



# CURRENT AFFAIRS for UPSC

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## INTERNATIONAL

### EXPLAINED: WHY TURKEY IS WARY OF SWEDEN AND FINLAND'S NATO BID

Turkish President Recep Tayyip Erdogan has thrown a spanner in the works of Sweden and Finland's historic decisions to seek NATO membership, declaring that he cannot allow them to join due to their alleged support of Kurdish militants and other groups that Ankara says threaten its national security.

NATO Secretary General Jens Stoltenberg has voiced confidence that the alliance will move to admit Sweden and Finland swiftly. But Erdogan's declaration suggests that the two Nordic countries' path to membership could be anything but smooth.

Turkey's approval is crucial because the military alliance makes its decisions by consensus. Any of its 30 member countries can veto a new member.

Erdogan's government is expected to use the two countries' membership bids as leverage for concessions and guarantees from its allies.

Here's a look at Turkey's position, what it could gain and likely repercussions:

#### **What's Turkey's problem with the membership bids?**

Turkey, which has NATO's second largest army, has traditionally been supportive of NATO enlargement, believing that the alliance's "open door" policy enhances European security. It has for example, spoken in favour of the prospect of Ukraine and Georgia joining.

Erdogan's objection to Sweden and Finland stems from Turkish grievances with Stockholm's — and to a lesser degree Helsinki's — perceived support of the banned Kurdistan Workers Party, or PKK, the leftist extremist group DHKP-C and followers of the US-based Muslim cleric Fethullah Gulen who Ankara claims was behind a failed military coup attempt in 2016.

Many Kurdish and other exiles have found refuge in Sweden over the past decades, as have members of Gulen's movement more recently. According to Turkey's state-run media, Sweden and Finland have refused to extradite 33 people wanted by Turkey.

Ankara, which frequently accuses allies of turning a blind eye to its security concerns, has also been angered by restrictions on sales of military equipment to Turkey. These were imposed by EU countries, including Sweden and Finland, following Turkey's military incursion into northern Syria in 2019.

Further justifying his objection, Erdogan says his country doesn't want to repeat a "mistake" by Ankara, which agreed to readmit Greece into NATO's military structure in 1980. He claimed the action had allowed Greece "to take an attitude against Turkey" with NATO's backing.

#### **What could Turkey gain?**

Turkey is expected to seek to negotiate a compromise deal under which the two countries will crack down on the PKK and other groups in return for Turkish support of their joining NATO. A key demand is expected to be that they halt any support to a Syrian Kurdish group, the Kurdish People's Protection Units, or YPG. The group is a Western ally in the fight against the Islamic State group in northern Syria but Turkey views it as an extension of the PKK.



Erdogan could also seek to use Sweden and Finland's membership to wrest concessions from the United States and other allies. Turkey wants to return to the US-led F-35 fighter jet program — a project it was kicked out of following its purchase of Russian S-400 missile defense systems. Alternatively, Turkey is looking to purchase a new batch of F-16 fighter jets and upgrade its existing fleet.

Other possible demands could include an end to an unofficial embargo on military sales to Turkey by allies; concessions from EU member countries concerning Turkey's faltered bid to join the bloc; and increased funds to help the country support 3.7 million Syrian refugees.

#### **How does this affect Turkey's image in the West?**

Turkey's threat of a veto is likely to undermine its own status in Washington and across NATO, reinforcing an image of a country that is blocking the alliance's expansion for its own profit. With the move, Turkey also risks damaging the credit it had earned by supplying Ukraine with the Bayraktar TB2 armed drones that became an effective weapon against Russian forces.

"There is no scenario under which Turkey does not end up being seen as (Russian President Vladimir) Putin's mole inside NATO," said Soner Cagaptay, an expert on Turkey at the Washington Institute. "Everybody will forget the objections linked to the PKK. Everybody will focus on the fact that Turkey is blocking NATO's expansion. It will distort the view of Turkey across (NATO)."

Cagaptay said Turkey's obstruction could also undo "the positive momentum" that had started to build in Washington regarding the sale of the F-16s. "I cannot see that sale going through at this stage," he said.

#### **Is Turkey trying to appease Russia?**

Turkey has built close relations with both Russia and Ukraine and has been trying to balance its ties with both. It has refused to join sanctions against Russia — while supporting Ukraine with the drones that helped deny Russia air superiority.

"The fact that Erdogan is derailing (the NATO) process intentionally suggests that maybe he is trying to balance the strong military support Turkey has given to Kyiv with political support to Russia," Cagaptay said.

A top Turkish politician has also expressed concerns that Finland and Sweden's membership could provoke Russia and inflame the war in Ukraine. Devlet Bahçeli, the leader of a nationalist party allied with Erdogan, said the best option would be to keep the two Nordic countries in the "waiting room."

#### **Can the move help Erdogan's ratings at home?**

The Turkish leader is seeing a decline in his domestic support due to a faltering economy, skyrocketing inflation and a cost of living crisis.

A standoff with Western nations over the emotional issue of perceived support to the PKK could help Erdogan boost his support and rally the nationalist vote before elections that are currently scheduled for June 2023.

"With dwindling domestic support at a time when Turkey is entering a critical electoral cycle, Erdogan is looking for a higher international profile to demonstrate his global importance to



Turkish voters,” analyst Asli Aydintasbas wrote in an article published in the European Council on Foreign Relations.

## WHY THE US IS WILLING TO SEND UKRAINE CLUSTER MUNITIONS NOW

The United States has decided to send cluster munitions to Ukraine to help its military push back Russian forces entrenched along the front lines.

The Biden administration is expected to announce on Friday that it will send thousands of them as part of a new military aid package worth \$800 million, according to people familiar with the decision who were not authorized to discuss it publicly before the official announcement and spoke on condition of anonymity.

The move will likely trigger outrage from some allies and humanitarian groups that have long opposed the use of cluster bombs. Proponents argue that Russia has already been using the controversial weapon in Ukraine and that the munitions the US will provide have a reduced dud rate, meaning there will be far fewer unexploded rounds that can result in unintended civilian deaths.

Here is a look at what cluster munitions are, where they have been used and why the the US plans to provide them to Ukraine now.

### WHAT IS A CLUSTER MUNITION?

A cluster munition is a bomb that opens in the air and releases smaller “bomblets” across a wide area. The bomblets are designed to take out tanks and equipment, as well as troops, hitting multiple targets at the same time. The munitions are launched by the same artillery weapons that the US and allies have already provided to Ukraine for the war — such as howitzers — and the type of cluster munition that the US is planning to send is based on a common 155 mm shell that is already widely in use across the battlefield.

In previous conflicts, cluster munitions have had a high dud rate, which meant that thousands of the smaller unexploded bomblets remained behind and killed and maimed people decades later. The US last used its cluster munitions in battle in Iraq in 2003, and decided not to continue using them as the conflict shifted to more urban environments with more dense civilian populations.

On Thursday, Brig Gen Pat Ryder said the Defense Department has “multiple variants” of the munitions and “the ones that we are considering providing would not include older variants with (unexploding) rates that are higher than 2.35%.”

### WHY PROVIDE THEM NOW?

For more than a year the US has dipped into its own stocks of traditional 155 howitzer munitions and sent more than 2 million rounds to Ukraine. Allies across the globe have provided hundreds of thousands more. A 155mm round can strike targets 15 to 20 miles (24 to 32 kilometers) away, making them a munition of choice for Ukrainian ground troops trying to hit enemy targets from a distance.

Ukrainian forces are burning through thousands of the rounds a day battling the Russians. Yehor Cherniev, a member of Ukraine’s parliament, told reporters at a German Marshall Fund event in the US this spring that Kyiv would likely need to fire 7,000 to 9,000 of the rounds daily in



intensified counteroffensive fighting. Providing that many puts substantial pressure on US and allied stocks.

The cluster bomb is an attractive option because it would help Ukraine destroy more targets with fewer rounds, and since the US hasn't used them in conflict since Iraq, it has large amounts of them in storage it can access quickly, said Ryan Brobst, a research analyst for the Foundation for Defense of Democracies.

A March 2023 letter from top House and Senate Republicans to the Biden administration said the US may have as many as 3 million cluster munitions available for use, and urged the White House to send the munitions to alleviate pressure on US war supplies.

"Cluster munitions are more effective than unitary artillery shells because they inflict damage over a wider area," Brobst said. "This is important for Ukraine as they try to clear heavily fortified Russian positions." Tapping into the US stores of cluster munitions could address Ukraine's shell shortage and alleviate pressure on the 155 mm stockpiles in the US and elsewhere, Brobst said.

#### **IS USING THEM A WAR CRIME?**

Use of cluster bombs itself does not violate international law, but using them against civilians can be a violation. As in any strike, determining a war crime requires looking at whether the target was legitimate and if precautions were taken to avoid civilian casualties.

"The part of international law where this starts playing (a role), though, is indiscriminate attacks targeting civilians," Human Rights Watch's associate arms director Mark Hiznay told The Associated Press.

"So that's not necessarily related to the weapons, but the way the weapons are used." A convention banning the use of cluster bombs has been joined by more than 120 countries, which agreed not to use, produce, transfer or stockpile the weapons and to clear them after they've been used. The US, Russia and Ukraine haven't signed on.

#### **WHERE HAVE THEY BEEN USED?**

The bombs have been deployed in many recent conflicts, including by US forces. The US initially considered cluster bombs an integral part of its arsenal during the invasion of Afghanistan that began in 2001, according to HRW. The group estimated that the US-led coalition dropped more than 1,500 cluster bombs in Afghanistan during the first three years of the conflict.

The Defense Department had been due by 2019 to stop use of any cluster munitions with a rate of unexploded ordnance greater than 1%. But the Trump administration rolled back that policy, allowing commanders to approve use of such munitions.

Syrian government troops often used cluster munitions — supplied by Russia — against opposition strongholds during that country's civil war, frequently hitting civilian targets and infrastructure. And Israel used them in civilian areas in south Lebanon, including during the 1982 invasion. During the monthlong 2006 war with Hezbollah, HRW and the United Nations accused Israel of firing as many as 4 million cluster munitions into Lebanon. That left unexploded ordnance that threatens Lebanese civilians to this day.

The Saudi-led coalition in Yemen has been criticized for its use of cluster bombs in the war with the Iran-backed Houthi rebels that has ravaged the southern Arabian country. In 2017, Yemen



was the second deadliest country for cluster munitions after Syria, according to the UN. Children have been killed or maimed long after the munitions originally fell, making it difficult to know the true toll.

In the 1980s, the Russians made heavy use of cluster bombs during their 10-year invasion of Afghanistan. As a result of decades of war, the Afghan countryside remains one of the most heavily mined countries in the world.

#### **WHAT'S HAPPENING IN UKRAINE?**

Russian forces have used cluster bombs in Ukraine on a number of occasions, according to Ukrainian government leaders, observers and humanitarian groups. And human rights groups have said Ukraine has also used them. During the early days of the war, there were repeated instances of Russian cluster bombs cited by groups such as Human Rights Watch, including when they hit near a preschool in the northeastern city of Okhtyrka.

The open-source intelligence group Bellingcat said its researchers found cluster munitions in that strike as well as multiple cluster attacks in Kharkiv, Ukraine's second-largest city, also in the northeast. More recently, in March, a Russian missile and drone barrage hit a number of urban areas, including a sustained bombardment in Bakhmut, in the eastern Donetsk region.

Just west of there, shelling and missile strikes hit the Ukrainian-held city of Kostiantynivka and AP journalists in the city saw at least four injured people taken to a local hospital. Police said Russian forces attacked the town with S-300 missiles and cluster munitions.

Just a month later, Donetsk Gov Pavlo Kyrylenko accused Russian forces of attacking a town with cluster munitions, wounding one person. An AP and Frontline database called War Crimes Watch Ukraine has cataloged how Russia has used cluster bombs.

#### **EXPRESS VIEW ON PROTESTS IN FRANCE: UNSEEN & UNHEARD**

The killing of Nahel M — a 17-year-old of North African descent — on June 27 by a police officer is, reportedly, the proximate cause for the riots that have gripped France and even spread beyond its borders. Nahel was shot by a police officer during a traffic stop, the incident was caught on camera. But as violence erupted in suburbs around Paris and spread across the country, it is becoming increasingly clear that the brutal visuals of Nahel's death were a catalyst. It is the political failure of President Emmanuel Macron, and his government, and perhaps the political class as a whole, that has been underlined by the episode.

Ever since he took office in 2017, Macron's presidency has been rocked by protests. The most significant among these was the Gilet Jaune (Yellow Vest) movement against rising prices and what was perceived as tax breaks for the rich. Then, earlier this year, a politically embattled Macron's pushing of pension reforms — which raised the working age from 62 to 64 — led to nation-wide strikes. Nahel's is reportedly the 21st fatal traffic stop shooting in France since 2020. It is being seen by many as part of a pattern, where the police victimise immigrants and citizens from the former French colonies. For long, the French idea of citizenship retained a progressive core. Yet, the fundamental promise of liberty, equality and fraternity at the heart of national identity has been unable to adapt to the idea that the French citizen is increasingly multi-lingual, or that she may, as someone whose community has faced the brutality of colonialism, have a different relationship with the state and its symbols. To be fair, for a pro-market centrist with a



diminished mandate in his second term, bridging the fundamental faultlines in France's political-economy is no easy task.

The 2022 general election saw the rise of both the far-right under Marine Le Pen and a strengthening of Left forces, led by Jean Luc Melenchon. Macron's response has been to veer rightwards and to attempt to make more space for himself on the nationalism plank. But that is little comfort to those who see in Nahel M's fate the confirmation of their insecurities. A democracy as mature as France needs a better way to deal with protests than deploying over 45,000 police personnel and arresting over 3,000 citizens. It needs to find a politics that allows the disenfranchised – whether they trace their ancestry to the former colonies and live in cities, or are farmers and workers fearful of change — to feel seen and heard.

## THE STUDENT DEBT CRISIS IN THE U.S.

### **The story so far:**

U.S. President Joe Biden has already released a new plan to cancel billions in student loan debt after the Supreme Court of the U.S. (SCOTUS) in a 6-3 decision on June 30 blocked his ambitious plan to cancel \$430 billion in debt.

### **How big is the U.S. student loan debt?**

As per the latest Federal Reserve figures, more than 45 million Americans owe a total of \$1.77 trillion in student debt to the U.S. government. As per the Congressional Research Service (CRS), approximately 63% of the U.S. population over the age of 25 has at some time enrolled in some level of higher education and roughly 17% of the country's population aged 18 or above has federal student loans. Meanwhile, the median student loan debt is just above \$17,000.

Research by the non-profit College Board suggests that over the past three decades, the cost of higher education has risen sharply in the U.S., doubling at private four-year colleges and universities and rising even further at public four-year schools. Between 2006 and 2019, the outstanding balance of student loans has nearly quadrupled. In the U.S., the federal government is the primary source of student loans, running several loan programmes to help students and their families finance higher education.

### **What are the repayment options?**

Once a student borrows a federal loan, they enter into a contractual obligation to repay the loan with interest. They can sign up for specific repayment plans, with repayment periods spanning a decade or more. Under a standard 10-year repayment plan, a borrower has to make 120 equal payments of principal and interest spread over a decade.

Then there are income-driven repayment (IDR) plans, the kind that President Biden wanted to alter in order to cancel student debt. Such plans cap the monthly payment installments at a share of the borrower's discretionary income, say 10%-15%; extend the repayment period over a span of 20 or 25 years, and forgive or write off any unpaid principal and interest remaining after that period.

### **What was Mr. Biden's original plan?**

The plan, announced in August 2022, was supposed to cancel \$10,000 in federal student loan debt for those making less than \$1,25,000 a year or households making less than \$2,50,000.



College students qualified if their loans were disbursed before July 1. The plan made 43 million borrowers eligible for some debt forgiveness, with 20 million possibly having their entire debt erased, according to the Biden administration. The White House said that 26 million people had applied for debt relief, and 16 million people already had their relief approved. As per the Congressional Budget Office, the program would cost about \$400 billion over the next three decades.

The Education Department also proposed to improve the existing income-driven plan mentioned above, capping monthly payments for undergraduate loans at 5% of a borrower's discretionary income, down from the current 10%. The administration claimed that the plan, the Revised Pay as You Earn (REPAYE) plan, would mean lowering of the average annual student loan payment by more than \$1,000 for both current and future borrowers.

### **Why did the plan run into trouble?**

There were two legal challenges to the plan which landed in the Supreme Court — one involving six Republican-led States and the other filed by two students.

In the case filed by the students, they argued, among other things, that the Biden administration didn't go through the proper process in enacting the plan. Texas-based U.S. District Judge Mark Pittman, appointed by former President Donald Trump, opined that Mr. Biden overstepped his authority. To cancel the debt, the Biden government relied on the Higher Education Relief Opportunities for Students Act, commonly known as the HEROES Act, which was enacted in the aftermath of the 9/11 attack and allows the Secretary of Education to waive or modify terms of federal student loans during times of war or national emergency. The White House cited the COVID-19 pandemic as a national emergency.

The ruling, however, argued that the HEROES Act did not accord the Secretary the authority for mass debt cancellation. The judge said it only granted flexibility during national emergencies, adding that it was unclear whether debt cancellation was a necessary response to the COVID-19 pandemic, which Mr. Biden had by then declared as over.

As for the suit by the six States— Arkansas, Iowa, Kansas, Missouri, Nebraska and South Carolina — a lower court dismissed it, ruling that the States could not challenge the programme as they were unable to show that they were harmed by it. However, the case went to a panel in the U.S. Court of Appeals for the 8th Circuit, after which, the Supreme Court agreed to weigh in. On June 30, SCOTUS held that the administration needs Congress' endorsement before undertaking such a costly programme. The majority rejected arguments that the bipartisan 2003 HEROES Act gave Mr. Biden the power that he claimed.

### **What is Mr. Biden's new plan?**

Mr. Biden announced on the day of the Court ruling that the Education Secretary had initiated a new rulemaking process for the alternative plan, this time using the Secretary's authority under the Higher Education Act (HEA), 1965, the law governing most federal student loan programmes.

Instead of the current REPAYE plan, the administration has proposed the new Saving on a Valuable Education (SAVE) plan. "This income-driven repayment plan will cut borrowers' monthly payments in half, allow many borrowers to make \$0 monthly payments, and save all other borrowers at least \$1,000 per year," says the factsheet on the plan.





The specifics remain the same — requiring borrowers to pay half the current share of discretionary income at 5%. Instead of forgiving loan balances after 20 years of annual payments, this plan also forgives outstanding principal after 10 years. Additionally, the plan seeks to raise the amount of income that is considered non-discretionary and therefore is protected from repayment. As for borrowers currently facing uncertainty, the President says they will be able to enrol for SAVE later this summer, “before any monthly payments are due.” Borrowers who sign up or are already signed up for the REPAYE plan will be automatically enrolled.

#### **What are the arguments for and against broad loan cancellation?**

Proposals for broad-scale student loan debt relief — including cancellation of all or a portion of federal student loan debt — have gained considerable attention in recent years. As the cost of education increases while wages stagnate, it has become harder for students to pay off their loans. Studies also point out how federal grants and scholarships have not kept pace with the increasing cost of education and attendance.

President Biden has explained the need for loan cancellation by arguing that higher education “should be a ticket to a middle-class life, but for too many, the cost of borrowing for college is a lifelong burden that deprives them of that opportunity.” A White House factsheet notes that middle-class American borrowers struggle with high monthly payments and “ballooning balances that make it harder for them to build wealth”.

CRS Research also points to the composition of borrowers, of which “black students were more likely to borrow” loans for undergraduate and graduate education “relative to any other racial or ethnic subgroup”. It also finds that certain groups of borrowers (Black, American Indian, and lower-income borrowers) have made less progress in paying down the original principal of debt when compared with other borrowers.

The government also noted how student debt burden falls disproportionately on Black borrowers. “Twenty years after first enrolling in school, the typical Black borrower who started college in the 1995-96 school year still owed 95% of their original student debt,” the White House factsheet on student debt reads.

On the other hand, critics of broad-based cancellation of loans point out how a one-time loan cancellation may fail to address the underlying causes of crushing loan debt. One major cause is the skyrocketing cost of education and the need for an overhaul of the system.

Analysts have highlighted that policies providing broad loan cancellation may result in higher-income households receiving more cancellation benefits compared to lower-income households when the total dollar amounts cancelled or the savings in annual debt service payments are looked at. Besides, large cancellation plans may also significantly impact federal budgets and debt.

### THE RISKS OF THE ZAPORIZHZHIA NPP

#### **The story so far:**

Nuclear power plants (NPPs) are complex and sophisticated facilities with several layers of safety measures, but no NPP in the world is built to withstand war – yet this is the risk that has befallen the Zaporizhzhia NPP in Ukraine. It was taken over by Russian forces in May 2022 and has since had to operate in conditions that threaten safety. In June, a Lithuania-based NGO named the



Bellona Foundation published a report analysing the risks associated with the hostilities around the Zaporizhzhia NPP based on the facility's design, safety measures, and the local geography.

#### **What is the reactor design?**

The Zaporizhzhia NPP is located southwest of Zaporizhzhia city, along the Dnieper river. It has six VVER-1000 reactors for a total power generation capacity of 6 GW. The reactor complex consists of the reactor vessel, in which uranium-dioxide fuel rods are immersed in water and control rods are inserted at the top. The water is both coolant and moderator. A pressuriser holds the water at a high but constant pressure — around 150 atm — to prevent it from boiling. This is the primary cooling circuit. As the water heats up, the heat is moved to a secondary cooling circuit, where it converts a separate volume of water into steam. This steam is fed to turbines to generate electricity.

