usage of the internet, India has had significant progress. Between 1993 and 2000, only 50% of India's population had access to electricity. By 2020, this increased to 99% of its population. A majority of the 32 countries considered provided electricity to over 99% of their population by 2020, except for Pakistan, South Africa and Nepal where the share remains below 90%. In 1990, almost no country considered, except for the U.S., had any access to the Internet. But by 2020, India has managed to provide internet access to 43% of its population. While India lags behind 27 countries in this indicator, Bhutan (53.5%) is the only country in the subcontinent that is ranked above India.

In 1960, with a population of 45.05 crore people, India had the second-highest population behind China (66.7 crore). By the end of 2022, India's population stood at 1.417 billion, surpassing China's 1.412 billion, making India the most populous country in the world, according to the World Population Review.



FROM THE RAMPARTS

Prime Minister Narendra Modi offered what he described as an account of his two consecutive terms in office, delivering his 10th customary address to the nation on Independence Day. His last address on August 15 before the general election next year also turned out to be a campaign speech in effect, as he expressed confidence of winning a third term. Cataloguing the achievements and initiatives of the country since 2014 — the year he became the Prime Minister — Mr. Modi suggested that it was a new beginning for the country which was until then unstable and aimless even though Independence from British imperialism was won in 1947. Mr. Modi cited demography, democracy and diversity as the three core strengths of the country, before lauding young entrepreneurs, farmers, and sportspeople who overcome the odds. He cited three challenges that hold back the progress of India — corruption, dynastic politics and appeasement politics. Since 2014, Mr. Modi told fellow citizens — whom he addressed as ‘family members’ throughout the speech — he has been tackling these challenges head on and making many enemies but remains undeterred. According to him, India was overcoming the ills of “1000 years of slavery” of the past, and is now laying the foundation for a “1000 year golden era”. In an emerging new world order, India would be playing a central role, Mr. Modi said.

The Prime Minister’s speech was inspiring and optimistic at one level. But it was also more self-congratulatory and exclusive than self-reflective and unifying, though Mr. Modi said India’s unity across regions, communities and gender was the utmost priority for him. The unity pitch did not resonate well, as the principal Opposition party, the Congress, said Mr. Modi’s speech was full of “distortions, lies, exaggerations and vague promises”. The Prime Minister deployed his skilful oratory to conflate his own persona with the country. The continuity in India’s progress since 1947 is as self-evident as the daunting challenges of its present. Denying or overlooking either is not a great strategy for progress. Mr. Modi noted that peace and normalcy were returning to strife-torn Manipur, but no State accountability for the violence and chaos was mentioned. Mr. Modi’s claims of an uncompromising crusade against corruption are weakened by the selective approach of the central investigative agencies that target only Opposition politicians until the point that they align with the Bharatiya Janata Party. Overall, Mr. Modi reinforced the faith of his faithful and the scepticism of his sceptics.

WHY THE RED FORT BECAME THE VENUE FOR THE PM’S INDEPENDENCE DAY SPEECH

Prime Minister Narendra Modi hoisted the tricolour and addressed the nation from the Red Fort in Delhi, early morning on August 15, on the occasion of India’s 77th Independence Day.

Jawaharlal Nehru first started the tradition in 1947, although his address was on August 16, a day after the official handover of power. In his speech, he memorably called himself the pratham sevak of India.

Over the years, the Red Fort has become an integral part of India’s Independence Day celebrations, often capturing the mood of the nation and the government in power. But why was Red Fort chosen for this honour? To understand this, first a brief history of how Delhi became the seat of power in India.

‘Capital of Hindustan’

It was under the Delhi Sultanate (1206-1506) that Delhi became a major capital city from where a large part of north India was ruled.



Babur (1483-1530), the founder of the Mughal dynasty, was the first to refer to Delhi as the 'capital of all Hindustan' in the 16th century. Though the Mughals, under Akbar (1542-1605) shifted their capital to Agra for some time, they continued to be seen as the rulers of Delhi.

Finally, under Shah Jahan (1592-1666), Delhi became the Mughal capital once again with the establishment of Shahjahanabad in 1648 (what we know today as Old Delhi). The Mughals would continue to rule from the fortified citadel of Shahjahanabad – more popularly known as the Red Fort – till 1857. Even as their power waned, they continued to be recognised as the symbolic rulers of India, in part due to their association with Delhi.

"Not only did the Mughal territories shrink, the Mughal emperor became increasingly ineffectual even within them," historian Swapna Liddle wrote for The Indian Express in 2021. "Yet, such was his [the Mughal emperor's] symbolic significance as the source of legitimate sovereign authority that many of these new states, including a newcomer, the East India Company, continued to rule in his name, and to issue coins in his name until well into the 19th century," she added.

Perhaps the best example of this was the Rebellion of 1857. After mutinying, the rebels immediately headed to Delhi and declared the aged Mughal Emperor Bahadur Shah Zafar (1775-1862) as their king.

Delhi at the time was of minor importance to the East India Company, and housed very few Europeans. But for the rebels, it was still the strongest symbol of indigenous authority, around which they rallied and the fall of Delhi pretty much sealed the fate of the rebellion.

After capturing Delhi from the rebels, the British initially planned to raze the whole city (Shahjahanabad) to the ground, their primary objective being to wipe out the memory of the Mughal Empire from the city. And destroy they did, razing beautiful Mughal buildings such as the Akbarabadi mosque near Daryaganj or the bustling Urdu Bazaar near Chandni Chowk.

Although they stopped short of completely razing the Red Fort to the ground, the British stripped it of all its imperial majesty. Precious artworks and the imperial treasury (what was left of it in 1857) were looted, and many of its inner structures were demolished to be replaced by British structures.

As per estimates, as much as 80 per cent of the Red Fort's original inner structures were destroyed, replaced by British buildings to house their troops and service their needs. The palace was converted into a British garrison and the famed Diwan-i-Aam into a hospital.

The Red Fort we see today, thus bears the undeniable stamp of British imperial authority, as much as it stands as a relic of the Mughal Empire's grandeur.

Co-opting Delhi's symbolic authority

In the years following 1857, the British systematically relegated Delhi to a minor provincial town.

At the same time, the city still remained a potent symbol of authority in India, something the British also tapped into, notably with the Delhi Durbars (1877, 1903, 1911). These grand ceremonies proclaimed the British monarch as the Emperor of India, and invited rulers from Princely States across the subcontinent to Delhi to pay their tributes to the British Crown.

The British finally decided to shift their capital to Delhi from Calcutta in 1911, building a grand new city which would be completed in 1930.



Suoro D Joardar, professor at the School of Planning and Architecture in New Delhi, noted in his article 'New Delhi: Imperial Capital to Capital of World's Largest Democracy' (2006) that besides the centrality and connectivity of Delhi, it also "carried in the minds of the colonial rulers a symbolic value – as the old saying goes: 'he who rules Delhi rules India' – a realisation of the Indian ethos, especially across northern and central India, enhanced during royal contact with the innumerable minor and major princes."

Reclaiming the Red Fort, reclaiming India

The Red Fort would return to the forefront of public consciousness in the years prior to Independence.

Under Subhas Chandra Bose, the Indian National Army – comprising Indian PoWs captured by Japan and civilian volunteers – raced towards India from the Burmese border in 1943, aiding the Japanese war effort. This effort would eventually fail – Bose died in a plane crash and between 1945 and 1946, senior officers were tried for treason.

These highly public trials were held at the Red Fort. Causing an outpouring of sympathy for the INA and upping nationalist sentiments against the British, the trials firmly established the Red Fort as a symbol of power and resistance in the minds of the Indian public.

It is in this context that Nehru's decision to hoist the flag over the Red Fort in 1947 makes sense.

As Swapna Liddle wrote in 2021: "With the coming of Independence, it was necessary that the site of the Red Fort, over which the British colonial government had sought to inscribe its power and might, be symbolically reclaimed for the Indian people." Each year, our Independence Day celebrations emphasise this reclamation.

INDIAN JUDICIAL DATA HIDES MORE THAN IT REVEALS IN BAIL CASES

The number of bail appeals filed in India's High Courts surged post 2020, according to the 'High Court dashboard' by DAKSH, a think-tank focussed on law and justice system reforms. Bail appeals went up from around 3.2 lakh to 3.5 lakh each year before 2020, to 4 lakh to 4.3 lakh thereafter.

Consequently, the number of pending bail appeals in High Courts also surged from around 50,000 to 65,000 to between 1.25 lakh to 1.3 lakh.

The data follow a July to June cycle. For instance, between July 2021 and June 2022, 4.3 lakh bail appeals were filed in High Courts.

One possible reason could be the sharp increase in cases related to the flouting of COVID-19-related lockdown norms during the pandemic. At the same time, pending bail cases piled up as the functioning of the courts was compromised during this time.

However, the exact reason cannot be ascertained from court data. The DAKSH 'High Court dashboard' explains that in 77% of regular bail cases, it was not possible to ascertain the Act under which the person seeking bail was imprisoned. It was not mentioned in the e-courts data of various High Courts. An analysis of 23% of cases in which the Act was mentioned shows that the Epidemic Diseases Act, 1897, was ranked fourth, hinting at the possibility of cases surging under this Act as the reason for more bail appeals.



The reason to understand the surge becomes paramount because in some of the States, bail appeals formed more than 30% of the caseload between July 2021 and June 2022. In five High Courts, i.e., in Patna, Jharkhand, Odisha, Madhya Pradesh and Chhattisgarh — bail appeals formed more than 30% of their total caseload.

Across all High Courts, DAKSH analysed 9,27,896 bail cases that were filed between 2010 and 2021. Each High Court follows a unique naming pattern for bail cases. The case type abbreviation for bail application was “BA” in Bombay and “BAIL APPL.” in Kerala. Uttarakhand had the most variation among bail case types — 18 types, where the first bail application was named BA1 and in successive applications, BA2, BA3, a unique naming pattern which no other High Court followed. In all, there were 81 case types associated with bail across the 15 High Courts analysed.

The database also reveals that the median number of days taken from the filing date to the decision date for regular bail applications was 23. However, for some High Courts, the median days taken for disposal were much higher. The median days for disposal of regular bail cases in the Jammu & Kashmir High Court was 156, for the Orissa High Court 61 days, and for the Bombay High Court, 56 days. Given the very high number of days it takes to dispose of bail cases (which are generally considered to not require much judicial time or deliberation), the lack of data to understand the reason for delay is worrying. “Delays in resolution have the same effect as denying bail as the accused remains in prison for the duration of their trial,” the DAKSH database argues.

Finally, data regarding the outcome of bail appeals in High Courts were also missing in many cases. In close to 80% of the disposed bail cases in all High Courts, the outcome of the bail appeal — whether it was granted or rejected — was either unclear, or the outcome was missing. For instance, in the Bombay High Court, the bail outcome of over 95% of appeals was not known.

DO SC, HCS JUDGES VACATION TOO MUCH? HERE’S THE DEBATE, AND THE FACTS OF THE SITUATION

Terming court vacations a “colonial legacy”, a parliamentary panel has recommended that High Court judges take turns going on vacation to tackle the mounting pendency of cases.

What is this report and what does it say?

In its 133rd report, “on the subject of judicial processes and their reforms”, the parliamentary panel headed by BJP MP Sushil Kumar Modi, reiterated a suggestion made by former Chief Justice of India (CJI) R M Lodha on court vacations earlier.

“...The Committee is of the view that the suggestion of...Shri R M Lodha on court vacations, that instead of all the judges going on vacation, all at one time, individual judges should take their leave at different times through the year so that the courts are constantly open and there are always benches present to hear cases,” the report said.

The demand for doing away with court vacations is primarily due to two factors, the report says: one, the “huge pendency of cases in our courts”, and two, the inconvenience faced by the litigants during court vacations.

“A common man holds a perception that despite having such huge pendency of cases, their judges go on long vacations. Further, during the vacations, the litigants have to suffer a lot despite having a handful of vacation courts/ benches,” the report said.



The report has recorded that the “Department of Justice has stated that court vacations particularly summer vacations spanning 7 weeks (10 weeks prior to 2013) are customary practice continuing from colonial days”, and that the “vacations of Supreme Court and High Courts need to be relooked in a holistic way vis-à-vis the present practice in the higher courts of other countries as well as other constitutional institutions in the country and also in the context of existing huge pendency of arrears of cases and increased volume of fresh cases being instituted on regular basis”.

Is this the first time that the Centre has expressed such a view?

The central government has brought up the issue of court vacations earlier too. On December 15, 2022, then Law Minister Kiren Rijju criticised the judiciary for taking long vacations even as pending cases hit record levels every year.

Responding to questions relating to pendency, Rijju told Rajya Sabha that the problem cannot be resolved until a “new system” on the appointment of judges was put in place.

He also said that “there is a feeling among people of India that the long vacation which the courts obtain is not very convenient for justice-seekers”, and that it is his “obligation and duty to convey the message or sense of this House to the judiciary”.

A day later, CJI D Y Chandrachud announced that no vacation benches would sit during the Supreme Court’s winter vacation.

The government is learned to have requested High Courts to fix the period of vacations to ensure that courts functioned for at least 222 working days. However, the parliamentary panel found that High Courts functioned for only 210 days on average.

Before this, in 2014, when the Supreme Court notified its new Rules, it said that the period of summer vacation shall not exceed seven weeks, as compared to the earlier 10-week period. This came after the Law Commission’s 230th Report and the Malimath Committee Report made similar suggestions.

And what did these two reports recommend?

In 2009, the Law Commission, in its 230th report on ‘Reforms in the Judiciary – Some suggestions’, suggested that court vacations be cut down by 10-15 days at all levels of the judiciary to help cut the backlog of cases.

Before that, in 2000, the Atal Bihari Vajpayee government appointed a “Committee on Reforms of Criminal Justice System” under Justice V S Malimath, former Chief Justice of the Karnataka and Kerala High Courts, which in its report submitted in 2003, recommended that the period of vacation should be reduced by 21 days, keeping in mind the long pendency of cases.

The Malimath Committee suggested that the Supreme Court should work for 206 days, and the High Courts for 231 days every year.

For how long do Indian courts go on vacation currently?

The Supreme Court has 193 working days a year for its judicial functioning, the High Courts function for approximately 210 days, and trial courts for 245 days.

High Courts have the power to structure their calendars according to the service rules.



The Supreme Court breaks for its annual summer vacation, which is typically for seven weeks starting at the end of May. The court reopens in July.

The Supreme Court also takes week-long breaks for Dussehra and Diwali, and two weeks at the end of December.

Despite the vacations, however, the Supreme Court has many more working days compared to the highest courts in other countries. For instance, the United States Supreme Court sits for 79 days with no oral arguments scheduled for a few months in between. The apex courts in Australia, the United Kingdom, and Singapore sit for a total of 97, 189, and 145 days respectively.

What happens to important cases during court vacations?

Generally, a few judges are available to hear urgent cases even when the court is in recess. "Vacation Benches" comprising two or three judges hear important cases that cannot wait. Cases such as bail, eviction, etc., often find precedence in listing before vacation benches.

It is also not uncommon for courts to hear important cases during vacations.

For example, in 2015, a five-judge Bench of the Supreme Court heard the challenge to the constitutional amendment setting up the National Judicial Appointments Commission (NJAC) during the summer vacation.

In 2017, a Constitution Bench led by then CJI J S Khehar held a six-day hearing in the case challenging the practice of triple talaq during summer vacation.

SC RESERVES ORDER ON WHETHER CHILDREN FROM INVALID MARRIAGES CAN INHERIT ANCESTRAL PROPERTY

The Supreme Court on Friday reserved its judgment on whether children born out of invalid/void and voidable Hindu marriages can inherit their parents' ancestral property.

A void marriage is not enforceable in law or is unlawful.

A voidable marriage has to be declared a nullity through a decree.

Amended provision

The case, before a three-judge Bench headed by Chief Justice of India D.Y. Chandrachud, is focused on an amended provision in the Hindu Marriage Act, Section 16(3). This provision deals with the inheritance rights of children from void or voidable marriages.

The case was referred to a larger Bench in 2011 after a Division Bench of the top court refused to follow past precedents and championed the cause of children born out of illegitimate marriages.

"The birth of a child in such a relationship has to be viewed independently of the relationship of the parents. A child born in such a relationship is innocent and is entitled to all the rights which are given to other children born in valid marriage. This is the crux of the amendment in Section 16(3)," the Division Bench of Justices (retired) G.S. Singhvi and A.K. Ganguly had written in their 2011 judgment in the *Revanasidappa v Mallikarjun* case.

The Division Bench had held that such children would have a right to any property that belonged to their parents, whether they were self-acquired or ancestral.



The Bench had however clarified that the children's claims would be limited to the property of their parents and no other relation.

12-year-old reference

On Friday, hearing the 12-year-old reference, Chief Justice Chandrachud seemed to agree with the Division Bench's findings that children from void and voidable marriages had rights over the property, whether self-acquired or ancestral, of their parents.

But the Division Bench said the cardinal question was when exactly did an ancestral property become the property of a parent of such a child.

"But we are actually concerned about the acquisition of interest...when does an ancestral property become the property of the parents for the purpose of Section 16(3)?" the Chief Justice D.Y. Chandrachud asked.

FIGHTING STEREOTYPES

In the quest for equal rights for all, the Supreme Court of India has taken an important step by releasing guidelines to take on harmful gender stereotypes that perpetuate inequalities. Laying down a set of dos and don'ts for judicial decision-making and writing, the Handbook on Combating Gender Stereotypes helps judges identify language that promotes archaic and "incorrect ideas", about women in particular, and offers alternative words and phrases. Instead of "affair", it will be de rigueur to say a "relationship outside of marriage"; similarly, for "adulteress", the preferred usage is a "woman who has engaged in sexual relations outside of marriage". A host of derogatory and seemingly mild adjectives have been dropped too while referring to women. For instance, it is no longer "chaste" woman, "dutiful" wife, "housewife"; a plain "woman", "wife" and "homemaker" will do. Men have not been forgotten either, with the Court striking down words such as "effeminate" (when used pejoratively), and "faggot", with the directive, "accurately describe the individual's sexual orientation (e.g. homosexual or bisexual)". Pointing out that stereotypes — "a set idea that people have about what someone or something is like, especially an idea that is wrong" — leads to exclusion and discrimination, it identifies common presumptions about the way sexual harassment, assault, rape and other violent crimes are viewed, skewed against women.

One of the stereotypes the Court shatters is women who do not wear traditional clothes and smoke or drink are asking for trouble, and drives home the important point of consent. It also firmly asserts that women who are sexually assaulted may not be able to immediately report the traumatic incident. Courts should take social realities and other challenges facing women seriously, it says. It is wrong, the Court adds, to assume women are "overly emotional, illogical, and cannot take decisions". It is also a stereotypical presumption that all women want to have children, says the handbook, and points out, "deciding to become a parent is an individual choice". These possibilities, to be able to choose what to do in life, are still frustratingly out of reach for most of India's women. In a largely patriarchal society, girls are often forced to pick marriage as a way out to avoid social stigma, and not education and a career. Even if things are changing, the pace is slow. To achieve gender equality, fundamental changes need to be made to shun all stereotypes. That women are more nurturing and better suited to care for others, and should do all household chores are simply wrong notions. The handbook may be a guide for judges and lawyers, but it could also be a catalyst for change right down to the societal level.



SC TO CONSIDER GIVING MORE 'BITE' TO MEDIA REGULATIONS, SUGGESTS RAISING PENALTY

A Bench headed by Chief Justice of India D.Y. Chandrachud noted that the ₹1 lakh fine fixed in 2008 had not been revised since.

The court issued notice to the National Broadcasters and Digital Association (NBDA), an independent electronic media watchdog, the Centre and other respondents on the question of "strengthening the framework" of regulations.

"We are as much concerned about free speech as the channels are... but you presume guilt of a person in your shows and not innocence of the person until he or she is proven guilty... Media went berserk after that actor's [Sushant Singh Rajput] death... you virtually pre-empt the entire investigation," the Chief Justice said.

Senior advocate Arvind P. Datar, appearing for the NBDA along with advocate Nisha Bhambhani, said he would consult Justice A.K. Sikri (retired), the current NBDA chairperson, and former NBDA head, Justice R.V. Raveendran (retired), on how to put "some bite" into its regulations.

"If at the end of all this violation, you [NBDA] are going to impose ₹1 lakh fine, which channel is going to be motivated? Your fine must be more than the profits a channel makes from the entire show. We do not want any censorship over the media, but the fine should be effective... The government does not want to be in this space. You are expected to self-regulate your content. How will a fine of ₹1 lakh deter an errant channel? This amount was fixed 15 years ago, have you not thought of revising it?" Chief Justice Chandrachud asked NBDA.

Solicitor-General Tushar Mehta, for the Centre, said NBDA was only one of the regulatory bodies.

Mr. Mehta said the Court had to intervene to lay down comprehensive regulatory guidelines on ethical conduct on air.

He added that some time ago, with the intervention of the Delhi HC, press officers were appointed to brief the media daily in order to avoid unnecessary sensationalism.

U.P. GOVT. DIRECTS OFFICIALS TO PROBE 'NEGATIVE NEWS ITEMS'

The Uttar Pradesh government has directed Divisional Commissioners and District Magistrates to probe into "negative news items" being published in daily newspapers and on media platforms in their respective jurisdictions.

A letter in this regard marked as top priority was issued by Sanjay Prasad, Principal Secretary to the Chief Minister.

"Negative news items published in daily newspapers and on media platforms are compiled by the Information Department," stated the letter dated August 16. It added that it is necessary to promptly investigate the facts mentioned in the "negative news items" as they malign the government's image.

The letter also stated that "the negative news items would be registered/uploaded on the Integrated Grievance Redressal System and forwarded for action to the respective Divisional Commissioners, District Magistrates and heads of department".



'Twisted facts'

The letter said that if the State government comes to know that a specific incident has been presented with "twisted or misleading facts" to tarnish the image of the government or district administration, then the District Magistrate concerned should write to the management of the media group in question for clarification and mark a copy to the Information Department.

ASHOKA VARSITY FACULTY THREATEN TO STOP TEACHING, WANT COLLEAGUE REINSTATED

Faculty members of Ashoka University's Economics and English Departments on Wednesday threatened to stop teaching unless the institute reinstated their colleague who resigned earlier this week over a controversial research paper.

