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20TH TO 26TH March, 2022

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## INTERNATIONAL

### THE NEO-NAZIS OF UKRAINE

When Russia annexed Crimea in February 2014, it faced no military resistance. Ukraine did not have an adequate number of combat-ready troops to mount a defence. Subsequently, when Russia-backed separatists took over government buildings in eastern Ukraine's Donbas region as a prelude to full-fledged insurgency, the Ukrainian military again proved unable to quell the rebellion. It was against this background that the Azov Battalion was formed in May 2014.

The Azov began as a military infantry unit made up of civilian volunteers drawn from far-right, neo-Nazi groups that were active in Ukraine, such as the Patriot of Ukraine gang and the Social National Assembly. With its highly motivated band of fighters, the Azov unit recaptured the strategic port city of Mariupol from the separatists. Following this crucial military triumph, the Azov unit was integrated into the National Guard of Ukraine in November 2014.

In 2016, the Azov set up its political wing, the National Corps Party, under the leadership of Andriy Biletsky, an ultra-Nationalist who was a Member of Parliament from 2014 to 2019 and has said on record it is Ukraine's mission to "lead the white races of the world in a final crusade... against Semite-led Untermenschen [inferior humans]".

The military uniforms of the Azov feature Nazi insignia and its fighters have been photographed with tattoos of Nazi symbols such as the swastika. On the eve of the launch of National Corps, its members took out a Nazi-style raised-fist, torch-lit march through the streets of Kyiv. Members of the Azov militia also do street patrols where, in the name of enforcing what it calls 'Ukrainian order', they have been known to attack Roma and other ethnic minorities, and LGBT events.

Different human rights bodies, including the Office of the UN High Commissioner for Human Rights and Amnesty International, have accused Azov fighters of human rights violations. In 2015, the U.S Congress passed a resolution stating that military aid for Ukraine cannot be used for funding, arming or training the Azov Battalion. But in 2016, the ban was rolled back, reportedly under Pentagon pressure. Since then, there have been unsuccessful efforts by Congress members — one of whom has described it as a "neo-Nazi paramilitary militia" — to designate the Azov as a 'Foreign Terrorist Organisation'. For all that, Azov social media channels are rife with videos of militia members training with American-made weapons.

When Russian President Vladimir Putin announced a "special military operation" to carry out a "demilitarization" and "denazification" of Ukraine, he appeared to be referring to the neo-Nazi militias such as the Azov, who – with the blessings of the Ukrainian state – have been at the forefront of Kyiv's military campaign against the Russia-backed separatist groups. Until the Russian invasion, many in the Ukrainian mainstream viewed the rise of the Azov with concern. But the Russian invasion may well end up laundering the Azov's neo-Nazi baggage, as seen with Facebook's U-turn, and strengthen the far-right forces, not just in Ukraine but beyond as well.

### EXPLAINED: WHY MARIUPOL MATTERS TO RUSSIA IN THE UKRAINE WAR

The Russian offensive against Mariupol has turned the city into "ashes of a dead land", the city council asserted on Tuesday, describing the increased bombarding and shelling ever since Ukraine rejected the Kremlin's proposal to lay down their arms and surrender.



Mariupol has been a key fighting ground as Moscow looks to overturn its 2014 loss when the Russia-backed separatists had failed to capture the city in the Donetsk oblast (region).

#### **Why is Mariupol significant to Moscow?**

Geographically, Mariupol forms a land bridge between Crimea—which Russia annexed in 2014—and Dobass, the separatist-held regions of Ukraine. As of now, the Sea of Azov falls between the Donetsk-Luhansk region and Crimea.

Just a 100-km away from the separatist-held regions, the rebel forces had tried to capture the city in 2014. However, Ukrainian forces reclaimed the region. Then president Petro Poroshenko had declared Mariupol the regional capital of the oblast after Donetsk fell to rebel forces.

In 2016, it also became a ‘city of solidarity’—as termed by the United Nations High Commissioner for Refugees—welcoming internally displaced people from the contested territories.

Not just land, capturing Mariupol also gives Russia a maritime advantage. With the fall of Kherson, Russia has already expanded its control over the Black Sea coastline, most of which is dominated by Moscow after it seized Crimea.