In this design, the water in the primary circuit does not leave the reactor vessel at any time. In RBMK reactors like at Chernobyl, the coolant and the moderator are different (light water and nuclear graphite respectively) and the coolant — which is radioactive for having been exposed to the nuclear fuel — flows out of the reactor vessel. One reason why Chernobyl became a disaster was because when the reactor was breached, the superhot graphite caught fire when it came in contact with air. Unlike Chernobyl, the VVER-1000 reactor and its power-generation units at Zaporizhzhia are placed inside a large airtight chamber called a containment.

#### **What is the risk at Zaporizhzhia?**

The Bellona report evaluated the risk of different types of accidents at the facility based on the types of damage sustained. In the worst case scenario, the containment is completely damaged and a projectile strikes a reactor while it is generating power.

The principal danger here is that the primary circuit water could depressurise as steam and escape into the air, along with radioactive material and other volatile substances. This mixture will contain the isotope iodine-131, which is easily dispersed by winds and accumulates in and damages the thyroid gland in humans. It has a half-life of around eight days and so, per the report, “would only pose a threat for several weeks”. A breach and depressurisation would also release caesium-137, which has a half-life of 30 years and was responsible for contaminating much of Chernobyl's surroundings after the accident. How either isotope is dispersed depends on the immediate weather, especially the strength and direction of the wind.

That being said, due to design differences, what was released in sustained fashion at Chernobyl for around a week is likely to be released in a single, short burst at Zaporizhzhia. This could keep the fallout to within 100 km.

#### **Are there best-case scenarios?**

If the reactors are shut for a few months, the iodine-131 will almost completely decay, removing an important threat. If a reactor has been in cold-shutdown (a shutdown where the primary circuit is almost at atmospheric pressure), then the chances of an explosive leak also drop. Since September 10, 2022, the six reactors at Zaporizhzhia have been shut. In late 2022, two were placed in a state of semi-hot shutdown, meaning the primary circuit was held at 200 degrees Celsius with heat from the decaying nuclear fuel. This was required to provide heat at the facility and for the nearby town of Energodar.

As of May 2023, all reactors but the sixth were in cold-shutdown.

**3<sup>RD</sup> FLOOR AND 4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR**



### What are the other concerns?

The Bellona report discussed several possibilities based on combinations of conditions. One was the 'Fukushima scenario' — when the NPP becomes disconnected from the external power grid. This is dangerous because, when nuclear reactions are not happening in the reactor, the nuclear fuel has to be cooled, which means the coolant pumps need to operate. If they don't, the fuel could become hot enough to melt through the reactor's bottom, where it will contaminate soil, air, and water.

A final concern is the working conditions of the 3,000 or so people at the plant, most of whom have refused to sign new employment contracts with their new Russian employers, amid, among other things, uncertainties over the management, violations of protocol, and "suspicions of disloyalty".

## IRAN'S INDUCTION IN THE SHANGHAI COOPERATION ORGANISATION

### The story so far:

As Iran joins the Shanghai Cooperation Organisation (SCO) as its ninth member, leaders of the SCO at a virtual summit chaired by Indian Prime Minister Narendra Modi on July 4 stressed that the formation of a "more representative" and multipolar world order is in the global interest.

### What is the SCO?

The SCO was built on the 'Shanghai Five' grouping of Russia, China, Kazakhstan, Kyrgyzstan and Tajikistan, which had come together in the post-Soviet era in 1996, in order to work on regional security, reduction of border troops, and terrorism. In 2001, the Shanghai Five inducted Uzbekistan into the group and named it the SCO. The organisation has two permanent bodies — the SCO Secretariat based in Beijing and the Executive Committee of the Regional Anti-Terrorist Structure in Tashkent.

### What are the main goals of the SCO?

The SCO describes its main goals as: "strengthening mutual trust and neighbourliness among the member states; promoting their effective cooperation in politics, trade, economy, research and technology and culture... making joint efforts to maintain and ensure peace, security and stability in the region; and moving towards the establishment of a democratic, fair and rational new international political and economic order." The latter part of the statement which calls to build a "new international political and economic order" did not sit well with the U.S. and Europe, and has led to the SCO being dubbed as "anti-NATO" for proposing military cooperation. This concern was further heightened when heavy sanctions were placed on Russia for its actions in Crimea and China came to its aid, signing a \$400 billion gas pipeline agreement. Since then, through the personal bond between Russian President Vladimir Putin and Chinese President Xi Jinping, the SCO has become a platform for Eurasian cooperation in a region rich with energy resources.

### Has SCO dealt with bilateral issues?

India and Pakistan joined the SCO as observers in 2005, and were admitted as full members in 2017. Since 2014, India and Pakistan have cut all ties, talks and trade with each other. However, both countries have consistently attended all meetings of the SCO's three councils — the Heads of State, Heads of Government, Council of Foreign Ministers. Despite the fact that India accuses



Pakistan of perpetrating cross-border terrorism at every other forum, at the SCO, Indian and Pakistani armed forces take part in military and anti-terrorism exercises together, as part of the SCO-Regional Anti-Terrorist Structure. Not only Pakistan, the SCO has also facilitated talks between India and China on the Line of Actual Control (LAC) border issue.

#### **Why is Iran's induction significant?**

While the SCO's original goals focused more on stability and security, recent declarations have put the focus squarely on connectivity in the region. For India, that has built its connectivity strategy through Iran's Chabahar port, where it operates a terminal and through the International North South Transport Corridor that goes through Iran and Central Asia to Russia, the entrance of Iran in the SCO is an important milestone. To begin with, Iran's presence ensures support for New Delhi's moves to circumvent land-based trade through Pakistan, which has blocked transit trade for India.

Uzbekistan President Shavkat Mirziyoyev said that Central Asian states that are double land-locked will seek to build a multimodal trade route via Afghanistan to ports in both Pakistan and Iran. It also allows India to conduct trade with the region while staying out of China's Belt and Road Initiative. In addition, the induction of Iran, a historically close partner of India that has also suffered from terrorism emanating from Pakistan and Afghanistan will bolster India's push for an end to terror safe havens. Where the government may find some unease in a more vocal support for Iran is in the fact that the SCO is increasingly seen as an "anti-West" forum, and Iran, like Russia is under severe sanctions. In addition, the U.S. has accused Iran of supplying weapons to Russia, and the expected induction of Belarus next year will only strengthen this image of the SCO, even as India strengthens ties with the Quad, making the Indian balancing act more difficult.

#### **EXPRESS VIEW: A BIGGER BRICS**

The rush to join BRICS, the grouping that brings together Brazil, Russia, India, China and South Africa and represents 40 per cent of the world's population and 23 per cent of global GDP, has sometimes been explained as triggered by FOMO, a fear of missing out. The geopolitical shifts in the world from the time of Russia's invasion of Ukraine, have set off frenetic group shopping as middle-sized countries with decent economies in the global south look for both voice and leverage. Both are potentially possible in BRICS, made up of five regional heavyweights. More than 20 countries are in the queue. If media reports are correct, five applicants — Saudi Arabia, Indonesia, the UAE, Egypt and Argentina — may be granted membership this August at the Cape Town summit. While it is always desirable to have bigger groupings than small clubs, especially when the stated aim of the group is to project the interests of the non-monolithic global south, an increase in membership is also likely to weigh the group in favour of China, the world's second largest economy. Other than the five possible new entrants this year, those waiting to join are also part of the Chinese Belt and Road Initiative.

Inherent in this is the likelihood of such a grouping being projected as a Chinese-led anti-American bloc. Understandably, Delhi, which has in recent days demonstrated a new resolve in taking the bilateral relationship with the US to a new level, has been wary of expansion. Indeed, the long line of aspiring members is seen already as fuelled by China, with the tacit backing of Russia. Last year's BRICS declaration reflects India's concern that any addition of new members must follow the carefully thought out objective criteria for membership, mutually discussed among the present members, so that all are on the same page regarding the logic of expansion.



At the BRICS foreign ministers' meeting last month, external affairs minister S Jaishankar called BRICS expansion a "work in progress" that had to take into consideration how the present BRICS countries worked with each other, and how BRICS works with non-BRICS countries. Realising perhaps that it may not be able entirely to stave off an expansion — many of the candidates are friends of India too — Delhi appears to have come to terms with a limited addition of five members. The challenge would be for the original BRICS members — India, Brazil and South Africa (remember IBSA?) — and the new entrants to ensure that the group does not become a Chinese bandwagon.

## WHAT IS CHINA'S NEW LAW ON FOREIGN RELATIONS?

### The story so far:

On June 28, China's National People's Congress, the Communist Party-controlled legislature, adopted a new Law on Foreign Relations of the People's Republic of China, which came into effect on July 1. The law will tighten President Xi Jinping's control over foreign policy, which has, since his taking office in 2012, become increasingly centralised.

### What is the new law?

The law involves foreign affairs, and as the very first article puts it, it was drafted to "safeguard China's sovereignty, national security and development interests". Explaining the need for the law, an unnamed official of the National People's Congress (NPC) told state media the "legal system concerning foreign affairs still has some shortcomings" and "gaps exist in laws safeguarding national sovereignty, security and development interests." The official said that "speeding up the building of the legal system concerning foreign affairs will help China more effectively deal with risks and challenges."

The broader aim of the law appears to be aimed at giving a legal stamp to many of the key objectives of Chinese foreign policy under Mr. Xi, and to make it a punishable offence if individuals or organisations were deemed to act against those objectives. In a similar vein, a border law was adopted in October 2021 that warned against "any act that undermines territorial sovereignty and land boundaries".

**DreamIAS**



## NATION

### OMINOUS SIGNS

Ahead of planned rallies by pro-Khalistan separatists in the U.S., the U.K., Canada and Australia on July 8 that target Indian diplomatic missions and diplomats, the Indian government has taken steps to speak to officials in these countries for added security and vigilance. The issue was raised by National Security Adviser Ajit Doval in talks with his British counterpart in Delhi on Friday, and was the subject of calls between the Ministry of External Affairs (MEA) and its counterparts in all partner countries, requesting pre-emptory action. Posters in these countries have billed the protests as “Kill India” and “Khalistan Freedom” rallies, exhorting supporters to march to Indian missions. What is worrying is that the posters sport the photographs of India’s top diplomats posted in these countries. The protests — after the attacks on Indian missions, arson attempts and vandalism — indicate a sharp uptick in separatist activity overseas and have left New Delhi concerned. However, they should be of far greater concern to the countries incubating these groups, as they involve their citizens. The rallies planned for Saturday put the respective governments on notice — to ensure adequate protection to Indian diplomatic interests, as obligated under international conventions. In addition, it is a test of their resolve to investigate groups threatening violence, gathering and sharing intelligence on any organisations supporting them to plan or carry out attacks or a terror strike like the 1985 bombing of an Air India flight. Above all, these governments must not use “freedom of speech” tropes as a cover for failing to prevent criminal acts.

While the onus remains on the four countries where pro-Khalistan attacks have increased, New Delhi must also reconsider its public diplomacy on the issue. Repeatedly calling out foreign governments for their failure to respond to Indian requests, freezing diplomatic contact, tit-for-tat retaliatory measures such as downgrading security for the British High Commission might be demonstrative, but hardly diplomatically effective. In addition, with the exception of the U.S, the MEA has regularly summoned top diplomats of the countries named, to *démarche* them over attacks (there is often no distinction made between violent attacks and graffiti). While the government is justified in raising concerns over the safety of Indian citizens and Indian property, it must leave law and order issues and policing to the sovereign government in that country. New Delhi’s vocal protests on behalf of the Indian diaspora and community centres targeted by pro-Khalistan groups, for example, fail to recognise that, most often, the victims and perpetrators are of Indian origin. Given the rising protests and the alarming nature of the threats, the need of the hour is more cooperation, and not brinkmanship, between the governments, and a mechanism to share information, intelligence and discuss solutions to growing violence by such groups.

### PENDING FOR TWO YEARS, SC TO TAKE UP PLEAS AGAINST DILUTION OF ARTICLE 370 ON JULY 11

A Constitution Bench, led by Chief Justice D.Y. Chandrachud, will take up on July 11 a series of petitions challenging the dilution of Article 370 of the Constitution, which deprived Jammu and Kashmir of its special privileges and led to the bifurcation of the then State in 2019.

The five-judge Bench, besides the CJI, would have Justices Sanjay Kishan Kaul, Sanjeev Khanna, B.R. Gavai and Surya Kant as Associate Judges. The five judges are the senior-most in the court and also members of the Supreme Court Collegium. Justices Khanna, Gavai and Kant are in line to be CJIs, as per seniority norm in the future.

**3<sup>RD</sup> FLOOR AND 4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR**



The case was last mentioned by the petitioners on February 17 for early listing and the CJI had agreed to give a specific date for the hearing.

The Article 370 case has been pending in the Supreme Court for over two years. The case had not come up after a five-judge Bench refused to refer the petitions to a larger Bench in March 2020. The petitions have challenged a Presidential Order of August 5, 2019, which took away special status under Article 370 of J&K. The Article had accorded special rights and privileges to the people of J&K since 1954 in accordance with the Instrument of Accession.

The special status was bestowed on J&K by incorporating Article 35A in the Constitution. Article 35A was incorporated by an order of President Rajendra Prasad in 1954 on the advice of the Jawaharlal Nehru Cabinet.

Parliament was not consulted when the President incorporated Article 35A into the Constitution through a Presidential Order issued under Article 370. Following the abrogation, the Jammu and Kashmir (Reorganisation) Act of 2019 came into force and bifurcated the State into the Union Territories of J&K and Ladakh.

In a day, J&K had lost its full statehood and became a Union Territory. The move had been preceded by a state of lockdown in the Valley. The various petitions have challenged the Centre's "unilateral" move to impose curfew and unravel the unique federal structure of India by dividing J&K "without taking consent from the people". They have questioned the Centre's move, under cover of President's Rule, to "undermine crucial elements of due process and the rule of law".

Separate petitions have contended that the August 5 order and the Jammu and Kashmir (Reorganisation) Act of 2019 were arbitrary. They have also challenged the proclamation of President's Rule in the State in 2018. The petitions have said what happened to J&K "goes to the heart of Indian federalism". They said the Presidential Order took cover of a temporary situation, meant to hold the field until the return of the elected government, to accomplish a fundamental, permanent and irreversible alteration of the status of the State of J&K without the concurrence, consultation or recommendation of the people of that State. The NC, the PDP and the CPI(M) welcomed the court's decision to hear petitions challenging the dilution of Article 370.

## RELIEF, AGAIN

For the second time in the same case, the Supreme Court has intervened to grant a welcome respite to activist Teesta Setalvad, who is being prosecuted on charges relating to her role in helping victims of the Gujarat riots pursue justice. The Court has extended till July 19 its interim stay on a Gujarat High Court decision denying her regular bail and directing her to surrender immediately. At first blush, it may appear that the Court was unusually accommodative when it formed a Bench to hear her plea against the High Court order on the same day, and a larger Bench after the one with two judges differed on granting her interim protection from arrest. However, the circumstances are equally unusual and indicate an attempt to keep her in prison for as long as possible. The present case arose from observations by a Bench of the Court virtually canvassing for her arrest and prosecution for "keeping the pot boiling" — a reference to Ms. Setalvad helping victims such as Zakia Jafri to seek justice for killings during the 2002 pogrom. The police lost no time in registering an FIR against her and former IPS officers R.B. Sreekumar and Sanjiv Bhatt, accusing them of fabricating evidence and tutoring witnesses to make statements that showed an alleged plot to implicate key functionaries of the Gujarat government, including the then Chief Minister Narendra Modi.



In September last year, the Court had given her interim bail, following an unusual postponement of her bail hearing in the High Court from August 3 to September 19, 2022. She had by then spent over two months in prison, and was questioned in custody. With the charge sheet having been filed, and the accused having spent considerable time in custody, it was a good case for grant of bail on merits. The Court had asked the High Court to decide on her regular bail application independently. The High Court cited the “gravity of the offence” and the material against her to deny her bail and reject a request to suspend the order for some time. It went so far as to observe that giving her bail would widen communal polarisation. One of the Supreme Court judges found it strange that someone who has been out of prison for nine months was denied even a few days’ time to surrender. As the Supreme Court has said in the past, protection of personal liberty should be ensured at least for a limited duration so that citizens may pursue their legal remedies. The prosecution’s zeal should not alone determine who is free and who is in jail.

### THWARTING TWITTER

It is unfortunate that the petition by Twitter, Inc. challenging the validity of the spate of blocking orders passed by the Union government was rejected by the Karnataka High Court. While success in litigation involving the government’s power to restrict speech and expression on grounds permitted in Article 19(2) of the Constitution was always expected to be difficult, it is disconcerting that the court refused to countenance all arguments based on the absence of notice to users and the apparent lack of proportionality involved in large-scale suspension of accounts and posts that contained political content, especially dissenting views against the government’s farm laws and the farmers’ protests they sparked. There was some expectation that judicial review will temper the authorities’ zeal to go in for account-level blocking rather than ordering the removal of specific tweets, links or URLs that it deemed injurious to public order or national security. What is quite disappointing is that the court both ruled that Twitter cannot espouse the cause of its users who have voiced no grievance and discouraged an intervenor from among those who suffered account-level suspension. It ruled that a foreign entity such as Twitter could not invoke the constitutional guarantee of free speech and expression on behalf of users. In the ultimate rebuff to the platform, the court imposed costs of ₹50 lakh for indulging in much-delayed “speculative litigation” despite not complying with the blocking orders for a long period and then doing so only under protest.

There is little doubt that social media content can degenerate into incitement, hate speech and hostile propaganda against the state or its instrumentalities. Laws exist in most countries to order intermediaries such as social media platforms and Internet service providers to remove any offending content, but it is a common principle that established democracies should frame policies and regulations rooted in fairness and natural justice, and not impose undue curbs on freedom of speech and expression. Section 69A of the IT Act, which sets out the power to issue blocking orders, was upheld by the Supreme Court in *Shreya Singhal (2015)* mainly on the ground that it came with adequate procedural safeguards. Twitter argued that lack of notice to the originators of content and the account users was in breach of that verdict. The court has ruled that issuing notice to users was not mandatory, especially when they may not be identifiable. Conclusions such as this, and the wide berth given to authorities to opt for account-level blocking may require reconsideration. A definitive verdict from the Supreme Court may be needed to clarify both the rights and obligations of large media companies in relation to user-generated content.





## PAY HALF OF FINE TO INFORMER: COURT'S BID TO SPUR ANIMAL PROTECTION

In a first-of-its-kind judgment, a Sessions Court in Hanumangarh district of Rajasthan has ordered the payment of half of the fine amount, imposed on a convict in a chinkara killing case, to the informer as a prize for helping in the detection of crime against wildlife. The court said it would make the society sensitive to wildlife protection.

Chinkara or Indian gazelle is the State animal of Rajasthan. A Judicial Magistrate's court in Rawatsar had last year sentenced Mana Ram to three years' imprisonment with a fine of ₹1,000 under the Wildlife Protection Act, 1972, for killing a chinkara on July 12, 2011. The sentence was suspended on the same day and the convict was released on bail.

Mana Ram was arrested after policemen at Dhannasar post were tipped off by informer Rajendra Bishnoi that the former was seen on a camel cart with the carcass of a chinkara. Mana Ram admitted to have hunted the chinkara with his licensed gun and having burnt its horns and some other parts of its body near the scene of the crime.

Following his conviction by the Magistrate's court, Mana Ram moved an appeal in the court of the Additional District and Sessions Judge at Nohar. Judge Rajendra Choudhary upheld his conviction and sentence on Monday, while dismissing his appeal, and directed that 50% of the amount of fine be paid to Mr. Bishnoi as a prize, as it would encourage the people to report the killing of endangered animals to the authorities.

Mana Ram's counsel raised the plea of the failure of the police to seize his gun while contending that his client was falsely implicated in the crime. The court rejected the argument, while citing a Supreme Court judgment of 2021, holding that mere non-seizure of a weapon could not be a ground to acquit an accused when his presence and use of firearm had been established and proved.

The court said in its 12-page judgment that though the Wildlife Protection Act had declared the hunting of scheduled species of wild animals a serious offence, the incidents of killing them were still being reported.

The court praised Mr. Bishnoi's role in exposing the crime by his timely information.

The Additional Sessions Judge said Section 55(c) of the Wildlife Protection Act empowered the court to take cognisance of an offence on the complaint of a private person. Besides, Article 51A (g) of the Constitution had laid down that the protection of wildlife and having compassion for living creatures was a fundamental duty of the citizens, the court said.

## HOW DEFINITE IS 'MODI' AS A 'COLLECTION OF PERSONS'?

The Gujarat High Court has held that the 'Modi' community or surname is a "well-defined identifiable and suable class". In fact, Justice Hemant Prachchhak, in his 125-page judgment, said Mr. Gandhi's offence is all the more serious because his "thief" remarks affected a large section of society and not just Prime Minister Narendra Modi.

Mr. Gandhi, who faces a two-year sentence for criminal defamation, has argued that "authentic literature shows that the word 'Modi' does not indicate any definite group of persons".