In separate statements, they also demanded that the university must ensure that its governing body does not interfere in their work as "it is likely to precipitate an exodus of faculty".

Department of Economics Assistant Professor Sabyasachi Das had resigned following a controversy over his research paper "Democratic Backsliding in the World's Largest Democracy", which claimed that the BJP won a disproportionate share of seats in closely contested constituencies in the 2019 general election. Ashoka is a Liberal Arts and Sciences education-based private university that receives its funding from various stakeholders. The university's freedom of speech policy states that it is committed to the principle that debate or deliberation may not be suppressed.

The university had in a statement on August 1 distanced itself from the paper, which was shared widely on social media. Ashoka University authorities have not responded to direct requests for comments on the latest developments. The Economics Department said, "The offer of resignation by our colleague Mr. Das and its hasty acceptance by the university has deeply ruptured the faith that we had reposed in the university's leadership." The department urged the governing body to address the issue by August 23.

"Unless these questions regarding basic academic freedom are resolved before the start of the monsoon 2023 semester, faculty members of the department will find themselves unable to carry forward their teaching obligations," the statement said.

Open letter

Earlier in an open letter, the Economics Department said, "The governing body's interference in this process to investigate the merits of his recent study constitutes institutional harassment, curtails academic freedom and forces scholars to operate in an environment of fear."

The letter said actions of the governing body pose an existential threat to the department. "It is likely to precipitate an exodus of faculty and prevent us from attracting new faculty."

Students and alumni of Ashoka University on Wednesday expressed solidarity with the stand taken by some faculty members across departments to stop teaching unless Assistant Professor Sabyasachi Das is reinstated.

Over 600 students, alumni and faculty members expressed their concern over the resignation of Mr. Das from the Department of Economics at a meeting held by the student governing body.



A BA student, on condition of anonymity, said students supported the statements issued by faculty members of the Economics and English Departments threatening an “exodus” if Mr. Das is not reinstated.

The students said they also hoped teachers of other departments would follow suit in order to elicit a response from the administration.

CONTENTIOUS CRITERIA

By mandating States and Union Territories to implement the National Education Policy (NEP) 2020 and adopt contentious academic criteria in order to avail funds under the Pradhan Mantri Uchcharat Shiksha Abhiyan (PM-USHA), the Ministry of Education (MoE) appears to have made the central scheme exclusivist. The guidelines for the scheme — an improvised version of the Rashtriya Uchcharat Shiksha Abhiyan (RUSA 1 and 2) to ensure increased access, equity and excellence in the State higher education system with central funding — were released in June. Only 22 States and Union Territories have joined the PM-USHA, which requires a memorandum of understanding to be signed between the State and the Department of Higher Education (MoE). West Bengal, Tamil Nadu and Kerala are among 14 States and Union Territories which have refused to get on board. Apart from embracing the NEP 2020, the memorandum of understanding, includes, inter alia, commitment from States on adopting guidelines for the National Credit Framework and Choice Based Credit System for Four Year Undergraduate Programme. Without agreeing to these conditions, States cannot avail of a share in the funds, an outlay of ₹12,926.10 crore between 2023-24 and 2025-26, earmarked to improve State-run higher education. This despite the fact that 40% of funding has to be borne by the respective State governments.

Over the past several years, a few States have strongly opposed NEP 2020, both at the draft and implementation stages. Some such as Tamil Nadu have initiated measures to draft their own State Education Policy. There are demands to restore ‘education’ to the State List from the Concurrent List, where it was moved without debate during the Emergency. Against this backdrop, it would appear that the conditions for the PM-USHA have been tailored to impose NEP 2020 through the backdoor. The scheme also requires adoption of the multiple entry and exit options in degree programmes and National Higher Education Qualifications Framework guidelines. This, when academic stakeholders and administrators have expressed serious concerns about the multiple entry and exit options possibly triggering more dropouts from the higher education system. The emphasis on a four-year undergraduate programme has also evoked concerns as to whether socially and economically backward students could afford the money and the time, to pursue an extra year in college to acquire a degree. Besides, even a State supporting the NEP 2020, Meghalaya, has called for a revisit of the funding criteria and an increase in the number of beneficiary units, since its State university is in the initial stage of being operational. Under these circumstances, it would be prudent for the Ministry of Education to negotiate better terms with the dissenting States, respecting the essence of cooperative federalism.

THE NEW BILLS TO OVERHAUL CRIMINAL LAWS

The story so far:

The Centre on August 11 introduced three new Bills in the Lok Sabha that propose a complete overhaul of the country’s criminal justice system. The Indian Penal Code (IPC), 1860 is set to be replaced by the Bharatiya Nyaya Sanhita, 2023. The Code of Criminal Procedure (CrPC), 1973 will be replaced by the Bharatiya Nagarik Suraksha Sanhita, 2023 whereas the Indian Evidence Act,

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



1872, will be replaced by the Bharatiya Sakshya Bill, 2023. “From 1860 to 2023, the country’s criminal justice system functioned as per the laws made by the British. With these three laws there will be a major change in the criminal justice system in the country”, Home Minister Amit Shah said while introducing the three new legislations. The Bills have been referred to a Parliamentary Standing Committee for review and recommendations.

What has been the process?

The process to bring about amendments in criminal laws has been in the pipeline for a while. Former Law Minister Kiren Rijiju apprised the Rajya Sabha last year that the government has initiated the process of amendment to laws such as IPC, CrPC and the Indian Evidence Act in consultation with all stakeholders.

It was also pointed out that the Parliamentary Standing Committee in its 111th and 128th reports had highlighted the need for reform in criminal laws through the enactment of a comprehensive legislation instead of piecemeal amendments in existing acts.

What was the mandate of the criminal law reforms committee?

The Ministry of Home Affairs through a notification dated May 4, 2020, constituted a committee headed by Prof. (Dr.) Ranbir Singh, former Vice Chancellor of National Law University (NLU), Delhi to review the three codes of criminal law. The other members of the committee included — G.S. Bajpai (Registrar, National Law University Delhi), Balraj Chauhan (first Vice-Chancellor, Dharmashastra National Law University, Jabalpur), Mahesh Jethmalani (senior advocate, Supreme Court) and G.P. Thareja (former district and session judge, Delhi).

The mandate of the committee was to ‘recommend reforms in the criminal laws of the country in a principled, effective and efficient manner, which ensures the safety and security of the individual, the community and the nation; and which prioritises the constitutional values of justice, dignity and the inherent worth of the individual,’ per the committee website. In July 2020, the committee invited comments from stakeholders via an extensive questionnaire. Subsequently, on February 27, 2022, the committee submitted its recommendations on the criminal law amendments.

However, the committee came under attack for its lack of diversity and the absence of transparency in its functioning. In a scathing letter, former Supreme Court and High Court judges, senior lawyers, and academicians questioned the lack of diversity in the all-male committee both in terms of social identity as well as professional background and experience. Clarifications were also sought on whether the committee would be functioning independently of the MHA.

Responding to the mounting criticism, Prof. Ranbir Singh subsequently clarified that while the structural part of the committee’s composition lies with the MHA, it would function in a completely autonomous manner. He stated that the committee “has remarkable diversity and competence in professional experience, affiliations, and, scholarship” and is guided by progressive and humane thinking in the realm of criminal law.

Has the offence of sedition been repealed?

Home Minister Amit Shah said in the Lok Sabha that the new Bill on IPC repeals the offence of sedition under Section 124A of the IPC. However, it has been replaced by another section targeting speech, writing or any form of communication that incites separatist and subversive activities.



Part VII of the Bharatiya Nyaya Sanhita Bill is titled 'Of Offences against the State', under which Section 150 criminalises 'acts endangering sovereignty unity and integrity of India.'

It reads: 'Whoever, purposely or knowingly, by words, either spoken or written, or by signs, or by visible representation, or by electronic communication or by use of financial mean, or otherwise, excites or attempts to excite, secession or armed rebellion or subversive activities, or encourages feelings of separatist activities or endangers sovereignty or unity and integrity of India; or indulges in or commits any such act shall be punished with imprisonment for life or with imprisonment which may extend to seven years and shall also be liable to fine.'

The explanation accompanying it is an incomplete sentence, but generally repeats the clarification found in Section 124A that comments expressing disapprobation of the measures or actions of the Government with a view of getting them altered by lawful means would not come under it. Section 150 also seeks to penalise aiding "subversive activities or those encouraging 'feelings of separatist activities'" through financial means.

The main difference between the existing offence of sedition and the proposed section is that there is no reference now to "disaffection against the government", or bringing it under hatred and contempt. While the punishment under Section 124A is either life imprisonment or three years in jail, Section 150 enhances the alternative punishment to seven years.

What are key highlights of the Bills?

The Bharatiya Nyaya Sanhita Bill, 2023 seeks to replace the IPC by repealing 22 of its provisions, proposes changes to 175 existing provisions and introduces eight new sections. It contains a total of 356 provisions.

The punishment for all types of gang rape will now include 20 years of imprisonment or life imprisonment. The punishment for the rape of a minor will include imposition of the death penalty. Various offences have also been made gender neutral.

Notably, for the first time capital punishment has been introduced for the offence of mob lynching apart from the offence being made punishable with seven years of imprisonment or life imprisonment.

The Bill also criminalises sexual intercourse under the false pretext of marriage or by deceitful means. It is followed by an explanation stipulating that 'deceitful means' will include the false promise of employment or promotion, inducement or marrying after suppressing one's identity. A maximum of 10-year imprisonment has been proposed for the offence. This is a notable change since IPC does not have an explicit clause dealing with instances of sexual intercourse based on a false promise of marriage. Such cases are typically covered under Section 90 of the IPC, where consent obtained through a 'misconception of fact' is deemed invalid. The accused in such cases can be charged under Section 375 for the offence of rape.

The provision for the offence of adultery has also been omitted. This is in line with the Supreme Court's ruling in 2018 in the case of Joseph Shine versus Union of India, where Section 497 of the IPC, which criminalised adultery, was held to be unconstitutional.

Similarly, pursuant to the Supreme Court's unanimous reading down of Section 377 of the IPC as far as it criminalised same-sex relations between consenting adults in Navtej Singh Johar versus Union of India (2018), the proposed legislation does not include any punishment for 'unnatural sexual offences against men.'



The provision legalising marital rape has however been retained. Exception 2 to Section 63 (which defines the offence of rape) reads — ‘Sexual intercourse or sexual acts by a man with his own wife, the wife not being under eighteen years of age, is not rape.’ A batch of petitions challenging the constitutional validity of Exception 2 to Section 375 of the IPC, which provides an exception to non-consensual matrimonial sex from the offence of rape, is currently pending adjudication before the Supreme Court.

The Bharatiya Nagarik Suraksha Sanhita Bill, 2023 will replace the CrPC by repealing nine of its provisions. It proposes changes to 160 provisions and introduces nine new provisions. It contains a total of 533 sections.

A formal provision (Section 230) has been introduced to ensure that a copy of the FIR is made available to the accused and the victim free of cost and within fourteen days from the date of production or appearance of the accused. Other changes to expedite the procedure include the facility for an accused person to be examined through electronic means, like video conferencing. Summary trials have been made mandatory for petty and less serious cases. The magisterial system has also been streamlined.

The Indian Evidence Act will be replaced by the Bharatiya Sakshya Bill, 2023 which proposes changes to 23 provisions and introduces one new provision. It contains 170 sections in total.

The Statement of Objects and Reasons of this Bill highlights that the Indian Evidence Act has been repealed because it fails to ‘address the technological advancement undergone in the country during the last few decades.’ The Bill permits the admissibility of an electronic or digital record as evidence and will have legal validity as documentary evidence. The ambit of what constitutes secondary evidence has also been expanded to include the following: copies made from the original by mechanical processes, copies made from or compared with the original, counterparts of documents as against the parties who did not execute them and oral accounts of the contents of a document given by some person who has himself seen it.

PC IS HISTORY: IN 1837, HOW MACAULAY CRACKED THE CODE

At the centre of our criminal justice system is the 164-year-old IPC, which defines crimes and prescribes their punishment. The architect of this law was an English lawyer, Thomas Babington Macaulay. He once described his legal experience as being limited to convicting a boy of stealing a parcel of cocks and hens. But Macaulay had a sharp mind, studied law at Cambridge and was interested in politics. His writings brought him into public focus, and a senior politician offered him a pocket borough seat. As a result, Macaulay became a member of the House of Commons in 1830 at the age of 30.

In 1833, the UK Parliament debated the Charter Act, a law which would fundamentally alter the functioning of the East India Company. It added a law member to the Governor General’s Council with the requirement that the individual was not employed by the company. Participating in the debate, Macaulay made a passionate plea for a uniform code of laws for India.

Macaulay knew that the future held limited political prospects for him, and an India position would help his financial situation. Writing to his sister a month after his speech, he confided that he was sure of being offered the role of the law member. He went on to state, “The advantages are very great ... The salary is ten thousand pounds a year. I am assured by persons who know Calcutta intimately ... that I may live in splendour there for five thousand a year, and may save the rest of



the salary with the accruing interest. I may therefore hope to return to England at only thirty-nine, in the full vigour of life, with a fortune of thirty thousand pounds. A larger fortune I never desired.”

Macaulay arrived in India in 1834 and started work as a legislative member of the Governor General’s council. As a law member, Macaulay championed press freedom and the removal of privilege enjoyed by British settlers appealing straight to the Supreme Court at Calcutta. He also pushed for Western education in English for the country. The Charter Act also established a law commission, and he was appointed its chairman. It is in this position that he embarked on consolidating and codifying the criminal laws of India.

India was an ideal canvas for the codification of criminal laws. A mix of Hindu, Muslim and British laws was applicable across the country. Then there was the problem of the same crime having a different punishment depending on whether it took place in the presidency of Calcutta, Madras or Bombay. Compounding the problem was that the British lawmakers had not codified their criminal law, so there was no template to follow. Macaulay did not want to create a simple unified digest of all the criminal laws. He wanted to create a code that would apply throughout the Indian empire and handle all the contingencies. He thought that the language of the law should allow clear communication of the legal principle.

The law commission had five other members. The ill health of some and the lack of competence of others meant that Macaulay had to shoulder all the responsibility of writing the first code of criminal law in the British Empire. The code that he produced was clear and concise. Its highlight was that it explained the legal provisions by examples and illustrations, a practice still used by modern drafters. Macaulay was a bibliophile and, at one time, had over 4,000 books. A book on his life and letters highlights how Macaulay weaved his interest in an illustration to explain the crime of theft.

“A, being on friendly terms with Z, goes into Z’s library in Z’s absence, and takes away a book without Z’s express consent. Here, if A was under the impression that he had Z’s implied consent to take the book for the purpose of reading it, A has not committed theft. But, if A afterwards sells the book for his own benefit, he is guilty of an offence under this section.” The use of illustrations led John Stuart Mill to complement him for “making the body of Laws a popular book, at once intelligible and interesting to the general reader”.

Macaulay completed the draft of the IPC in 1837, and it finally became law a year after he died in 1860. The impact of his criminal law codification exercise was felt across the British Empire. Crimes from his IPC, like sodomy, became a crime not only in India but in almost all British territories and continued to remain so after their independence. By all accounts, he was racist and contemptuous of Indians and their customs and the criminal code he wrote made the British rule even more effective.

For example, Macaulay’s code incorporated the crime of sedition (though the draft did not use the word) in IPC. It provided that anyone who, by speaking or writing, attempts to “excite feelings of disaffection” towards the government in the territories of the East India Company would be punished with banishment for life or imprisonment for three years. But the law he wrote, with its imperfections, stood the test of time, and his contributions to India have cemented his place in history.



SECTION 377 IS GONE, BUT SOME FEAR THE PROPOSED BHARATIYA NYAYA SANHITA DOES NOT PROTECT MEN AGAINST RAPE. THIS IS WHY.

The Bharatiya Nyaya Sanhita (BNS) 2023, the proposed replacement for the Indian Penal Code (IPC), does not contain IPC Section 377 (or an equivalent section), which was read down by the Supreme Court in 2018. While Section 377 (“unnatural offences”) remained in the IPC, it can no longer be used to criminalise gay sex between consenting adults. But the absence of this section in the BNS can leave adult male victims of sexual assault without much recourse in the law, some experts have pointed out.

But first, what is Section 377 of the IPC?

Section 377 of the IPC states: “Whoever voluntarily has carnal inter-course against the order of nature with any man, woman or animal, shall be punished with imprisonment for life, or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine.”

The explanation to the provision states that “penetration is sufficient to constitute the carnal intercourse necessary to the offence.”

For decades, the LGBTQ community and others argued that this section was discriminatory, and provided legal protection to the harassment and intimidation of gay couples.

So how is this position changed by the proposed BNS?

It has been pointed out that if the Bill is passed in its present form, groups including male victims of sexual assault, could lose the legal protection accorded to them.

This, it is argued, is because the offence of “rape”, as defined in the proposed BNS, is gendered — which means that it is committed by a man against a woman. While this is the position in the IPC as well, in the IPC, Section 377 — which mentioned “carnal inter-course against the order of nature with any man, woman or animal” — did offer protection to non-minor males from rape. Now, in the proposed BNS, this section is gone.

In the IPC, Section 375 defines rape and lists seven notions of consent which, if violated, would constitute the offence of rape by a man. In the proposed BNS, rape is covered under Section 63.

While in the IPC, Section 375 (and Section 376, which prescribes the punishment for rape) are placed under the subhead “Sexual offences” under Chapter XVI of the Code, “Of Offences Affecting the Human Body”, in the proposed BNS, the subhead “Of sexual offences” is under Chapter V of the Sanhita, which is specifically about “Offences Against Women and Children”.

Back in 2018, when the SC passed its verdict in ‘Navtej Johar’, several police officers had said that the judgment opened up grey areas and that guidelines were required to deal with cases where, say, a gay man withdrew “consent” and lodged a complaint against their partner.

As on date, India’s laws on sexual assault do not recognise men as victims of rape. However, the proposed BNS does mention “unnatural lust” in at least two places.

Section 38 says the right of private defence of one’s body will extend to the voluntary causing of death or any other harm to the assailant if the offence that “occasions the exercise of the right” is an “assault with the intention of gratifying unnatural lust”.



And Section 138(4) punishes kidnapping or abducting a person to subject them to or put them “in danger of being subjected to grievous hurt, or slavery, or to the unnatural lust of any person”.

But again, the proposed BNS does not define the term “unnatural lust”.

GOA IS THE ONLY STATE WITH A UNIFORM CIVIL CODE. HERE’S WHAT IT LOOKS LIKE

With the matter of a Uniform Civil Code likely to be kept alive in the run-up to the 2024 elections – even if, as The Indian Express earlier reported, the BJP-led government is unlikely to push it through in its current term – the crucial question is what form and shape the proposed law would take.

One model that is held up as an example is the Portuguese Civil Code – a 156-year-old, 647-page code that was enacted in the Ajuda Palace in Lisbon. The Code continues to govern Goa, and the Union Territories of Daman & Diu and Dadra & Nagar Haveli. After its liberation in 1961, Goa, with a population of just six lakh at that time, retained the Portuguese Civil Code, making it the only state to have a uniform civil code for all religions.

This crucial feature of the Portuguese Civil Code that cuts across religions and with laws that govern everything from gender equality in marriage to personal inheritance, is what the Uniform Civil Code aspires to achieve.

After the 22nd Law Commission on June 14 sought public comments on the Uniform Civil Code, Goa Chief Minister Pramod Sawant, among the most vocal supporters of the idea, had said, “I am proud that in Goa, Uniform Civil Code has been followed since the time of liberation... Minorities comprise more than 27 per cent of the population in Goa, and in the last 60 years, there has not been any problem or complaint. No one has faced any problem here or raised an issue on this.”

While the ‘only state with Uniform Civil Code’ status invokes a sense of pride and sub-nationalism, the 19th Century law is now being closely scrutinised for how equal and uniform it is.

Uniform Civil Code: An equal law?

A radical idea for India in 1861, the Portuguese codified the “communion of assets”, a joint ownership of marital property which was followed in Portugal since the Middle Ages. The law, aimed at achieving gender equality by securing economic rights, gives spouses an equal right in each other’s assets, which means neither party can sell it without the other’s consent. Under Hindu law, while the wife is a legal heir, she is not a joint owner of the husband’s property.

“Communion of assets is a great idea. But it was meant for a time when marriages used to last and there was no concept of a divorce,” former Advocate General and senior advocate S D Lotlikar said.

He has just advised a 29-year-old client on divorce. She has been married only for two years, but a divorce now means her husband is entitled to half of any inheritance from her parents.

But even the seemingly equal law has riders. Even when a wife has joint ownership of her husband’s property – both ancestral and self-acquired — the law gives the husband the right to manage the estate.

On inheritance, the Portuguese Civil Code is quite similar to the Muslim law in including lineal ascendants and descendants as legal heirs. This means, parents and siblings of an individual can inherit property unlike in Hindu law which passes only to spouse or descendant. But the crucial



difference is that the Portuguese law treats sons and daughters equally. While Hindu daughters secured the right to an equal share in ancestral property only after the 2005 amendment to the Hindu Succession Act, Muslim daughters are entitled only to half of the share that a son gets.

For Rashida Mujawar, a Panjim-based women's rights activist, it is important that her daughters inherit equally which would not be the case in Muslim personal law. "I have long opposed extending Indian personal laws to Goa. Our daughters get an equal share in the property and there is a Goan identity that is homogenous," she said.

It is this "Goan identity", as Mujawar calls it, that is crucial for the continued Portuguese law. Even as Chief Minister Sawant calls for "wiping away the traces of Portuguese rule from the state", the colonial civil Code is undeniably a distinct marker of Goan identity.

Crucial exceptions

A short drive north of Panjim is Taleigao, on the Tiswadi island. The burgeoning neighbourhood that is making space for the new settlers in Goa is lined with hypermarkets and high-rise apartments. The Portuguese law does not apply to them. It applies to Goans: by legal definition, only those whose either of their parents or grandparents were born in Goa before December 20, 1961.