### **JAPANESE PM’S VISIT REAFFIRMS SALIENCE OF BILATERAL TIES WITH INDIA AT A TIME OF GEOPOLITICAL FERMENT**

Japanese Prime Minister Fumio Kishida’s visit to India was significant for multiple reasons. First, the choice to visit New Delhi for his first bilateral state visit since he assumed office in October last year highlights the importance of the relationship for Tokyo. The annual summit-level meeting between the countries could not occur over the last two years due to the pandemic and in 2019, the summit with then Prime Minister Shinzo Abe — to be held in Guwahati — was cancelled due to protests regarding amendments to India’s citizenship law. Kishida’s visit comes at a time when the two countries are marking 70 years of bilateral ties. However, for much of that time, the relationship was not as close as it could have been. It acquired salience and depth in 2006, when Delhi and Tokyo formed a “Strategic and Global Partnership”. Since then, trade, military exercises and a consensus on a rules-based maritime order have seen the two countries draw closer together. Kishida’s visit marks both a re-affirmation of the close economic and strategic ties between the countries, as well as lays out the prospect of deepening the relationship in the wake of the current geopolitical ferment.

That the target of 3.5 trillion Japanese Yen (JPY) under the 2014 Investment Promotion Partnership has been met is impressive. The announcement that Japan will now invest 5 trillion JPY signals that Japanese companies and the government continue to see India as a viable investment destination. It also holds out the possibility for the second- and third-largest economies in Asia to effectively collaborate in the face of Chinese dominance. The investment will cover a wide range of activities, and effectively boost Japanese investments, skill Indian labour and build supply chains. The two countries have also committed to cooperation on digital security and green technologies. On the strategic front, too, the joint statement and briefings by officials from both sides indicates forward movement: The statement condemned Pakistan-sponsored terror attacks on Indian soil and both countries reaffirmed their commitment to collaborate to ensure “peace and stability” in Afghanistan.

It is significant that despite the recent developments in Ukraine, Tokyo and New Delhi have managed to present a united front vis-a-vis China. While Kishida condemned the Russian attack,



the Indian side called for peace and dialogue. This is in line with the two countries' positions, and individual strategic needs — and that common interests outweigh the differences. India's foreign secretary, Harsh Vardhan Shringla, also confirmed that the two sides had discussed China's aggressive stance in the Indo-Pacific as well as its encroachment on India's land borders, and added that it could not be "business as usual" with Beijing until the stand-off in Ladakh is resolved peacefully. Given recent overtures by China, and the talk of a visit by Chinese Foreign Minister Wang Yi, Delhi's stated commitment to the rules-based order will certainly provide comfort to Tokyo. It is this goodwill, enhanced by Kishida's visit, that can be built upon for greater cooperation in the upcoming 2+2 ministerial conference.

## BEIJING DEFENDS ITS MILITARISATION OF ISLANDS

China on Tuesday said it has the right to develop South China Sea islands as it sees fit in the wake of U.S. accusations that it has fully militarised at least three of several islands it built in the disputed waterway in violation of a previous commitment.

China's deployment of "necessary national defense facilities on its own territory is a right entitled to every sovereign country and is in line with international law, which is beyond reproach," Foreign Ministry spokesperson Wang Wenbin said.

U.S. military activities in the area aimed to "stir up trouble and make provocations," Mr. Wang said. "That seriously threatens the sovereignty and security of coastal countries and undermines the order and navigation safety in the South China Sea."

On Sunday, U.S. Indo-Pacific Commander Adm. John C. Aquilino said China had armed the islands with anti-ship and anti-aircraft missile systems, laser and jamming equipment, and fighter jets, in an increasingly aggressive move that threatens all nations operating nearby.

Adm. Aquilino said the hostile actions were in stark contrast to Chinese President Xi Jinping's past assurances that Beijing would not transform the artificial islands in contested waters into military bases.

China claims as its own territory virtually the entire South China Sea, home to fish stocks and undersea minerals, along with sea lanes through which an estimated \$5 trillion in global trade travels each year.

China refuses to acknowledge claims from five other governments to some or all of the waterway and dismissed the findings of a UN-backed arbitration tribunal that invalidated China's sweeping historical claims.