Mr. Gandhi said the complainant's claim that 13 crore people belong to the Modi community was a "mockery of law" as it would mean anyone could file for defamation. The surname 'Modi' is used even within the Muslims and Parsis besides a number of Hindu castes, Mr. Gandhi's lawyers had contended.

Explanation 2 to Section 499 of the IPC provides that criminal defamation extends to a "collection of persons". But the "collection of persons" should be clearly identifiable and definite. It should be "boundaried" and devoid of "woolly edges", the SC said in its 2016 Subramanian Swamy judgment.

The top court's 1965 verdict in Sahib Singh Mehra versus State of Uttar Pradesh case defines the contours of the phrase "collection of persons" in Explanation 2. The top court held that "a collection of persons must be identifiable in the sense that one could, with certainty, say that this group of particular people has been defamed, as distinguished from the rest of the community".

## STANDING UP FOR NATIONAL ANTHEM: WHAT THE SUPREME COURT HAS RULED

An executive magistrate in Srinagar has sent 11 men to jail after they were detained for allegedly not rising for the National Anthem at an event on June 25 where J&K Lt Governor Manoj Sinha was present.

### **Bijoe Emmanuel case**

The law around alleged disrespect to the National Anthem was laid down by the Supreme Court in its 1986 judgment in *Bijoe Emmanuel & Ors vs State Of Kerala & Ors*.

The court granted protection to three children belonging to the millenarian Christian sect Jehovah's Witnesses, who did not join in the singing of the National Anthem at their school. The court held that forcing them to sing the Anthem violated their fundamental right to religion under Article 25 of the Constitution.

The children, siblings named Bijoe Emmanuel, Binu, and Bindu, who were students of Classes 10, 9, and 5 respectively, were expelled from NSS High School, run by the Hindu organisation Nair Service Society, on July 26, 1985.

Their parents pleaded unsuccessfully before the Kerala High Court that Jehovah's Witnesses permitted worship of only Jehovah (a form of the Hebrew name for God), and since the Anthem was a prayer, the children could stand up in respect, but could not sing.

In its August 11, 1986 judgment, the Supreme Court said that "Article 25 ("Freedom of conscience and free profession, practice and propagation of religion")...[was] incorporated in recognition of the principle that the real test of a true democracy is the ability of even an insignificant minority to find its identity under the country's Constitution."

Standing up respectfully when the National Anthem is sung — as the children had done — but not singing oneself "does not either prevent the singing of the National Anthem or cause disturbance to an assembly engaged in such singing so as to constitute the offence...[under] the Prevention of Insults to National Honour Act, [1971]," the court said.

Section 3 of the Act prescribes jail up to three years and/ or a fine for "intentionally prevent[ing] the singing of the National Anthem or caus[ing] disturbance to any assembly engaged in such singing".



The court held that the children’s expulsion as a result of their “conscientiously held religious faith...was a violation of their Fundamental Right to freedom of conscience” and to freely profess, practise and propagate their religion.

#### **The debate revisited**

The Supreme Court revisited the matter in *Shyam Narayan Chouksey vs Union of India* (2018). While hearing the case, the court had, on November 30, 2016, passed an interim order that “All the cinema halls in India shall play the National Anthem before the feature film starts and all present in the hall are obliged to stand up to show respect to the National Anthem.”

The court had also ordered that “entry and exit doors shall remain closed” when the Anthem is played, and that “when the National Anthem shall be played...it shall be with the National Flag on the screen”.

However, in its final judgment in the case passed on January 9, 2018, the court modified its 2016 interim order. “The order passed on 30th November, 2016, is modified to the extent that playing of the National Anthem prior to the screening of feature films in cinema halls is not mandatory, but optional or directory,” the court said.

The court’s decision to modify the 2016 order came after it was informed by the Centre that a 12-member inter-ministerial committee had been formed to frame guidelines for occasions on which the National Anthem will be played or sung in theatres.

### **CRIMINALISATION OF POLITICS: WHY ADR HAS APPROACHED THE ECI SEEKING ACTION AGAINST POLITICAL PARTIES**

The Association for Democratic Reforms (ADR), an electoral watchdog established in 1999 by a group of professors from the Indian Institute of Management (IIM) Ahmedabad, on June 19 wrote to the Election Commission seeking action against parties that fail to publish details of criminal antecedents of candidates as per orders of the Supreme Court and the poll panel.

“ADR is seeking strict action to be initiated against the defaulting political parties, which had contested 2023 Assembly elections held in Tripura, Meghalaya, Nagaland and Karnataka, 2022 Assembly elections held in Gujarat, Himachal Pradesh, Uttar Pradesh, Uttarakhand, Goa, Manipur and Punjab and 2021 Assembly elections held in West Bengal, Tamil Nadu, Kerala, Assam and UT of Puducherry,” the letter said.

For years, activists and independent electoral watchdogs like ADR have been raising concerns over political parties fielding candidates with criminal antecedents. After the 2019 Lok Sabha elections, according to ADR, 43% of the newly-elected MPs had pending criminal cases against them.

#### **What has the Supreme Court said?**

Hearing a petition filed by Public Interest Foundation, the Supreme Court on September 25, 2018, made it mandatory for political parties to publish the details of criminal cases pending against their candidates, including on their websites, in a format prescribed by the Election Commission of India. While candidates did declare the cases pending against them in their election affidavits to the ECI before the ruling, the Supreme Court order made it mandatory for the information to be widely publicised.



It directed parties to publish the details of criminal cases pending against a candidate in bold letters and told the candidate with pending cases to inform the party about these cases. The court also ordered that the candidate and the party have to publish the information at least thrice after filing the nomination.

“We are inclined to say so, for in a constitutional democracy, criminalisation of politics is an extremely disastrous and lamentable situation. The citizens in a democracy cannot be compelled to stand as silent, deaf and mute spectators to corruption by projecting themselves as helpless...Disclosure of antecedents makes the election a fair one and the exercise of the right of voting by the electorate also gets sanctified. It has to be remembered that such a right is paramount for a democracy,” the court had observed in its judgement.

Subsequently, in February 2020, while hearing a contempt petition regarding its 2018 order not being implemented, the apex court reiterated that the parties would have to publish the details of candidates with pending criminal cases. It also added that they would have to include the reasons for selecting such a candidate.

“The reasons as to selection shall be with reference to the qualifications, achievements and merit of the candidate concerned, and not mere ‘winnability’ at the polls,” the court said. It said the information would have to be published in one local vernacular newspaper, one national newspaper and on the official social media platforms of the political party within 48 hours of the selection or not less than two weeks before the first date of nominations, whichever is earlier. The parties would then have to submit a compliance report with the ECI within 72 hours.

#### **How are political parties flouting the Supreme Court’s orders?**

According to ADR, political parties are flouting the Supreme Court’s orders and the ECI’s subsequent directions. Writing to the ECI on June 19, ADR said there was “wilful disobedience” by parties. It said it had analysed the forms C2 and C7, which are the ECI’s prescribed formats for submitting the information and found many shortcomings.

ADR also mentioned that many political parties did not have functional websites to publish the information, and those that did, had not maintained the information and/or had inaccessible website links. While the Supreme Court had said that a party cannot use “winnability” as a reason for selecting a candidate with criminal antecedents, the ADR letter point out that parties were citing “chances of winning, the popularity of the person” as among the reasons. The parties were also “copy-pasting” the similar justifications for multiple candidates.

#### **What is happening now?**

ADR brought the situation to the apex court’s notice and was directed, on March 17, to “pursue its remedies before the Election Commission of India”. This led the election watchdog to write the letter to ECI on June 19. In its letter, ADR has asked the EC to take strict action against parties that are violating the orders, including de-registering them. ADR has also asked the ECI to publish a list of defaulting parties and impose fines on them.

### **EXPRESS VIEW ON CPR LOSING ITS TAX EXEMPTIONS: THINK TANKED**

It’s ironic that when the government has recognised the need to build and fund universities and research institutions, a premier think tank in the capital, the Centre for Policy Research (CPR), has come in the cross-hairs of state agencies. A few months ago, the Ministry of Home Affairs cancelled



its FCRA (Foreign Contribution Regulation Act) registration, a requisite to access foreign funds that constitute a significant section of its corpus. Now, the Income Tax department has cancelled CPR's tax exemption status, which it has held since 1976. The decision follows a show cause notice that the IT authorities had served in December last, wherein the Centre was told it carried out activities "not in accordance with the objects and conditions" under which it was registered.

In September last year, the IT department had conducted "surveys" on CPR for alleged tax discrepancies. Following the "survey", the department found "certain specified violations", which includes the think tank's "involvement" in the Hasdeo movement against coal mining in the Chhattisgarh forests. The investigation team of the IT department has red-flagged funds provided by CPR to Jana Abhivakti Samajik Vikas Sanstha, an outfit involved in the preservation of the environment. The survey claims that funds were provided to individuals associated with it to identify "litigation issues, mobilisation of people and funds for the Hasdeo movement", which falls outside the mandate claimed by CPR. In a democracy, institutions like CPR bring together a range of experts — cutting across disciplines — who use the tools of research and education to enrich discourse around policy. Indeed, the CPR has worked on areas as wide as analysing election data to evaluating the government's flagship programmes such as PM Poshan. Such informed deliberations and publications feed into the policy debate and help both state and non-state agencies to finetune, even course-correct. It is difficult to expect the state planning boards or Niti Aayog to fill this task of both making and auditing public policy as well as do broad analysis of political and social trends. That's why many governments lean on think tanks to build capacities in decision-making. That's why good think tanks depend on donors, governments and funding sources that tie few hands, attach few strings. A disruption in the flow of funds could cripple their activities, force them to scale down operations and even shut shop. Certainly, CPR needs to address questions raised by the tax authorities but to cancel its exemption status — key to its funding — is heavy-handed and a disturbing throwback to the licence permit inspector raj.

Tax inspectors, surely, can not be expected to evaluate the merits of research or publications. They may succeed in forcing institutions to conform with the government's goals and priorities. But that will come at a cost — it will hurt policymaking, it will do disservice to the many ideas that policymakers need to discuss and debate.

#### EXPRESS VIEW ON DATA PROTECTION BILL: PERSONAL IS PRIVATE

After months of delay, the Union cabinet on Wednesday, approved the draft data protection Bill, clearing the way for it to be introduced in Parliament in the upcoming monsoon session. This Digital Personal Data Protection Bill forms an integral part of the regulatory architecture that is being ushered in by the ruling dispensation to govern India's ever expanding digital economy. While more clarity is awaited on the finer points of the Bill, some modifications have been carried out in the version of the legislation that was put forth in November last year, as reported by this newspaper. However, some of the more contentious aspects of that version have reportedly been retained. These require careful examination.

Of particular concern is the sweeping exemptions afforded to the central government and its agencies. As per reports, the government will have the right to exempt "any instrumentality of the state" from adverse consequences citing national security, relations with foreign governments, and maintenance of public order. Considering that the Indian state gathers vast amounts of personal data, there are legitimate concerns that such wide-ranging exemptions could create the space for misuse of data. Equally worrying is the discretion that the government is likely to exercise in the appointment of members to the data protection board. The chief executive of the



board — that will be charged with ensuring compliance, dealing with grievances and disputes — will be appointed by the government. In an environment, when concerns are being voiced over the independence and autonomy of institutions, this raises troubling questions over the board's degrees of freedom. Reports also suggest that a change is being made in the manner in which cross-border data flows will be dealt with. The legislation is likely to have shifted towards a blacklisting framework from a whitelisting approach. This would involve allowing data flows to all jurisdictions, other than those on a negative list, to whom transfers would be curtailed. However, what remains unclear is the manner in which this negative list will be created — for instance, will the choices be influenced by the prevailing geopolitical environment? And while the Bill has also prescribed penalties for failing to prevent a data breach at upto Rs 250 crore per instance, there does remain some ambiguity over the definition of “per instance”.

Considering the dramatic expansion of the digital economy in the country, bringing in a robust data protection architecture is of critical importance. This Bill needs to go through a process of extensive discussion in Parliament. The provisions need to be tightened, ambiguities removed, and discretion minimised.

#### GOVT. TO SHARE PM GATI SHAKTI DATA

Industry and potential investors will have access to infrastructure data captured on the PM Gati Shakti platform, according to a top government official; data sharing to be compatible with the policies of the Science and Electronics & IT ministries

The government is working out a mechanism to share data with industry and potential investors about multi-modal connectivity as well as other physical and social infrastructure captured on the PM Gati Shakti platform, a top official said on Friday.

#### WITH NEW DATE TO FIX BOUNDARIES, CENSUS UNLIKELY BEFORE POLLS

The decennial Census exercise that was to be conducted in 2021 was postponed indefinitely, initially due to the COVID-19 pandemic. The latest order does not specify any reason. The office of the Registrar General of India issued an order last week, stating the date of freezing of boundaries for the ensuing Census has been extended and will now be with effect from January 1, 2024, a senior government official told The Hindu.

The order asked the Directorate of Census Operations to instruct State governments to make any administrative changes latest by December 31, and send a copy of the notification on jurisdictional changes to the Census office. An official said that after the boundaries are frozen, it takes at least three months to train enumerators. The exercise cannot begin before April 2024, when the Lok Sabha election would be under way. Around 30 lakh government officials are to be assigned as enumerators.

“The same workforce will be deployed for General Election duty and as the Model Code of Conduct will be in place by then, the next Census will be held after the new government comes to power in 2024,” the official said.

India has conducted a Census every 10 years since 1881. The exercise was not halted even during World War II, but it had to be postponed in 2020 due to the pandemic.



### First digital Census

The next Census will be the first digital Census, giving citizens the opportunity to self-enumerate. The Census is now carried out in two phases — the Houselisting and Housing Census and Population Enumeration phase, which typically takes around 11 months.

The National Population Register (NPR) is to be updated with the first phase of Census. Both phases were to be concluded by March 5, 2021.

On February 7, Minister of State for Home Nityanand Rai informed the Lok Sabha that the intent of the government for conducting Census 2021 was notified in the Gazette of India on March 28, 2019. "Due to outbreak of COVID-19 pandemic, the Census 2021 and the related field activities have been postponed until further orders. Population Projections for India and States/Union Territories for 2011-2036, based on Census 2011 data, are available in the 'Report of the Technical Group on Population Projections' published by National Commission on Population, Ministry of Health and Family Welfare," Mr. Rai said.

### Density of population

The report said that the population of India is expected to increase from 121.1 crore to 151.8 crore during 2011-2036 period — an increase of 25% in 25 years at the rate of 1.0% annually. As a consequence, the density of population will increase from 368 to 462 persons per square kilometre.

Earlier, the United Nations had said that India's population was expected to reach 142 crore people by the end of April, surpassing that of China.

## SHELVED 2017-18 HCES SHOWED MAHARASHTRA'S INEQUALITY WIDENING

For urban households in Maharashtra, food costs crossed 40% of monthly spends in 2017-18, for the first time in 18 years, while the food bill for their rural counterparts shot up to almost 49% of total spending, with that figure crossing 60% for the poorest 5% of households, data from the National Statistical Office's 2017-18 Household Consumption Expenditure Survey (HCES) show.

The average monthly per capita consumption expenditure (MPCE), an indicator of living standards and purchasing power, rose 69.5% for households in urban Maharashtra to ₹4,471 in 2017-18, from ₹2,638 in 2011-12. But it was propped up solely by coastal urban areas, led by Mumbai and its neighbouring districts with an MPCE of ₹5,613, while all other regions in the State languished below the average, as per the HCES, which the Centre had junked citing data quality concerns.

The Maharashtra government has, however, published the State-level findings from the exercise conducted as part of the 75<sup>th</sup> round of the National Sample Survey (NSS).

Rural folk also appear to have lost ground vis-à-vis their urban peers as their average monthly spends were just 45% of the ₹4,400-odd spent by average households in cities in 2017-18. This proportion stood at 54% in 2011-12.

For the poorest 10% of urban households, the proportion of their spends of total expenditure on food was far higher at 52%-55%, while households in the richest 5% bracket had more than 70% of spending power left even after their food bills were met.



## DON'T NEED PHD TO TEACH IN A COLLEGE: A LOOK AT UGC'S CHANGED RULE TO HIRE ENTRY-LEVEL PROFESSORS

It is no longer mandatory to have a PhD degree to apply for the post of assistant professor in colleges and universities. It is enough to clear the National Eligibility Test (NET), State Eligibility Test (SET), or State Level Eligibility Test (SLET) to be eligible for appointment.

The University Grants Commission (UGC), India's higher education regulator, notified this change on June 30, reversing a decision it made in 2018. The new minimum criteria for direct recruitment of college and university teachers at the entry level came into effect on July 1.

### What was the system earlier?

In revised regulations on 'Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges' released in June 2010, the UGC said that candidates for assistant professor must qualify in the NET, SET, or SLET. However, candidates who had PhDs were exempted from this eligibility condition.

In other words, if a candidate had a doctoral degree, she could apply for appointment even if she had not cleared NET, SET, or SLET.

This changed in 2018, when Prakash Javadekar was Education Minister (known as the HRD Minister then). The UGC issued a notification in July 2018, which said, "The PhD Degree shall be a mandatory qualification for direct recruitment to the post of Assistant Professor in Universities with effect from 01.07.2021."

What this meant was that candidates had a three-year window (2018-21) to complete their PhDs. UGC also directed universities and colleges to implement the new minimum criteria for recruitment from 2021.

In October 2021, taking note of the disruption caused by the Covid-19 pandemic, the UGC pushed the July 2021 deadline to July 2023.

### Does this mean a PhD was never in effect a mandatory qualification for the assistant professor's job?

In effect, no. UGC first set the date to implement the PhD requirement from July 2021, but this was extended to July 2023. However, even before this deadline could kick in, it has notified that a PhD is no longer mandatory.

Thus, UGC has reversed its 2018 decision even before it could be implemented.

### But why did UGC reverse the decision it had announced in 2018?

The purpose seems to be to cast the net wider by removing an inessential entry barrier, while ensuring at the same time that quality does not suffer.

UGC Chairman Mamidala Jagadesh Kumar told The Indian Express, "In certain disciplines such as policy-making, design, foreign languages, law, architecture and other similar subjects, universities often find it difficult to get candidates with a PhD. Removal of mandatory PhD conditions at the entry level will help universities in recruiting candidates with a flair for teaching but without a PhD. They of course need to complete their PhD to move to the next level [of associate professor]."





Jagadesh Kumar argued that this would not lead to a decline in the quality of education.

“We already have more than 25,000 PhDs produced every year in India. In major disciplines, there is intense competition to select the best PhDs for faculty positions. Therefore, removing PhD as a mandatory condition at the entry-level assistant professor position will not affect the quality of education.”

The UGC chairman clarified that while NET/SET/SLET is the minimum requirement for assistant professor, universities or colleges may set higher shortlisting criteria for interviews in order to manage the number of candidates.

“Since HEIs (higher education institutions) are autonomous, they can set a higher selection criteria in certain disciplines but use the UGC’s minimum criteria in other disciplines. For example, in a foreign languages centre, the university may use a Master’s degree and UGC-NET, if candidates with a PhD are not available. But in a chemistry department, the shortlisting committee may decide to shortlist only candidates with a PhD and, say, two journal publications. In the latter case, it will help to call only a manageable number of candidates to the interview,” he told The Indian Express.

#### EXPRESS VIEW ON YAMUNA STATUS REPORT: RIVER ABANDONED

In January, the National Green Tribunal (NGT) constituted a panel headed by Delhi’s lieutenant governor to find ways to rejuvenate the Yamuna in the capital. Six months later, a status report submitted by the Delhi government shows that there’s scarcely any reduction in the river’s pollution levels. It lists a litany of problems that have been known for long: The city’s sewage treatment plants do not operate to their full capacity and untreated or partially treated sewage flows into the river. A large number of localities, inhabited by the poor, are not covered by the network of pipes that take sewage to treatment plants. As a result, the water of the river in most of its stretch in the capital is not fit for bathing quality. The six-month deadline set by the NGT to resolve these problems was perhaps unrealistic. But in the past two decades, goalposts on Yamuna cleaning have been shifted several times. The Delhi government must get its act together.

The status report points to an “extension of the sewerage network to a few more unauthorised colonies and JJ clusters”. However, the fact that 245 million gallons of sewage is left untreated every day shows that this extension has not made much difference to the Yamuna’s pollution levels — by all accounts, about 250 MGD was dumped in the river before the NGT’s intervention. An interceptor drain project initiated more than 15 years ago has missed several deadlines. The idea behind the project was that, instead of laying a massive network of new lines, interceptor sewers would be laid to trap the sewage from Delhi’s three large drains that carry most of the city’s filth and dump it into the Yamuna. However, since the project was conceived, the number of colonies outside the city’s sewerage network has increased. It seems that the interceptor drain project did not plan for the impact Delhi’s growing population would have on the capital’s waste disposal system. The trouble also is that the different authorities in the city — the DDA, the municipal corporation, and the pollution control agencies — rarely work in sync. And, the Yamuna cleaning work is among the several casualties of the constant confrontation between the Delhi government and the city’s LG.

The Delhi stretch is only 2 per cent of the river’s length. But more than 70 per cent of the Yamuna’s pollution burden originates in the capital. Restoring the river in Delhi is, therefore, critical for its



health. The NGT has asked the Delhi government to submit another report by September. The solutions have been known for long now. It's high time they are implemented.