Amidst changing demography, with the influx of migrants and Goans taking up Portuguese passports, it is unclear how many of the 15-lakh local population in the state are governed by the common Code. The Portuguese law allows those born in its erstwhile colonies – for up to three generations – to take up Portuguese citizenship. "In principle, extending the Code to everyone in Goa is a good idea. But is there a real necessity when a national step is being taken," said Vijai Sardesai, Goa Forward Party MLA from Margao's Fatorda.

Sardesai, whose party's motto is "Goem, Goemkar, Goemkarponn" (Goa, Goans and Goan ethos), also cautions that the Goa model for UCC might not be ideal. "The Goan Uniform Civil Code is also not strictly uniform. It is different for Hindus and Catholics. And women's rights are also not perfectly equal to men's. I can definitely say that the Goan UCC cannot be the perfect template. It needs to be modified and updated to fulfil modern aspirations."

The Portuguese Civil Code carves out crucial exceptions for Hindus and Catholics. In 1867, the Code drafted by António Luiz de Seabra, a judge at the Oporto Court of Appeal, had created several exemptions for the "gentile" population in Portuguese colonies.

These exceptions extended to Chinese customs in Macau; customs of Baneanes, Bhatias, Parsis and Muslims in Mozambique and to the "moral or public policy" of Indians in New Conquests – outside the core of 16th Century Portuguese Goa – and of Daman and Diu.

The Code of Gentile Hindu Usages and Customs of Goa was enacted in 1880, a decade after the civil Code came into effect to codify the concessions to Hindus. One key exemption from 1880 is crucial in Indian law too — "partnership sociedade" or the taxation benefits for a Hindu Undivided Family. The Code also recognises a "maioral" or "karta" of a Hindu family who heads the family.

A controversial exception to the monogamy rule in the Portuguese Code is also made for Hindus. Although the provision has not been invoked in the post-colonial era, a Hindu male is allowed the right to bigamy, with the consent of his wife, if she fails to deliver a child by the age of 25, or if she fails to deliver a male child by the age of 30.



“This consent had to be taken before a public notary. When the Code came into force, there were only two public notaries for the whole of Goa and they were white men. If they saw the slightest hesitation in the woman...suppose she started crying...that would be the end of it,” Noronha said.

Even Chief Minister Sawant insists that the bigamy law for Hindus has not been invoked since 1920. However, the regressive provision continues to be on the books.

For Catholics, the Code did not envision a clear separation of church and state for personal laws. Canonical marriages enjoyed the same status as civil marriages and rulings of the church in annulling a marriage or grant of divorce were given legal sanctity. However, in 2019, the Goa bench of the Bombay High Court struck down portions of a Portuguese edict that gave legal sanctity to rulings of ecclesiastical tribunals in the former Portuguese colony.

Frozen in time

The 2,538 Articles in the Portuguese Civil Code deal with not just personal laws and property, though the focus is largely on these aspects. From recognising the right to existence, right to liberty and inviolability of thought as fundamental rights, to the law on patents, copyright and shipwreck, the Code was intended to be the complete law of the land.

Till 1961, amendments made in Portugal would be applicable in Goa. With Indian legislation extending to Goa, several provisions of the Code stand repealed. However, without a direct amendment since 1961, the Code stands frozen in time.

Take for instance the concept of communion of marital assets, touted as the unique provision that enables gender equality — even Portugal has moved from a general communion of assets to a regime of communion of assets acquired only during the marriage.

With first-hand knowledge of Portuguese slowly disappearing, it is telling that the need for an official translation of the Code to English was commissioned by the state government in 2016 and was completed in 2019.

While the proposed Uniform Civil Code is an opportunity for voices calling for reform, Mujawar’s unwavering support for a common code has a cautious tone. “There are fears that the community is under attack in the country. It is in that context that we have to think of a UCC and what good it can do for Muslim women who are said to be the beneficiaries,” she said.

THE ‘NEW IPC’ REMOVES THE PUNISHMENT FOR ATTEMPTING SUICIDE — OR DOES IT? HERE’S WHAT THE PROPOSED NYAYA SANHITA SAYS

Among some of the more problematic provisions of the Indian Penal Code (IPC), 1860, that are absent in the proposed Bharatiya Nyaya Sanhita (BNS) is IPC Section 309, which punishes an attempt to die by suicide. The provision, one of the most archaic in the IPC, has been criticised for long, and it was made mostly redundant by a law of Parliament that came into effect in 2018. However, it remains a part of the Code and is, therefore, liable to be misused.

What does Section 309 of the IPC say?

The Section punishes anyone who tries to kill themselves — usually understood to be the last resort of deeply distressed individuals — with a prison term and/ or a fine. IPC Section 309 says: “Whoever attempts to commit suicide and does any act towards the commission of such offence,



shall be punished with simple imprisonment for a term which may extend to one year or with fine, or with both.”

The law, brought by the British in the 19th century, reflected the thinking of the time when killing or attempting to kill oneself was considered a crime against the state as well as against religion.

According to India’s National Crime Records Bureau, the burden of deaths by suicide has increased in India by 7.2 per cent between the years 2020-2021, with a total of 1,64,033 deaths. The NCRB, which collects data from police on recorded suicide cases, also reported that every year more than 1 lakh people die by suicide in India.

So how has the provision changed since the Code was enacted?

Back in 1971, the Law Commission in its 42nd Report recommended the repeal of IPC Section 309.

In furtherance of this objective, the Janata Party government of Prime Minister Morarji Desai brought The IPC (Amendment) Bill, 1978. The Bill was introduced and passed in Rajya Sabha, but before it could be cleared by Lok Sabha, Parliament was dissolved, and the Bill lapsed.

In ‘Gian Kaur vs. the State of Punjab (1996), a five-judge Bench of the Supreme Court upheld the constitutional validity of IPC Section 309. However, in 2008, the Law Commission, in its 210th Report, said that an attempt to commit suicide needed medical and psychiatric care and not punishment. In March 2011, the Supreme Court also recommended to Parliament that it should consider deleting this section from the IPC.

However, concrete action could finally come with the passage of The Mental Healthcare Bill (MHCA) of 2017, which came into force in 2018. The law made it clear that Section 309 IPC could be used to punish attempted suicide only as an exception.

Section 115(1) of The MHCA says: “Notwithstanding anything contained in section 309 of the Indian Penal Code any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code.”

Section 115(2) of The MHCA states that it shall be the duty of the “appropriate government” to “provide care, treatment, and rehabilitation to a person, having severe stress and who attempted to commit suicide, to reduce the risk of recurrence of attempt to commit suicide.”

So how effective a deterrent against the use of IPC Section 309 was this law?

The restrictions on the use of Section 309 under the provisions of the MHCA were not enough because they only created a directive under another Act, while the offence itself was allowed to stay alive in the IPC. Thus, even after the enactment of the MHCA, there have been reports about the alleged misuse of this section.

On May 20, 2020, an inmate at Gurgaon’s Bhondsi jail who allegedly tried to kill himself with a pair of scissors, was reported to have been booked under Section 309 IPC. Again, on June 8, 2020, a runaway couple allegedly attempted suicide at Ashok Nagar police station in Bengaluru by consuming hair dye. Local media reported that they were booked under IPC Section 309.

Several senior police officers have said that on many occasions, there is a lack of awareness among officers at the level of the police station about the relatively new MHCA, and they simply go by the IPC. However, the charge under Section 309 is often dropped subsequently, following



consultations with senior officers, Harssh Poddar, who was then the Superintendent of Police, Beed, Maharashtra, had told The Indian Express in 2020.

Does the removal of the section in the proposed BNS finally close this chapter, then?

Although the new Bill seemingly removes this section from the statute books, it doesn't entirely decriminalise the offence of attempting to die by suicide.

Thus, Section 224 of the proposed BNS states: "Whoever attempts to commit suicide with the intent to compel or restrain any public servant from discharging his official duty shall be punished with simple imprisonment for a term which may extend to one year or with fine or with both or with community service." This essentially introduces a twist in the provision — an attempt to commit suicide remains a punishable offence if it is made to stop a public servant from acting. An example could be of a protester who attempts self-immolation to stop police from arresting other protesters.

Also, Section 224 of the proposed BNS allows community service as punishment, which is not available in IPC Section 309.

What other provisions in the proposed new laws deal with issues related to suicide and mental health?

There are a couple of sections in the proposed BNS that punish the abetment of suicide.

Section 106 says: "If any person commits suicide, whoever abets the commission of such suicide, shall be punished with imprisonment... [up] to ten years and shall also be liable to fine."

And Section 105 states: "If any person under eighteen years of age, any person with mental illness, any delirious person or any person in a state of intoxication, commits suicide, whoever abets the commission of such suicide, shall be punished with death or imprisonment for life, or imprisonment for a term not exceeding ten years, and shall also be liable to fine."

The Bharatiya Nagarik Suraksha Sanhita, 2023, which seeks to replace the Code of Criminal Procedure, also has a provision on suicide, but not as an offence. Section 194 of the proposed BNSS deals with the police's ability to inquire about and report on suicide, etc.

Sections 367–369 of the proposed BNSS specify the criminal procedure in cases where the accused is a person with mental illness, the mentally ill person is being tried before the court, and the release of persons with mental illness pending investigation or trial.

Section 376 of the proposed BNSS lays down the procedure where a prisoner with mental illness is reported as capable of making his defence; Section 377 deals with the procedure by which those detained with mental illness are declared fit to be released; and Section 378 deals with the delivery of persons with mental liabilities to a relative or friend for their care.

FAIZAN MUSTAFA WRITES: NEW PENAL CODE FALLS SHORT OF ITS LAUDABLE OBJECTIVES

Home Minister Amit Shah, like Macaulay, will be remembered for initiating a sea change in Indian criminal law. The 42nd report of the Law Commission, 1971 had proposed a revision of the Indian Penal Code (IPC). But the amendments in 1972 and 1978 lapsed due to the dissolution of Lok Sabha.



There is no denying the fact that the philosophical stance and fundamental principles of Macaulay's code were the product of a particular time and culture, and the imperialist policy of the British empire. The Home Minister is right in asserting that some of the concepts underlying the code were either problematic or had become obsolete and, therefore, there was a need for reforms.

In 1860, when the IPC was enforced, it was certainly ahead of its time. Macaulay had himself favoured regular revision of the IPC. It is widely appreciated as a state-of-the-art code and was, indeed, the first codification of criminal law in the entire British Empire. Today it is the longest-serving penal code in the common law world. James Stephen, who drafted the Evidence Act, 1872, had remarked, "The Indian Penal Code is to the English criminal law what a manufactured article ready for use is to the materials out of which it is made. It is to the French Penal Code and, I may add, to the North German Code of 1871, what a finished picture is to a sketch. It is far simpler, and much better expressed than Livingston's Code for Louisiana; and its practical success has been complete."

The Modi government has taken the extremely difficult task of improving the IPC in terms of precision, comprehensibility, and accessibility. Unfortunately, for most crimes, the new code has not been able to improve the definition clauses and has merely clubbed penal sections with the definition sections. It has certainly widened a few definitions in cases like rape and sedition though the word "sedition" has been dropped. The requirement of mens rea or guilty mind with the use of the expression "purposely or knowingly" and "secession or armed rebellion" and removal of "disaffection towards government" are welcome changes. Yet, the term "subversive activities" again widens the scope with no definition of subversive activities given in the code. The inclusion of financial means in this section is unnecessary as terror financing has been included in the offence of terrorist acts, where the stringent special law of UAPA has been incorporated in the general code itself. Even Sardar Patel had opposed "sedition" as a ground for restricting freedom of speech under Article 19.

The distinction between "culpable homicide" and "murder" in the IPC was criticised even by Stephen as the "weakest part of the code" as their definitions were obscure. "Culpable homicide" was first defined, but "homicide" was not defined at all. Indeed, "culpable homicide", the genus, and "murder", the species, were defined in terms so closely resembling each other that it was difficult to distinguish them. The new Code does not improve these definitions except for punishing killings in mob lynching by five or more persons without using the term "mob lynching". The retention of the death penalty too shows that the government continues to believe in the dated ideas of retribution and deterrence. The death penalty has been provided for the rape of a minor. The much-abused crime of cruelty has not been made gender-neutral, despite this being one of the rationales for the new code. The insanity provision has replaced the wider idea of "unsoundness of mind" with just "mental illness". Section 143, which punishes the habitual export, import and selling of slaves, is a surprise inclusion as slavery has already been abolished. It is disheartening to see that the new code has neither made marital rape an offence nor made any improvements on the inadequate hate speech provisions of Sections 153A and 153B. The offence of adultery reappears in a new avatar as the offence of having sex on the false promise of marriage or promotion etc.

Criminal conspiracy was made a substantive offence only in 1913. There are doubts about the need to continue in the new code the type of conspiracy which is punishable even when two people merely agree to commit an offence without any overt act following the agreement. The offence is objectionable because it was added to the code by the colonial masters to deal with



political conspiracies and a code committed to the constitutional ideals of the rule of law and democracy should not retain it. Justice T R Fitzgerald had observed: “The law of conspiracy is a branch of our jurisprudence to be narrowly watched, to be zealously regarded and never to be pressed beyond its true limits.”

Criminal defamation has a chilling effect on free speech and should have been decriminalised. Unfortunately, even the punishment of two years imprisonment has been retained by Section 354(2), though community service has been added as an alternative punishment. In a welcome move, community service has also been provided for first offenders in cases of theft that involve values of less than Rs 5,000 and for the misconduct of drunken people in public places.

Similarly, the offence of blasphemy has been retained though most countries in the world have decriminalised it. Liberal India should not be seen in the company of regressive Islamic states. The new code has also retained membership of an assembly without any participation in the actual crime as an offence. There have been instances when people have been sentenced to death and hanged, despite not even being present at the actual scene of the crime. Attempt to commit suicide has been retained only when it is done to put pressure on a public servant.

Criminal justice policy is largely irrelevant in reducing the incidence of crime. Achieving higher conviction rates may be a good goal but it simply requires that innocent people not be prosecuted. The inclusion of forensic investigations in major crimes is to be appreciated. A good criminal justice system must be accused-centric as in it one little man is pitted against the might of the state.

GLARING OMISSION

The Union government’s proposal to have a three-member selection panel with a majority for the executive for the appointment of members of the Election Commission may not subserve the objective of protecting the poll watchdog’s independence. A Bill introduced in the Rajya Sabha says the committee will consist of the Prime Minister, the Leader of the Opposition and a Union Cabinet Minister. This runs counter to a recent judgment of a Constitution Bench that envisaged an independent selection committee that included the Chief Justice of India. The judgment was also in line with the recommendations of the Dinesh Goswami Committee in 1990 and the Justice Tarkunde Committee in 1975. It is true that the Court said that its order would hold good only until Parliament made a law as envisaged in the Constitution. However, for the government to retain an executive majority in the selection process amounts to disregarding the spirit of the Court’s recommendations. An argument could be made that the CJI’s presence in the process could provide pre-emptive legitimacy to appointments and affect judicial scrutiny of errors or infirmity in the selections. Yet, when weighed against the fact that the ECI is a constitutional body that not only conducts elections but also renders a quasi-judicial role, the need for a selection process that embodies insulation from executive preponderance makes sense.

A non-partisan and independent ECI is a sine qua non for the robustness of electoral democracy. The Election Commission of India has played a seminal role in the periodic conduct of elections, which have only seen greater participation from the electorate because of the largely free, fair and convenient nature of the process. Yet, there are misgivings. In the run-up to the 2019 general election, for example, the announcement of elections was delayed for a month between February and March, allowing the government to inaugurate many projects. The Model Code of Conduct was unevenly implemented, with the ruling party receiving favourable treatment by the ECI, leading to dissent by one of the commissioners. The independent V-Dem Institute in Sweden,



which compares democracies worldwide, has downgraded India to an “electoral autocracy”, citing the loss in autonomy of the ECI. With the next Lok Sabha election just months away, it should have been incumbent on the government to stay true to the Constitution Bench’s judgment and retain its recommendations in the Bill. It is for the Opposition now to ensure that the Bill is discussed and modified.

WHAT IS A PRIVILEGE MOTION AND HOW DOES THE COMMITTEE OF PRIVILEGES IN PARLIAMENT EXAMINE IT?

Rajya Sabha Chairman Jagdeep Dhankhar referred complaints related to the privilege of the House against TMC’s Derek O’Brien and AAP’s Raghav Chadha to the privileges committee on Thursday (August 3).

This comes amid differences between the ruling party and some opposition parties that have plagued the ongoing Monsoon Session of its sittings. The opposition complaints were primarily about asking Prime Minister Modi to make an appearance in the Parliament to speak about the ethnic violence that has taken place in Manipur.

“On consideration of the facts, the Hon’ble Chairman, Rajya Sabha has referred the matter under Rule 203 of Rules of Procedure and Conduct of Business in the Council of States (Rajya Sabha) to the Committee of Privileges for examination, investigation and report,” said a bulletin issued by the Rajya Sabha secretariat late on Thursday night. Under this rule, the Chairman can refer any question of privilege to the Committee of Privileges for examination and investigation. What is the basis of such referrals and what is the function of this Committee?

What is the basis of the complaints against Chadha and O’Brien?

The Rajya Sabha secretariat said the complaint against O’Brien was filed by BJP members Laxmikant Bajpayee and Surendra Singh Nagar, while that against Chadha was filed by Sushil Kumar Modi and Deepak Prakash.

The notice against O’Brien was filed for repeated publishing of the clippings of his statement made in the House on July 20 through his verified personal Twitter handle, despite the fact that those were expunged or removed from the record by the chairman.

The complaint against Chadha, dated July 25, alleges an “intentional and deliberate act of presenting misleading facts to the media” on July 24 with respect to the suspension of “Sanjay Singh, Member, from the service of the Council for the remaining period of the 260th (Monsoon) session of Rajya Sabha for his indecorous behaviour and repeated violation of directions of the Chair”.

It added that some members alleged Chadha allegedly stated that Singh would continue to sit inside the Chamber despite being suspended from the service of the Council. But this happening would be in violation of Rule 256 of the Rules of Procedure and Conduct of Business in the Council of States (Rajya Sabha), stated the notice.

What is a privilege motion?

The two rules referred to here relate to the concept of parliamentary privilege, which are certain rights conferred to the Members of Parliament for conducting the business of the Parliament. There is no codified list of the exact privileges, but it includes the right of free expression in the



course of Parliamentary debates and Members of Parliament will not be liable for court proceedings for this.

If there is a belief that such a privilege has been breached, a motion can be raised by any member. It can be admitted by the Chairman. They can then refer it to the Privileges Committee. The Chairman can, from time to time, nominate such a Committee, consisting of ten members. It will also have a Chairman appointed by the Rajya Sabha Chairman.

The right to raise a question of privilege is based on satisfying two conditions, namely: (i) the question shall be restricted to a specific matter of recent occurrence, and (ii) the matter requires the intervention of the Council.

Similar provisions exist in Lok Sabha with the Speaker having the power to make such decisions. The Speaker/RS chairperson is the first level of scrutiny of a privilege motion. Therefore, the Speaker/Chair can decide on the privilege motion himself or herself or refer it to the privileges committee of Parliament.

What action can the privileges committee take?

The mandate of the committee is to examine such cases and “make such recommendations as it may deem fit”. It can call the relevant people as part of its examination and look at related documents. It has to then make a report and if the Council has not fixed any time for its presentation, the report shall be presented within one month of the date on which reference to the Committee was made.

A motion has to be passed for the consideration of the report and amendments can be suggested. The Chairman or any member of the Committee or any other member can move that the Council agrees, disagrees, or agrees with amendments, with the recommendations contained in the report.

Are privilege notices rejected often?

A large number of notices are rejected, with penal action recommended in only a few cases.

The most significant case was in 1978 when Indira Gandhi, who had just won the Lok Sabha elections from Chikmagalur, was expelled from the House. Then home minister Charan Singh moved a resolution of breach of privilege against her following observations made by the Justice Shah Commission, which probed excesses during the Emergency.

It was the culmination of a year-long investigation by such a committee in the Lok Sabha. The Indian Express reported at the time that she was held guilty:

“... for obstructing four government officials from collecting information for a question on Maruti tabled by Jyotirmoy Bosu in 1975. The Committee has also indicted R K Dhawan, former additional private secretary to the prime minister and D Sen, former director of the CBI, for the same reason. The Committee has said they all deserve punishment but has left it to the “collective wisdom” of the House to punish her and the two others. The two volume, 1,007-page report of the Committee was placed before the Lok Sabha today by Samar Guha, chairman of the Committee. Mrs Gandhi was not present when Guha placed the report.”

Another case was the expulsion of Subramanian Swamy from the Rajya Sabha in 1976. Swamy was charged with bringing disrepute to Parliament through his activities through interviews in foreign publications that were construed as “anti-India propaganda”.



On December 23, 2005, 11 “tainted” MPs, who were caught in a sting over the cash for query scandal, were expelled from the House.

WHAT IS THE DEBATE AROUND ARTICLE 370?

The story so far:

The ongoing arguments before a Constitution Bench of the Supreme Court on the abrogation of Jammu and Kashmir’s special status under Article 370 throw considerable light on the history behind the unique status enjoyed by the State until August 2019, when the Centre removed it.

Why was J&K given special status?

Jammu and Kashmir was accorded special status because of the circumstances in which it acceded to India soon after Independence. Sandwiched between the two new Dominions of India and Pakistan, the State did not make an immediate decision on which country to join, as it had vital economic and cultural links with both. However, by October 1947, Maharaja Hari Singh was faced with regular military attacks from the Pakistan side by “soldiers in plainclothes, desperadoes with modern weapons”. There was mass infiltration by heavily armed tribesmen from the North-West Frontier into Kashmir, and the Maharaja felt this could not happen without the support of the governments of Pakistan and of the North-West Frontier Province. In a desperate letter to India’s Governor-General, Lord Mountbatten, on October 26, 1947, he sought help from India, noting that “naturally they cannot send the help asked for” without his State acceding to the Dominion of India. Therefore, he attached an ‘Instrument of Accession’ with the letter. However, it was not unconditional. He specified matters on which the Dominion legislature may make laws for Jammu and Kashmir, but the rest of the powers were to be retained by the State. These subjects were Defence, Foreign Affairs and Communications.

Was the accession temporary?