## CLEARING THE WATER

Access to potable tap water is a basic necessity. However, of the roughly 25 crore households in India (2016), a tap water connection that delivers 55 litres per capita every day of potable water is a rarity in most of rural India, which accounts for about 19.5 crore households. In August 2019, Prime Minister Narendra Modi promised that rural households would be assured of piped, potable water by 2024 — before his government's tenure ended. When he made that commitment, only about 3.2 crore, or about 16% of rural households, were so connected. Today, those figures stand at 64%, a substantial increase but still below the target. In recent years, the Jal Shakti Ministry, which has labelled this plan of providing piped water connections as the 'Har Ghar Jal' missions, has consistently underlined the scale of the exercise. Since 2019, about nine crore households have their own exclusive access to piped water. This is apart from connections to village schools, anganwadis and community buildings. Yet, for all this scale, it is unlikely that all of rural India will be connected by April 2023, as per Mr. Modi's claim. The COVID-19 pandemic and the Russia-Ukraine war reportedly caused the mission to slow down considerably, government officials claim, by impeding access to pipes and civil construction necessary to the enterprise. Realistically, it is unlikely that even 75% of households will be connected by this time. While this too, by no means, is an insignificant achievement, the challenge is the reliability of these numbers.

The figures reported by the Jal Shakti Ministry are solely based on data reported by States. One proxy that presents a discouraging picture is the number of villages that have been certified as 'Har Ghar Jal', or having all houses fully connected. Only 1,68,157 villages have been reported by States as 'Har Ghar Jal' and only 59,000 or about 35% have been 'certified' — meaning their gram panchayats have formally acknowledged compliance. The overwhelming fraction of villages have somewhere between half or three-fourths of their households connected. An independent assessment commissioned by the Jal Shakti Ministry sampled about 300,000 households in 13,300 villages and reported 62% households as connected in October last year. That is good but too small a sample to be representative. It also emerges that the large States with 100% compliance, i.e., Gujarat, Haryana, Punjab, already started on a fairly high base in 2019. The Centre must put in place a mechanism that discloses the scheme's performance on the ground in a transparent way.

## WAS INDIA'S HOT SUMMER OF 2023 A PORTEND OF THINGS TO COME?

A recent report from the India Meteorological Department (IMD) indicated an increasing trend in the number and duration of heatwaves, based on data from March to June from 1961 to 2020. This year, heatwaves started as early as on March 3, and many areas reported temperatures that were higher than average.

The number of days with temperatures exceeding 30 degrees Celsius has also increased of late. While a temperature of 33 degrees Celsius was recorded between 1961 and 1990 for around 70 days every year, from 1991 to 2022, this temperature was recorded for 89 days a year. It thus became the new normal.

The concept of the 'new normal' vis-à-vis climate change refers to long-term changes in weather patterns and climatic conditions that are expected to, or have, become more frequent because of climate change.



### **Are weather patterns changing?**

Climate change is increasing both the frequency and the intensity of extreme weather events. In India, for one, normal monsoon patterns have given way to, among others, delayed onset, short but intense bursts of rain, and delayed withdrawal. Some weather events have also become drier and others wetter thanks to the effects of climate change on the water cycle, which leads to more evaporation and eventually causes more precipitation. Some areas also experience heavier than normal precipitation while others are becoming prone to unexpected droughts.

The U.N. Intergovernmental Panel on Climate Change's Sixth Assessment Report warned of prolonged rain-free periods along with excessive rainfall in many parts of the world. In recent decades, India has recorded several such extreme events.

An October 2017 study conducted by the Indian Institute of Tropical Meteorology (IITM), Pune, reported that there was a three-fold increase in widespread extreme events from 1950 to 2015. From June to September 2022, there were variations in rainfall in different parts of India: a significant increase was recorded in central and south India whereas parts of Kerala, Karnataka, and Madhya Pradesh flooded many times. A significant shortfall was also recorded in many parts of Uttar Pradesh, Bihar, Odisha, and the northeast.

High monsoon rainfall variability and continuous warming raise the probability of dry and hot extremes, with profound implications for agriculture, water resources, and India's overall economy.

There is also a strong connection between land and ocean heatwaves, driven by atmospheric circulation, increase in sea-surface temperature, and feedback mechanisms that exacerbate the intensity and duration of extreme temperatures. For example, when a land-based heatwave occurs, it can enhance evaporation rates and reduce soil moisture, leading to drier conditions. This drier surface, in turn, absorbs more solar radiation, amplifying the heatwave. This feedback can also influence the persistence of heatwaves over both land and ocean environments.

### **Do marine heatwaves have a role?**

The oceans play a key role in the formation of monsoon winds and in keeping the monsoon alive. When extreme heat warms their waters, the change in temperature can lead to cascading effects, such as marine heatwaves, ocean acidification, sea-level rise, and ice melting faster at the poles.

Marine heatwaves are periods of temperature much higher than the average seasonal temperature in that region. The Indian Ocean recorded six marine heatwaves over a period of 52 days in 2021. They used to be rare in this water-body but today are an annual occurrence.

A low pressure develops over the Indian subcontinent when the land heats up during the summer. The moisture for monsoon rains is thus carried by the winds as they blow in from the Indian Ocean. However, rainfall over the land decreases when ocean heatwaves occur, as the winds are drawn to areas over the ocean instead of land.

In recent decades, oceans have remained warmer for longer periods than normal. In 2022, IITM researchers reported a significant increase in the number of marine heatwaves in recent decades because of warming and a strong El Niño (a phenomenon that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean).

Specifically, they found that from 1982 to 2018, the western Indian Ocean region had a four-fold increase in marine heatwaves (an increase of 1.2 to 1.5 events per decade); the northern Bay of Bengal region followed with a two- or three-fold rise (an increase of 0.4 to 0.5 events per decade).

Earlier this month, the U.S. NOAA announced that another El Nino period had begun this year, with the potential to set new surface temperature highs.

### **Climate risk amplification**

Amplification is what happens when certain climate-related factors and/or events interact with each other or happen at the same time, intensifying or exacerbating the overall risks and consequences associated with climate change. A good example is the warm and dry conditions that have put Canada on course for its worst-ever wildfire destruction this year. Such amplification happens in the form of various feedback loops and interconnected processes in the earth's climate system. It has greater consequences than 'just' individual extremes and is also more complex and challenging to deal with.

The interaction of multiple climatic and non-climatic risks can also increase overall risk. According to a January 2023 study by the School of Geography and the Environment, University of Oxford, the combined consequences of excessive heat and drought are expected to put more than 90% of the world's population at higher risk, potentially deepening socioeconomic disparities. Such an amplification can occur as a result of an El Niño, prolonged hot days, dry monsoons, and/or ocean heatwaves occurring together, compounding risks across sectors.

Such a combination will also affect water availability, soil moisture, and crop output while increasing food prices and lowering incomes. The co-occurrence of heatwaves and droughts can also lead to wildfires, tree mortality, and a higher risk of thermal power-plant failures. Ultimately, the risks can push sensitive and vulnerable systems over a tipping point, ultimately avalanching into drastic consequences for socio-ecological systems.

Amplified climate risks underscore the urgency of taking proactive measures to mitigate greenhouse gas emissions, adapt to changing conditions, and enhance resilience in both natural and human systems. Identifying compound event hotspots and monitoring them are important to frame suitable adaptation strategies. By understanding and addressing these amplification mechanisms, we will be able to reduce the overall risk associated with climate change and build a more sustainable and resilient future.

## **WILL SIGNING ARTEMIS ACCORDS BENEFIT INDIA?**

### **The story so far:**

On June 21, India became the 27th signatory to the Artemis Accords, a set of non-binding guidelines that underpin the Artemis programme, a U.S.-led project to return humans to the moon permanently.

### **Why do the Accords matter?**

The Artemis programme includes plans for a base on the lunar surface, multiple spacecraft to ferry humans and cargo, an orbiting space station, and a constellation of satellites to help with navigation and communication. The first Artemis crewed mission to the moon's surface is likely in 2026. The programme resembles a Chinese-Russian plan for an 'International Lunar Research



Station'. With Russia reeling under sanctions, China has taken the lead on the project, outlining similar plans for a permanent base and a lunar satellite constellation.

For leaders in the U.S. and China, lunar exploration embodies all that is good about their countries even as they are locked in a bitter rivalry. Leaders are also betting that the incredible challenges of lunar exploration will spur technological innovation. A sign of power in international politics is the ability to set norms and build multinational collaborations. The Accords support an America-friendly interpretation of space law. In return, member states get to participate in the Artemis programme, which can bring prestige and technological benefits.

#### **Where do the Accords fit in space law?**

Modern space law is erected on four international agreements that cover issues like the peaceful use of space, registration, and liability. They were struck between 1967 and 1976, at the time of the first Space Race and Cold War detente. The Accords' principles are consonant with these agreements. A fifth treaty, the Moon Agreement, was introduced in 1979 but neither the U.S. nor the Soviet Union signed it. India signed it but didn't ratify it.

One provision in the Artemis Accords allows actors to extract and utilise space resources. This could be at odds with the Moon Agreement, which asks for gains from commercial exploitation of lunar resources to be distributed. This has not stopped countries like Australia and France which previously signed the Moon Agreement, from becoming Artemis signatories. In reality, the provisions of the Accords and the Moon Agreement are vague enough for lawyers to play according to the rules of both. Also, even if the Artemis programme succeeds and private enterprises set up settlements on the Moon, resource extraction will likely be restricted to using the lunar soil to build habitats and lunar ice for sustaining life.

#### **Why didn't India sign the Accords earlier?**

The Artemis Accords were drafted in 2020, just as India was opening up its own space sector to private players. While being a signatory to the Moon Agreement may have initially given India pause, the cases of Australia and France are reassuring. India's own attitude has also evolved, with its new space policy allowing private players to mine any "space resource".

There is also a noticeable shift in India's diplomatic practice. Previously, diplomats in Delhi were likely concerned that the Accords are an informal set of norms rather than a legally-binding instrument. India has historically preferred the latter because it believes laws foster better compliance. That India has now accepted a set of U.S.-led norms suggests a change in thinking. Furthermore, the dramatic developments of the last three years have made it clear that divisions between the U.S. and China are too deep for them to agree on a complex new international law on the Moon until their ties improve. Finally, ties between India and the U.S. have been on an upswing, and there is less hesitation in Delhi about joining an America-inspired international effort.

#### **What must India do?**

Signing the Artemis Accords alone has no financial implications for India but if the country wants to be a major player in the Artemis programme, ISRO will need a significant hike in its annual budget, which stands at about ₹12,500 crore this year. At present, ISRO's lunar exploration programme is impressive but modest. Its Chandrayaan-3 mission is scheduled to make India's first soft landing on the moon in the next few weeks. It may also take three years or more before India independently sends humans into space as part of its Gaganyaan project. India must



overcome domestic resistance to collaboration with other space agencies, enable its private sector to work with other Artemis members, and develop legislation that encourages space activities.

#### CHANDRAYAAN-3 LAUNCH ON JULY 14, LUNAR LANDING ON AUGUST 23 OR 24

Landing date is decided based on when there is sunrise on the moon; if the landing does not take place as planned, then ISRO will wait for one month to make another attempt in September, says space agency Chairman S. Somnath

India's much-awaited moon mission Chandrayaan-3 will be launched at 2.35 p.m. on July 14 from the Satish Dhawan Space Centre, Sriharikota, the Indian Space Research Organisation (ISRO) announced on Thursday.

On the sidelines of the G-20 Space Economy Leaders Meeting, ISRO Chairman S. Somnath told presspersons that if the launch took place as scheduled on July 14, the landing on the lunar surface would take place in the last week of August.

"If the launch takes place on that day, then we will be ready for landing on the moon possibly by the last week of August. The date (landing date) is decided when there is sunrise on the moon. When we are landing, sunlight must be there. So the landing will be on August 23 or 24," Mr. Somnath said.

The space agency chief said that if the landing did not take place as planned, then the ISRO would wait for another month to make a landing attempt in September.

"The lander and the rover will stay on the moon for 14 days until sunlight is there. When there is no sunlight, a small solar panel which is on the rover will generate power to charge the battery for the next 14 days until light comes. The temperature there goes down to minus-40 degrees Celsius, and in such an environment, there is no guarantee that the battery and electronics will survive, but we did some tests and have the feeling that they will survive," he said.

The Chandrayaan-3 spacecraft will be launched by the Launch Vehicle Mark-III (LVM3) and launch window for the mission is between July 12 and 19.

Chandrayaan-3 will demonstrate end-to-end capability in safe landing and roving on the lunar surface.

The mission has an indigenous lander module, a propulsion module and a rover with an objective of developing and demonstrating new technologies required for inter-planetary missions.

#### MAKING IT COUNT

The significance of data in influencing policy constructs and thereon, decisions, is non-contestable. The country takes periodic stock of various parameters just to inform welfare policies better. In context, the recent decision of the Union government to drop the disability-specific question from the National Family Health Survey (NFHS)-6 seems churlish and sends out wrong signals. After years of campaigning for the same, activists rejoiced when the government added one question on disability in the NFHS-5, and were hopeful that this would be built upon in subsequent versions of the nation-wide survey. The deletion, and reluctance to map the minutiae that will help understand their lives and needs better, leaves the question: is the government serious about its commitment to the disabled in the country, who number, as per the 2011 Census, about 2.68



crore? The Ministry of Health and Family responded that questions about disability were already asked as part of the Sample Registration Survey (SRS) 76th round, conducted between July and December 2018, and that any specific information can be tabulated from the raw data, which is also available in the public domain. It has also gone on record stating that disability data will 'not change fast'. That might be an erroneous supposition.

While gross data on disabilities will change marginally (but still be substantial given the numbers), the count of 6.1 lakh sample households that the NFHS relies on will make the data set truly representative. The elaborate questions asked by NFHS will provide valuable specifics on the lives of the disabled; something on that scale hitherto conspicuous by its absence. While the SRS does a good job with marking the prevalence and incidence of disability, education level, living arrangements, care-givers, certificate of disability, accessibility and unemployment rate, among others, the NFHS asks more comprehensive questions. It seeks answers on health and nutrition status, access to health schemes, insurance, sexual behaviour, availability of family planning, use of contraception, domestic violence, household amenities and possessions, lifestyle indicators, and access to drinking water and toilets. There is no doubt that the latter will yield better, more robust, data on the disability sector. While Health Ministry officials claim that the sole NFHS question on disability too resulted in under-reporting, that might actually be a function of training for field staff who ask the questions. The state must employ these efforts — adding questions on disabilities, training field staff, because nothing really justifies any attempt to keep a significant section out of a massive scale count of the Indian population.

#### KERALA BOY DIES DUE TO BRAIN-EATING AMOEBIA: WHAT'S IT ALL ABOUT AND HOW CAN IT INFECT YOU?

A 15-year-old boy in Kerala's Alappuzha district has died due to a rare infection caused by *Naegleria fowleri* or "brain-eating amoeba" after a week of high fever and rapid deterioration in his vitals. He used to take a bath in a stream near his home, the likely source of the amoeba, which is known to thrive in any natural environment, particularly in warm water habitats. However, it doesn't survive in saline conditions and is hence not found in sea water. It survives on bacteria found in the sediment in lakes and rivers.

According to experts, *Naegleria fowleri* has existed for a long time in nature but cases of infection are extremely rare. Last December, a 50-year-old South Korean man and in March, a man in Florida succumbed to the infection. Dr PN Renjen, Senior Consultant, Neurology, at Indraprastha Apollo Hospitals, New Delhi, says that the exact reason for an infection is not fully understood. "However, warm water temperatures, particularly during the summer months, create favourable conditions for the amoeba's growth. And such conditions are not rare in India," says he. He answers some of the most frequently asked questions.

#### What is *Naegleria fowleri*?

*Naegleria fowleri*, commonly known as "brain-eating amoeba," is a single-cell organism found in a warm freshwater environment such as lakes, hot springs and even in poorly maintained swimming pools. It is so small that it can only be seen with a microscope. Only one species of *Naegleria*, *Naegleria fowleri*, infects people.

In very rare instances, *Naegleria fowleri* has been found in swimming pools, splash pads, surf parks, or other recreational venues that are poorly maintained or don't have enough chlorine in them.



The amoeba enters the body through the nose and travels to the brain, leading to a severe and usually fatal brain infection known as primary amebic meningoencephalitis (PAM). Although the amoeba becomes vulnerable in its maturing or trophozoite phase, as a cyst it becomes resistant to its environment. It grows best at temperatures above 46 degree celsius. Although trophozoites are killed rapidly by refrigeration, cysts can survive even extreme cold.

Warm water temperatures, particularly during the summer months, create favourable conditions for the amoeba's growth. Poorly maintained swimming pools or contaminated water sources increase the risk of exposure. Activities like diving or jumping into warm freshwater bodies can force water up the nose, providing an entry point for the amoeba.

#### **How does it spread in the human body?**

It is typically acquired through the nasal passage and mouth when a person goes swimming, diving, or even uses contaminated water for religious rituals. The amoeba then migrates through the olfactory nerve to the brain, where it causes severe inflammation and destruction of brain tissue.

#### **Can it also spread from one person to another?**

It's important to note that *Naegleria fowleri* infection does not spread from person to person, nor does it manifest symptoms when contracted in other forms. The infection is primarily associated with a warm freshwater environment, especially during hot summer months when water temperatures are higher. Therefore, they usually flourish between July and September.

#### **What prevention measures should a swimmer consider?**

Preventive measures such as avoiding warm freshwater bodies with inadequate chlorination, using nose clips during water-related activities, and using sterile water for nasal cleansing rituals can help reduce the risk of contracting *Naegleria fowleri* infection.

#### **Who is at risk of getting infected?**

The human body is generally vulnerable to *Naegleria fowleri* but it is very rare. Once inside, the amoeba can travel to the brain, causing a severe and usually fatal infection called primary amebic meningoencephalitis (PAM). Although anyone can be affected, certain factors can increase vulnerability, such as a weakened immune system, a history of nasal or sinus issues, or activities that involve exposure to warm freshwater.

#### **How do you know you are infected?**

Once in the brain, it causes a condition called primary amoebic meningoencephalitis (PAM). This affects the brain by causing inflammation and destruction of brain tissue. The symptoms usually appear within a week of infection and include severe headache, fever, nausea, vomiting, stiff neck, confusion, seizures and hallucinations. As the infection progresses, the patient can slip into coma and ultimately death. The amoeba's ability to rapidly destroy brain tissue makes it a highly lethal infection. Prompt medical intervention is crucial but even with treatment, the survival rate is low.

#### **What are the chances of survival?**

Brain-eating amoeba can be fatal, with a recorded death rate of 97 per cent. The chances of survival from this infection are unfortunately low. The infection rapidly destroys brain tissue, leading to inflammation and neurological symptoms such as severe headache, fever, nausea,





vomiting, stiff neck, seizures and coma. Despite the best medical interventions, including antifungal medications and supportive care, the chances of surviving *Naegleria fowleri* infection are very slim. Early diagnosis and prompt initiation of treatment are crucial, but even then, the prognosis remains grim.

#### **What about treatment?**

The US-based Centers for Disease Control (CDC) recommends treatment with a combination of drugs, often including amphotericin B, azithromycin, fluconazole, rifampin, miltefosine, and dexamethasone. These drugs have been used to treat patients who survived. Miltefosine is the newest of these drugs. It has been shown to kill *Naegleria fowleri* in the laboratory and has been used to treat three survivors.

#### **What preventive measures can be taken to manage natural water bodies?**

Limit activities in warm fresh water bodies such as lakes, hot springs and ponds unless they are disinfected with chlorine. Use nose protection while swimming or diving, maintain clean swimming pools, follow proper hygiene, washing your hands thoroughly with soap and water before and after water activities, as well as before eating. Use sterile water for nasal cleaning.

#### **Can one contract *Naegleria fowleri* infection from a properly disinfected swimming pool?**

No. If the chlorine levels are monitored regularly and hygiene maintained, there's no risk.

### **UNDERSTANDING LEPTOSPIROSIS, A DISEASE THAT SURGES DURING THE MONSOON**

Leptospirosis has emerged as an important infectious disease in the world today. It is a potentially fatal zoonotic bacterial disease that tends to have large outbreaks after heavy rain or flooding.

The disease is more prevalent in warm, humid countries and in both urban and rural areas.

It affects an estimated 1.03 million people every year, killing around 60,000. The burden of leptospirosis is expected to increase in the future as the urban poor population in many tropical countries increases even as sanitary infrastructure falls short.

In India, thousands of people are affected by leptospirosis every year.

However, the numbers at the global and regional levels are not exact because of misdiagnosis (its symptoms mimic those of dengue, malaria, and hepatitis), limited access to reliable diagnostics, lack of awareness among treating physicians, and lack of environmental surveillance.

Within India, studies have found that leptospirosis is more common in the south, although this could be due to the region's better healthcare and thus better disease detection.

#### **What causes the disease?**

The disease is caused by a bacterium called *Leptospira interrogans*, or *leptospira*. It is a contagious disease in animals but is occasionally transmitted to humans in certain environmental conditions.

The carriers of the disease can be either wild or domestic animals, including rodents, cattle, pigs, and dogs.



The cycle of disease transmission begins with the shedding of leptospira, usually in the urine of infected animals.

According to the U.S. Centers for Disease Control and Prevention, infected animals can continue to excrete the bacteria into their surroundings for a few months, but sometimes up to several years.

#### **Which people are at risk?**

Humans become part of the cycle when they come in direct contact with this urine or indirectly, through soil and water that contain leptospira bacteria. A person is more likely to contract leptospirosis if they have cuts or abrasions on their skin.

The disease is also considered an occupational hazard for people working in agricultural settings, with animals, or in sanitary services that bring them into contact with contaminated water.

Recreational activities in contaminated lakes and rivers are also reported to increase the risk of leptospirosis.

#### **What are the symptoms?**

The severity of a leptospirosis infection ranges from a mild flu-like illness to being life-threatening.

The infection can affect many organs, reflecting the systemic nature of the disease. This is also why the signs and symptoms of leptospirosis are often mistaken for other diseases.

In milder cases, patients could experience a sudden onset of fever, chills, and headache – or no symptoms at all. But in severe cases, the disease can be characterised by the dysfunction of multiple organs, including the liver, kidneys, lungs, and the brain.

Animals exhibit a variety of clinical symptoms and indications. In cattle and pigs, the disease can potentially cause reproductive failure, stillbirths, and weak calves or piglets. Dogs experience a range of symptoms, including fever, jaundice, vomiting, diarrhoea, renal failure, and even death.

#### **What are the misconceptions?**

Preventing leptospirosis requires appropriate and adequate health education, community health empowerment, and preventive habits.

The disease has been called “ili jwara” in Kannada and “eli pani” in Malayalam, both meaning “rat fever”. This usage has fed the common belief that rats are the sole cause of the disease, which is not true.

Leptospirosis has a spectrum of reservoir hosts, including pigs, cattle, water buffaloes, goats, dogs, horses, and sheep. Further, seasonal patterns such as the onset of the monsoon can also potentially facilitate the disease’s incidence and transmission.

Ambient air that is more humid can help the pathogenic leptospira survive longer in the environment, thus increasing the risk of disease exposure in the community.

The incidence of the disease is also linked to extreme weather events like floods and hurricanes, when people are exposed to contaminated water.



Similarly, poor waste management, a high density of stray animals, faulty drainage systems, and unhygienic sanitation facilities are major drivers of the disease in urban areas. In rural parts, these are contaminated paddy fields, dirty livestock shelters, and poor water-quality and sanitation.

Despite this complexity, the use of “rat fever” as a colloquial term for leptospirosis undermines a more holistic understanding of the disease’s causes.

If we are to protect people, we must use the correct terms, study the ecology of the disease and use the findings to inform healthcare policy, improve health literacy, and engage with people’s concerns.

### **Preventing leptospirosis?**

Leptospirosis control can benefit from a ‘One Health’ approach. ‘One Health’ is an interdisciplinary approach that recognises the interconnections between the health of humans, animals, plants, and their shared environment.

People who frequently interact with animals or their urine should exercise particular caution, such as by wearing personal protective equipment like gloves and boots. The same goes for workers in flooded fields where there’s a chance of being exposed to contaminated water. They should take extra care if they have cuts or abrasions on their lower extremities.

Preventing animals from getting infected is also important to reduce the risk of leptospirosis spreading and to limit farmers’ economic losses (when the disease causes reproductive failures in pigs and cattle). This in turn requires sanitary animal-keeping conditions, which is also desirable to improve the animals’ health and to prevent the spread of many diseases. Given the spike in leptospirosis during the monsoons, it is best to take precautions, including washing one’s arms and legs with an antiseptic liquid after handling animal waste and after working in water.

In sum, with ‘One Health’ in mind, public health professionals must work closely with the animal husbandry department to familiarise people about the dangers of leptospirosis, and create countermeasures that work for the health of both people and animals.

## **WHY ARE INDIAN DRUGMAKERS UNDER THE LENS?**

### **The story so far:**

Since October last year, Indian pharma companies have been under constant international scrutiny for exporting allegedly contaminated drugs, which have led to deaths of children. Recently, Nigeria raised the red flag on two oral drugs; Cameroon too sounded an alarm over another cough syrup reportedly made in India when several children died. Sri Lanka called out two drugs manufactured in India linking them to adverse reactions in several patients. In the latest move, Gambia has declared that from July 1, it is running strict quality control checks on all pharma products shipped into the country, before they leave Indian shores.

### **Has India launched a probe?**

Soon after Gambia reported deaths of at least 70 children related to a contaminated cough syrup made in India, in December last year, reports from Uzbekistan of at least 18 children dying after consuming cough syrup contaminated with high amounts of diethylene glycol (DEG) or ethylene glycol poured in. The pharma company, Marion Biotech’s licence was cancelled by the national watchdog — the Central Drugs Standard Control Organisation (CDSCO) — in March, but the

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Ministry of Health and Family Welfare has not answered any questions on the probe that was launched.

The latest in line are alerts from Sri Lanka, where patients are reported to have died after being administered anaesthetic drugs made in India, and that an eye medication had caused visual impairment in 10 patients. Nigeria's National Agency for Food and Drugs Administration and Control found a batch of oral paracetamol and another cough medicine manufactured by companies based in Mumbai and Punjab to be sub-standard.

#### **What has led to the loss of confidence?**

While Gambia has appointed Mumbai-based Qontrol Labs to independently assess the manufacturing plants and drug samples of Indian exporters who ship drugs to Gambia from July onwards, The Hindu has learnt that it is not the first such African country to have a checking system in place. "Mozambique has been checking samples from all batches of medicines before they are exported from India to its shores," Riddhi Jhaveri, founder of Qontrol Labs, told The Hindu. For instance, Ms. Jhaveri says, in the case of a sample of paracetamol drug — Azithromycin 500 mg — that was tested by Qontrol, it was found that there was only 20 mg of azithromycin instead of 500 mg. "We have a database of more than 500 exporters whose batch samples we analyse, and in the past several years we have picked up nearly 40 to 45 non-conformities in the samples," said Jhaveri.

In fact, Nigeria has been more careful. Not only does the Nigerian government get all pharmaceutical samples checked, it has also mandated that samples from all batches of chemicals, food, medical devices and cosmetics be checked by an independent assessor.

#### **Why are regulators failing to take action against faulty manufacturing practices?**

The issue of contaminated cough syrup batches seeping into the supply chain and finding their way to paediatric patients is not only limited to exports. India has recorded at least five major DEG poisoning events since 1972, killing at least 84 children. The incidents occurred in Chennai, Maharashtra, Bihar, Haryana, and the latest being the 2019 case in Jammu.

Ideally, when a manufacturer is found to be violating laws especially in cases where there is a threat to life or alleged deaths, a criminal prosecution of the persons who are responsible for manufacturing and marketing the drug should be launched. Instead of doing that, the Ministry of CDSCO and state regulators keep passing the buck. "Under India's convoluted drug regulatory law, the Centre is responsible for imports and approving new drugs based on safety and efficacy data but the licensing and prosecutions of pharma companies is the responsibility of State governments," write Dinesh Thakur and Prashant Reddy, co-authors of The Truth Pill, a book on how drug regulation works in India.

#### **Why are pharma companies not punished?**

Merely suspending or cancelling the manufacturing licence of a pharma company is not enough, says Ms. Jhaveri.

Under the Drugs and Cosmetics Act, 1940, manufacturers not adhering to good manufacturing practices can be subjected to a maximum punishment of imprisonment for life. Even when prosecutions are filed, the cases move at a snail's pace in courts. For instance, Thakur and Reddy note that in Andhra Pradesh, of the 54 judgments in cases filed against pharma companies between 1999 and 2017, the state was able to secure convictions in only eight cases. Poor



conviction rate was due to glaring errors committed by drug inspectors including shoddy paperwork, failure to seize, record its condition of storage and label the samples properly, as also the failure to complete the testing process of samples before its expiry date.

It does not help that the CDSCO is perennially reeling under a shortage of drug inspectors. A 2019 report titled 'Drug Regulation in India: The Working and Performance of CDSCO and SDRAs,' compiled by lawyers Shree Agnihotri and Sumathi Chandrashekar, said that while there ought to be one drug inspector for every 50 manufacturing units and 200 pharmacists, there were vacancies in most States waiting to be filled.

Health experts say that if India wants to redeem its reputation, it will have to tighten the screws by ensuring robust pharma inspections and make sure that any slip-up by manufacturers is reported and prosecuted.

### LANSDOWNE TO BE RENAMED JASWANTGARH: WHO WAS LORD LANSDOWNE AND RIFLEMAN JASWANT SINGH?

Lansdowne is located 155 km away from Dehradun.

#### **Who was Lord Lansdowne?**

Henry Charles Keith Petty-Firzmaurice, the fifth Marquess of Lansdowne, was a British politician who served as Viceroy of India from 1888 to 1894. At the time of the Anglo-Manipur War of 1891, Manipuri heroes Bir Tikendrajit and General Thangal were hanged in public, and many others were sent to kala pani.

Official records of the Lansdowne Cantonment Board show that in 1886, on the recommendation of Field Marshal Sir F S Roberts, the Commander-in-Chief of the British army in India, it was decided to raise a separate Regiment of the Garhwalis.

The Cantonment and Regimental Centre for the training of recruits of the Garhwal Rifles was located in a forest area popularly known as Kalundanda, at an elevation of 6,000 feet above sea level. The new site was approved by Brig Gen J I Murray, GOC, Rohilkhand, and the First Battalion of the Garhwal Rifles, under Lt Col E P Mainwaring, moved into Kalundanda on November 4, 1887.

On September 21, 1890, Kalundanda was renamed as Lansdowne after the Viceroy.

#### **And who was Rifleman Jaswant Singh?**

Rifleman Jaswant Singh Rawat was awarded the second highest gallantry award, Maha Vir Chakra, for his role in the Battle of Nuranang against the Chinese Peoples' Liberation Army (PLA) in the North-East Frontier Agency (now Arunachal Pradesh) on November 17, 1962.

Jaswant Singh was serving in the 4th Battalion of the Garhwal Rifles. As per official records, his battalion had beaten back two Chinese charges on their position. During a third attack, a Chinese medium machine gun (MMG) came close to the Indian defences and was firing accurately at the Indian positions.

Jaswant Singh volunteered to silence this PLA machine gun. Under covering fire given by Lance Naik Trilok Singh Negi and Rifleman Gopal Singh Gusain, he closed in within grenade-throwing distance of the machine gun position, and neutralised the Chinese detachment of five sentries, seizing the medium machine gun in the process.



However, while returning, Gusain and Negi lost their lives and Jaswant was seriously injured, although he managed to return with the captured weapon.

While Jaswant Singh's company had to withdraw under repeated Chinese assaults, the lone Rifleman continued to man his post. Local folklore says he was aided in his efforts by two local girls, one of whom was killed and the other taken captive. Rifleman Jaswant Singh managed to hold back successive Chinese attacks until he succumbed to his injuries.

Jaswant was awarded the Maha Vir Chakra posthumously while his battalion received the Battle Honour Nuranang. Today, the post at which Jaswant Singh fought is named Jaswantgarh. A memorial to his bravery has been erected at the spot.

### NAMBOODIRI, THE ARTIST WHOSE LINES TRACED AN ARC OF HISTORY, IS NO MORE

Few illustrators would have created art history like Karuvattu Vasudevan Namboodiri, 97, who passed away on July 6. When back in the 1960s he began his career in Mathrubhumi Weekly, he signed his illustrations for short stories, serialised novels and poems as NAMBOODIRI . That is how the journal's committed readership came to know him. By the time he left the publication in the 1980s he had outgrown the job role as an accompanying artist. He was one in his own right. Kerala has since known him as Artist Namboodiri.

In Namboodiri's days, Mathrubhumi Weekly pretty much defined mainstream Malayalam in prose and poetry, fiction and non-fiction. It was to Kerala what Desh was to Bengal. These two states in two corners of the subcontinent seemed to radicalise in tandem — left politics, pathbreaking literature, new cinema.

What endeared Namboodiri to readers was his core work as an illustrator. Back then, when he started out, editors to advertisers everywhere preferred line art to photographs. There was no Photoshop then to tweak images. You needed trained artists to conjure up visual content. Mathrubhumi had commissioned a formidable array of accomplished artists to illustrate, beginning with the legendary K C S Panicker, followed by M V Devan, A S Nair and Namboodiri. The three became household names thanks to the stature of the publication. Interestingly, art itself was not promoted half as well as literature in Kerala then. It came as part of your read. Biennale took ages to arrive. What saved the day was that the readers who turned the pages looked at the drawing as well. And slowly, the lines grew on them.

Those were the years when Malayalam literature was modernising and literacy was beginning to boom. Television hadn't come and cinema was the only distraction. Even the best of films were adaptations of novels and short stories. For a visual artist then, the world of words was the safest place to be in. On the flip side, it could be annoyingly limiting, especially for someone like Namboodiri who studied art formally in the Madras School of Arts and loved his occasional sculpting on copper.

Namboodiri transcended the trap with a certain lightness of touch. When he had to visualise Randamoozham, M T Vasudevan Nair's Jnanpith winning novel based on the Mahabharata, he could have created an array of larger-than-life characters. He did nothing of the kind. He didn't eclipse the text but created a parallel visual narrative. He would always tell you that he practised his art as a musician practises music, "Leave the lyrics alone and stay in tune".



## BUSINESS & ECONOMICS

### WHY HAS THE IMF'S VIEW ON THE CRYPTO MARKET IN LATIN AMERICA CHANGED?

#### The story so far:

On June 22, the International Monetary Fund (IMF) issued a statement on the use of cryptocurrency in the Latin American and Caribbean market, and about the rising interest in blockchain-based central bank digital currencies (CBDCs). The global monetary authority ended its statement noting that a ban on crypto “may not be effective in the long run” in the region. The international organisation’s change in stance on crypto in the LatAm market has raised eyebrows everywhere.

#### Why is Latin America’s crypto economy so significant?

Countries like Argentina, Chile, and Columbia have experienced devaluation of their currency against the U.S. dollar. To preserve the value of their savings, some residents have explored converting their funds to U.S. dollars. However, there are legal restrictions controlling this. Others have chosen to convert their assets to stablecoins — cryptocurrencies designed to reflect the value of fiat currencies such as the U.S dollar. Brazil, Argentina, Colombia, and Ecuador are among the top 20 in Chainalysis’ 2022 Global Crypto Adoption Index.

Separately, a number of central banks in the Latin American market are considering CBDCs, meaning that more people could soon be exposed to blockchain-based infrastructure.

#### Why does El Salvador stand out among crypto economies?

El Salvador is the first country in the world to adopt Bitcoin — the largest cryptocurrency by market capitalisation — as its legal tender. The country with a population of 6.5 million adopted Bitcoin on September 7, 2021 under the leadership of President Nayib Bukele, who is an ardent crypto supporter. He has since bought over 2,000 BTC and continued to buy even as the crypto market suffered crashes, joking about getting the asset for cheap. El Salvador uses a digital wallet known as Chivo to regulate users’ crypto transactions. However, there have been complaints about the wallet causing funds to disappear and enabling identity fraud.

Bitcoin reached an all-time high of over \$67,000 in November 2021. During this time, Bukele made ambitious plans to issue Bitcoin bonds, build a ‘Bitcoin City’ and start the volcanic mining of Bitcoin. However, these plans were largely put on hold as Bitcoin suffered multiple crashes through 2022 and the Bukele administration turned its focus to cracking down on gang activity. Around 2% of its adult population was arrested during this process, reported CNN.

On November 17, 2022, Bukele said that he would be buying Bitcoin every day from November 18. And as on June 29, the country’s Bitcoin investment value is down 26.3% in total, as per the Nayib Bukele online portfolio tracker. El Salvador’s president also predicted that Bitcoin would reach a value of \$1,00,000 by the end of 2022. But the asset has not even come close to its previous high. As on June 29, Bitcoin is worth a little over \$30,000.

#### How did the IMF react to El Salvador’s Bitcoin adoption?

The IMF said it was against El Salvador’s move, citing fiscal risks and consumer protection issues. According to its statement, IMF’s executive directors “urged the authorities to narrow the scope



of the Bitcoin law by removing Bitcoin's legal tender status." They were further concerned by Bukele's Bitcoin-backed bonds idea. El Salvador was also told that its adoption of Bitcoin might affect its application for a loan of \$1.3 billion, reported Bloomberg in 2022. This is why the IMF's latest blog post on crypto and CBDC use in Latin America and the Caribbean came as a surprise to many. "While a few countries have completely banned crypto assets given their risks, this approach may not be effective in the long run," said the post, going on to add that the Latin America and Caribbean region should improve the financial infrastructure and lack of support which drove users to crypto in the first place. The post also called for regulation of cryptocurrency and recording crypto transactions for transparency.

#### **What is the difference between cryptocurrency and CBDCs?**

Cryptocurrencies and CBDCs are both blockchain-based digital currencies. However, while cryptocurrencies are generally run by private companies or individuals, a CBDC is controlled and tracked by a country's central bank and corresponds to that country's fiat currency.

Bitcoin's price may vary by hundreds or even thousands of dollars in a short period of time, and its founder is a mystery. On the other hand, a CBDC such as the eNaira, issued by the Central Bank of Nigeria, would (ideally) be worth as much as its physical counterpart. While investors often buy large quantities of Bitcoin or other cryptocurrencies and hold them in the hope of making a profit, this doesn't make sense in the case of CBDCs as they are not meant to be investment vehicles.

China's government, meanwhile, has energetically promoted its digital renminbi (e-RMB). Transactions with its CBDC crossed \$13.9 billion last year. China has however banned crypto mining and unregulated virtual assets in the country, prompting a large section of the mining population to flee to other countries. The Bahamas in the Caribbean was one of the first countries to officially introduce its Sand Dollar CBDC.

### **EXPRESS VIEW ON INTERNATIONALISATION OF INDIAN CURRENCY: THE RUPEE CHALLENGE**

An inter-departmental group constituted by the Reserve Bank of India to frame a road map for the internationalisation of the Indian rupee has submitted its report. The report comes against the backdrop of the Russia-Ukraine war, the subsequent imposition of sanctions and the weaponisation of the financial system which has led to apprehensions over excessive reliance on the dollar, leading to calls for diversification.

For an economy like India, the advantages from greater usage of its currency in international transactions are manifold. For one, it brings down the "exchange rate risk" for Indian exporters and importers, while curtailing the demand for US dollar. It also reduces the need to maintain a forex war-chest in order to "manage external vulnerabilities", and, among others, makes the economy less at risk to "sudden stops and reversals of capital flows".

The report has detailed several measures required to boost the rupee's usage in international transactions. The short-term measures range from putting in place a uniform approach for dealing with trade arrangements "for invoicing, settlement and payment in the rupee and local currencies", incentivising exporters to use the Indian currency for trade settlement, and integrating payment systems to provide seamless cross-border transactions. Among the more medium-term measures are synchronising tax regimes of India and other financial centres, and





allowing banking services in the rupee outside the country, while in the long run, the objective could be to include the rupee in the IMF's SDR (special drawing rights) basket.

However, the path to internationalisation is likely to be challenging. As per reports, even though the central bank had allowed banks in July last year to settle international trade in rupees with 18 countries, there has been little traction for this facility so far. Russia, for instance, reportedly prefers the yuan or the dirham as a medium of transaction, even though there has been a sharp rise in oil imports from the country. A few months ago, Russian Deputy Prime Minister, Denis Valentinovich Manturov had said that "because of a lack of imports from India, it's not enough to use the rupee".

The quest for internationalisation will involve providing greater frictionless freedom to transact in the rupee. Moreover, the depth and breadth of financial and foreign exchange markets, the extent of frictions therein, will also play a critical role in determining the pace of internationalisation of the currency. As the Indian economy grows in size, as its trade linkages with other countries grow stronger, more space will be created for using the rupee in international transactions. But, a cautious approach is called for.

## AN INCOMPLETE REFORM

India's tryst with the Goods and Services Tax (GST), launched at a special midnight Parliament session with unusual fanfare, completed six years this month. Marking the occasion, Finance Minister Nirmala Sitharaman emphasised that the GST has moved the country towards a unified market from a situation where each State mandated different indirect tax structures and procedures, while inter-State borders were marked by bottlenecked check posts that added to logistics costs and subtracted from Indian goods' competitiveness. Introduced soon after the demonetisation shock, the GST was viewed as another disruptor for the informal economy and its initial technical, structural and procedural challenges took a while to sort out. That all businesses with annual turnover of ₹5 crore will have to generate e-invoices starting this August, and that there has been no ostensible pushback from smaller businesses over this, indicates that firms have gradually embraced the change. The Revenue Department's crackdown on fake invoicing and other techniques deployed by tax evaders may compel the few outliers to fall in line too.

Tightening compliance and the post-pandemic rebound in economic activity have helped improve revenues from the GST, which Ms. Sitharaman had suggested were underwhelming as of late 2021 when the Council set up a ministerial group to rationalise the unwieldy multiple rate structure and enhance tax inflows. This June, GST revenues crossed ₹1.6 lakh crore, only the fourth such occasion in its 72 months' existence, lifting the average collections in the first quarter of this year to nearly ₹1.7 lakh crore — a healthy 12% over last year's kitty. The recent revenue buoyancy, even if it may face a blip if consumption growth falters amid a slowing global economy, bodes well for States that were worried about their fiscal capacity after five years of assured revenues through GST compensation expired last July. For taxpayers and consumers, however, much remains to be done till the GST can be considered a Good, Simple Tax. GST Compensation cess levies have been extended till at least March 2026, instead of the initial five-year tenure, due to the transitory shock of COVID-19 lockdowns on revenues. Dispute resolution remains a pain point for industry, with GST appellate tribunals still not set up. There is no road map in sight on the rate rationalisation exercise or the inclusion of excluded items such as electricity, petroleum and real estate, without which the efficiency gains from the GST remain constricted. The GST Council needs to meet more often and turn its to-do list into a must-do list expeditiously.