While India was then ruled under the provisions of the Government of India Act, 1935, Jammu and Kashmir had its own Constitution since 1939. In the Instrument of Accession, Hari Singh had laid down a condition that it cannot be altered unless he accepted the change. Quite significantly, he said: “Nothing in this Instrument shall be deemed to commit in any way to acceptance of any future Constitution of India or to fetter my discretion to enter into arrangement with the Government of India under any such future Constitution.”

When Article 370 was adopted in the Constituent Assembly of India, care was taken to see that it reflected the clauses and spirit of the Instrument of Accession. Hence, the key issue of whether the status could have been abrogated unilaterally is being argued in historical terms, and not merely in legal terms.

What are the features of Article 370?

Many believe that Article 370 is the sole mechanism by which Jammu and Kashmir can be a part of India, and that without it, the conditions of its accession will be breached. It falls under a heading ‘Temporary provisions with respect to the State of Jammu and Kashmir’. It has three core principles:

(a) On items in the Union List and Concurrent List, the power of Parliament to make laws for the State will be limited to those matters that correspond to those specified in the Instrument of



Accession; and, even that will be in 'consultation' with the State government. (b) On other matters in these Lists, Parliament can make laws for the State only with the State government's 'concurrence'. This is why until before the abrogation, Indian laws did not automatically apply to Jammu and Kashmir. (c) Article 1 (which declares India a Union of States) and Article 370 itself were made applicable as such to J&K. However, the rest of the Constitution of India would be applicable only through Orders passed by the President from time to time "with exceptions and modifications". Finally, the Article provided for its own demise: the President could declare it inoperative if there is such a recommendation from the State Constituent Assembly.

How was the special status removed?

On August 5, 2019, President Ram Nath Kovind initially issued an Order "with the concurrence of the State government of Jammu and Kashmir". As the State was then under President's Rule, it is presumed that the State Governor gave such concurrence. The Order stated that all the provisions of the Constitution of India, as amended from time to time, will be applicable to Jammu and Kashmir. It superseded the Constitution (Application to Jammu and Kashmir) Order, 1954, and the amendments made to it in subsequent years.

However, further measures were required. The President's August 5 Order made crucial changes to definitions in Article 370. For this, it added provisions to Article 367 of the Constitution which describes how to interpret some terms. The new clause said, when applicable to Jammu and Kashmir, all references to the 'Sadar-i-Riyasat', acting on the aid and advice of the Council of Ministers, would be construed as references to the Governor of Jammu and Kashmir. All references to the State government shall mean "the Governor". And most importantly, the reference to the "Constituent Assembly" in a proviso to Article 370 (3) was amended to read "Legislative Assembly of the State".

A resolution was introduced to elicit Parliament's views (instead of the J&K Assembly because the State was under President's Rule) on the introduction of a new law to reorganise Jammu and Kashmir as two new Union Territories – 'Jammu and Kashmir, as a Territory with an Assembly, and Ladakh as a Territory without an Assembly.' Another resolution was adopted in Parliament to recommend that Article 370 be declared inoperative. Parliament was acting on behalf of the J&K Legislative Assembly, which itself was treated as the equivalent of the State's Constituent Assembly. The President issued another order on August 6 declaring Article 370 inoperative except for a clause that declared that all provisions of the Constitution will apply to J&K.

What are the legal issues involved?

The key questions so far argued on behalf of petitioners who have challenged the removal of the special status and downgrading and bifurcation of the State are: whether the status of J&K had not become permanent after the Constituent Assembly refrained from any decision on Article 370; whether the latter effectively prevents the Union government from unilaterally altering the State's relationship with India, and whether what was considered a 'temporary' provision prior to the work of the State's Constituent Assembly had not become permanent subsequently. The Bench has raised questions whether the dissolution of the State Constituent Assembly could render Article 370 beyond abrogation or amendment, as if it is part of the Basic Structure, and whether the State's accession had not become complete after the terms of its relationship with India had been finalised by the respective Constitutions. And why Parliament could not alter its status in exercise of its sovereign power through legal and constitutional means.



WHY IS BIHAR'S CASTE-BASED SURVEY FACING LEGAL CHALLENGES?

The story so far:

The Supreme Court is set to hear on August 18, petitions challenging the Patna High Court (HC)'s verdict upholding the Bihar government's ongoing caste survey.

What is the 'caste-based survey'?

On January 7, the State government launched a two-phase caste survey in Bihar, stating that detailed information on socio-economic conditions would help create better government policies for disadvantaged groups. Last year on June 6, the Bihar government issued a notification to this effect, following a State Cabinet decision on June 2, 2022.

The survey is estimated to collect the socio-economic data for a population of 12.70 crore in the 38 districts of Bihar. The first phase of the survey, which involved a house listing exercise, was carried out from January 7 to January 12. The State was in the middle of the second phase, when the survey was halted due to a stay order from the HC on May 4.

However, a recent HC verdict dismissed all petitions opposing the move, and the government on August 2 resumed work on the second phase of the survey. In the second phase, data related to castes, sub-castes, and religions of all people is to be collected. The final survey report can be expected in September, less than a year before the 2024 election.

Why the need for a caste census?

The Census conducted at the beginning of every decade does not record any caste data other than for those listed as Scheduled Castes (SCs). In the absence of such a census, there is no proper estimate for the population of OBCs, various groups within the OBCs, and others.

Despite this ambiguity, the Union government has categorically ruled out conducting a socio-economic caste census, saying it is unfeasible, 'administratively difficult and cumbersome.' Responding to a writ petition filed by the State of Maharashtra, the Centre in its affidavit said that excluding any castes other than the SCs and Scheduled Tribes was a 'conscious policy decision' adopted since the 1951 Census, and that there was a policy of 'official discouragement of caste'. The Union government in 2011 had undertaken a survey of castes through the Socio-Economic and Caste Census of 2011. However, the collected raw data of nearly 130 crore Indians was never made public due to flaws in the data.

Political analysts see the Bihar government's move as a way for coalition parties to counter the Bharatiya Janata Party (BJP)'s Hindutva politics with a revival of Mandal politics. On August 13, 1990, the V.P. Singh government announced the decision to implement the Mandal Commission report, which recommended a 27% reservation for Other Backward Classes (OBC). In 1992, with the Supreme Court ruling in Indra Sawhney & Others versus Union of India (1992) that caste was an acceptable indicator of backwardness, the recommendations of the Mandal Commission were finally implemented. The Mandal Commission estimated the OBC population at 52%.

However, it is debatable whether the estimate holds true today. Opposition parties, have continued to demand a caste census saying that such an exercise is necessary to streamline welfare policies.



Why is it being challenged?

The petitions in the Supreme Court contend that the State's June 6, 2022 order notifying the survey is unconstitutional since only the Centre is exclusively authorised to conduct a census under the Constitution.

They also point out that the State Government does not have any independent power to appoint District Magistrates and local authorities for collating data, without a notification under Section 3 of the Census Act, 1948 by the Centre. The HC verdict has also been assailed on the ground that it violates the Puttaswamy judgment as it permits the collection of personal data by the State under an executive order.

However, the HC had observed that the State is competent to frame a policy for better administration and that the policy is not arbitrary. Besides, States "cannot wait on their haunches" for the Centre to carry out a caste census. It also dismissed concerns about right of privacy of those surveyed by referring to the triple-test requirements in the Puttasamy judgment.

HOUSING FOR ALL

The announcement by Prime Minister Narendra Modi of a scheme to help the urban poor build houses in cities is a signal that the government is to undertake one more plan to address the problem of a shortage in urban housing. Even five months ago, its stand was that no new housing scheme had been envisaged following the extension of the Pradhan Mantri Awas Yojana-Urban (PMAY-U) till December 2024, with the focus on expeditious completion of sanctioned houses. But an appraisal of PMAY-U may have caused the shift in stance. It also indicates that 'housing for all' is still a long way away. In the last eight years since the launch of PMAY-U, only two-thirds of the sanctioned houses, or 76.25 lakh houses out of about 1.19 crore sanctioned, were either completed or handed over as on August 14. The central assistance released was ₹1.49 lakh crore; the Centre's share has been limited to 24.4% while that of States and urban local bodies is 16%. The remainder, almost 60%, has to come from beneficiaries. Of the estimated total investment of ₹8.31 lakh crore for the 1.23 crore houses originally proposed, the beneficiaries (urban poor) have to shell out ₹4.95 lakh crore. Under the proposed scheme, the share of beneficiaries should be brought down to at least 40%, as a parliamentary committee report highlights, as beneficiaries are not in a position to fully pay their share because of their low income. Even though some State governments try to help such beneficiaries access bank loans, financial institutions have been lukewarm in their responses citing the lack of proof of sustained income.

The parliamentary committee also made well-considered suggestions on the implementation of PMAY-U, and the government would do well to examine them while drawing up the proposed scheme. The committee's most significant recommendation is on the need to drop uniform and fixed assistance across the country, as followed in PMAY-U, and adopt a flexible arrangement instead, depending on the topography and other factors. Reasons behind the poor quality of the houses and the prevalence of unoccupancy too should be gone into. High land costs, floor space index restrictions, and multiple certification from different agencies are factors that determine the success of urban housing. This calls for central government-organised discussions with the relevant agencies such as State governments, local bodies, urban planning bodies, urban sector professionals, financial institutions and activists, as there is enough time for the Union government to formulate the new scheme. This time, the objective should be to draft a fool-proof scheme so that 'housing for all' no longer remains a slogan but becomes a reality in the tangible future.



GUARDING THE NORTHEAST

The volatile situation in Manipur took a turn for the worse earlier this month after the State Police registered a case against the Assam Rifles, the oldest paramilitary force deployed in the region to restore peace. The Manipur Police claimed the Assam Rifles had disobeyed the law by “obstructing duty” and accused its personnel of blocking police vehicles and helping Kuki militants flee.

The Assam Rifles, one of the Central Armed Police Forces (CAPF), deployed to tackle the situation when ethnic clashes between the Meitis and the Kukis erupted in May, has faced relentless attacks from the Meiti leaders and civil society members in the BJP-ruled State. The latest face-off has exposed deep divisions within the security apparatus.

The history of the Assam Rifles dates back to 1835 when it was raised by the British as ‘Cachar Levy’ to protect its settlements from tribals living in the hilly areas. Additional units were subsequently merged into the ‘Frontier Force’ that extended the administrative control over remote tribal areas. During the First World War, 3,000 men were sent to Europe and West Asia as part of the British Army. It was christened the ‘Assam Rifles’ in 1917, in recognition of its services for fighting alongside the rifle regiments of the British Army. By the Second World War, the Assam Rifles performed multifarious tasks. Besides evacuating refugees from Myanmar (then Burma), it was part of a resistance group, the Victor Force, which countered the Japanese on the Indo-Burmese border.

Post-Independence, it took part in the 1962 and 1965 wars after which its operational control was given to the Army. The Assam Rifles was part of the Indian Peace Keeping Force (IPKF) in Sri Lanka in 1987 and tackled tribal unrest and insurgency in the northeast. The paramilitary force has grown from 17 battalions in 1960 to 46, with a sanctioned strength of 63,000 personnel. It is primarily led by officers of the Indian Army. The northeast is its main area of operation. Currently, the Assam Rifles guards the India-Myanmar border while the Army secures the India-China border.

Integral part

The Assam Rifles has been an integral part of the counter-insurgency operations, which earned it the sobriquet of the ‘sentinels of the northeast’. The paramilitary force, however, has had strained relations with the northeastern region, primarily because of the controversial Armed Forces Special Powers Act (AFSPA).

The Act has repeatedly come under public scrutiny, with the locals accusing the security forces of staging encounters, killing civilians and violating human rights. In 2000, the Malom massacre in Manipur prompted Irom Sharmila to embark on a hunger strike that would go on for 16 years. Ten civilians were gunned down by the paramilitary force in Malom. Four years later, the custodial rape and murder of Thangjam Manorama led to widespread protests.

In 2013, an SC-appointed committee to probe six instances of alleged fake encounters found that the encounters were not “genuine”. In 2021, an officer of the Assam Rifles was killed by an insurgent group along with his family in an ambush in Churachandpur. A month later, 15 civilians and a soldier were killed in a botched ambush and retaliatory violence in Nagaland’s Mon.

Ambiguity in the command and control of the Assam Rifles has added to its problems. The force operated under the MEA under the North East Frontier policy till 1965. Currently, it is administratively under the Ministry of Home Affairs (MHA), while the operational control is with



the Ministry of Defence. This duality has been part of a drawn-out tussle. In 2019, the MHA proposed to take over operational control by merging the force with the Indo-Tibetan Border Police (ITBP). The Army, however, believes that shifting the operational control will jeopardise the surveillance along the LAC and impact the assistance the force provides. The tug of war continues.

AIR FORCE'S OPS IN MIZORAM: HOW OPERATION JERICO WAS QUELLED

The use of air power in Mizoram in 1966 has become a hot topic of discussion after Prime Minister Narendra Modi mentioned it in the Lok Sabha while replying to the no confidence motion last week.

What were the circumstances under which Indian Air Force (IAF) aircraft were used in a counter insurgency role? What was the military situation in Mizoram in early 1966?

What was happening in Mizoram in 1966?

In the first two months of 1966, a separatist movement led by Mizo National Front (MNF) was gathering steam in the area now known as Mizoram, and then referred to as the Mizo Hills. The Centre had decided to station another Assam Rifles battalion in the Hills, in addition to the one Assam Rifles battalion and a few BSF companies already present. Incensed at this, the MNF leadership decided to launch 'Operation Jericho' to take control of Aizawl, the biggest town in the region, and then the entire Mizo hills. They overran Aizawl in a few days' time in late February.

In an article on the Mizo Rebellion published in a journal of Centre for Land Warfare Studies (CLAWS), Ali Ahmad, research fellow at Institute for Defence Studies and Analysis (IDSA), said that Operation Jericho had been described by a military writer as a "masterstroke" with "near complete military preparation", amounting to an "expression of confidence and clinical planning not witnessed hitherto fore in the Indian subcontinent."

It has been explained that "the military precision was a result of the fact that a large number of volunteers who joined in the armed struggle were either ex-servicemen or personnel of the Assam Regiment battalions dismissed for lack of discipline."

What was the government's response?

The Army operations on the ground to clear rebel-held positions was led by Brig (later Maj Gen) Rustom Zal Kabraji, who was commanding the 61 Mountain Brigade, located at Agartala.

Maj Gen Kabraji, an officer of the Corps of Signals, was the first Signals officer to command a mountain brigade. His brigade was moved to Mizo Hills at a time when the rebels had entered Aizawl.

The Mizo rebels had besieged the HQs of 1 Assam Rifles, where the Deputy Commissioner had taken refuge, and released all prisoners from the local jail. There was widespread looting of arms and cash from the government treasury. Proclamations of "independence" were made and a demand raised for the Assam Rifles to surrender.

In response, attempts were made to re-supply the Assam Rifles battalion with helicopters, but these were shot at by the Mizo rebels.



Brig Kabraji led the operations on the ground in the face of stiff resistance from the rebels, taking several days to reach Aizawl. Other battalions advanced on other axes of operations.

How was the IAF involved?

As the Army struggled to dislodge the rebels, the Air Force was called in. The air attack helped the Army regain control of vast areas that had been declared “independent”. By the end of the month, aided by the air operations, Brig Kabraji’s Brigade had regained control of Mizoram.

Anchit Gupta, who specialises in research on IAF operations, put out a series of posts about the Mizo hills operations.

He said that two IAF Squadrons, 29 Squadron and 14 Squadron, were primarily involved in the air ops. The 29 Squadron flew the Toofani (French origin Dassault Ouragan) based at Bagdogra, while the 14 Squadron flew Hunters out of Jorhat.

According to Gupta, on March 2, 1966, as the MNF reached Assam Rifles HQ, it captured Army installations at Launglei and Chanphai. The IAF’s initial role was to re-supply the army installations, for which Dakotas and Caribou transport aircraft were pressed in from Guwahati and Jorhat.

In one such mission, flown by the AOC-in-C Eastern Air Command, Air Vice Marshal YV Malse, the Dakota received 21 bullet holes before it landed at Kumbhigram airbase near Silchar. According to Gupta, this was the event that necessitated the offensive air operations.

The actual missions started on March 5, with 30 mm cannons and T-10 rockets used against targets provided by the Army.

Gupta further said that by March 7, the rebels had started to burn forests, making it difficult to spot targets. But the Toofani aircraft continued their offensive action. On March 8, the Mizo supply line at Demagiri was destroyed, much to the help of the Assam Rifles unit in the region. By March 11, the Army came up with a better marking system of lobbing smoke grenades at the targets, which the pilots then destroyed. Gupta says that March 12 was the last mission against Dimagiri, and on March 17, the squadron was ordered to return to base.

Flt Lt (later Air Chief Marshal) SK Sareen later received a Vayu Sena Medal for gallantry in 1970, with his citation including a reference to the Mizo ops. Group Captain (later Air Vice Marshal) Jasper Bouche, senior staff officer in the Eastern Air Command responsible for planning the operations, received an Ati Vishisht Seva Medal (AVSM), with his citation also referring to his role in the Mizo ops. Flight lieutenant (later Air Commodore) Rajendra Narain Pande received a Shaurya Chakra for flying helicopters under fire in the Mizo operations.

WHY IS THE CAUVERY WATER SHARING ISSUE FLARING UP AGAIN?

The story so far:

On August 14, the Tamil Nadu government sought the Supreme Court’s intervention to make Karnataka immediately release 24,000 cubic feet per second (cusecs) from its reservoirs and ensure the availability of the specified quantity of water at Biligundlu on the inter-State border for the remainder of the month. It also urged the Court to direct Karnataka to ensure the release of 36.76 TMC (thousand million cubic feet) stipulated for September 2023 as per the Cauvery



Water Disputes Tribunal (CWDT)'s final award of February 2007 that was modified by the SC in 2018.

How is the water being shared?

A monthly schedule is in place for Karnataka, the upper riparian State of the Cauvery basin, to release water to Tamil Nadu. As per the schedule, Karnataka is to make available to Tamil Nadu at Biligundlu a total quantity of 177.25 TMC in a "normal" water year (June to May). Of this quantity, 123.14 TMC is to be given during the period from June to September, also marking the season of the southwest monsoon. Invariably, it is during this period that the Cauvery issue gets flared up, when the monsoon yields lower rainfall than anticipated. After the SC gave its judgment in February 2018 on the CWDT's 2007 award, the Cauvery Water Management Authority (CWMA) and Cauvery Water Regulation Committee (CWRC) were established four months later to ensure the implementation of the judgment. Since then, the two bodies have been holding meetings to take stock of the situation.

Why has T.N. approached the SC?

The CWMA, at its meeting on August 11, wanted Karnataka to manage its releases in such a way that 10,000 cusecs of water was realised at Biligundlu for the next 15 days, starting from August 12. In other words, Karnataka would have to provide 0.86 TMC a day or 12.9 TMC totally in the 15 days. The Authority also decided that based on future rainfall, there would be a re-evaluation of the quantity to be released. But, what apparently irked Tamil Nadu was the refusal of Karnataka during the meeting to abide by the quantity that was agreed upon at the meeting of the CWRC the previous day— which was a figure of 15,000 cusecs for 15 days. However, Karnataka, during the Authority's meeting, said it would release only 8,000 cusecs, and that too up to August 22.

How has Karnataka responded?

Karnataka has contended that lower rainfall in the Cauvery catchment including in Kerala has led to the poor inflow to its own reservoirs. On Saturday, in Mysuru, Chief Minister Siddaramaiah told journalists that whenever additional water flowed into the reservoirs, Karnataka was releasing it to Tamil Nadu. But, this year, Karnataka was not in such a position, he conceded. According to data of the Meteorological Department, Kodagu, the district cited by Mr. Siddaramaiah for the deficit rainfall (the Cauvery originates from there), received 44% less rainfall during June 1-August 15 than what it was expected to experience. Also, Karnataka, at the Authority's meeting, had refused to accept the demand of Tamil Nadu for following a distress-sharing formula, even though its Chief Minister, in Mysuru, favoured the idea of sharing distress.

What lies next?

Tamil Nadu, especially its farmers in the Cauvery delta, is eagerly awaiting to see whether Karnataka will go at least by the decision of the Authority. The present storage of the Mettur reservoir in Tamil Nadu is precariously low with about 20 TMC, which will last only 10 days after giving allowance for dead storage and drinking water requirements, even though water will be required at least for one more month for the standing short-term crop, kuruvai. It remains to be seen how the Supreme Court is going to view the matter.

A distress-sharing formula, acceptable to all, seems to be the need of the hour.



NORTH INDIA MORE AFFECTED BY EL NINO

Ahead of every monsoon, meteorologists track, with a degree of nervousness, temperatures in the central and eastern Pacific Ocean. Six in 10 years, a half degree or more rise — an El Nino — corresponds to diminished rainfall in India. The converse, or a La Nina, is linked to increased rain. A study last week however suggests that this cyclical swing — called the El Nino Southern Oscillation (ENSO) — affects vast regions of India differently.

ENSO fluctuations

Since 1981, the study published this week in Scientific Reports notes, monsoon rainfall over Central India — known as the monsoon core zone and where agriculture is largely rainfed — is increasingly getting disassociated from the ENSO with only 10% of droughts or excess rains linked to ENSO fluctuations.

On the other hand, the ENSO link to North India was strengthening, with 70% of rainfall fluctuations linked to the ENSO cycle. In southern India, the relationship has remained largely stable.

While past research into monsoon patterns have suggested a “weakening” of the relationship between ENSO and monsoon, the latest suggests that this too has varied since 1901.

“We notice that the ENSO–ISMR inverse relationship started getting stronger from 1901 to 1940, became stable from 1941 to 1980 and then the relationship has weakened in the recent epoch (1981 onwards),” the authors note in their study.

Monsoon rainfall, which accounts for 80% of India’s annual rainfall, is influenced by two broad factors: the external one is the impact of ENSO which influences the trade winds and their ability to carry warm, moist air towards India around monsoon. The other, internal, is the ‘monsoon trough — an elongated low-pressure area which extends from over Pakistan to the Bay of Bengal.

This trough swings between north and south India through the monsoon bringing rain wherever it is active and is fed on moisture brought in from the Bay of Bengal (and the Arabian Sea to a lesser extent) in the form of low-level cyclones called ‘depressions.’