## MOMENTUM SOFTENS

The latest Purchasing Managers' Index (PMI) for India's manufacturing sector and the Services Business Activity Index for the economy's broader services sector from S&P Global, posit a softening in momentum in economic activity. Its survey of about 400 manufacturers shows that production growth at major private sector factories eased marginally last month, with the June PMI reading dipping to 57.8, from 58.7 in May. On the services front, the index signalled the expansion in output decelerating to a three-month low, dragged down by activity in the transport, information and communication sectors registering a sequential slowdown. The softer readings of the manufacturing and services indices for June can be attributed to a large extent to their multi-year peaks in May and April, respectively, especially when the underlying constituents of the index are viewed separately. While manufacturing PMI surged to a 31-month high in May, the index for services had in April registered its highest seasonally adjusted figure in almost 13 years. June's data show that new orders at factories, which constitute about 30% of the manufacturing PMI's weight, grew at the strongest pace in 28 months, while demand and higher labour costs spurred charge inflation — the rate of increase in prices of manufacturers' finished goods — to a 13-month high. Similarly, service providers noted a quicker expansion in intake of new business, pointing to demand remaining robust, and buoying firms' confidence in growth prospects to the highest level in 2023.

On the face of it, S&P Global's survey findings ought to reassure policymakers that the Reserve Bank of India's inflation-battling interest rate increases till the end of the last fiscal have still not sapped domestic demand for manufactured goods and services. However, the PMI survey panels do not include MSMEs, which collectively are estimated to contribute more than a third to the gross value added generated by the manufacturing sector as a whole. The absence of data on the MSME segment, which is a key bulwark of manufacturing employment, means that estimating the overall strength of job creation in the formal economy relying largely on PMI as an indicator may be risky. While S&P Global's surveys point to private sector employment strengthening further, with manufacturers recording a stronger expansion in jobs than service providers, CMIE data point to the June unemployment rate having spiked to 8.5%, from 7.7% in May. Policymakers will also need to keep a watch on the upward trend in output prices at manufacturers and service providers, given that the resurgence in food inflation threatens to undermine the RBI's efforts to anchor inflation expectations and ensure growth-supportive price stability.

## LIMITS OF EXPANSION

The National Conference of Food Ministers failed to resolve the issue of the discontinuance of rice and wheat sales to States under the Open Market Sale Scheme (OMSS) in view of the Centre's restrictions. The meet was to discuss topics such as an action plan for the procurement of coarse grains and a strengthened focus on food and nutritional security. However, given the row in Karnataka over the Centre's stringent restrictions on the OMSS, it was expected that there would be a solution. But the Centre was in no mood to oblige the States, which use the OMSS to cover a considerable portion of their foodgrain requirements. Apart from Karnataka, Tamil Nadu and Rajasthan asked that the restrictions be removed. Rejecting the plea, Union Food Minister Piyush Goyal reiterated the Centre's position of taking care of the interests of those outside the scope of the National Food Security Act (NFSA). Though it is indisputable that he has to look after the non-NFSA category of beneficiaries, the States' plea too considers the needs of sections of the non-NFSA population, as those covered under the Act get their entitlements under the Centre's monthly allocation of foodgrains. Besides, if States are forced to tap the open market, rice and



wheat prices are bound to go up. This will defeat the Centre's objective behind restrictions on quantity sold through OMSS, i.e., keeping prices under control. Finding middle ground would have addressed everyone's concerns, at least partially.

The controversy over the OMSS should have sent out the message to States that it would not be wise to rely on the Centre or its agencies when it comes to implementing State schemes in the food sector. They must identify their own sources, and in a cost-effective manner. After the U-turn by the Food Corporation of India in providing additional foodgrains for the Anna Bhagya 2.0 programme, the Congress government in Karnataka could not find an equivalent supplier, cost being a key reason. States should introspect whether it is feasible to double the size of entitlements, as Karnataka had sought to, from 5 kg to 10 kg. Though Karnataka has found a way out — it will now transfer cash for the proposed additional quantity — the episode brings into focus its ill-planned attempt to replicate, in the area of food security, a scheme of the Union government, which has a bigger resource base. With Mr. Goyal sounding caution on the El Niño factor in foodgrain production and procurement, the Centre and the States should focus more on making the Public Distribution System foolproof than on expanding existing schemes.

#### EXPRESS VIEW ON RBI'S LATEST FINANCIAL STABILITY REPORT: WELCOME TURNAROUND

The asset quality of the Indian banking system continues to show improvement. As per the Reserve Bank of India's latest financial stability report, banks' gross non-performing assets have fallen to a 10 year low of 3.9 per cent in March 2023. The improvement has been across the board with bad loans falling in both public and private sector banks, and in major sectors of the economy. Alongside, there has also been a steady improvement across key financial parameters of the corporate sector. As per the report, private non-financial companies have managed to bring down their debt to equity ratios further, and have seen an improvement in their debt servicing capacity. As a consequence, unlike in the past when the balance sheets of both banks and firms were impediments to investment activity, they are now "engendering a twin balance sheet advantage for growth" as per RBI Governor Shaktikanta Das. These are encouraging signs for the economy.

The improvement in the asset quality of banks is likely to continue. Stress tests by the central bank suggest that bad loans are likely to decline further to 3.6 per cent by the end of March 2024. However, this trend could be disrupted if the macroeconomic environment worsens. Alongside, banks have managed to sustain the momentum in their profitability as their net interest margins continue to grow, their provisioning coverage ratio is high, and their capital position is healthy. In fact, the capital to risk-weighted assets ratio has touched a high implying that banks are well capitalised and can absorb macroeconomic shocks. As per the RBI's assessment, they will be able to comply with the minimum capital requirements even under adverse stress scenarios.

However, there are some areas of concern. In the retail loan category, even though NPAs are low, loans where the principal or the interest payments or any other amount wholly or partly overdue has remained outstanding for a specified time (special mention accounts), were high at 7.4 per cent. For public sector banks they were even higher in both the secured and unsecured loan category, amounting to almost a tenth of their retail portfolio. For public sector banks, 6.1 per cent of education loans have turned bad, as have 18 per cent of credit card receivables. The share of unsecured retail loans has also risen from 22.9 per cent to 25.2 per cent. Further, under the emergency credit line guarantee scheme, one-sixth of accounts have turned non-performing, with the distress being majorly seen in micro enterprises, in the services and trade sectors. In the case of industry, while bad loans have fallen, they remain high in segments such as gems and jewellery, construction, food processing and textiles. These areas require close monitoring.

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## WHY RBI PENALISED CREDIT INFO COMPANIES AND WHAT BORROWERS SHOULD DO NOW

The Reserve Bank of India (RBI), earlier this week, slapped a total penalty of over Rs one crore on four credit information companies (CICs) for their failure to update credit information of borrowers which leads to big problems for bank customers while applying for banking services like loans and credit cards.

### **What was the RBI action?**

The central bank slapped a monetary penalty of Rs 26 lakh on TransUnion CIBIL Ltd, Rs 24.75 lakh on Experian Credit Information Company of India Pvt Ltd, Rs 24.25 lakh on Equifax Credit Information Services and Rs 25.75 lakh on CRIF High Mark Credit Information Services for non-compliance with certain provisions of the act and rules governing credit information companies.

The RBI conducted statutory inspection of these four companies for the financial position as on March 31, 2021 and examination of the inspection report, supervisory letter and all related correspondence pertaining to the same revealed that certain data relating to the credit information, especially updating credit information, maintained by the companies was not accurate and complete.

The RBI issued notices to these companies advising it to show cause as to why penalty should not be imposed for its failure to comply with the provisions of the CIC (R) Act read with CIC Rules. The RBI came to the conclusion that the charge of non-compliance with various provisions were substantiated and warranted imposition of monetary penalty on the company, it said.

### **What are the complaints of customers?**

The RBI had received many complaints from customers about CICs not updating the status of borrowers. Many customers had complained that when they rectify a default issue or point out a wrong classification, CICs failed to act within the stipulated timeframe.

As a result, many customers were unable to get loans or credit cards as banks access the database of CICs and the rating given by them while taking decisions on loan and card sanctions. If a credit card holder defaults on a credit card or loan instalment, it's immediately notified to the CICs. However, CICs have failed to reclassify them when they rectified the payments.

The RBI said these companies had neither updated the credit information relating to them nor informed them regarding the steps taken by it for correction of discrepancies and also the reasons for its inability to comply with the timeframe for providing correct information, within 30 days of receipt of such complaints.

### **What are credit information bureaus?**

They maintain credit information of borrowers (including individuals, corporate, SMEs) which can be accessed by banks and other lending institutions. They collect information from a variety of credit providers including banks, credit card companies and non-bank financial institutions. They rate the borrowers in a scale of 300-900 with 900 being the highest rating. Banks and finance companies normally take decision on the rating given by the credit bureaus.

If the borrower has a rating of over 800, he has a good chance to get a loan or credit card easily and at a lower interest rate. If a borrower defaults, his rating will come down. When the rating



declines below 500, chances of getting low interest rates and even loans or cards also decline accordingly.

They levy charges on enquiries even if they have no data on the entity. Banks mandate the usage of credit information report (CIR) in their credit appraisal process. CICs and banks are supposed to keep the credit information collected/ maintained by them, updated regularly on a monthly basis or at such shorter intervals as may be mutually agreed upon between the banks and the CICs.

#### **What's in their database?**

CICs have details about all the creditors and borrowers in the financial system. This means they are monitoring credit outstanding of Rs 140 lakh crore in the banking system. CICs also capture the names of directors, guarantors and partners involved in the loans.

There were 34,304 suit-filed accounts – where banks filed cases against borrowers for loan defaults – involving Rs 934,882 crore as of December 2022, according to TransUnion Cibil data. Also, there were 16,185 wilful defaulters involving Rs 347,424 crore as of December 2022, Cibil data shows.

#### **What should borrowers watch out for?**

When borrowers default on repayment and subsequently make the repayment, they should approach the CIC after a month to seek the status. If they are still classified as defaulters and rating is down, they should take up the issue with the CIC for rectification. Borrowers are in the dark about their credit rating and credit status unless they seek a report from CICs. Unlike banks, they don't have direct access to CICs' database.

### **CREDIT CARD USAGE: WHY RBI WANTS BANKS TO LET CUSTOMERS CHOOSE AMONG VISA, MASTERCARD, OTHER CARD NETWORKS**

Should it be Visa, Mastercard, American Express or RuPay? At a time when the credit card business of banks is booming, the Reserve Bank of India (RBI) wants credit card issuers (banks and finance companies) to allow customers opt for their desired card network instead of forcing them to accept the favourite networks of banks.

#### **What does the proposal entail?**

The central bank has proposed that card issuers provide an option to their eligible customers to choose any one among the multiple card networks. This option may be exercised by customers either at the time of issue or at any subsequent time, the RBI said in a draft circular to banks.

The RBI has said card issuers should not enter into any arrangement or agreement with card networks that restrain them from availing the services of other card networks. "Card issuers should issue cards across more than one card network," the central bank said, stating that card issuers and card networks should ensure to adhere to these requirements in existing agreements at the time of amendment or renewal and fresh agreements executed from the date of the RBI circular.

#### **What do card networks do?**

Credit card networks provide the centralised communication system that card issuers like banks and non-banks use to process credit card transactions. The networks and issuers authorise and



process credit card transactions, set the transaction terms, and move payments between customers, businesses, and their banks. Major credit card networks include Visa, Mastercard, American Express and RuPay.

Banks usually issue credit cards to customers in association with card networks. If a customer has a credit card issued by the bank with its logo and the Visa logo on it, the bank is the credit card issuer and Visa is the credit card network.

When a customer uses a credit card to make a purchase, the transaction request goes to the credit card issuer, who then decides whether or not to authorise it through the network system of the card networks. The bank extends credit to the cardholder, and the cardholder pays the bank back for purchases made with the credit card.

#### **What are the practices that RBI want to put an end?**

Many banks have exclusively tied up – informally – with card networks to offer their services whether the customers prefer them or not. While one of India’s leading two private banks have tied up with Visa, the other one offers only the network of MasterCard.

“It is observed that arrangements existing between card networks and card issuers (banks and non-banks) are not conducive to the availability of choice for customers,” the RBI said. Some banks have been forcefully asking customers to accept particular card networks. The RBI had indefinitely barred Mastercard, American Express and Diners Club from issuing new debit, credit or prepaid cards to customers over noncompliance with local data storage rules two years ago but lifted the ban later.

#### **How is the credit card market doing?**

According to RBI data, credit card outstanding has soared to Rs 2 lakh crore, a rise of 29.7 per cent on a year-on-year basis. Banks have issued 8.65 crore credit cards, as of April 2023. Monthly credit payments are now over Rs one lakh crore every month, with card payments touching Rs 1.32 lakh crore in the month of April 2023.

The surge in credit card usage in India is a positive indicator of the growing purchasing power of our country. “The outstanding debt of over Rs 2 lakh crore underscores the power of credit cards in enabling individuals to fulfil their needs and wants,” said Meet Semrani, Co-founder, Tartan. However, it is crucial to establish the right awareness to ensure credit cards are issued with the right practice by credit card companies, Semrani said.

### **BANK LOCKER OWNERS REQUIRED TO RENEW AGREEMENTS: WHY FRESH CONDITIONS, NEW CHARGES ARE HASSLING CUSTOMERS**

The Reserve Bank of India’s (RBI) stipulation that bank locker owners should renew their locker agreements on a stamp paper within a set of new deadlines has sent locker owners scrambling to comply, as banks have started asking customers for inking new agreements on stamp papers and hiking charges across the board.

#### **What is the RBI deadline?**

The central bank had asked banks to notify all their customers of the revised requirements by April 30, 2023 and ensure that at least 50 per cent and 75 per cent of their existing customers have executed the revised agreements by June 30 and September 30, 2023 respectively.

**3<sup>RD</sup> FLOOR AND 4<sup>TH</sup> FLOOR SHATABDI TOWER, SAKCHI, JAMSHEDPUR**



Banks should report the status of compliance with these instructions on the DAKSH supervisory portal of the Reserve Bank on a monthly basis. The deadline for banks is being extended in a phased manner to December 31, 2023.

#### **What is the new procedure?**

While banks were originally required to renew their locker agreements with existing locker customers by January 1, 2023, a large number of customers are yet to execute the revised agreement and are facing difficulties in doing the same. In many cases, the banks are yet to inform the customers about the need for renewal of agreements before January 1, 2023. Further, there is a need for revision in the Model Agreement drafted by the Indian Banks' Association (IBA) to fully comply with the revised instructions.

The central bank has asked banks to facilitate execution of the fresh/supplementary stamped agreements with their customers by taking measures such as arranging stamp papers, franking, electronic execution of agreement, e-stamping, etc. and provide a copy of the executed agreement to the customer.

Where operations in lockers have been frozen for non-execution of agreement by January 1, 2023, the lockers are required to be unfrozen with immediate effect. At the time of allotment of the locker to a customer, the bank should enter into an agreement with the customer to whom the locker facility is provided, on a paper duly stamped.

A copy of the locker agreement in duplicate signed by both the parties should be furnished to the locker-hirer to know his/her rights and responsibilities. The original agreement should be retained with the bank's branch where the locker is situated.

#### **What are banks doing?**

While some lenders are asking locker owners to submit stamped agreement on Rs 500 paper, others say a Rs 100 stamp paper is fine. It is also not clear who will bear the cost of the stamp paper. As a result, some banks were supplying stamp paper while others are asking customers to bring the stamp paper, which is already in short supply. There are also complaints from customers that banks have not informed them about the renewal of the locker agreement.

At the same time, banks have hiked locker charges across the board. State Bank of India (SBI) has hiked the rates to Rs 1,500-12,000 plus GST for various types of lockers, as against Rs 500-3,000 a year on the basis of the location of the branch. SBI charges Rs 3,000 plus GST for urban and metro customers to hire a medium size locker and Rs 2,000 plus GST for lockers in rural, semi urban customers. HDFC Bank levies a fee of Rs 1,350 to Rs 20,000 annually for lockers depending on the location and type.

#### **What are the conditions?**

According to the RBI, to ensure prompt payment of locker rent, banks are allowed to obtain a term deposit at the time of allotment, which would cover three years' rent and the charges for breaking open the locker in case of such eventuality. Banks, however, should not insist on such term deposits from the existing locker holders or those who have satisfactory operative account. The packaging of allotment of locker facility with placement of term deposits beyond what is specifically permitted above will be considered as a restrictive practice.



Banks should have the discretion to break open any locker following due procedure if the rent has not been paid by the customer for three years in a row. The bank should ensure to notify the existing locker-hirer prior to any changes in the allotment and give him/her reasonable opportunity to withdraw the articles deposited by him/her.

HDFC Bank says if the locker remains inoperative for a period of seven years and the locker hirer cannot be located, even if the rent is being paid regularly, the Bank should be at liberty to transfer the contents of the locker to their nominees/legal heir or dispose of the articles in transparent manner, as the case may be.

#### **What can't be kept in the locker?**

Bank lockers are only meant to be used for legal reasons, such as keeping valuables like jewellery and important papers safe. They are not meant to be used to keep money or cash. Weapons, explosives, drugs, or other illegal substances, or any perishable, radioactive, illegal, otherwise hazardous material or any substance that might endanger the bank or any of its clients or pose a hazard to them.

#### **What's the compensation for fraud?**

According to the RBI, it is the responsibility of banks to take all steps for the safety and security of the premises in which the safe deposit vaults are housed. It has the responsibility to ensure that incidents like fire, theft, burglary, robbery, dacoity and building collapse do not occur in the bank's premises due to its own shortcomings, negligence and by any act of omission or commission.

As banks cannot claim that they bear no liability towards their customers for loss of contents of the locker, in instances where loss of contents of locker are due to incidents mentioned above or attributable to fraud committed by its employees, the banks' liability should be for an amount equivalent to 100 times the prevailing annual rent of the safe deposit locker, the RBI said.

However, banks explicitly mention in the agreement that they are not responsible for any damage to or loss of the contents of the Locker if it is caused by a natural disaster or an Act of God like an earthquake or flood.

### **CMV AND TOMV: THE TWO 'MOSAIC' VIRUSES THAT HIT TOMATO CROP IN MAHARASHTRA AND KARNATAKA**

Tomato growers in Maharashtra and Karnataka have blamed two different viruses for the loss of yields earlier this year. Farmers in Maharashtra have said their tomato crop was impacted by attacks of the cucumber mosaic virus (CMV), while growers in Karnataka and other South Indian states have blamed the tomato mosaic virus (ToMV) for crop losses.

Over the last three years, growers of tomato have complained of increased infestation with these two viruses, leading to partial to complete crop losses.

#### **What are CMV and ToMV?**

The two plant pathogens have similar names and cause similar damage to crops, but they belong to different viral families, and spread differently. ToMV belongs to the Virgaviridae family and is closely related to the tobacco mosaic virus (TMV). ToMV hosts include tomato, tobacco, peppers, and certain ornamental plants.





CMV has a much larger host pool that includes cucumber, melon, eggplant, tomato, carrot, lettuce, celery, cucurbits (members of the gourd family, including squash, pumpkin, zucchini, some gourds, etc.), and some ornamentals. CMV was identified in cucumber in 1934, which gave the virus its name.

#### **How do these two viruses spread?**

ToMV spreads mainly through infected seeds, saplings, agricultural tools and often, through the hands of nursery workers who have failed to sanitise themselves properly before entering the fields. It would require only a few infected saplings for the virus to take over an entire field in a matter of days.

CMV is spread by aphids, which are sap-sucking insects. CMV too can spread through human touch, but the chances of that are extremely low.

Conditions of high temperature followed by intermittent rain, which allow aphids to multiply, are conducive to the spread of CMV, Dr M Krishna Reddy, a former head of crop protection at Indian Institute of Horticulture (IIHR), Bengaluru, said. These conditions were seen in Maharashtra — the late rabi crop (planted in January-February) faced a sudden bout of rain followed by extreme heat.

For ToMV, farmers in Maharashtra have blamed seed manufacturers and nurseries. Tomato growers plant 3-4-inch saplings in their fields, which they buy from nurseries. It is very important to ensure that nurseries maintain bio safety, and restrict entry into the premises. “Seed treatment at the nursery is necessary to prevent future spread of the virus,” Dr Reddy said.

#### **How do the viruses affect the crop?**

Both viruses can cause almost 100 per cent crop loss unless properly treated on time. The foliage of plants infected with ToMV shows alternating yellowish and dark green areas, which often appear as blisters on the leaves. Distortion of leaves and twisting of younger leaves are also symptoms. The fruit develops necrotic spots, which leads to overripening. Younger plants are dwarfed, and fruit setting is affected.

CMV too causes distortion of leaves, but the pattern is different. Often leaves at the top and bottom are distorted while those in the middle remain relatively blemish-free. In cucumber, the virus causes a mosaic-like pattern of alternating yellow and green spots. In tomato, fruit formation is affected, and in some cases the fruit is distorted and small.