Rise in temperature

In the last few decades, the role of climate change has dramatically increased ocean temperatures in the Indian Ocean, said Roxy Mathew Koll, scientist at the Indian Institute of Tropical Meteorology, Pune and one of the study authors. This was influencing the number of depressions that formed during the season and consequently rain over Central India.

However, these depressions weren’t reaching out as strongly towards North India as it was in the past.

“Consequently, this has left it more vulnerable to the impact from El Nino, which is known to affect the trade winds and the monsoon circulation over India,” he told The Hindu. For the rainfall over south India, the influence of ENSO and strength of monsoon trough have been consistent over the entire period, he added.

Accounting for the regional variation in the effect of El Nino would improve the accuracy of monsoon forecasts.



“The ENSO dominance over the core monsoon zone is weak, which means that seasonal prediction over this region has become less predictable in the recent decades. Other factors like Indian Ocean warming should be monitored for the core monsoon zone, due to its impact on the strength of the monsoon trough and the depressions,” he added.

Currently an El Niño forming in the Pacific is likely to strengthen in the coming months and influence monsoon rainfall in August and September.

A NECESSARY BRAKE

Being an El Niño year, the expectation was that north India would see a sparse monsoon. However, the pendulum has swung the other way. July saw record rainfall in many parts of Himachal Pradesh, Punjab and Uttarakhand and the rare sight of the Yamuna nearly spilling into the Red Fort in Delhi. At least 150 were killed and losses worth ₹10,000 crore were reported by Himachal Pradesh alone. The worst, however, was yet to come as the week saw multiple floods in Himachal Pradesh and Uttarakhand that have claimed at least 60 lives since Sunday. A series of landslides has crumbled buildings and blocked highways. The immediate explanation for the landslides is the unexpectedly copious rainfall that these States have received and that these in turn are due to a surfeit of Western Disturbances (WD). These are tropical storms that originate in the Mediterranean region and normally bring winter rainfall to north India. However, right from the beginning of this year, the WD have been erratic. There were too few of them in December and January and their absence was cause for the hottest February recorded in India in at least a century. However, the WD appear to be overcompensating for their absence, with several of them incident over north India in the last two months — a time when they normally should not be around. While a combination of WD and monsoon can be dismissed as ‘freak’ weather, climate scientists have been warning of the increasing probability of such high-risk events. The awry WD are in part due to a warming Arctic that causes the polar jet stream, which carries moisture, to deviate from its regular path and bring the disturbances to north India during the monsoon.

It is in the context of these altered weather patterns that warnings by scientists and environmentalists of the perils of wanton construction in the Himalayas must be factored in. The ongoing Char Dham road building project has led to large-scale altering of the mountains with significant chunks carved away, rendering them vulnerable to upheaval. As recent fears of land subsidence in Joshimath, Uttarakhand demonstrated, ill-thought construction and haphazard building practices have magnified the risk to residents who live in these regions. While State governments tend to search for short-term solutions such as demanding compensation from the Centre for ‘disaster relief’, it is time that more serious thought is given to the nature of infrastructure development and, if need be, restrictions imposed in the larger interest of minimising hazards and maintaining stability.

AS CHANDRAYAAN-3 AND LUNA 25 PREPARE TO LAND ON MOON, TWO QUESTIONS

India’s Chandrayaan-3 and Russia’s Luna 25 are both in lunar orbit, preparing for a landing on the Moon next week. Luna 25 is expected to go first, on August 21, while Chandrayaan-3 is likely to touch down two days later, on August 23. Both missions are aiming to land in a region where no spacecraft has gone before, near the South Pole of the Moon.

Since the landing of the then Soviet Union’s Luna 24 in 1976, only China has been able to land a spacecraft on the Moon — Chang’e 3 and Chang’e 4 in 2013 and 2018 respectively. India and Russia are both trying to make their first soft landing.

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



What determines the landing time of the two spacecraft?

Luna 25 rode on a powerful rocket to reach lunar orbit in just six days after launch on August 10. Chandrayaan-3 took 23 days after launching on July 14, because ISRO still does not have a powerful enough rocket to go directly to lunar orbit. Chandrayaan-3's circuitous route, however, helped save energy and costs.

Now that both spacecraft are in lunar orbit, Luna 25 has no particular advantage over Chandrayaan-3 that facilitates its early landing. It is not as though Luna 25 can descend to the lunar surface faster than Chandrayaan-3. The choice of the landing date is dictated by other factors.

August 23 is the beginning of daytime on the Moon. One lunar day is equivalent to about 14 days on Earth, when sunlight is continually available. The instruments on Chandrayaan-3 have a life of just one lunar day, or 14 Earth days. That is because they are solar-powered instruments, and require sunlight to remain operational.

The Moon gets extremely cold during night time, well below minus 100 degree Celsius. Electronics not specifically designed to operate at such low temperatures can freeze and become non-functional.

To maximise the time for observations and experiments, it is crucial for Chandrayaan-3 to land at the beginning of the lunar day. If for some reason, it is unable to attempt the landing on August 23, another attempt is supposed to be made the next day. If that too is not feasible, it would wait for one full month — about 29 days — for the lunar day and lunar night to get over.

Simply put, Chandrayaan-3 cannot land before August 23, and would not like to land after August 24.

Luna 25 has no such restrictions. It too is solar powered, but it also has an onboard generator to provide heat and power to the instruments during night time. It has a life of a year, and the choice of its landing date is not dictated by how much Sun is shining on the Moon.

How far apart will the Indian and Russian missions land?

Though it is being said the landings will be near the "South Pole", the landing sites are not exactly in the polar region on the Moon. The selected site for Chandrayaan-3 is about 68 degree South latitude while that of Luna 25 is closer to 70 degree South.

But these are still much farther to the south than any other landing on the Moon. All landings have so far happened in the equatorial region, mainly because this area gets the most sunlight.

The actual distance between the landing sites of Chandrayaan-3 and Luna 25 could be several hundred kilometres on the lunar surface. The polar region of the Moon is expected to get busier in the future, with several upcoming missions seeking to explore this part, mainly because of the greater potential of finding frozen water.

AFTER MOON, ISRO TURNS TO SUN: INDIA'S 1ST SOLAR MISSION LOOKS AT SEPT LAUNCH DATE

AFTER TWO successful mission launches in July, including the Chandrayaan-3, the Indian Space Research Organisation (ISRO) is getting ready for its next big mission – to the sun.

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



According to sources, Aditya-L1 — India's first mission to the sun — is expected to be launched in early September this year.

"Aditya-L1, the first space-based Indian observatory to study the sun, is getting ready for the launch. The satellite realised at the U R Rao Satellite Centre (URSC), Bengaluru, has arrived at SDSC-SHAR, Sriharikota," ISRO tweeted on Monday.

Just like the ongoing Chandrayaan-3 mission, the satellite will go around the earth gathering speed and then slingshot towards the sun. It will then cruise the 1.5 million kilometres in around four months. And, then it will be inserted into a halo-shaped orbit around the L1 point.

The solar mission will not see the spacecraft actually go to the sun, it will instead create a space observatory at a point from which the sun can be observed even during an eclipse.

Aditya L1 VELC / Source : IIA

To get this unobstructed, continuous view of sun, the satellite will travel to L1 or Lagrange point between the sun and the earth. Lagrange points — there are five between any two celestial objects — are referred to as parking spots in space because gravitational pull of celestial objects equals force required to keep it in orbit.

ISRO in Phase 3

THE back-to-back missions to the moon and sun will help establish ISRO as a serious player. This is the third phase of ISRO's development. The first phase was about societal demands – remote sensing, communication etc – and the second was about commercial satellite launches.

"Even after travelling the 1.5 million kilometres, we would have covered only 10% of the distance to the sun. This will allow the main payload VLEC to look directly into the source of coronal mass ejection. Once at L1, it will be the best instrument observing the solar corona. Although there are observatories studying the solar corona even on ground, but the weather conditions and atmospheric interference does not allow it to see this as clearly," said Prof Dipankar Banerjee, director of Aryabhata Research Institute of Observational Sciences (ARIES), which will host the support cell for the Aditya-L1 mission.

He said, the closest a man-made object has gone to the sun is the Parker probe from NASA, however, the objectives of the mission were very different. "Since it is closer to the sun, it cannot directly look at the sun. Parker is actually turned away from the sun and observes the particles in the solar wave in that position."

Aditya-L1 aims to study the solar corona, solar emissions, solar winds and flares, Coronal Mass Ejections (CMEs), besides carrying out imaging of the sun, round-the-clock, ISRO said.

After Astrosat, this is ISRO's second astronomy mission/ observatory done in collaboration with scientific and research institutes. The main collaborators in the solar mission with seven payloads are Physical Research Laboratory, Ahmedabad; Indian Institute of Astrophysics (IIA), Bengaluru; Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune; and the Indian Institute of Science, Education and Research (IISER), Kolkata.

In January, IIA handed over Visible Line Emission Coronagraph (VELC) to ISRO, which will track CMEs, trace links between CME plasma and the magnetic field that drive solar eruptions and solar winds.



In June, IUCAA completed and handed over the Solar Ultraviolet Imaging Telescope (SUIT), which will provide full disk images of the sun in the 2000-4000 Å wavelength range, observe the solar atmosphere slicing via different layers — these will help put together processes inside the solar surface.

Both VELC and SUIT are unique instruments built for the mission to the sun.

WHY IS INDIA'S DEFENCE MINISTRY DITCHING MICROSOFT WINDOWS FOR MAYA OS?

The Ubuntu-based Maya operating system has been developed by Indian government agencies within six months, and is aimed at preventing malware attacks by cybercriminals, who are increasingly targeting critical infrastructure and government agencies

India's Defence Ministry has decided to replace the Microsoft Operating System (OS) in all its computers that can connect to the Internet with Maya, an Ubuntu-based OS built locally. The new OS is currently being rolled out only in the Defence Ministry computers, and not the three Services. While the Navy is said to have cleared Maya for use in its systems, the Army and the Air Force are still evaluating the software.

Maya has been developed by Indian government agencies within six months, and it is aimed at preventing malware attacks by cybercriminals who are increasingly targeting critical infrastructure and government agencies. The new OS will be backed by a protection system called Chakravayuh. This end point system is also being deployed in the computers that have Maya installed.

What's in the name?

Maya OS has been named after the Sanskrit word Maya which means "illusion." The name suggests that Maya OS can create a deceptive layer of protection for the Defence Ministry's computers, hiding them from cyberattacks. Meanwhile, Chakravayuh is derived from the ancient Indian military formation that was used to trap enemies in a circular maze.

But how effective is this new OS, and how does it differ from Microsoft's Windows?

While the two operating systems provide a platform for the user to interact with computer hardware, Maya and Windows differ significantly, both in terms of cost and build. Windows is a commercial software sold by Microsoft for a license fee. It is the most widely used OS, and is easy to install and run. Devices powered by Microsoft's OS run on the Windows NT kernel. A kernel is the core of an operating system. It runs on a computer's Random Access Memory (RAM) and gives the device instructions on how to perform specific tasks.

Prior to building the kernel architecture, programmers used to run codes directly on the processor. In the 1970s, Danish computer scientist Per Brinch Hansen pioneered the approach of splitting what needs to be done by a processor from how it executes that task, thus introducing the kernel architecture in the RC 4000 multiprogramming system. It separated policy from mechanism in the OS design.

Difference in the core

This design was monolithic, meaning a single programme contained all necessary codes to perform kernel-related tasks. This architecture provided rich and powerful abstraction for the



underlying hardware. But it was also large and difficult to maintain as the lines of codes ran in the millions.

Limitations in the traditional architecture led to a new kernel design called the microkernel. This design broke down the monolithic system into multiple small servers that communicate through a smaller kernel while giving more space for user customisations. This change allowed developers to run patches easily without rebooting the entire kernel. It did have some drawbacks like larger running memory space and more software interactions that reduced the computer's performance.

Windows runs on a hybrid kernel architecture which is a microkernel design coupled with additional codes that help enhance performance. Apple's MacOS also uses a hybrid kernel called XNU. And Ubuntu, a Linux OS that was used to build Maya, runs on monolithic architecture. Linux versions are called "distributions" or "distro", and they comprise free and open-source software. In fact, Android is also based on the Linux kernel.

Cyber threats and malware

India's switch to the Ubuntu-based Maya OS comes at a time when cyberspace is increasingly becoming vulnerable to malware and ransomware attacks. An almost three-year old cyberattack made governments around the world rethink their cyber strategy.

In December 2020, cybersecurity firm FireEye, now rebranded as Trellix, discovered a cyber spy campaign that compromised dozens of government agencies and private organisations in the U.S. The firm noted that hackers found their way into the Cybersecurity and Infrastructure Security Agency (CISA), a unit within the Department of Homeland Security. The department is tasked to protect the government's networks from cyberattacks. This attack on CISA was found to have originated from the Russian intelligence service, the SVR, according to FireEye's report.

Additionally, IT software provider SolarWinds' network management software, Orion, deployed on hundreds of computers globally was used by hackers to plant malware masquerading as a software update from the company. The networking software company's products are used by over 3,00,000 customers around the globe, and nearly 18,000 customers downloaded the compromised software update from Orion, according to media reports. Microsoft's own systems were breached in this attack. The company also identified over 40 of its customers had installed the malware as part of their update process.

The Redmond-based company also sends software patches, similar to the Orion update, to fix bugs and install updates in users' computers. These kinds of updates are a common affair in proprietary commercial software. But the SolarWinds attack reveals how vulnerable these processes are to cyber threats.

An open source future

Such cyber threats arising from proprietary software are once again making global governments look to free and open-source software (FOSS) to develop their own OS. According to findings from a survey by the Center for Strategic and International Studies (CSIS), a total of 669 open-source policy initiatives were taken by governments around the world between 1999 and 2022. After a spike in using FOSS in 2003, interest in such software continues to be constant overall.

Apart from cybersecurity, the reason behind this move is to assist IT modernisation efforts that are underway — like digitising government services and making them interoperable.



“While the SolarWinds attack has brought home the graveness of the cyberthreat, the move to Maya underscores the Indian government’s emphasis on using open source software to build on the India stack model,” Sameer Patil, Sr. Fellow at Observer Research Foundation (ORF) said.

“But such a switch [to open source software] would take many years because only sensitive ministries will make the switch in the near term,” he noted.

PRESIDENT MURMU LAUNCHES NAVY’S STEALTH FRIGATE: STEP TOWARDS GOAL OF ATMANIRBHAR BHARAT

President Droupadi Murmu on Thursday launched the advanced stealth frigate ‘Vindhyagiri’ for the Indian Navy in Kolkata and said its rollout was a step towards achieving the goal of an ‘atmanirbhar Bharat’ (self-reliant India) through indigenous shipbuilding. The ship was built by Garden Reach Shipbuilders and Engineers Ltd’s (GRSE) facility at Kolkata. The event was also attended by West Bengal Chief Minister Mamata Banerjee, Governor CV Ananda Bose and Chief of Naval Staff Admiral R Hari Kumar, former BCCI president Sourav Ganguly and Kolkata Police Commissioner Vineet Goyal, among other dignitaries.

Stealth frigate Vindhyagiri is the sixth vessel rolled out as part of the Project 17A Frigate. The five other ships – INS Nilgiri, Udaygiri, Himgiri, Taragiri, and Dunagiri – were launched between 2019 and 2022. Officials said the ship derives its names from the ‘Vindhya’ ranges in Karnataka.

According to officials, the P17A ships are guided missile frigates. “They are 149 metres long, with a displacement of approximately 6,670 tonnes and a speed of 28 knots. These ships are capable of neutralising threats in all three dimensions of air, surface and sub-surface,” said a GRSE official.

INDIA’S FIRST 3D-PRINTED POST OFFICE INAUGURATED IN BENGALURU: HOW DOES 3D PRINTING WORK?

India’s first 3D-printed post office was virtually inaugurated by Union Minister Ashwini Vaishnav in Bengaluru’s Cambridge Layout on Friday (August 18). Its construction was completed in just 43 days — two days ahead of the deadline.

Multinational company Larsen & Toubro Limited built the post office with technological support from IIT Madras under the guidance of Professor Manu Santhanam, Building Technology and Construction Management Division, Department of Civil Engineering.

Invented in the 1980s, 3D printing burst into the mainstream around the 2010s, when many thought it would take over the world. The technology, however, at the time was expensive, slow and prone to making errors. In recent years, some of these flaws have been done away with, making 3D printing more prevalent than ever before. For instance, it’s being used in automotive and aerospace sectors to make parts of cars and rockets respectively.

What exactly is 3D printing ? And how do 3D printers work?

What is 3D printing?

3D printing, also known as additive manufacturing, is a process that uses computer-created design to make three-dimensional objects layer by layer. It is an additive process, in which layers of a material like plastic, composites or bio-materials are built up to construct objects that range in shape, size, rigidity and colour.



How is 3D printing done?

To carry out 3D printing, one needs a personal computer connected to a 3D printer. All they need to do is design a 3D model of the required object on computer-aid design (CAD) software and press 'print'. The 3D printer does the rest of the job.

3D printers construct the desired object by using a layering method, which is the complete opposite of the subtractive manufacturing processes. Think about the great Italian sculptor Michelangelo making his masterpiece sculpture David. He famously carved out the colossal statue from one single block of marble. This is an ideal example of the subtractive manufacturing method.

3D printers, on the other hand, build from the bottom up by piling on layer after layer until the object looks exactly like it was envisioned. "The (3D) printer acts generally the same as a traditional inkjet printer in the direct 3D printing process, where a nozzle moves back and forth while dispensing a wax or plastic-like polymer layer-by-layer, waiting for that layer to dry, then adding the next level. It essentially adds hundreds or thousands of 2D prints on top of one another to make a three-dimensional object," a report by Built In, an online tech news outlet, said.

Notably, these machines are capable of printing anything from ordinary objects like a ball or a spoon to complex moving parts like hinges and wheels.

"You could print a whole bike – handlebars, saddle, frame, wheels, brakes, pedals and chain – ready assembled, without using any tools. It's just a question of leaving gaps in the right places," The Independent said in a report.

What are some of the notable examples of 3D printing?

As mentioned before, 3D printing is being used in a host of different industries like healthcare, automobile and aerospace. In May this year, aerospace manufacturing company Relativity Space launched a test rocket made entirely from 3D-printed parts, measuring 100 feet tall and 7.5 feet wide. Shortly after its take off, however, it suffered a failure.

At the peak of the Covid-19 pandemic in 2020, the healthcare industry used 3D printers to make much-needed medical equipment, like swabs, face shields, and masks, as well as the parts to fix their ventilators.

WHY DOCTORS ARE PROTESTING RULE TO PRESCRIBE GENERIC DRUGS

After the National Medical Commission notified new guidelines on professional conduct recently, doctors have been protesting one of the stipulations — using generic names of medicines on the prescription instead of a particular brand name.

The Indian Medical Association, the largest body of doctors in the country, said in a statement this was akin to "running trains without tracks." They said before implementing any policy to meaningfully promote generic medicines, the quality of drugs across manufacturers has to be ensured.

What do the guidelines say?

The guidelines say that doctors can only write the generic names of the medicine on the prescription. For example, a doctor will have to prescribe paracetamol for fever, instead of Dolo



or Calpol “Every RMP should prescribe drugs using generic names written legibly,” the guidelines say.

This practice can only be relaxed for medicines with narrow therapeutic index (drugs where a small difference in dosage may lead to adverse outcomes), biosimilars (a different version of biologic products that are manufactured in living systems), and “similar other exceptional cases.”

The guideline says that generic medicines, on average, are 30% to 80% cheaper than the branded versions, and are hence likely to bring down healthcare costs.

What does it mean for you?

The new guidelines do not allow doctors to write a specific brand, which means that you will get whichever medicine with the relevant active ingredient your pharmacist stocks.

“If a pharmacy does not have a generic version of a medicine — which drug stores usually do not stock because of very low profit margins — the responsibility to substitute it with a branded medicine will shift to the pharmacist instead of the doctor. This will promote brands that have good profit margins, irrespective of how good they are,” said Dr Arun Gupta, president of Delhi Medical Council.

Additionally, doctors say it will also take away their choice of prescribing the medicine they think is the best for a patient. Taken in the context of the quality of generics varying across companies, this could result in ineffective treatment.

What are doctors saying?

The main reason for doctors protesting the guidelines is the quality of generic medicines, they say. “The biggest impediment to generic drugs is the uncertainty about its quality. The quality control in the nation being very weak, there’s practically no guarantee of the quality of drugs, and prescribing drugs without assured quality would be detrimental to patient health,” IMA said in its statement.

Dr Sharad Agarwal, IMA president, said: “What happens if a person takes a generic medicine prescribed by me and doesn’t get better, then buys a branded version from the pharmacy and does? It hampers my reputation. What about hospitalised patients? I give them generics and they do not get better. Later, the family would say they could have paid for any medicine, why did I not use it. This will lead to violence.” He also said that the guidelines were notified without consultation with stakeholders.

“IMA demands deferring of this regulation for wider consultations by the Government of India,” the statement from the doctors’ body says.

What are the issues with generic medicines?

Doctors, drug manufacturers, and the government all agree that there is much to be done when it comes to the quality of generic medicines in the country.

While the doctors in the IMA statement said that only 0.1% medicines are tested for quality checks, manufacturers said it is not possible for the government to test every batch, but following good manufacturing practices to the T can assure quality by design.



Many have also questioned the tests that a company needs to do to get approval. Until a few years ago, it was not mandatory for companies making generics to carry out bio-equivalence or stability studies. Bio-equivalence studies are done to show that the generic drug elicits the same response as a branded version. Stability studies are done to see how the quality of the drug varies over a period under specific environmental conditions. Experts from the pharmaceutical sector admit that there are drugs still in the market that never underwent these studies.

Data from the Union health ministry shows that around 3% of all medicines tested over the last three years — including generics, branded generics, and branded medicines — were found to be not of standard quality.

GOVT. PLANNING LAW ON PROTECTION OF INDIAN MANUSCRIPTS

The Bakhshali manuscript, an ancient Indian mathematical text written on birch bark, is considered to be the earliest recorded example of the use of zero. The seminal text, dating back roughly to the third or fourth century AD, is in one of the Bodleian Libraries of the University of Oxford.