While specific effects vary depending on the host, overall, CMV causes stunting and lower production.

#### **How can the viruses be controlled?**

Dr Reddy stressed the importance of following biosafety standards in nurseries, and compulsory seed treatment to stop the spread of ToMV. Farmers who buy trays of saplings should check before planting, and discard any visible infected material, he said. They should also look out for signs of infection throughout the cropping cycle, and remove infected plants without allowing it to touch healthy ones.

ToMV can remain dormant in weeds and plant remains around the field, and come back later. Fields must, therefore, be cleared of weeds and plant material before fresh planting. Plants cannot



be cured of ToMV, but the infection can be controlled with good agricultural practices. “Earlier we had reports about the virus mostly from Maharashtra, but reports are now coming from Karnataka, Andhra Pradesh, and other states,” Dr Reddy said.

Controlling CMV is more difficult, given the large number of hosts the virus can live on. The best way is to stop the aphids, which can be done by spraying quick acting insecticides or mineral oils on the plants. Irritating the aphids can spread the virus to other fields. An eye must be kept on aphid migration so that measures can be taken while planting the crop.

## GREEDFLATION AND ITS COUNTER ARGUMENTS: HOW CONSUMERS ULTIMATELY DECIDE PRICES

Greedflation refers to price inflation caused by corporate greed for high profits. Progressives in the United States have accused corporate greed as a major reason for the historically high price inflation in the U.S. since the pandemic. The proponents of the idea of greedflation argue that corporate profit margins have risen significantly since the pandemic even though the larger economy has struggled and that this has contributed to high inflation. They contend that the U.S. corporations have allegedly increased the prices of their goods by more than what was necessary to compensate for higher input costs caused by supply-chain bottlenecks.

Proponents of the greedflation theory of inflation see this as a sign of increased market dominance by corporations, and have called for efforts to rein in market power of large corporations and some have even advocated for a ban on price hikes to prevent “profiteering”.

### Questioning the narrative

Many economists, however, have questioned the validity of the argument that corporate thirst for higher profits is the cause behind inflation. They see greedflation as a political narrative built around the issue of inflation rather than as a serious economic explanation of high inflation since the pandemic.

Economists who disagree with the greedflation narrative argue that businesses, whether they are large corporations or small companies, cannot arbitrarily set prices as many people seem to erroneously believe. Businesses set prices for their products based on what consumers would be willing to pay for these products. In other words, businesses cannot force consumers to pay a certain price for their goods; they can only try to gauge the maximum price that consumers would be willing to pay and set prices accordingly in order to maximise their profits. If a business sets the price of its product too high, this would cause its goods to go unsold and the business would have no choice but to lower the price of its product to clear its unsold stock.

In short, while businesses have the freedom to raise or lower the prices of their products, it is ultimately consumers who determine the price of any product in the market. So be the case, it may not be sound to argue that corporate greed is behind the rise in inflation.

### The primacy of consumers

Moreover, inflation refers to a general rise in the price level (meaning a widespread rise in the prices of goods and services across the broader economy) rather than in the prices of individual goods and services. The only way corporations can influence the overall price level is by reducing the supply of goods and services. There is, however, no evidence to suggest that there has been a deliberate reduction in the output of U.S. corporations recently. Even if corporations cut down



their output, the drop in output is likely to be temporary as other suppliers would rush to meet the demand.

It is thus extremely unlikely that U.S. corporations caused prices to rise across the board in recent years by somehow adversely influencing the aggregate supply of goods.

The current bout of high inflation in the U.S., most economists believe, is much better explained by the U.S. Federal Reserve's expansionary monetary policy during the pandemic which put more money in the hands of U.S. consumers, who in turn have bid up the prices of goods and services in the economy. The U.S. money supply rose by a whopping 40% in the wake of the pandemic and this combined with supply-chain bottlenecks caused by stringent lockdowns led to high inflation.

#### **Where did the profits come from?**

Economists have also pointed out that the cost of inputs used by businesses has risen at a faster pace than the pace at which the prices of consumer goods have risen. In such a climate, the rise in the profit margins of corporations has come as a surprise. It should be noted, however, that corporations represent just a tiny share of the total number of businesses in the U.S. economy, so their rising profit margins may not present a true picture of the health of businesses in the wider economy. In fact, it could well be the case that large U.S. corporations benefited from the demise of smaller businesses during the pandemic by capturing more of their market share.

While this suggests that the market dominance of U.S. corporations may have risen considerably, particularly since rising profit margins could possibly be a sign of weakening competition among businesses, it still does not mean that rising profit margins are the reason behind high inflation. As noted earlier, prices are ultimately determined by buyers and not by sellers.

Greedflation has been compared to other theories of "cost-push" inflation which attribute inflation to a rise in input costs. For example, in the past, a rise in the wages demanded by workers has been blamed for the rise in the prices of goods and services. In the case of greedflation, it is the rise in the corporate thirst for profits that is seen as a cost that is driving up prices.

A criticism of the cost-push theory of inflation has been that it ignores the fact that the cost of producing any good is itself determined indirectly, but ultimately, by consumers. It should be noted that the cost of inputs, which can be used towards different alternative ends of society, is determined by competitive bidding in the market.

### **UNDERSTANDING DARK PATTERNS**

The Department of Consumer Affairs and the Advertising Standards Council of India (ASCI) recently held a joint consultation with stakeholders on the menace of 'dark patterns'. The ASCI has come up with guidelines for the same, with the central government also working towards norms against 'dark patterns'.

#### **What are dark patterns?**

Harry Brignull, a user experience researcher in the U.K., introduced the phrase 'dark pattern' in 2010 to characterise deceptive strategies used to trick clients. A dark pattern refers to a design or user interface technique that is intentionally crafted to manipulate or deceive users into making certain choices or taking specific actions that may not be in their best interest. It is a deceptive



practice employed to influence user behaviour in a way that benefits the company implementing it.

For example, a common dark pattern is the “sneak into basket” technique used on e-commerce websites. When a user adds an item to their shopping cart, a dark pattern may be employed by automatically adding additional items to the cart without the user’s explicit consent or clear notification. This can mislead the user into purchasing more items than they intended, potentially increasing the company’s sales but compromising the user’s autonomy and decision-making. Similarly, many of us have encountered pop-up requests for our personal information, where we have found it difficult to locate the ‘reject’ link. It is challenging for customers to decline the acquisition of their personal data if they want to continue on a website because the choice to depart or reject is so subtly positioned. By using such dark patterns, digital platforms infringe on the consumer’s right to full transparency of the services they use and control over their browsing experience.

### **What are the different types?**

Businesses are using various techniques and deceptive patterns to downgrade the user experience to their own advantage. Some of the common practices are — creating a sense of urgency or scarcity while online shopping; confirm shaming wherein a consumer is criticised for not conforming to a particular belief; the forced action of signing up for a service to access content; advertising one product or service but delivering another, often of lower quality, known as the bait and switch technique; hidden costs where the bill is revised or costs are added when the consumer is almost certain to purchase the product; disguised advertisements of a particular product by way of depicting it as news and many more. Such deceptive patterns that manipulate consumer choice and impede their right to be well-informed constitute unfair practices that are prohibited under the Consumer Protection Act 2019.

### **Are dark patterns illegal?**

Many believe that the use of dark patterns is a business strategy. The legality of dark patterns is a complex matter as distinguishing between manipulation and fraudulent intent can be challenging. As of now, there are no specific regulations in place in most nations against dark patterns. Nonetheless, individuals who have experienced harm as a result of dark patterns may potentially seek compensation for damages. In 2022, Google and Facebook faced repercussions due to their cookie banners. These companies violated EU and French regulations by making it more difficult for users to reject cookies as compared to accepting them.

### **What are global regulators saying?**

Major international authorities are acting and formulating rules to address the issue. In a letter to U.K. businesses, the Competition and Markets Authority (CMA) of the U.K. lists different pressure-selling techniques that the CMA believes would likely violate consumer protection laws and for which actions will be taken. Guidelines from the European Data Protection Board were released in 2022 and offered designers and users of social media platforms practical guidance on how to spot and avoid so-called “dark patterns” in social media interfaces that are in violation of General Data Protection Regulation (GDPR) laws.



### How do we address dark patterns?

The Department of Consumer Affairs and the ASCI have identified the issue and recently taken certain steps to handle the same. As of now, companies are being asked to desist from using such tactics in the e-market and on June 30, 2023, as per information by the PIB, major Indian online marketplaces received a letter from the Department of Consumer Affairs warning them against engaging in “unfair trade practices” by implementing “dark patterns” in their user interfaces to influence consumer choice and infringe on “consumer rights” as stated in Section 2(9) of the Consumer Protection Act, 2019. However, with the growing use of e- platforms, a robust legal mechanism is a demand. The Indian government should also amend existing laws to specifically address dark patterns. To do this, new rules aimed against deceptive design practices may need to be introduced along with updated consumer protection laws and data protection legislation.

### JIO'S NEW PHONE AND ITS FRESH BATTLE WITH AIRTEL, VODAFONE IDEA

Reliance Industries has launched a feature phone priced at Rs 999, in what is perhaps the most affordable 4G internet-enabled phone in the Indian market. The phone, called Jio Bharat, runs on an operating system designed by Reliance Jio and offers entertainment and payments applications of the company.

But, the hardware is only part of the offering, with the other play being a new affordable tariff plan to lure customers away from Bharti Airtel and Vodafone Idea.

Reliance is aiming to target the 250-million entry-level mobile broadband customers, especially in the rural markets using 2G speeds offered by Airtel and Vodafone Idea. Analysts say that if Jio's phone is successful in attracting these customers, it could have a material impact on the topline of the other two operators, along with BSNL.

#### Jio's new phone and its offerings

Jio Bharat has been priced at an affordable Rs 999, which the company claims makes it the cheapest phone to support 4G internet in the country. It runs a suite of Jio's own apps including JioCinema, JioSaavn, and Jio Pay, through which users can carry out UPI payments.

To ensure scalability, the company will conduct a beta trial for the first 1 million phones, across 6,500 districts, starting from July 7, Reliance Jio said in a statement.

Reliance has outsourced the manufacturing of the Jio Bharat phones to an Indian contract manufacturer. Besides Reliance, Indian phone maker Karbonn will also build its version of the Jio Bharat phone, meaning that there will be two different brands making the same phone.

It is worth noting that the latest phone is not part of the collaboration between Jio and Google – under which the two had produced the Jio Phone, and Jio Phone Next.

Currently, the operating system only supports apps developed by Jio, and It is unclear whether competitors in the respective segments would be willing to develop apps specific to Jio's operating system – if that does not happen, then the phones could be limited to just Jio's suite of applications.

A source at Jio said that at launch, the feature phone will not support other major applications like WhatsApp. Meta, the owner of WhatsApp, invested \$5.7 billion in Jio Platforms in 2020 for a 9.99 per cent stake.



### The big picture: Impact on other telecom operators

Another part of the jigsaw that Reliance seems to be relying on for selling the phone is a new tariff plan. It will offer a 28 day unlimited voice plan priced at Rs 123 which will also include 14 GB of data per month. Jio said that the current compatible plan offered by other telcos is priced at Rs 179.

Analysts said that the pricing could sway Airtel and Vi's 2G customers to Jio.

"We believe with this phone Jio can take market share at the lower end of the market. This also puts Bharti at risk as it can see increased churn from its recent 2G price action of increasing the Rs 99 plan to Rs 155 plan," JP Morgan said in a note. "We believe this is negative for Bharti as any hopes of a tariff hike should be diluted over the next 12-18 months."

Financial services firm Emkay said that the pricing could impact Airtel's consolidated EBITDA by as much as 6 per cent. "Vi and Airtel had 103mn/111mn 2G subscribers at the end of Q4FY23, which contributed 26%/20% to their respective mobile revenue. Assuming 40% of 2G users shift to JioBharat, the impact on India's mobile revenue for Vi/Airtel can be 11%/8% and the impact on EBITDA can be 19%/11%. It will impact Airtel's consolidated EBITDA by 6%," it said in a note.



# DreamIAS



## LIFE & SCIENCE

### OBSERVING GRAVITATIONAL WAVES CRITICAL TO STUDY OF THE COSMOS

Albert Einstein's theory of relativity predicted the existence of gravitational waves more than a century ago but the phenomenon was only directly observed in 2016. Gravitational waves are like ripples in the fabric of spacetime, akin to tiny waves on a lake when a pebble is tossed into it.

In 2016, scientists working with the Laser Interferometer Gravitational-wave Observatory (LIGO) announced that they had directly detected gravitational waves for the first time, emitted by the merger of two black holes 1.3 billion light years away.

Indirect evidence of the existence of gravitational waves had been discovered in 1974 itself, from the decaying orbital period of objects called binary pulsars, by Russel Hulse and Joseph Taylor. Direct detection wasn't possible until the twin LIGO instruments became operational in 2015.

#### **New discovery**

India's Giant Metre wave Radio Telescope was one of six large telescopes worldwide involved in collecting data that led to the recent discovery. The information carried by gravitational waves can allow scientists and researchers to analyse parts of the universe that are difficult to observe in any other way.

Historically, scientists have used electromagnetic radiation (in the form of visible light, X-rays, microwaves, ultraviolet light, etc.) to study the universe. Gravitational waves offer a kind of information that electromagnetic radiation doesn't, however. Intense cosmic events like the collisions of black holes or neutron stars release large amounts of energy as well as gravitational waves. Such events are hard to 'see' in certain wavelengths, but scientists can piece together many parts of the image that are otherwise invisible by analysing the gravitational waves.

According to the LIGO website, gravitational waves can be used to "listen" to the universe – in effect giving us an 'ear' on the universe's happenings – in addition to the 'eyes' we have had on it, the telescopes that tracked electromagnetic radiation. Black holes are objects in space with a gravitational pull so strong that even light can't get away from them. As a result, observatories that 'see' electromagnetic radiation alone can't see black holes or study them very well.

Scientists think that black holes probably began to form shortly after the universe was born. So studying them could reveal important information about their effects on the universe, especially when it was very young.

### EARTH RECORDS HOTTEST DAY EVER ON JULY 4: CAUSES, WHAT LIES AHEAD

Continuing an astonishing series of record-breaking warming events this year, the past Monday and Tuesday, July 3 and July 4, have been measured to be the hottest two days for the earth ever. July 3 was the first time that the global average daily temperature crossed the 17 degree Celsius mark. That record was broken within a day, with July 4 turning out to be even hotter.

The average temperature on July 3 was measured to be 17.01 degree Celsius. The next day recorded 17.18 degree Celsius. Scientists expect more such record-breaking events in the near future.



### **But 17 degree Celsius is not hot**

A 17 degree Celsius temperature may not appear to be particularly warm. But this temperature was not over any one place or region. Instead, this is a measure of the global average temperature for the day, the average over both land and ocean, including the ice sheets in the polar region and the snow of the high mountains where surface temperatures are well below zero degree Celsius.

Average temperatures over oceans are around 21 degree Celsius, and oceans occupy nearly 70 per cent of the earth's surface. The Antarctic Ice Sheet, where temperatures can easily drop to -50 degree Celsius, covers about 8.3 per cent of earth's surface while the Greenland Ice Sheet, which includes the Arctic region and north pole, constitutes about 1.2 per cent. The glaciers and ice caps in the mountain are estimated to account for about another 0.5 per cent of the surface.

So, while there are places that routinely experience temperatures in the high 40-plus degree Celsius range, the global average is relatively cool.

Before the 17 degree Celsius mark was breached on June 3, the hottest daily temperature happened to be 16.92 degree Celsius, recorded in August 2016, amid one of the strongest El Nino events.

### **El Nino impact**

It is no surprise that the latest record-breaking event has also been measured when an El Nino is developing. On Tuesday, the World Meteorological Organisation (WMO) announced the formal onset of the El Nino phase in the eastern equatorial Pacific Ocean and warned that this could lead to further increases in temperature this year. "The onset of El Nino will greatly increase the likelihood of breaking temperature records and triggering more extreme heat in many parts of the world and in the ocean," WMO Secretary General Petteri Taalas said in a statement.

El Nino, an abnormal warming of sea surface waters in the Pacific, off the northwestern coast of South America, is a large-scale climate driver known to have an overall warming effect on the planet.

The record-breaking temperature events of Monday and Tuesday were reported by the Climate Reanalyzer project of the University of Maine using data captured by the Climate Forecast System of the National Centers for Environmental Prediction (NCEP), which is part of the US National Oceanic and Atmospheric Administration.

The measured temperature was 0.81 degree Celsius higher than the normal on Monday and 0.98 degree Celsius higher on Tuesday. "Though NCEP CFSR (the dataset in question) only begins in 1979, other datasets let us look further back and conclude that this day (Monday) was warmer than any point since instrumental measurements began, and probably for a long time before that as well," said Robert Rohde, lead scientist of the Earth Team at the University of Berkeley, US, on Twitter. "This (the new record) is driven by the combination of El Nino on top of global warming, and we may well see a few even warmer days over the next six weeks," Rohde said.

### **Incredibly warm year**

With the end of a strong La Nina phase that had subdued the global rise in temperatures for the past two years, 2023, right from its start, was predicted to be extremely hot. And the predictions have not been off the mark.





The UK Met Office announced Tuesday that the past month was the hottest ever June for the UK. Before that, NOAA of the United States had measured this year's March to be the earth's second-warmest ever, May to be the third warmest ever, and February and April to be the fourth warmest ever.

Canada is battling its worst forest fires ever, while China is in the midst of a severe heat wave, both events made at least five times more likely by climate change according to rapid attribution studies.

The WMO, in its annual State of Global Climate report published in May, had said that it was almost certain that at least one of the next five years (2023 to 2027) would turn out to be the warmest year on record, leaving 2016, the current record holder, behind. It had further said there was a 66 per cent chance that at least one of these years would also breach the 1.5 degree Celsius threshold, meaning that average global temperatures in that year would be at least 1.5 degree Celsius higher than pre-industrial times.

## WHAT ARE THE PROVISIONS OF THE HIGH SEAS TREATY?

### **The story so far:**

On June 19, the UN adopted the Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ) or the High Seas Treaty. It became the third agreement to be approved under UNCLOS, after the 1994 and 1995 treaties, which established the International Seabed Authority and the Fish Stocks agreement.

### **When did the process start?**

The idea of protecting the marine environment emerged in 2002. By 2008, the need for implementing an agreement was recognised, which led to the UNGA resolution in 2015 to form a Preparatory Committee to create the treaty. The Committee recommended the holding of intergovernmental conferences (IGC) and after five prolonged IGC negotiations, the treaty was adopted in 2023. The treaty's objective is to implement international regulations to protect life in oceans beyond national jurisdiction through international cooperation.

### **What does the treaty entail?**

The treaty aims to address critical issues such as the increasing sea surface temperatures, overexploitation of marine biodiversity, overfishing, coastal pollution, and unsustainable practices beyond national jurisdiction. The first step is establishing marine protected areas to protect oceans from human activities through a "three-quarterly majority vote," which prevents the decision from getting blocked by one or two parties. On the fair sharing of benefits from marine genetic resources, the treaty mandates sharing of scientific information and monetary benefits through installing a "clear house mechanism." Through the mechanism, information on marine protected areas, marine genetic resources, and "area-based management tools" will be open to access for all parties. This is to bring transparency and boost cooperation. The last pillar of the treaty is capacity building and marine technology. The Scientific and Technical Body will also play a significant role in environmental impact assessment. The body will be creating standards and guidelines for assessment procedures, and helping countries with less capacity in carrying out assessments. This will facilitate the conference of parties to trace future impacts, identify data gaps, and bring out research priorities.



### Why did it take so long to sign?

The marine genetic resources issue was the treaty's most contended element. The parties to the treaty must share and exchange information on marine protected areas and technical, scientific and area-based management tools to ensure open access of knowledge. The negotiations on the subject were prolonged due to the absence of a provision to monitor information sharing. In IGC-2, small island states supported the idea of having a licensing scheme for monitoring, but was opposed by the likes of the U.S., and Russia, stating its notification system would hinder "bioprospecting research."

Another debate was over definition. The use of the phrases "promote" or "ensure" in different parts of the treaty, especially with respect to the sharing of benefits from marine genetic resources, was heavily debated over. And finally, there was the prolonged negotiation over the adjacency issue. This was specifically applicable to coastal states whose national jurisdictions over the seas may vary. This meant it required special provisions where it can exercise sovereign rights over seabed and subsoil in the jurisdiction beyond. It prolonged the decision-making as it affects the interests of landlocked and distant states.

### Who opposed the treaty?

Many developed countries opposed the treaty as they stand by private entities which are at the forefront of advanced research and development in marine technology (patents relating to marine genetic resources are held by a small group of private companies). Russia and China also are not in favour of the treaty. Russia withdrew from the last stage of reaching a consensus in IGC-5, arguing that the treaty does not balance conservation and sustainability.

## WITH THE NETHERLANDS' APOLOGY ON SLAVERY, A LOOK AT THE DUTCH ROLE IN HISTORY

The king of the Netherlands, Willem-Alexander, has apologised for his country's role in the slavery of colonised people, beginning in the 16th Century. He was speaking on Saturday (July 1) at a speech marking the 150th anniversary of the abolishment of slavery in Suriname (in South America) and in Dutch colonies in the Caribbean in 1873. "But today, on this day of remembrance, I ask forgiveness for the clear failure to act in the face of this crime against humanity," he said.