Many other Indian manuscripts lie in libraries across the globe or are with private collectors, both in India and abroad.

Sources in the Culture Ministry say the government is planning to introduce the National Manuscripts Bill, 2023, possibly in the Winter Session of Parliament.

The primary aim of the Bill is to document and catalogue Indian heritage texts wherever they may be in India or abroad, maintain accurate and up-to-date information about them, and detail the conditions under which they may be consulted.

The Bill envisages setting up a 10-member National Manuscripts Authority (NMA). While the Culture Minister will be the Chairperson of this body, the members will include the Secretaries of Culture, Finance and Education, the Vice-Chancellor of Central Sanskrit University, special invitees representing the States, and private agencies.

“The National Manuscripts Authority will be the apex policy-making body with regard to digitisation, conservation, preservation, editing, and publication work of manuscripts,” says a concept paper on the Bill accessed by The Hindu.

India possesses an estimated 10 million manuscripts in 80 ancient scripts such as Brahmi, Kushan, Gaudi, Lepcha, and Maithili, says the National Mission for Manuscripts (NMM), an autonomous body under the Culture Ministry, which is mandated with preserving the vast manuscript wealth of India.

The NMA will have the powers of a civil court to regulate the allocation of access to manuscripts and will also have an investigation wing for the purpose of conducting an inquiry into thefts and desecration of texts. It will also ensure that the manuscripts are not lost by damage or theft. It can collaborate with universities and other educational institutions or agencies to provide fellowships and scholarships for study of manuscripts. The NMA will also prepare a dedicated digital portal for indexing, cataloguing, uploading, and downloading copies of manuscripts. The special body will be vested with the right to take over a manuscript from a private owner based on the uniqueness and the importance of the content. The sum to be paid will be fixed by an expert committee, the concept paper says.



Manuscripts are written on materials such as palm leaf, paper, cloth, and bark on themes ranging from history and religion to literature, astrology, and agricultural practice. While 75% of the existing manuscripts are in Sanskrit, 25% are in regional languages, according to the NMM.

“There is a need to link studying and interpreting of manuscripts with livelihood. Only then we can bring back the importance of ancient manuscripts into the socio-cultural milieu,” says Professor Anirban Dash, Director of NMM. He feels that the documentation of Indian manuscripts abroad “will definitely give a boost to an increased global interest in Indian manuscripts”.

The NMM has digitised 3.3 lakh manuscripts, containing about 3.1 crore folios. Though more than 1.18 lakh manuscripts have been uploaded, only about 70,000 have been made available online for public access.

275 BIRD SPECIES COUNTED DURING SURVEY AT CORBETT TIGER RESERVE

About 275 bird species, including two critically endangered, four vulnerable ones and two endangered species, were counted during a survey at Corbett Tiger Reserve.

The survey, conducted between June 20 and 23 by a 62-member team consisting of ornithologists, conservationists, volunteers from World Wide Fund (WWF) India, Tiger Conservation Foundation and Village Volunteer Protection Force, covering overall 540 km of 135 forest trails provided insights into the diverse bird species inhabiting at Corbett Tiger Reserve.

As per the report, two species, namely white-rumped vulture and red-headed vulture, considered critically endangered by the International Union for Conservation of Nature (IUCN) list, have been documented in the survey, which covered the vast range of landscape in the reserve, including grassland, dense forest, rivers and hilly terrains. Two endangered species — Pallas’s fish-eagle, Egyptian vulture were also counted by the researchers in the survey. Four vulnerable bird species — great hornbill, great slaty woodpecker, grey-crowned prinia and river tern — have also been counted in the survey.

Near-threatened species

About 10 near-threatened bird species — river lapwing, red-breasted parakeet, oriental darter, lesser fish-eagle, Himalayan griffon, great thick-knee, gray-headed fish-eagle, black-necked stork, Asian woolley-necked stork and Alexandrine parakeet — have also been found at the reserve.

About 256 species documented in the survey are considered to be of least concern by the IUCN. The report was compiled by Oriental Trials, an NGO working for conservation of wildlife.

EXPRESS VIEW ON INDIA’S ASIAN CHAMPIONS WIN: MARK OF A CHAMPION

India reasserted its regional supremacy by lifting the Asian Champions Trophy for the fourth time last weekend. It dominated the show from start to finish, where, despite facing a stiff challenge from Malaysia in the final, it remained the only unbeaten team and showcased its prowess in nearly all aspects of the game. Then again, that India is tactically and fitness-wise superior to the rest of the teams in Asia is hardly news. What often costs India dear — as was evident at the 2018 Asian Games where they lost to Malaysia in the semifinals and the World Cup quarterfinal loss to New Zealand this year — is the mental fragility and the tendency to crumble under pressure. This India was different, though. Even when they trailed they paused, changed plans, and hit back.



Modern sport is also psychological warfare. In what seemed like his exit interview, Graham Reid — the coach responsible for India’s return to the Olympic hockey podium — gave valuable parting advice. Days before he was sacked, following India’s embarrassing exit from the World Cup in January, Reid urged the need for a full-time sports psychologist for the team. A few weeks ago, Hockey India acted on Reid’s recommendation by appointing South Africa’s Paddy Upton as the team’s mental conditioning coach and the players and chief coach, Craig Fulton, are already feeling the difference.

The hockey team, where insecurities run deep, has for decades lagged behind on this front. Hence, to have someone like Upton at the national camp and tournaments gives the players a safe space to pour their heart out and, if needed, talk about subjects often brushed under the carpet. Upton’s reputation — he was an integral part of Gary Kirsten’s support staff during the Indian cricket team’s 2011 World Cup triumph — precedes him. Upton’s work has just started. India have aced on-field tactics. To reclaim the Asian Games gold, which they last won in 2014, they’ll have to overcome mental barriers as well.

DRDO EX-CHIEF WHO WEAPONISED INDIA’S NUKES DIES

Eminent scientist, former head of Defence Research and Development Organisation (DRDO) and a key player in the weaponization of India’s nuclear programme, V S Arunachalam, has passed away, his former colleagues said. He was 87 and was undergoing treatment for pneumonia and Parkinson’s. Arunachalam, who served as DRDO chief and scientific adviser to the defence minister for ten years between 1982 and 1992, passed away in the United States where he had been living the life of an academic for a long time.

“Many of the most important programmes, including the Light Combat Aircraft and Main Battle Tank Arjun started under his leadership. He had a long-term vision and great leadership qualities,” V K Saraswat, himself a former head of DRDO and now a member of NITI Aayog, said.

A “physics person” who ventured into material sciences, Arunachalam began his career at the Bhabha Atomic Research Centre (BARC) in Mumbai, moved to the National Aeronautical Laboratory in Bengaluru before joining the Defence Metallurgical Research Laboratory where he became the director at a very young age. He was awarded Bhatnagar Prize in 1980. Arunachalam was in his mid 40s when he was appointed head of DRDO and secretary of Department of Defence Research & Development. He was succeeded by A P J Abdul Kalam.

“That was a momentous period in the DRDO’s history. Visionaries like Arunachalam and Kalam, and many others working together. This was the building phase of the organisation. Arunachalam was a moderniser. At that time, DRDO’s infrastructure was not that great. He built new infrastructure in the labs and upgraded the existing ones, even insisting on getting the guest houses upgraded,” Saraswat said.

“He was persuasive and could get the support of the political leaders for DRDO’s project. He worked with so many PMs and defence ministers and commanded the respect of all. He also had a very good rapport with then army chief General K Sunderjee and ensured that the armed forces accepted the DRDO technologies and products,” he said. W Selvamurthy, a former DRDO scientist who had worked with Arunachalam, said Arunachalam always thought big. “Everything that you see DRDO doing today, the foundations were laid during his time,” he said.



He said Arunachalam was also deeply spiritual. “He was a frequent visitor to the Malai Mandir in R K Puram and Venkateshwara Temple near JNU. And these were not quick visits. He used to sometimes spend hours there. He was also a lover of classical Carnatic music,” Selvamurthy said.

A strong votary of weaponization of India’s nuclear programme, Arunachalam had repeatedly warned the government of the futility of weapons without an effective delivery system. He had exited the scene when India carried out nuclear tests in 1998 but as Saraswat pointed out the “process of integrating the missiles and nuclear systems was initiated during his tenure at DRDO”.

Later, as an academic, Arunchalam wrote regularly on India’s nuclear programme.

EXPRESS VIEW ON BINDESHWAR PATHAK: THANK YOU MR PATHAK

In the late 1960s, the Gandhi Centenary Committee in Patna sent a young volunteer to work amidst the Dalit community in Bettiah. The volunteer Bindeshwar Pathak braved humiliation and ridicule from members of the Brahmin caste he was born into to spend three months in a village studying the socio-economic conditions of the scavenger community. Despite his familiarity with the realities of caste atrocities, this was an eye-opening experience. Those were times when open defecation was a common practice, and not even the elites in large parts of the country were exempt. Septic tanks were costly and only very few towns had good sewerage networks. Public toilets were virtually non-existent. The task of cleaning the night soil fell on the Dalit community. Pathak, who had joined the Gandhi Centenary Committee influenced by the Mahatma’s message of restoring the dignity of the scavenger community, made it a mission to replace the bucket latrines. Out of that quest was born the Sulabh toilet which does not use sewers or expensive treatment plants. It uses a fifth of the water used in conventional toilets, allows easy switching between pits to enable composting and can be customised to local conditions. Most importantly, the innovations of Pathak, who passed away on Tuesday aged 80, freed many people from the scavenger community from the task of cleaning latrines. This was the use of technology for social upliftment at its most elementary level.

Pathak was a sociology graduate — not an engineer. Officials of the Bihar government had doubts about his project. It took Pathak nearly five years to convince them of the Sulabh toilet’s efficacy. In 1973, the Arrah municipality gave Pathak Rs 500 to construct two toilets in the compound of its office. Word spread. In 1974, the Bihar government sent a circular to all local bodies to take Sulabh’s help to convert bucket toilets into two-pit pour-flush toilets. Municipal Corporations gave land and financed the construction of the toilets but did not agree to pay for their maintenance. Pathak had to ask users to pay for public facilities. An earlier attempt to make people pay for public toilets — by the colonial state — had failed. But people quickly saw the merit of the clean, odourless and environment-friendly Sulabh toilets. By 1980, 25,000 people were using Sulabh public facilities in Patna alone. Sulabh became the implementing agency for building and maintaining toilet blocks in educational institutions. This was a seminal contribution because the absence of latrines in schools would force a large number of girl students to drop out.

Sulabh has converted dry latrines into two-pit pour flush latrines in more than 1,700 towns and built over 1.5 million toilets. Pathak has been feted nationally and internationally, including the Padma Bhushan and the Stockholm Water Prize. The government recognised Sulabh’s contribution to Swachh Bharat by awarding Pathak the Gandhi Peace Prize in 2016. His mission was, indeed, the forerunner of the government’s flagship programme. The greatest tribute to him would be to eliminate manual scavenging completely.



BUSINESS & ECONOMICS

MOODY'S AFFIRMS INDIA RATING, FLAGS MANIPUR

Moody's Investors Service has reaffirmed India's rating as a long-term local and foreign-currency issuer at Baa3, with a stable outlook, on a view that the economy is likely to continue to grow rapidly by international standards despite potential growth slipping in the past seven to 10 years.

Moody's said it expects India's economic growth to outpace other G20 economies through at least the next two years, driven by domestic demand.

Though the rating agency views monetary and macro policy effectiveness as having strengthened, it flagged concerns about weakening institutions and rising political tensions, citing the eruption of unrest in Manipur that has led to at least 150 deaths. "The curtailment of civil society and political dissent, compounded by rising sectarian tensions, support a weaker assessment of political risk and the quality of institutions," it said in a note on Friday.

Though elevated political polarisation was unlikely to destabilise government, rising "political tensions suggest an ongoing risk of populist policies... amid prevalence of social risks such as poverty and income inequality."

EXPRESS VIEW ON EXPORT DATA: GLOBAL HEADWINDS

Trade data released by the Ministry of Commerce and Industry a few days ago points towards a continuing weakness in India's exports. Merchandise exports fell to a nine month low of \$32.25 billion in July, a decline of almost 16 per cent. Alongside, goods imports also fell by 17 per cent to \$52.9 billion. In the first four months of the financial year (April-July), exports and imports have now contracted by 14.5 per cent and 13.8 per cent respectively. While part of the decline can be traced towards lower commodity prices, both non-oil exports and imports have fallen indicating weak global and domestic demand. These are worrying signs.

The disaggregated data shows that 19 of the 30 major export items have declined during April-July. These also include labour intensive sectors such as gems and jewellery, leather products, textiles and others. However, electronic exports continue to grow at a robust pace, rising by 37.6 per cent in the financial year so far. As per an analysis by Crisil, the decline in India's exports has been more pronounced in the Asia Pacific region. In the first two months of the financial year, exports to APAC declined by 21.8 per cent, followed by the US (12.9 per cent), Africa (8.6 per cent) and Europe (6 per cent). As per this analysis, the share of APAC in India's goods exports has been on a decline since the beginning of the pandemic. While in 2019, the region accounted for 33 per cent of India's merchandise exports, by 2022-23, its share in the country's export basket had declined to 26.5 per cent, while the combined share of the US and the EU rose to 34 per cent.

In the near term, slowing global demand and trade will continue to weigh down exports. As per the International Monetary Fund's July update of its World Economic Outlook, the world economy is likely to grow at 3 per cent this year, down from 3.5 per cent the year before. Alongside, world trade volume growth (goods and services) is expected to slow down from 5.2 per cent last year to 2 per cent this year. In fact, growth this year is now projected to be 0.4 percentage points lower than the IMF's earlier forecast. Considering its broader economic implications such as on job creation and the current account, policy must focus on boosting merchandise exports.



EXPRESS VIEW ON RBI STUDIES: CARRYING HOPE

At the end of this month, the National Statistical Office will release the GDP growth estimates for the first quarter (April-June) of the ongoing financial year. As per the most recent estimate by the RBI, the economy is likely to have grown at 8 per cent during this period. In the period thereafter, the economic momentum (on a quarter-on-quarter basis) is likely to have remained healthy even as the global recovery is slowing down as per the State Of The Economy report by economists at the RBI.

The report states that while the contraction in exports will drag down growth — merchandise exports declined by around 16 per cent in July, falling to a nine month low \$32.25 billion — growth in private consumption and investment activity is expected to offset that. These are encouraging signs.

The study examines a range of high-frequency indicators for whom data is available for the month of July. Several indicators of both demand and supply show healthy signs. For instance, e-way bill volumes have registered robust growth. FMCG sales have also improved sequentially. Alongside, cargo at major ports as well as railway freight traffic has picked up in July. And both steel and cement consumption have registered healthy growth. However, there are other indicators that point towards weakness in parts of the economy. Automobile sales, with the exception of three-wheelers, remain weak. Demand for work by households/individuals under MGNREGA is higher than last year. And non-oil imports are lower than last year indicating weak domestic demand. Of particular concern is the extent to which a pickup in investment is materialising.

Another study by economists at the central bank, which looks at investment intentions financed through various sources, provides some indications. As investment intentions closely track actual investments (as measured by gross fixed capital formation of private corporates), this serves as a useful indicator of gauging the private investment cycle. As per this (limited) study, in 2022-23, investment plans were made for 982 projects with a capital outlay of Rs 3.5 lakh crore.

In comparison, in 2021-22, plans were drawn up for 791 projects worth Rs 1.96 lakh crore. Around 60 per cent of these projects financed by banks and financial institutions are in the infrastructure sector — power, roads and bridges, SEZs, industrial biotech and IT park. And most are for investment in green field projects. Five states, namely, Uttar Pradesh, Gujarat, Odisha, Maharashtra and Karnataka account for more than half of the total project cost. These are healthy signs.

While greater clarity on the extent of a pick in the investment cycle will emerge in the months and quarters ahead, stronger bank and corporate sector balance sheets, improving demand conditions and rising capacity utilisation rates, do, as the report argues, “bode well for the capex cycle”.

BANKS LIKELY TO RAISE DEPOSIT RATES TO MEET CREDIT DEMAND

Last week, the RBI asked banks to maintain an incremental cash reserve ratio (I-CRR) of 10 per cent on the increase in their net demand and time liabilities (NDTL) between May 19, 2023, and July 28, 2023.

With the excess liquidity in the banking system getting absorbed due to the Reserve Bank of India's (RBI) incremental cash reserve ratio (I-CRR) measure, banks are likely to raise deposit rates on select tenors to meet higher credit demand ahead of the upcoming festive season.



Last week, the RBI asked banks to maintain an incremental cash reserve ratio (I-CRR) of 10 per cent on the increase in their net demand and time liabilities (NDTL) between May 19, 2023, and July 28, 2023. Lenders have to maintain I-CRR from the fortnight starting on August 12.

According to experts, banks will wait for a fortnight to gauge the liquidity situation, and demand for credit, and later take a call on the quantum of the increase in deposit rates. The hike in deposit rates could be in the range of 25-50 basis points (bps), they said. One basis point is one-hundredth of a percentage point. This increase will happen over the next two to three months, he added.

“Before banks start hiking retail deposit rates to increase deposit mobilisation, there will be an increase in bulk deposit rates on short-term tenors or the issuances of certificates of deposit will go up,” he said, adding that there could be an increase of 25-30 bps on bulk deposits and CD rates. Bulk deposits are single rupee term deposits of Rs 2 crore and above. A Certificate of Deposit (CD) is a negotiable, unsecured money market instrument issued by a bank as a usance promissory note against funds deposited at the bank for a maturity period of up to one year. A CD issued by banks are subscribed to by corporates and mutual funds.

While announcing the monetary policy on August 10, Reserve Bank of India (RBI) Governor Shaktikanta Das said the I-CRR is purely a temporary measure for managing the liquidity overhang generated due to the return of Rs 2,000 notes to the banking system, the central bank’s surplus transfer to the government, pick up in government spending and capital inflows.

On May 19, RBI announced the withdrawal of Rs 2,000 notes from circulation, while maintaining its legal tender status. As on May 19, the total value of Rs 2,000 notes in circulation was Rs 3.56 lakh crore.

As on July 31, the RBI received Rs 3.14 lakh crore worth of Rs 2,000 notes, or 88 per cent of notes in circulation. Of this, about 87 per cent were in the form of deposits and the remaining around 13 per cent had been exchanged into other denomination banknotes. Higher deposits in banks increased the liquidity situation. The overall daily absorption under the liquidity adjustment facility (LAF) was Rs 1.7 lakh crore in June and Rs 1.8 lakh crore in July 2023.

Das said even after the temporary impounding of liquidity, there will be adequate liquidity in the system to meet the credit needs of the economy. The I-CRR will be reviewed on September 8, 2023, or earlier to return the impounded funds to the banking system ahead of the festival season, the governor had said.

AS INFLATION RISES & LIQUIDITY TIGHTENS, BOND, T-BILL YIELDS RISE SHARPLY

A week after the Reserve Bank of India (RBI) opted for status quo in its monetary policy, yields on 10-year benchmark bonds and Treasury Bills rose sharply Thursday as retail inflation spiked to 7.44 per cent in July, liquidity in the system tightened and pressure mounted on short-term interest rates. India’s benchmark 10-year bonds rose to 7.25 per cent from the previous level of 7.20 per cent on August 14 and T-Bill yields rose by up to 13 basis points Thursday. Ten-year bond yields have gone up by 17 basis points in the last one month.

RBI had, last week, directed banks to maintain an incremental cash reserve ratio (I-CRR) of 10 per cent for banks in order to manage surplus liquidity in the banking system. The temporary measure will suck out over Rs 1 lakh crore of excess liquidity from the banking system. Soon after, retail inflation saw a big rise amid skyrocketing vegetable prices. A rise in bond yields indicates that



there's upward pressure on interest rates. The rupee fell by 20 basis points to 83.15 against the dollar on Thursday.

The liquidity stress in the system is getting reflected in the market after the invocation of the incremental CRR. Surplus liquidity has dried up to just Rs 21,000 crore as of August 14. This was reflected in the T-Bill auction cut-offs on Thursday.

Simultaneously, the rupee has fallen below the 83 level against the dollar with the dollar strengthening and foreign investors in a nervous mood. The trade deficit caused by falling imports has added to the sentiment. This is the time when the speculative element comes into the market. The next few trading sessions will be important to watch whether the 83 level stays or there is a retreat.

The Reserve Bank of India's inflation projection has belied hopes for a reduction in the interest rates in the current financial year (2023-24) as retail inflation is expected to remain elevated due to high vegetable and foodgrain prices. July retail inflation spiked to 7.44 per cent from 4.87 per cent in the previous month as vegetable and cereals prices skyrocketed.

Retail inflation which is expected to remain above the five per cent till the first quarter of 2024-25 is likely to hit the 6.2 per cent level in the ongoing quarter (July-September) of 2023-24. The RBI's objective is to achieve the medium-term target for retail inflation of 4 per cent within a band of plus or minus two per cent, while supporting growth.

The rise in yields is not restricted to India alone. US yields kept rising after minutes from the Federal Reserve's July meeting showed officials divided over the need for more interest rate hikes though many policymakers continued to prioritise the inflation battle. The US Fed raised the key rate by 25 basis points in July to 5.25-5.50 per cent range. Although the market is not expecting another hike, consensus indicates rates staying elevated longer, driving a sustained uptick in US yields. The 10-year yield hit 4.2980 per cent, the highest in nearly 10 months, with the two-year yield trending near the crucial 5.00 per cent mark.