Earlier in December 2022, Dutch Prime Minister Mark Rutte had also offered a full apology, coming after the results of a government-commissioned study were made public. It found that between 1945 and 1949, the Dutch used "excessive violence" in Indonesia after World War 2. While the Dutch had established their presence in the 1600s, it was in the 19th and 20th centuries that they began ruling the country. Japan then took control during World War 2, at the end of which the Dutch tried to regain control amid the independence movement taking shape.

### What the king and the PM said

In his speech, the king thanked researchers for shedding light on the history of slavery in the country. "We know that more than 600,000 people were transported across the Atlantic Ocean from Africa aboard Dutch ships, to be sold as slaves or put to work on plantations. Around 75,000 did not survive the crossing. We also know about the extensive slave trade to the East, in areas controlled by the Dutch East India Company. And we know about the atrocities committed against the indigenous populations of the colonies," he said.



PM Rutte echoed this sentiment last year in a speech, when he said, “We who live in today’s world must acknowledge the evils of slavery in the clearest possible terms, and condemn it as a crime against humanity. As a criminal system which caused untold numbers of people untold suffering. Suffering that continues in the lives of people today. And we in the Netherlands must confront our part in that history.”

Saying that the slaves were “wrenched from their families and stripped of their humanity”, and “treated like cattle”, Rutte said while no one alive today was to blame for the past Dutch atrocities, “it is also true that the Dutch State, in all its manifestations through history, bears responsibility for the terrible suffering inflicted on enslaved people and their descendants.” Another independent study has been commissioned by the King to find out the precise role played by the Dutch Royals, the House of Orange-Nassau, in this history.

#### **What was the Dutch role in the slave trade?**

According to the United Nations Slavery and Remembrance website, “Like other European maritime nations, the Dutch were quick to involve themselves in the transatlantic slave trade. Between 1596 and 1829, the Dutch transported about half a million Africans across the Atlantic.

Large numbers were taken to the small islands of Curaçao and St. Eustatius, in the Caribbean... The Dutch also shipped about a half million Africans to their settlements in Dutch Guiana, notably Suriname, where they worked primarily on sugar plantations.”

The Dutch put slaves to work in their coffee, sugar and tobacco plantations, apart from household labour in colonies. The centuries of slave trade funded what is known as the Netherlands’ ‘golden age’ – the period roughly between 1585-1670, when trade, arts, sciences and the military flourished in the country.

According to Rutte’s speech, “By 1814, more than 600,000 enslaved African women, men and children had been shipped to the American continent, in deplorable conditions, by Dutch slave traders... In Asia, between 660,000 and over one million people – we don’t even know exactly how many – were traded within the areas under the authority of the Dutch East India Company.” When slavery was formally abolished in 1863, it was not the slaves who received compensation from the Dutch state, but the slave owners.

#### **What else is the government doing?**

According to an official statement last December, “The government will make €200 million available in a fund for measures aimed at raising awareness, fostering engagement and addressing the present-day effects of slavery.”

July 2023 is being marked as the 150th anniversary of the abolition of slavery, as, while it was formally abolished in 1863, another 10 years were required to put it into practice.

A criticism frequently levelled at The Netherlands is that its school education system does not adequately engage with its colonial and slave trading past. The government in its recent statement said it will “give the Netherlands’ role in the history of slavery a substantial place in education, as this is where young people come into contact with history.”

Apart from this, the country is also looking at returning artworks looted during the colonial period.



### Why are some unhappy with the apology?

Some activist groups had asked for monetary reparations to have been made and for the process of recognising the history to have been more consultative with modern-day descendants of those impacted by slavery.

There is also the issue of present-day issues of racism. In 2020, the then UN rapporteur on racism, Tendayi Achiume, had said that a self-image of “tolerance” was blocking the tackling of discrimination in The Netherlands.

The country has seen allegations of systematic racism in its police force and other government services, dual nationals have been unfairly accused of childcare benefits fraud, and migrants have in general been found to have lower levels of educational and professional success than White Dutch people.

As Rutte said in his speech, “Centuries of oppression and exploitation still have an effect to this very day. In racist stereotypes. In discriminatory patterns of exclusion. In social inequality.”

The apology itself has been a long time coming. Sections of the Dutch population feel the nation today has nothing to apologise for in crimes committed centuries ago, while some fear that an apology can open the floodgates to demands for reparations.

## HOW THE AMERICAN BALD EAGLE ‘RETURNED’ FROM THE BRINK OF EXTINCTION

The national symbol of the United States, the bald eagle was once on course to become the dodo of the 20th century. However, today, it is hailed as one of the biggest success stories in the history of conservation.

The American bald eagle was removed from the United States’ list of endangered species on June 28, 2007. Since then, the population of the bird has steadily risen. A 2021 report by the US Fish and Wildlife Service said that the number of bald eagles in the wild has quadrupled since 2009.

However, just a few decades back, the bird was on the verge of extinction, facing multiple threats to its existence. In fact, many conservationists felt that the national symbol of the United States was on the path to become the dodo of the 20th century.

### Population decline since the 1800s

Once upon a time, bald eagles were abundant across the United States. When they were adopted as the country’s national symbol in 1782, there were as many as 100,000 nesting birds in the continental United States (including Alaska), as per the American Eagle Foundation.

However, their populations began to decline in the early 1800s. Bald eagles began to be seen as a threat to livestock, especially domestic chicken, and started to be hunted. Often, counties placed bounties on bald eagles – ostensibly to protect farmers’ interests.

Hunting intensified in the latter half of the century, when feather hats became a fashion staple. While the Migratory Birds Treaty Act came into force in 1918, populations steadily declined till about the 1940s.

This compelled the US Congress to pass the Bald and Golden Eagle Protection Act in 1940 expanding protections and prohibiting even the possession of eagle feathers.



However, eagles would soon face a different, arguably more dangerous, threat than hunting and habitat destruction.

#### **The appearance of DDT decimates the bald eagle population**

DDT or dichloro-diphenyl-trichloroethane was first synthesised in 1874. However, it was in 1939 that it was first promoted as an insecticide and began to be used to kill malaria-carrying mosquitos and agricultural pests. By the mid to late 1940s, DDT was being widely used for agriculture across the US.

While extremely effective as an insecticide, DDT had a catastrophic impact on the bald eagle population.

Water bodies were soon contaminated with DDT, which in turn contaminated the fish in them. The chemical would enter the bald eagles' bloodstream when they would eat these fish. Notably, DDT resulted in female eagles laying extremely thin-shelled eggs, leading to nesting failures.

Consequently, by 1963, only 417 nesting pairs were found in the continental United States (minus Alaska). This was, after 18 consequent seasons of large-scale nesting failures, as per experts.

Notably, like the bald eagle, birds such as ospreys and peregrine falcons also faced a similar dropoff in population.

#### **Silent Spring, the ban on DDT and the Endangered Species Act**

In 1962, Rachel Carson's book Silent Spring was published. This book, for the first time, documented the detrimental effects of chemical pesticides on the environment and meticulously described how DDT was the prime cause behind the decline in bald eagle populations.

While railed by companies in the chemical industry, the book became the rallying point for the burgeoning environmental movement of the 1960s.

Notably, a nationwide ban on the use of DDT for agricultural use was introduced in 1972 and in 1973, the Endangered Species Act was enacted. This act broadened protections already in place for endangered species, particularly focussing on the protection of animal habitats.

The bald eagle was one of the original species listed for protection under this act.

#### **Captive breeding programmes and strict habitat protections**

Captive breeding programmes were launched in the 1970s and proved to be crucial in helping the resurgence of bald eagles.

The US Fish and Wildlife Service would head programmes where eagle colonies were bred in captivity at centres such as the Patuxent Wildlife Research Center in Maryland before being released into the wild. This allowed conservationists to closely monitor fragile eggs and nestlings, increasing their survival rates significantly.

A practice known as hacking was commonly used by conservationists. Hacking is a controlled way to raise and release bald eagles into a wild viable environment from artificial nesting towers. This method simulates a wild eagle nesting site and aids in recovery in an area where re-population is desirable.



Moreover, strict restrictions were brought in with regard to human activity around eagle nests or known nesting areas. For instance, any construction activity was barred within a radius of roughly 100 m of a bald eagle nesting site.

Protecting against hunting, banning of DDT, breeding programs, and habitat protection around nesting sites, led to a steady growth in bald eagle populations. In 1995, the bald eagle was moved from “endangered” to “threatened” status and in 2007, it was delisted completely.

#### **A success story**

In 2007, when the bald eagle was removed from the endangered species list, there were roughly 9,789 known breeding pairs in the US. The latest figures (from 2021) put the number of nesting pairs at about 71,4000 with the overall population standing at roughly 316,700.

“The strong return of this treasured bird reminds us of our nation’s shared resilience and the importance of being responsible stewards of our lands and waters that bind us together,” Deb Haaland, the US Secretary of the Interior said in 2021.

#### **Lessons for the future**

The success of bald eagle conservation teaches some important lessons about conservation.

It shows that there is seldom a silver bullet when it comes to conservation – policies have to be comprehensive, taking into account the complexity of factors that generally lead to the decline of animal populations. While the banning of DDT was monumental, without habitat protections and captive breeding programmes, the success would be far from certain.

Notably, it shows how conservation efforts often take a long period of time to bear fruit. It took years of lobbying to get DDT banned. Since then, bald eagle populations have taken about half a century to reach the levels they are today.

“The fact that saving the bald eagle was such a long process means that many of those who had the foresight to fight for their protection may not even be alive today,” environmentalist Thomas O’Grady wrote in a Medium post in 2021.

“It was truly a decades-long effort. With persistence and staying the course over time, we achieved these great successes. That’s an important part of the lesson – you can’t be impatient,” conservationist Dan Brauning said in an interview in 2021.

As climate change poses novel risks and challenges to flora and fauna around the world, the story of the American bald eagle serves as an important case study on the importance of persisting with conservation efforts – even if their impact is not immediately obvious.

### **OSMOSIS: FLUID TRANSFER**

Ocean currents, subatomic particles, galaxies – almost everything is moving from one place to another. There are different kinds of movement, with different purposes. One type of movement is osmosis, where a fluid moves from a place of higher concentration to a lower concentration through a semipermeable membrane.

For example, you fill a container with a concentrated sugar solution on one side and a diluted sugar solution on the other of a semipermeable membrane. Water molecules will travel from the



diluted solution to the concentrated one through the membrane until the concentration of water is equal on both sides. This is osmosis.

A German plant physiologist named Wilhelm Pfeffer first thoroughly studied osmosis in 1877, after various other studies by other scholars on leaky membranes. This process is incredibly important in biology, where liquids move from one part of an organism to another through cellular membranes that are semipermeable. In trees, osmosis is part of a pumping system that transports water and nutrients up from the roots to the leaves.

You can observe osmosis in many real-life scenarios, such as in the swelling of raisins or other seeds when they are soaked in water, and in the pruning or wrinkling of your fingers after taking a long bath.

#### LOCAL CASES OF MALARIA REPORTED IN THE U.S. AFTER TWENTY YEARS

The U.S. Centres for Disease Control and Prevention (CDC) has identified locally acquired malaria (LAM) cases in Florida and Texas in the last two months. This is the first time such malaria cases have been reported from the country in two decades. The CDC has also raised concerns about a potential rise in 'imported' malaria cases.

For malaria to be locally acquired, the disease has to present in people with no recent travel. That is, a locally acquired case would mean that the mosquito transmitting the disease first bit a person carrying the malaria-causing parasite and then another person, thus transmitting the disease locally.

In a June 26 advisory, the CDC recommended that medical health professionals consider a malaria diagnosis for patients with fever of unknown origin, regardless of their travel history. The agency also said patients suspected of having malaria should be urgently evaluated in an appropriate medical facility. Florida has reported four LAM cases this year, with two of them reported between June 18 and 24, 2023, from Sarasota County. The State also reported 23 malaria cases in 2023 associated with international travel. One case of LAM was identified in Cameron County, Texas.

Malaria is a potentially fatal disease caused by a parasite of the genus Plasmodium. It is usually transmitted in the bite of an Anopheles mosquito. Almost all cases of malaria in the U.S. have historically been found among people with a history of international travel; locally acquired cases are rare. In fact, Texas recorded its last LAM case in 1994, before it resurfaced this year.

The parasite identified in locally acquired cases across Texas and Florida is Plasmodium vivax. While malaria caused by this species is relatively less intense, it can still cause cerebral malaria, renal failure, acute respiratory distress, and shock in some people. Malaria usually starts off with flu-like symptoms, including fever, chills, nausea, and sweating, and, if left untreated, can lead to disorientation, seizures, anaemia, and kidney damage.

According to biologist Colin Carlson, it is "somewhat likely" that climate change contributed to the presence of malaria in the U.S. But he also said that States in the south have environments conducive to the presence of malaria, even without climate change.

Malaria was endemic in large parts of the U.S. until the 1950s, when it was eradicated by "increased urbanisation and improved socioeconomic conditions, which resulted in decreased human-vector contact, increased access to medical care and effective treatment, and reduced Anopheles populations," according to the CDC.



## AS MIGRAINE TREATMENT EVOLVES, UNDERSTANDING TOO GETS BETTER

Headaches are not uncommon. But the frequency and severity make a world of difference. This is where migraine fits in - primarily characterised by recurrent attacks of moderate to severe headaches, usually unilateral and pulsating, and associated with photophobia and phonophobia and nausea/vomiting. While the diagnosis and treatment of migraines have evolved over the years - targeted treatments and preventive therapies are here, this disabling headache disorder is being understood better including its impact on one's working capacity resulting in lost workdays.

As the World Health Organisation, in its Atlas of Headache Disorders and Resources in the World 2011, pointed out that headache is felt, at some time, by nearly everybody, and almost half of the world's adults at any one time have recent personal experience of one or more headache disorders. An article - The global prevalence of headache: an update, with analysis of the influences of methodological factors on prevalence estimates (The Journal of Headache and Pain) - stated that "each day, 15.8% of the world's population had a headache".

### Debilitating

Migraines, in particular, could have a debilitating effect on an individual. One report - Diagnosis and management of migraine in ten steps (Nature Reviews Neurology) - quoting the Global Burden of Disease study (GBD), said that migraine is the second most prevalent neurological disorder worldwide and is responsible for more disability than all other neurological disorders combined.

Migraine remains second among the world's causes of disability, and first among young women: findings from GBD 2019 (The Journal of Headache and Pain) - said that migraine is a top cause of disability-adjusted life years in young women, a finding of profound significance. "No other disease, communicable or non-communicable, is responsible for more years of lost healthy life in young women, notwithstanding that migraine causes no premature mortality", they said.

### Don't ignore migraine

R. Lakshmi Narasimhan, Director and Professor of Neurology, Institute of Neurology, Madras Medical College, said the implications of migraine are far more complicated. "People do not realise the importance of treating migraine. Many consider migraines as a small entity. But migraine is one of the topmost reasons for lost workdays," he said.

There are more than 70 to 80 migraine auras, he said, adding that even doppelganger phenomena, out-of-body experience and corona phenomena are migraine auras. He goes on to elaborate : "Initially, it is episodic. Later on, frequency and severity keeps increasing, and if we do not treat it, it will slowly become chronic migraine, and then chronic daily migraine, and subsequently, chronic persistent migraine. In chronic persistent migraine, the person will not be able to sleep; even resting the head on a pillow will be difficult. Usually non- painful stimuli - such as touching the hair - could trigger pain."

### More common in women

Roopesh Kumar, Director, Neurosurgery, MGM Healthcare said migraines were more common in women, and often seen in families. "Scientifically, migraines are called neurovascular headaches. Sunlight, menstruation, crowded places such as marriages and some food items can aggravate migraines," he pointed out.





Migraines could have associated symptoms of nausea/vomiting and sensitivity to light. “This is mainly a clinical diagnosis. But other causes are ruled out by CT scan/MRI and other imaging. Aura is a warning sign of a headache. There could be visual disturbances, pain in the eyes, seeing stars or flashes of light,” M. Kodeeswaran, head of Department of Neurosurgery, Government Kilpauk Medical College Hospital, added. He raises a key point : “You have to maintain a headache diary to check the trigger factors and try to avoid it. Lifestyle modifications, proper sleep habits, healthier eating habits, stress management and weight loss will help.”

### Treatments

He added that for medical treatment of migraines, there are beta blockers, antidepressants and a few anticonvulsants that will also be useful in low dosage. Botox injections are also an option for recurrent resistant headaches, he said. Management of migraines have evolved in all fronts - prevention, treatment for acute attacks and modalities for imaging, Dr. Lakshmi Narasimhan added.

Treatment of migraines is of two types - one to treat acute attacks and the other to prevent attacks (prophylactic), he said, adding: “So, there is one group of drugs during acute pain and another to prevent attacks, and there have been advancements in both. Non-pharmacological therapy for headaches has also improved. There are a lot of experiments using virtual reality in the treatment of headaches. For instance, if you have severe pain, and using virtual reality, you are immersed in a pleasurable environment; it could be something you like such as music or ocean life. This will bring down the pain.”

In a study - Preventive oral treatment of Episodic Migraine: an overview, he and a team of doctors reviewed the oral treatment used in the prevention of episodic migraine. The various classes of drugs that are established to be useful in oral preventive treatment of migraine are antihypertensive agents, antidepressants and antiepileptics. They noted that a carefully chosen oral preventive therapy in consensus with the patient can help decrease the frequency and intensity of headaches, improve the response to acute therapy and reduce disability. It was necessary to consider the comorbidity that the patient has in considering the choice of the drug.

## A SEMAGLUTIDE ‘MIRACLE’: REPURPOSING DIABETES DRUG FOR WEIGHT LOSS

While initially on trial for a once-a-week diabetes therapy, an unexpected side effect – weight loss – swept the drug (semaglutide) off the shelves of a pharmacy and put it in the celebrity section on social media. Initial results seemed like a fantasy, as stunning weight loss was recorded in those put on the drug as treatment for diabetes, and celebrities, even those without diabetes, did not take too long to cotton on, starting oral and injectible semaglutide doses to lose weight.

Naturally enough in the initial stages, there were experts cautioning that Ozempic (brand) might turn out to be the snake oil of the 21st century, and that the drug should not be misused. However, several studies done over the last few years have yielded similarly fantastic results. It is by now, quite clear that semaglutide’s ability to lead to weight loss is not in the realm of fantasy, but as real as the kilos and inches that users shed, and its repurposing is nearly complete.

A recent study by Philip K. Knop of the Centre for Clinical Metabolic Research, Gentofte Hospital, Denmark, in association with researchers from the United States and Novo Nordisk, the company that developed Ozempic, specifically studied the impact of semaglutide on adults who were overweight or obese, without Type 2 diabetes. They recorded in The Lancet end June, that ‘oral



semaglutide 50 mg once per day led to a superior and clinically meaningful decrease in bodyweight compared with placebo’.

No wonder then that rampant off-label prescription of Ozempic for weight loss led to a shortage of the drug in 2022. Despite its high cost, the lure of an easy way to weight loss is understandably tantalising to many struggling to bring weight down, or keep it that way.

#### GOOGLE AI TOOL FOR RETINAL SCAN CAN PREDICT CARDIOVASCULAR RISK

Can a look inside your eye reveal the condition of your heart? An algorithm being developed by Google is really set on proving that your eyes are the window to your soul. A deep learning model based on the retinal images of nearly 285,000 people can predict risk factors such as age, gender, blood pressure and smoking status — some of the big predictors of heart diseases.

The technology could reveal the heart’s health condition after matching the eye scans with a matrix for cardiovascular risks. The algorithm has proved to be correct in 70 per cent of the cases where it has been tested so far. Google’s new AI technique could eliminate the need to have a long series of conventional tests and scans usually required to detect cardiovascular risks.

#### EXPRESS VIEW: REMEMBERING JOHN GOODENOUGH

In 2019, when he was awarded the Nobel Prize for Chemistry — at 97, the oldest laureate — very few people outside academia had heard of John Bannister Goodenough. But millions across the world owned a device powered by the lithium-ion battery he had helped create in 1980.

Without it, there would be no smartphones, no laptops, no electric cars. But despite his central role in developing the rechargeable power pack that gave wings to the ambitions of commercial titans like Microsoft, Apple and Tesla, Goodenough, who passed away on Sunday, received no royalties for his seminal work.

Oxford University, where he undertook his breakthrough research, did not believe it would yield any commercial benefit and refused to apply for a patent. Goodenough signed away his royalties to a research institute in the UK, hoping that his invention would reach the market. He hadn’t anticipated the impact his invention was to have.

But then, Goodenough cared very little for monetary benefits. He shared the royalties of his later research with his colleagues and donated the money that came with the many laurels he received for scholarships. As the University of Texas, where he worked after leaving Oxford in 1986, noted in its tribute, “he took great pride in being a mentor to many graduate students and faculty members”.

His laboratory at UT typified the best tradition of the material sciences that combines the precision of chemistry and engineering with the theoretical rigour of physics. It hosted scientists from across the world, including some who exploited Goodenough’s generosity for unfair commercial benefits. Goodenough worked well into his late-90s hoping to discover a “super battery” that would store solar and wind energy economically and allow people to drive vehicles for weeks on a single charge.

He was dismissive of Elon Musk’s Tesla “which sold cars to the rich while waiting for scientists to make the next breakthrough”. But then, as he said in his Nobel Prize lecture, scientists have an important role in delivering society from fossil fuels.