A SURGE FORETOLD

The latest NSO data, showing retail inflation accelerating to a 15-month high, comes less than a week after the Reserve Bank of India (RBI) left interest rates unchanged even as it warned of "a substantial increase in headline inflation" in the near term. The primary driver of this surge was the food price component, with the Consumer Food Price Index-based inflation accelerating by a mind-numbing 696 basis points to 11.51%, from June's 4.55%. Save oils and fats, the 11 other items on the 12-member food and beverages group of the Consumer Price Index (CPI) logged year-on-year increases in prices. Cereals, the largest food component with an almost 10% weight in the CPI and representing the basic staples of rice and wheat, saw prices surge 13% from July 2022 levels, and posted a near doubling in the month-on-month pace to 1.2%. It was, however, vegetables, with a 6% contribution to the CPI, that witnessed a vertigo-inducing ascent in the inflation rate, with prices increasing 37.3% year-on-year, and 38.1% month-on-month in July. Data compiled by CMIE show the sequential surge in vegetable prices was the highest in at least five years, as tomato prices skyrocketed 214% from June's levels. The all-India average retail price of the nutrient-rich food as on August 15, while 9% softer than a month earlier, was still at a punishingly elevated ₹107.87 a kilogram, well over three times last year's Independence Day price of ₹31.66, data from the Consumer Affairs Department show.



Rather disconcertingly, the prices of 18 of the 19 items in the vegetables sub-group registered appreciable sequential price gains, with onions (19%), potato (11%), cauliflower (32%), brinjal (24%), ginger and garlic (almost 21% each) and potassium-rich green chillies (46%) making it very difficult for any family to manage its monthly food budget. Inflation in non-food items too were a palpable concern. The five other broad groups on the CPI, all recorded sequential price increases, signalling inflation is now more widely spread across the goods and services consumed in the economy than even in the preceding month. For all the central bank's optimism that the price shock is likely to be temporary, allowing monetary policymakers the latitude to look through a couple of high headline inflation readings, the risk of inflation expectations getting unmoored in the face of such runaway price gains is far too real and in the present. With a looming El Niño and uneven monsoon rains adding to the uncertainty over the supply of agricultural produce in the coming months, the RBI may find itself facing an uphill task in aligning inflation to its avowed target of 4% unless all authorities act in concert to tame inflation before it undermines broader consumption and economic growth.

EXPRESS VIEW: ONIONS AND TEARS

The last week saw proactive measures from the Narendra Modi government for controlling food inflation, ahead of Monday's consumer price index data release that may present a not-too-pretty picture. A decision was taken to offload 5 million tonnes (mt) of wheat and 2.5 mt of rice from the Food Corporation of India's (FCI) stocks in the open market. The move came even as the all-India average modal retail prices of wheat flour (atta) and rice have risen to Rs 35 and 40 per kg respectively, from their corresponding year-ago levels of Rs 30 and Rs 34.

It was also decided to release onions from a 0.3-mt buffer created out of the rabi crop that was procured hardly a couple of months back. This follows a spike in wholesale prices at Maharashtra's Lasalgaon mandi, from Rs 13.50 to Rs 22 per kg since end-July. Clearly, the Modi government is worried about onions doing a tomato, whose prices in markets such as Karnataka's Kolar have somewhat eased from Rs 95-100 to Rs 35-40/kg during this period.

The above supply-side interventions — extending earlier to export bans on wheat, white rice and sugar and stock limits on tur and urad pulses — have both economic and political dimensions. The Reserve Bank of India (RBI) cannot, beyond a point, "look through" food inflation. While there's little that monetary policy can do to bring down vegetable or cereal prices, these tend to also influence the inflation expectations of households. Such expectations, to the extent they feed into actual inflation, would make it difficult for the RBI to even "pause", leave alone cut, interest rates. But for the government, it is not the RBI's but the average voter's perception that matters, especially when national elections are due in April-May 2024.

The latest measures, however, reflect desperation more than anything. The July inflation number is likely to be above the RBI's 6 per cent outer band, mainly due to vegetable prices that should correct with fresh market arrivals from next month. The government's focus shouldn't be on the current, but future inflation that might arise from El Niño.

The most recent forecasts are of the latter strengthening and persisting through the winter till February 2024. That could potentially impact the upcoming rabi crop in a scenario of the FCI's cereal stocks already at a six-year-low. That's all the more reason not to burn these stocks now. The government would do better to slash the import duty on wheat like it has done for edible oils and pulses.



HOW TO MAKE UREA MORE EFFICIENT AS A FERTILISER, AND WHY THAT'S NEEDED

Late last month, Prime Minister Narendra Modi officially launched 'Urea Gold' fertiliser. Developed by the state-owned Rashtriya Chemicals and Fertilizers Ltd (RCF), it is basically urea fortified with sulphur.

Normal urea contains 46% of a single plant nutrient: Nitrogen or N. Urea Gold has 37% N plus 17% sulphur or S and aims at two things. The first is to deliver S along with N. Indian soils are deficient in S, which oilseeds and pulses – the country is significantly import-dependent in both – particularly require.

The second is to improve the nitrogen use efficiency (NUE) of urea. Coating of S over urea ensures a more gradual release of N. By prolonging the urea action, the plants stay greener for a longer time. Farmers tend to apply urea when they notice the leaves turning yellowish. If the crop retains greenness for an extended period, they would reduce the frequency of application and use, say, only two bags, as against three, for an acre of paddy or wheat.

RCF is yet to commercially introduce Urea Gold or reveal any pricing details. The maximum retail price (MRP) for a 45-kg bag of ordinary neem-coated urea is around Rs 254, net of local taxes. Indications are that Urea Gold, given its higher NUE from the slow-release mechanism, may be sold in 40-kg bags. The MRP is expected to be fixed at Rs 400-500 per 40-kg bag.

The problem

Urea is India's most widely used fertiliser, with its consumption/sales rising from 26.7 million tonnes (mt) to 35.7 mt between 2009-10 and 2022-23. The Modi government's measures, such as mandatory coating of all urea with neem oil and reducing the size of bags from 50 to 45 kg, enabled a slight dip after 2013-14 till 2017-18. But the subsequent period has shown renewed uptrend.

urea 1

There are two concerns over rising urea consumption. The first is imports, which accounted for 7.6 mt out of the total 35.7 mt sold last fiscal. Even with regard to domestically-manufactured urea, the feedstock used – natural gas – is mostly imported. India's nearly 36-mt annual consumption of urea is today next only to China's 51 mt, with the latter's production largely coal-based.

The second concern is NUE. Barely 35% of the N applied through urea in India is actually utilised by crops to produce harvested yields. The balance 65% N is unavailable to the plants, much of it "lost" through release into the atmosphere as ammonia gas or leaching below the ground after conversion into nitrate. Declining NUE, from an estimated 48% in the early 1960s, has resulted in farmers applying more and more fertiliser for the same yield.

urea 2: The fortification solution

There is growing consensus, including in the government, that India cannot sustain the above increase in consumption of urea – or even di-ammonium phosphate (DAP), muriate of potash and other fertilisers containing just primary nutrients: N, P (phosphorus) and K (potassium).

A country with hardly any natural gas or rock phosphate, potash and sulphur reserves shouldn't, beyond a point, encourage the consumption of these commodity fertilisers in plain-vanilla form.



Instead, they must be coated with secondary nutrients (S, calcium and magnesium) as well as micronutrients (zinc, boron, manganese, molybdenum, iron, copper and nickel).

Coating not only allows urea or DAP to be used as “carrier products” for delivering secondary and micro nutrients to crops. It improves their own N and P use efficiency through synergetic effects and controlled release that, in the case of urea, helps reduce losses through ammonia volatilisation and nitrate leaching.

Yara International, a \$24.1 billion-revenue Norwegian crop nutrition company, has a proprietary ‘Procote’ technology for coating all commodity fertilisers with any micronutrient. Its Indian subsidiary – which has a 1.2-mt urea plant at Babrala in Uttar Pradesh’s Sambhal district – launched ‘Procote Zn’ for coating of urea with zinc oxide during the 2022 kharif season. “Punjab and Haryana farmers growing paddy usually mix 5 kg of zinc sulphate (having 33% Zn content) with a 45-kg bag of urea per acre 10-12 days after transplanting. Here, they need apply just 325-350 ml of Procote Zn (containing 39.5% Zn), again by mixing with 45 kg of urea,” said Sanjiv Kanwar, managing director, Yara Fertilisers India Pvt. Ltd.

Being a powder, zinc sulphate is prone to losses during mixing and application. The micronutrient particles also don’t get uniformly distributed over all the urea prills that are of 1-2 mm diameter. Procote Zn, by contrast, is a palm oil-based suspension concentrate that farmers can simply pour, mix and rub in their urea before application. “There’s no dust loss and every single urea prill will now carry a thin lining of Zn, even with only 325-350 ml and not 5 kg of coating material,” claimed Kanwar. Yara is planning next to commercialise ‘Procote B’ (boron) and ‘Procote BMZ’ (boron, manganese and zinc) in India – based on the same dust-free micronutrient coating technology platform – for which field trials are underway.

The hurdle: That has to do with pricing.

The government currently permits coating of urea with zinc (for which fertiliser concerns can recover an extra Rs 542 per tonne or about Rs 24 for a 45-kg bag) and sulphur (for which the MRP is still to be finalized). Urea apart, an additional subsidy of Rs 300 and Rs 500 per tonne is being provided for P&K fertilisers fortified with boron and zinc, respectively. These additional rates aren’t attractive enough for companies to market zincated urea, boronated DAP or any of the 20-odd fortified products recognised under the Fertiliser Control Order.

This is despite the proven benefits of micronutrient fortification: Yara’s field trials have demonstrated average paddy yields for the ‘PR-126’ variety in Punjab increasing from 24-25 to 26-27 quintals per acre, when farmers apply zinc sulphate on top of urea. It goes up further to 30 quintals with Procote Zn. Sulphur-coated urea has been similarly found by the Indian Agricultural Research Institute to boost wheat yields by roughly 10% and enhance nitrogen efficiency by 60%.

For now, there’s not much incentive for fortification. Yara is selling urea and Procote Zn separately. Farmers are paying the controlled MRP of Rs 254 for a 45-kg bag of urea and Rs 530-550 for 325-350 ml of Procote Zn. The latter price is marginally higher than the Rs 500 that 5 kg of zinc sulphate is costing them.

“Ideally, the coating should be carried out at the factory itself, which will guarantee even more uniform distribution of micronutrients and save the farmer the hassles of mixing. The government can probably set free the MRPs for all coated fertilisers. Since the regular urea or DAP will continue to be sold at heavily subsidised rates, companies cannot charge too much of premium on their fortified fertiliser products,” Kanwar pointed out.



NOBLE INTENTIONS

The PM Vishwakarma scheme approved by the Cabinet on Wednesday to help traditional craftspeople and artisans can provide an economic boost to these professionals. Announced by Prime Minister Narendra Modi during his Independence Day speech, the scheme, with an outlay of ₹13,000 crore, provides loans of up to a total of ₹3 lakh (in two tranches) at a concessional interest rate of 5%. It covers individuals from 18 trades such as cobblers, toy makers, laundrymen, barbers, masons and coir weavers. The government expects about five lakh families to be covered in the first year and 30 lakh families to benefit from the scheme over five years. But the scheme can help craftspeople and artisans only to the extent of freeing them from the difficulties they now face in accessing affordable credit from the formal banking system. However, the support extended to these struggling artisanal communities could come with its own risks in the way of unintended consequences. The challenges they face are far deeper than just the availability of cheap credit. By far the biggest of these that traditional art and craft professionals face is either the lack of patronage for their goods and services in the wider marketplace, or in the case of other trades, a skewed undervaluation of their economic output.

Crucially, the lack of access to formal credit may simply be a symptom rather than the cause of the underlying problem these communities face. No government scheme can help these communities in the long run unless it helps them overcome the fundamental problem of a lack of economic viability for their output. More seriously, if the scheme fails to open up new markets and simply extends loans to these communities in the name of promoting their welfare, it runs the risk of leaving not only the intended beneficiaries but also their families deeper in debt. Also, by laying stress on the intergenerational nature of knowledge dissemination in these communities, the scheme could end up leaving the next generation willy-nilly stuck for perpetuity in these traditional low-paying trades, many of which are practised in a caste straitjacket. The Vishwakarma scheme includes skilling programmes that offer a nominal stipend as well as financial help to purchase modern tools. Ultimately, the success of this well-intentioned scheme will hinge on its implementation, an area where the government would do well to rope in professionals with the know-how and entrepreneurial flair to help the craftspeople and artisans upgrade their offerings to cater to new markets and tap fresh opportunities.

FOR INDIA'S 15 TO 34-YR-OLDS, TOP CONCERN IS JOBS, ECONOMIC STRUGGLE: WHAT LOKNITI-CSDS'S LATEST SURVEY REVEALS

These findings, which are part of a report released by Lokniti-CSDS earlier this month, suggest that the youth identify challenges relating to the economy as the most significant facing the nation. The report offers insights into their career aspirations, job preferences, and expectations.

More than one in three (36%) Indians between the ages of 15 and 34 believe unemployment is the biggest problem before the country. About one in six (16%) think it is poverty, and 13% think it is inflation.

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About 6% of respondents identified corruption as the most significant challenge; 4% each identified problems in education and high population.

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



WHY HAS GOVT. CALLED FOR PC IMPORT CURBS?

The story so far:

On August 3, the government restricted the import of laptops, tablets, all-in-one personal computers, ultra-small form factor computers and servers. The import of these products would be allowed against a valid licence for restricted imports. Initially meant to be enforced with immediate effect, a revised order the next day deferred the enforcement until November 1.

What does the order state?

Import of all items categorised under the Harmonised System of Nomenclature (HSN) 8471, that is, automated data processing machines and units, would be restricted from November 1. A valid licence would be required to import them for sale to consumers. Exemption to licensing requirements would be extended in four circumstances. First, purchasing a single unit of the mentioned products on an e-commerce website that are being brought into the country through post or courier. It would only draw relevant duties. This also applies to (reimport of) products meant for repair and return. Permission has been given to import up to 20 such items in a consignment for purposes entailing research and development, testing, benchmarking and evaluation, repair and re-export or product development purposes. Following their intended use, the products would either have to be destroyed beyond use or re-exported. Finally, items may be imported if they serve as an essential part of an entity's capital good.

What is the purpose of the move?

The key objective is to reduce the dependence on imports, ensure the country has access to trusted hardware and systems and increase domestic manufacturing of products.

On domestic manufacturing, the government had introduced the production-linked incentive (PLI) Scheme 2.0 for IT hardware in May this year. It was explained in the gazette that with domestic demand for electronics hardware expected to rise to approximately \$300 billion by FY2026, "India cannot afford to bear the rapidly increasing foreign exchange outgo on account of import of electronics."

Is domestic production growing?

Domestic production of electronic goods, as per industry estimates, increased to \$87.1 billion in 2021-22 from \$49 billion in 2016-17 — registering a compound annual growth rate (CAGR) of 15%. Further, as per figures from the Commerce Ministry, the country's imports with respect to the products in discussion stood at approximately \$10.1 billion in FY 2022-23, about 13% lower on a year-over-year basis.

It was observed in May that over the years IT hardware manufacturing capability and capacity in India has "progressively declined and many units have either ceased operations or are operating at low capacities." The demand for laptops and tablets were being largely met through imports. As per market intelligence firm International Data Corporation's report for Q1-23, HP commanded the highest share in the domestic PC market at 33.8%, followed by Lenovo (15.7%), Dell (13.9%), Acer (12.3%), Asus (6.6%) and all others combined at 17.6%.



What happens next?

Concerns mostly revolve around accessibility to stocks and a potential impact on prices. Global companies operating in India have sought that the implementation be deferred by 9-12 months to enable them time to ramp up domestic production and understand the licensing process. Bharath Shenoy, Senior Market Analyst for PC Devices at IDC India, said, with the deadline extended to October-end, "We expect vendors to pump inventory across channels till October-end so that there are no disruptions during the festive sales season." For the longer term, Mr. Shenoy states that vendors would be able to arrange for the required licences by October-November. Further, he explained that most of the big vendors except Apple and Asus have local assemblies (Apple manufacturer Foxconn and a couple of other suppliers manufacture iPhones in India) where they assemble desktops and/or some budget notebooks. "They will fast-track the local assembly process and try to build the ecosystem around it at the earliest. Asus and Apple might also eventually start local assembly," he observed. About the potential impact on prices, Mr. Shenoy contends that vendors won't increase prices for the next three months as it is the festive sales season. "However, customers will advance their purchases anticipating price increase going forward. From November, we can expect some price increase," he stated.

LIFE & SCIENCE

MARTIAN TRANSITIONS

New observations of mud cracks made by the Curiosity Rover show that high-frequency, wet-dry cycling occurred in early Martian surface environments, indicating that the red planet may have once seen seasonal weather patterns or even flash floods (Nature). These mud cracks reveal the transitional time when liquid water was less abundant but still active on the Martian surface, a release says. This points to the existence of wet-dry environments that on Earth are extremely conducive to the development of organic molecules and potentially life. These results gives us a picture of Mars as a habitable world, Nina Lanza, principal investigator of the ChemCam instrument onboard the Curiosity Rover says in a release. A change in mud crack patterns signifies a change in the way the surface would have dried. This indicates that water was still present on the surface of Mars, meaning water could have been present, evaporated, and repeated until polygons, or mud cracks, formed.

MATERIAL CONSIDERATION

The scientific community is now confident that the material known as LK-99 is not a room-temperature and ambient-pressure superconductor, bringing to a swift close an exciting episode launched by a group of South Korean researchers. There has been no formal conclusion to match the formal announcement that this material could transport an electric current with no resistance in ambient conditions. But the South Koreans and the independent scientists who worked to verify the claim published their findings as preprint papers that were free to read. LK-99's seemingly simple composition and availability of instructions to synthesise it prompted scientists outside academia to test the material as well. The pace of developments was exhilarating, but there was soon hype and misinformation. While some reports indicated that the South Korean group had submitted manuscripts explaining their claim to a journal, concerns that the preprint papers were not worth reacting to until the journal had responded missed the point: efforts to validate the claim constituted a better, more organic peer-review process together with attempts by scientists across the world (including India) to replicate the claim in their laboratories. It soon became clear



that there were two reasons why the material was no superconductor. First, as conventional superconductors inside a weak magnetic field are cooled to induce a superconducting state, they expel the field from their bulk and under the transition temperature. So, a magnet near the superconductor will be pushed away during the transition. The South Korean group had shared a video in which LK-99 appeared to half-repel a magnet. But independent researchers found that the material was an insulator whose impurities could be magnetised, leading to the half-repulsion seen in the video. Second, the South Koreans reported that the electrical resistivity of LK-99 dropped sharply at around 104° Celsius, a potential sign of superconductivity. But scientists observed the drop if the material contained copper sulphide as an impurity; copper sulphide undergoes a phase transition at that temperature, distorting the resistivity.

Now, the burden of proof is back on the South Korean group. The online diffusion of information and data in this episode achieved something the world seldom has: near-real-time and crowd-organised documentation, collaboration rather than competition, and closure. Participating in open science can lead to more good science but also, in the presence of bad-faith actors, to misunderstanding and confusion. The LK-99 episode suggests that the compunctions with the latter should not hold back the former.

THE SCRAMBLE TO SAVE THE PLANET'S LUNGS

On August 9, executive leaders and Ministers from Bolivia, Colombia, Peru, Venezuela, Guyana, Suriname and the French Guiana met with a Brazilian delegation — all of whom are part of the Amazon Cooperation Treaty Organization (ACTO) — in Belem do Para, Brazil. The outcome of this meeting was the “Belem declaration”, which called for cooperation between the countries to ensure the survival of the humongous Amazon rainforest, that constitutes a significant portion of these countries, by conserving its biodiversity and natural resources.

It called for the advancement of debt-for-climate action, financed by developed countries. It promised concerted efforts to arrest deforestation by illegal mining and logging, bring about integrated fire management, besides law enforcement for protecting the rights of Indigenous people inextricably linked to the rainforest ecosystem. It called for inviting development banks in the region to work together by pooling funds into a green coalition and which shall provide for conservation and employment and income opportunities for poorer people linked to the Amazon's economy. Besides other measures.

But it fell short of collectively advancing clear goals such as the protection of 80% of the forest from deforestation and degradation (as proposed by Colombia) or zero deforestation by 2030 even if some constituent nations of the ACTO like Brazil have done so already. Clearly, these countries were not ready to evince a decisive shift from their dependence on extractive industry-driven economics, which would follow from such a commitment.

On the next day, August 10, the ACTO's representatives met with their counterparts of fellow rainforest nations — the Republic of the Congo and the Democratic Republic of the Congo from Africa and Indonesia from Asia. In another declaration, “United for our Forests”, the governments of these countries reaffirmed the imperatives from the previous declaration related to arresting deforestation and the need for sustainable economic practices to go with environmental protection. Tellingly, Brazilian President Luiz Inacio ‘Lula’ Da Silva, who has been the catalyst for these meetings, spoke of the need for climate financing to be provided by the developed world for “its nature that needs money.. [and] it's nature that needs financing”.



It is clear that Lula has been the lynchpin of these initiatives and his coming to power on January 1, 2023 has turned the page decisively from the controversial presidency of Jair Bolsonaro during whose tenure there was rapid dismantling of environmental protections that allowed for rampant exploitation of the Amazon. In the first seven months of Lula's latest tenure, deforestation reduced by 42% compared to the previous year.

Yearly deforestation

According to Brazil's National Institute for Space Research (INPE), the total deforestation of the Amazon rainforest from August 1, 2019 to July 31, 2021 alone amounted to 34,018 sq. km, and this does not include losses due to natural forest fires. This marked a 52% increase compared to the previous three years. Yearly deforestation of the Amazon, according to the NIPE, fell from more than 25,000 sq. km in 2004 to less than 5,000 sq. km in 2012 during Lula's previous tenures. This more than doubled to nearly 13,000 sq. km in 2021 alone — a legacy of the Bolsonaro regime's policies.

These numbers are stark even if the total landmass area of the Amazon rainforest is considered 6.7 million sq. km, just more than twice the total landed area of India (3.3 million sq. km). The Amazon rainforest or Amazonia constitutes close to 1.3% of the planet's surface and 4.1% of the earth's land surface, but as a biome, the Amazon is host to 10% of the world's wildlife species and some more, as we are still discovering new species in this epic mass of life in Latin America. Some of the species found in the Amazon are not found anywhere else. The Amazon itself is the largest river by volume of water in the world, draining from Iquitos in Peru, across Brazil and discharging into the Atlantic ocean.

Amazonia and its massive Amazon river basin straddles the countries party to the ACTO — close to 60% of it is in Brazil, 13% is in Peru, 8% in Bolivia, 7% and 6% respectively in Colombia and Venezuela, and nearly 3% each in Guyana and Suriname and around 1% in French Guiana and Ecuador.

It is also a heterogeneous ecosystem with tall canopied rainforest occupying 50% of the region besides mountainous grasslands, mangrove forests, dry semi deciduous forests, bamboo forests, floodplains, etc. Tropical rainforests are the "lungs of the earth"; they draw in the carbon dioxide in the atmosphere and breathe out oxygen. They also sustain large, complex ecosystems that 'fix' a considerable amount of carbon in biomass. In all, by storing around 76 billion tonnes of carbon, the Amazon rainforest helps stabilise the world's climate. As Brazilian scientist Eneas Salati pointed out in the 1970s, the Amazon also generates its own rainfall by recycling moisture from air from the Atlantic Ocean. Moisture from the Amazon is responsible for rainfall for many parts of Latin America, contributing to agriculture, storage of water in urban reservoirs as well.

Rapid deforestation in recent years has contributed to the ecosystem teetering on the brink of disaster by affecting the resilience of the Amazon rainforest. A paper in Nature pointed to the loss of resilience (ability to bounce back from droughts or extreme weather events) in more than three fourths of the Amazon rainforest since the early 2000s. It points out that this risks "dieback" of the forests with profound implications for biodiversity, carbon storage and climate change at a global scale. Scientists have long warned of a point of no return in the Amazon — more warming could result in an irreversible transition to a new form of ecosystem.



'Death of the forest'

"If 20% or 25% of the forest is destroyed, the forest will enter a process of savannization ... and that would represent the death of the forest" said Marina Silva, Brazil's Environment Minister, after the ACTO summit. The alarming situation notwithstanding, the lack of a united agreement by the ACTO countries on regulating the role of extractive industries in the destruction of the rainforest was telling. An investigation involving The Guardian, for example, revealed that 800 million trees had been felled in six years to serve Brazil's beef industry, as "1.7 million hectares of the Amazon was destroyed near meat plants exporting beef around the world". Mining and oil industries are also driving the destruction.

Yet, the realisation of the scale of dangers ahead due to deforestation by the new regime in Brazil and the keenness towards coordination and cooperation with other ACTO promise the first steps in the reversal of the destruction, even as advanced and developed countries should take the lead in financing the change in the economic trajectories in the ACTO countries, which are currently dependent upon extractive industries and the export of their products.

A new EU law that requires EU-based companies to ensure their imports are "deforestation-free" marked an important moment when it was passed in the European Parliament in April. Similar legislation in other consuming nations such as the U.S, China and even India could emulate this benchmark law. After all, the lungs of the world need to be protected for the sake of the future of the universe's only known planet with living beings.

HAWAII WILDFIRES LEAVE AT LEAST 93 PEOPLE DEAD: WHAT IS HAPPENING?

Large-scale wildfires have been sweeping the US state of Hawaii since Tuesday (August 9), with the death toll reaching 93 as of Sunday and is expected to rise in the coming days.

Hawaii is an archipelago in the Pacific Ocean that is known for its picturesque natural beauty and is a famous tourist spot. The ongoing fires have particularly affected Maui island (located 167 km from the capital city of Honolulu) with significant damage to the town of Lahaina, a site of historical and cultural importance.

What is happening in Hawaii?

The extent of the fires likely had to do with the weather conditions prevailing in the state this summer. According to Associated Press, dry weather and strong winds from a passing hurricane were major contributors to the blaze.

What is the historical significance of Maui and Lahaina?

Lahaina was the one-time capital of the former Hawaiian kingdom from 1820 to 1845. The town was once the royal residence of King Kamehameha, who unified Hawaii under a single kingdom by defeating the other islands' chiefs. Kings and queens are buried in the graveyard of the 200-year-old stone Waivee Church. Later named Waiola, the church that once sat up to 200 people was photographed apparently engulfed in flames this week.

Why have the fires in Hawaii been so devastating?

The role of human factors – such as how the evacuation was carried out and whether it was done quickly enough – will be known as further details emerge in the next few days. However, the role of climate-related factors is being discussed at the moment.



Previously, massive tracts of land were occupied by irrigated pineapples and sugar cane, and as those businesses declined and ceased, the lands were taken over by invasive, fire-prone grass species. “The problem is at such a large scale, 26% of our state is now invaded by these grasses,” she said on Thursday.

Even wind movements may have had a role to play. Hurricane Dora, which passed south of the islands this week, is adding to the low-pressure system and increasing the difference in air pressure to create “unusually strong trade winds,” said Genki Kino, a meteorologist with the National Weather Service office in Honolulu. Hawaii’s state climatologist, Pao-Shin Chu, said he was caught off guard by the impact Dora had from roughly 500 miles (800 kilometres) away. “Hurricane Dora is very far away from Hawaii, but you still have this fire occurrence here. So this is something we didn’t expect to see,” he said.

Finally, climate change has been noted in the instances of increasing forest fires in recent years and Hawaii is likely no exception to this phenomenon. As mean temperatures rise everywhere, the air gets warmer, aiding the necessary conditions required for storms to occur.

CAN ZOOM USE AUDIO, VIDEO FROM CALLS TO TRAIN ITS AI?

A change in Zoom’s terms of service is raising alarm bells on social media, with users concerned that the move could allow the popular video conferencing platform to use audio and video from Zoom calls to train its artificial intelligence (AI) algorithms.

“Zoom terms of service now require you to allow AI to train on ALL your data — audio, facial recognition, private conversations — unconditionally and irrevocably, with no opt out,” read one widely-shared tweet this week that has since been deleted, the Associated Press reported.

The company has been quick to clarify that such data will not be used without users’ consent. But, there is a catch.

What was the change in Zoom’s policy that raised privacy fears?

In March, the company updated its terms of service which said that by using the service, a user was granting it perpetual, worldwide, non-exclusive, royalty-free, sublicensable, transferable licence and all other rights to process customer content for “product and service development, marketing, analytics, quality assurance, machine learning, artificial intelligence, training, testing ...”

What this essentially meant is that Zoom, under these terms of service, would be able to use any content from Zoom calls, including audio and video, for its own purposes, specifically to train its AI.

For privacy advocates, this was a cause of concern. As US Congresswoman Jan Schakowsky (D-Ill) put it in her statement: “This [Zoom’s terms of service] is yet another example of a tech company taking away an individuals’ right to their own data.”

How has Zoom addressed these concerns?

However, after users raised red flags, the company made a further update to its policy and said, “Notwithstanding the above, Zoom will not use audio, video or chat Customer Content to train our artificial intelligence models without your consent.”



In a blog post, Zoom’s chief product officer Smita Hashim said that its intention with the change was to make sure that if it provided value-added services (such as a meeting recording), it would have the ability to do so without questions of usage rights.

“The meeting recording is still owned by the customer, and we have a licence to that content in order to deliver the service of recording. An example of a machine learning service for which we need licence and usage rights is our automated scanning of webinar invites / reminders to make sure that we aren’t unwittingly being used to spam or defraud participants,” she clarified.

Does this mean Zoom will not use any data to train its AI?

Not really. Zoom said it will use “service generated data” which it considers belongs to the company. Service generated data includes telemetry, diagnostic data, etc.

“We wanted to be transparent that we consider this to be our data so that we can use service generated data to make the user experience better for everyone on our platform. For example, it is helpful to know generally what time of day in a particular region we have heavy usage so we can better balance loads in our data centres and provide better video quality for all of our users,” Hashim said in her blog post.

How will consent work for data fed into Zoom’s AI?

Zoom said that it will not use audio and video data from calls for training its AI without a user’s consent. This is where the catch lies. The problem here is that the company allows one person – the host of a particular meeting on Zoom – to offer such consent on behalf of all other participants.

As a person on such a call where the host has consented to sharing data with Zoom’s AI, one has only two options – either to accept Zoom’s terms or to leave the meeting. Users can not individually opt-in or opt-out of the service if they are not the host of a call.

“If the administrator consents and it’s your boss at your work who requires you to use Zoom, how is that really consent?” Katharine Trendacosta, director of policy and advocacy at the Electronic Frontier Foundation, asked.

GERMANY OKAYS ‘CONTROLLED’ USE OF CANNABIS

The German government approved a draft law on Wednesday legalising the purchase and possession of cannabis for recreational use, with the Health Minister pushing back against criticism of the controversial plans.

The legislation would allow adults to possess up to 25 grams of cannabis and grow up to three plants for personal use.

People would also be allowed to join non-profit “cannabis clubs” of up to 500 members where the drug can be legally cultivated and purchased.

The Bill still needs to be approved by lawmakers in German Parliament, who return from their summer break on September 4.

Health Minister Karl Lauterbach called the draft law “a turning point” in Germany’s attitude towards cannabis.



The more relaxed approach would crack down on the black market and drug-related crime, ease the burden on law enforcement and allow for safer consumption of marijuana, he said at a Berlin press conference.

Minors will still be prohibited from using the drug, and the government will launch a campaign warning of the health risks for young people especially, he added.

“We want to limit consumption and make it safer,” Mr. Lauterbach said.

CENTRIFUGAL FORCE – MEET THE RESISTANCE

Ever felt a force pushing you outward, away from the centre, when you are riding a merry-go-round? It's the centrifugal force. It is a force that an object perceives when it is moving in a curved path – always in the direction away from the centre of the path of rotation.

The centrifugal force is often called an actual force but it is really the product of inertia – the tendency for an object to maintain its state of motion. Unlike actual forces, which arise from an interaction between forces like gravity or magnetism, the centrifugal force arises when an object resists a change of direction. And moving on a curved path is to constantly change direction.

Research laboratories, the pharmaceutical and dairy industries, and the nuclear-energy sector around the world put this resistance to clever use in a machine called the centrifuge. Mixtures of substances are placed in small containers that are spun very fast. The centrifugal force pushes on each component of the mixture according to its density. So the less-dense components are separated from their denser counterparts.

But you can see the force at work in the humble washing machine itself, which dries clothes in the spin cycle by expelling water from them using the centrifugal force.

CRAMP AND RELIEF

Q: Why do people get cramps and how does massage help?

A1: A cramp is a sudden, painful, and involuntary contraction of a muscle. It generally affects the legs and hands. It can occur due to various reasons, such as metabolic abnormality, severe cold, lack of blood flow, and mineral deficiency.

All these elicit pain or other types of sensory impulses that are transmitted from the muscle to the spinal cord, thus causing reflexive muscle contraction. The contraction in turn stimulates the same sensory receptors more, which causes the spinal cord to increase the intensity of contraction. So a positive feedback mechanism occurs so that a small amount of initial irritation leads to more and more contraction until a full-blown muscle cramp ensues.

Massage helps to overcome cramp mainly by stretching the cramped muscle. In other words, it elicits what can be termed as ‘reciprocal inhibition’ of the muscle. This can at times relieve the cramp.

A2: Cramps can occur due to a localised muscle spasm. The pain or uneasiness is caused by nervous irritation due to accumulation of some ‘metabolites’ or chemicals in that area.



Massage – an external compression of muscle – improves blood supply and helps in washing away these metabolites, and thus relieves the cramp. However, not all cramps can be relieved by massages.

PIG KIDNEY WORKS IN A DONATED BODY FOR OVER A MONTH, A STEP TOWARD ANIMAL-HUMAN TRANSPLANTS

Surgeons transplanted a pig’s kidney into a brain-dead man and for over a month it’s worked normally — a critical step toward an operation the New York team hopes to eventually try in living patients.

Scientists around the country are racing to learn how to use animal organs to save human lives, and bodies donated for research offer a remarkable rehearsal.

The latest experiment announced Wednesday by NYU Langone Health marks the longest a pig kidney has functioned in a person, albeit a deceased one -- and it’s not over. Researchers are set to track the kidney’s performance for a second month.

“It looks even better than a human kidney,” Montgomery said on July 14 as he replaced a deceased man’s own kidneys with a single kidney from a genetically modified pig — and watched it immediately start producing urine.

The possibility that pig kidneys might one day help ease a dire shortage of transplantable organs persuaded the family of Maurice “Mo” Miller from upstate New York to donate his body for the experiment. He’d died suddenly at 57 with a previously undiagnosed brain cancer, ruling out routine organ donation.

Attempts at animal-to-human transplants, or xenotransplantation, have failed for decades as people’s immune systems attacked the foreign tissue. Now researchers are using pigs genetically modified so their organs better match human bodies.

Last year with special permission from regulators, University of Maryland surgeons transplanted a gene-edited pig heart into a dying man who was out of other options. He survived only two months before the organ failed for reasons that aren’t fully understood but that offer lessons for future attempts.

Next, rather than last-ditch efforts, the Food and Drug Administration is considering whether to allow some small but rigorous studies of pig heart or kidney transplants in volunteer patients.

The NYU experiment is one of a string of developments aimed at speeding the start of such clinical trials. Also Wednesday, the University of Alabama at Birmingham reported another important success — a pair of pig kidneys worked normally inside another donated body for seven days.

Kidneys don’t just make urine — they provide a wide range of jobs in the body. In the journal *JAMA Surgery*, UAB transplant surgeon Dr. Jayme Locke reported lab tests documenting the gene-modified pig organs’ performance. She said the weeklong experiment demonstrates they can “provide life-sustaining kidney function.”

These kinds of experiments are critical to answer remaining questions “in a setting where we’re not putting someone’s life in jeopardy,” said Montgomery, the NYU kidney transplant surgeon who also received his own heart transplant — and is acutely aware of the need for a new source of organs.



IN TB DETECTION, INDIA FAR FROM MEETING THE 2025 GOAL

In March 2016, in his Mann Ki Baat address, Prime Minister Narendra Modi urged people to make India TB-free; in 2018 he set the target to “eliminate TB by 2025”. To fulfil this goal, the Health Ministry rolled out the National Strategic Plan (NSP) 2017-2025 to “eliminate” TB by 2025. Though the Plan outlined a paradigm shift in approach and strategy to achieve the ambitious goal, by 2020, it became clear that the NSP will not be able to meet these objectives. A new NSP 2020-2025 to end TB was launched.

On the diagnostics front, NSP 2017-2025 wanted to reduce the number of presumptive TB patients who are offered sputum smear microscopy from over 9.1 million in 2015 to 5.8 million in 2022, while increasing the number of molecular tests from 40,000 in 2015 to over 13.4 million in 2022. As per the India TB report, in 2022, India was far from reaching the ambitious target set by the NSP 2017-2025 — smear microscopy was used for detecting 77% (13.9 million) of presumptive TB cases and just 23% (4.1 million) cases were detected using a molecular test. If India failed to meet the diagnostic goals set out by NSP 2017-2025, the revised NSP 2020-2025 has raised the bar even higher for precision tests to be used for initial diagnosis. Three years after the launch of the revised NSP, India is nowhere near meeting this target.

One of the main objectives of the revised NSP is the early detection of presumptive TB cases. It says there should be “prompt diagnosis” using highly sensitive diagnostic tests for detecting presumptive TB cases “at the first point of contact” both in the private and public sectors.

Under the prioritised set of actions to be taken over the NSP period 2020-2025, the revised plan underlines the need to “scale-up advanced diagnostics services and TB surveillance capacity by replacing sputum microscopy services with new precision diagnostic tools”. And it clearly states that smear microscopy services should be replaced with precision diagnostic tools, which is molecular tests, “in all TB diagnostic centres in the country”. Three years after the revised NSP was chalked out and just two more years left for meeting the 2025 target of “eliminating” TB from the country, replacing smear microscopy services with molecular tests is yet to become a reality.

In 2022, bacteriologically confirmed cases among notified TB patients in the public sector was just 59% (1.07 million) and a meagre 28% (nearly 0.16 million) in the private sector. This could mean a sizable number of diagnoses are based on X-rays and clinical evaluation without bacteriological confirmation. Grimmer still is that results for at least rifampicin resistance among the bacteriologically confirmed TB patients was just 77% (0.82 million). Universal drug-susceptibility testing in all drug-sensitive TB cases is crucial for early identification of drug-resistant TB. The revised NSP clearly states that NTEP should provide “universal access” to drug resistance testing, which is yet to happen.

In November 2019, WHO and the Joint Monitoring Mission undertook an intensive review of the TB programme. Among the set of recommendations listed out by the team that represent the “minimum required” to fulfil the Prime Minister’s 2025 goal is the urgent need to replace smear microscopy with molecular tests across the country. To further increase the availability of advanced molecular tests across the country and at double-quick time to meet the 2025 goal, the WHO-JMM team has recommended that NTEP should utilise the molecular testing capacity available in the private sector to get 20 million molecular tests done annually.

Besides limited availability of 5,090 machines to undertake molecular tests, there are additional challenges in terms of availability of trained personnel to run these advanced tests and shortage



of molecular tests. There is huge compulsion to use the scarce resource to first test the most vulnerable groups with presumptive TB such as paediatric population, people with extrapulmonary TB, people who are HIV positive, and previously treated patients. Besides digital chest X-ray screening, the revised NSP too emphasises the need for replacing smear microscopy with rapid molecular diagnostic tests for active case finding. The revised NSP has highlighted the challenge of lack of access to the latest NAAT-based molecular tests at the peripheral health institutions for active case finding. Finally, all presumptive TB cases detected using smear microscopy need to be tested for drug resistance using molecular tests. All these challenges underline the compulsion to outsource molecular tests to the private sector to improve case detection at the first point of contact till such time universal access to molecular tests in the public sector becomes a reality.

CAN IMPROVED NUTRITION HELP PREVENT TB?

The story so far:

According to recent reports in *The Lancet* and *The Lancet Global Health*, nutritional support has helped prevent both tuberculosis (TB) among household contacts and mortality among TB patients in a trial in Jharkhand. In 2017, the World Health Organization had estimated that undernutrition is responsible for twice the number of TB cases than HIV globally. Any attempt to end/eliminate TB in India by 2025 will become possible only if undernutrition among people is addressed. As per conservative estimates, 40% of new TB cases annually in India are due to undernutrition.

What are the key achievements of the trial?

A large field-based trial was undertaken between August 2019 and August 2022 in four districts of Jharkhand by a team led by Dr. Anurag Bhargava and Dr. Madhavi Bhargava from the Yenepoya Medical College, Mangaluru in collaboration with the National Tuberculosis Elimination Programme (NTEP) and the National Institute for Research in Tuberculosis-Indian Council of Medical Research (NIRT-ICMR).

The RATIONS (Reducing Activation of Tuberculosis by Improvement of Nutritional Status) trial enrolled 2,800 people with pulmonary TB disease and 10,345 household contacts of TB patients. While all the TB patients received nutritional support, household contacts were randomly assigned to receive either nutritional support or usual diet alone. There were 5,621 household contacts in the intervention arm and 4,724 contacts in the control group.

While there were 108 (4%) deaths among TB patients across all body weights, mortality among those under 35 kg body weight (severely underweight) was 7%. In comparison, in a study carried out by the Chennai-based NIRT in Tiruvallur district, Tamil Nadu, which did not provide any nutrition support to the TB patients, mortality was 14% in those weighing under 35 kg; mortality dropped to 4% among those weighing over 35 kg. Incidence of TB deaths reduced by 12% with a one-unit increase in BMI and by 23% for a two-unit increase in BMI. With the nutritional support, at six months, the proportion of those with normal BMI increased from 16.5% to 43.5%. In general, extreme undernutrition — BMI less than 13 in men and BMI less than 11 in women — can often be fatal. However, in the current trial, more than 85% of such TB patients survived with nutritional support. Over 80% of TB patients had a BMI less than 18.5 and nearly 49% had a BMI less than 16 (severely underweight). There was 5% weight gain in the first two months which was associated with 60% lower risk of TB mortality. As per a 2022 study undertaken in India, the



absence of weight gain during treatment in patients with severe undernutrition was associated with a five-fold higher death rate.

Among the household contacts, nutritional support led to a 39%-48% reduction in TB disease in the intervention group compared with the control arm. In the study that lasted for six months, 122 people in the control group developed TB whereas the intervention arm had only 96 TB cases. There was a 39% reduction in TB incidence — pulmonary and extra-pulmonary — while there was 48% reduction in pulmonary TB. The 39%-48% reduction in TB disease in the household contact intervention arm was after adjusting for confounding factors such as TB preventive treatment to children below five years, diabetes, smoking, and alcohol use.

What was the nutritional support provided?

Each adult household contact in the intervention arm received 5 kg of rice, 1.5 kg of split pigeon peas (tur dal), and micronutrient pills every month for six months. Each child (below 10 years) household contact received 50% of the adult nutrition support. Those in the control arm did not get any nutritional supplementation.

For TB patients, monthly nutritional support included 5 kg of rice, 1.5 kg of milk powder, 3 kg of roasted chickpea flour, 500 ml of oil, and micronutrient pills for a period of six months for people with drug-susceptible TB, and 12 months for people with MDR-TB.

What effect does undernutrition have?

Many new cases of TB are attributable to five risk factors — undernourishment, HIV infection, alcohol use disorders, smoking (especially among men) and diabetes, says the WHO Global TB report 2022. In TB-endemic countries such as India, undernutrition is the most widely prevalent risk factor, accounting for the “highest population attributable risk for TB in India”. It is also responsible for increased TB disease severity, higher mortality and poor treatment outcomes. A study in India found that severe undernutrition at diagnosis was associated with a two-fold higher risk of death. As per a 2016 paper by NIRT researchers, undernutrition is an important risk factor for progression of latent TB infection to TB disease. It increases the risk of drug toxicity, TB relapse and mortality. For each unit reduction in BMI, the risk of TB increases by about 14%. Undernourished patients also tend to have poor bioavailability of drugs such as rifampicin, leading to treatment failure and development of multidrug resistance.

How do schemes like Nikshay Poshan Yojana and Ni-kshay Mitra help?

Nikshay Poshan Yojana is a direct benefit transfer (DBT) scheme for nutritional support to TB patients. It was launched in 2018. All notified TB cases are provided with a financial incentive of ₹500 per month. According to the 2022 India TB report, seven million TB patients have benefited between 2018 and 2022, and ₹2,089 crore has been disbursed during this period. Also, as of March 9, 2023, 9.55 lakh consented TB patients across India adopted by Ni-kshay Mitras will receive nutritional support.