## A MATTER OF QUAD

The unexceptionable point made by Chinese Vice Foreign Minister Le Yucheng in his barely-veiled attack on the Quad — the grouping consisting of India, Australia, Japan and the US — was this: "No country should pursue its so-called absolute security at the expense of other countries' security." He drew a parallel between the situation in Ukraine — according to him, a result of "the NATO strategy of eastward expansion" — and the several provocations perceived by Beijing in the Indo-Pacific. The analogy does not hold. After all, it is China that has become an assertive power in the region and beyond, often at the "expense of other countries' security". US forces and allies have been a presence in the region since the end of the Second World War, and unlike NATO, the Quad is not a military alliance. As a former ambassador to India and rising star in China's foreign



policy establishment, Le may understandably be taken seriously in Delhi. But it is important to note that amid recent geopolitical developments, India's foreign policy priorities and the ties fostered with members of the Quad are holding fast.

The Quad is a response to China's rising ambitions, which have manifested in the form of occupying islands and trying to control sea lanes in the Indo-Pacific, as well as its activities along the Line of Actual Control with India. On the other hand, as recently as February 4, China and Russia declared a "no-limits" partnership, effectively creating an alliance where they would back each other's plans in Ukraine and Taiwan. In other words, China may be doing precisely what it is accusing the West and countries in the Indo-Pacific of doing. Le's offensive against the Quad also comes on the heels of Indian Prime Minister Narendra Modi's summit-level meetings with the prime ministers of Japan and Australia this week. With both countries, the level of bilateral economic cooperation and strategic convergence has only deepened: Japan has committed to investments of about \$4.2 billion over five years and Australia too is likely to unveil new projects and investments in India. Both visits took place following reports of Chinese Foreign Minister Wang Yi's offer to visit India.

New Delhi must engage in talks with Beijing, while, as it has done so far, looking out for its best interests. It is also clear that China continues to be seen as the primary challenge by the Quad. Both the Japanese and Australian prime ministers have reportedly discussed the situation in Ukraine with PM Modi, and have not insisted that India echo their position. New Delhi has also reiterated that China's belligerence — whether on its borders or in the Indo-Pacific — stands in the way of a thaw in ties with Beijing. No amount of grandstanding by China changes that reality.

#### BIDEN'S COVID RESPONSE CHIEF

In early 2020, when the U.S. was confronting the first wave of COVID-19, with its health system starting to feel the strain, a Harvard physician had said on a morning news show: "We can either have a national quarantine now, two weeks, get a grip on where things are, and then reassess, or we can not wait another week, and when things look really terrible, be forced into it."

Almost two years later, the public health expert is saying, "pulling back on mask mandates for now is very reasonable," as he advises keeping testing rates high for a possible new surge. The man is Indian-origin physician Dr. Ashish Jha, U.S. President Joe Biden's newly-appointed COVID-19 response coordinator, who will replace Jeffrey D. Zients, a management consultant.

#### **New phase**

Dr. Jha's appointment comes at a time when America is entering a new phase of the pandemic. After successive waves tested the limits of the country's public health system and claimed over a million lives, COVID-19 numbers are now in decline. As three quarters of the country's population are vaccinated at least once, and as it closely watches for the threat of the new BA.2 variant driving a surge in Europe, Dr. Jha's appointment signifies a strategic shift in the country's pandemic response. The Dean of Brown University's School of Public Health, Dr. Jha brings to the table almost two decades of experience in public health and health policy research. Before assuming his current position at Brown in 2020, he was the faculty director of the Harvard Global Health Institute and professor of global health at the Harvard T.H. Chan School of Public Health. As a doctor of internal medicine, he has practised in Massachusetts and Providence.





Born in Pursaulia, Bihar, in 1970, he first moved to Canada in 1979 and then to the U.S. in 1983. An economics graduate, Dr. Jha, before pursuing internal medicine training at the University of California, got his M.D. from Harvard Medical School in 1997. In 2004, he earned his masters of public health from the Harvard T.H. Chan School of Public Health.

He has to his name “groundbreaking” research on Ebola and jointly heading West Africa’s strategy to tackle the outbreak of the disease in 2014. Dr. Jha’s academic research, of over 200 empirical papers, focuses on enhancing the quality of healthcare systems and how national policies impact healthcare. He has studied extensively how state funds for health can be utilised for efficiency.

Even when the Biden administration took over to steer and fix the previous administration’s response, Dr. Jha had said rejoining the WHO and reviving the U.S.’ leading role in it won’t solve things. He emphasised on how pandemics are truly global in the 21st century, and the U.S. or the West cannot just ‘lead’ alone in global health, but work with international partners, take cross-border health measures and exchange knowledge to “decolonise” global health. While thanking Mr. Biden for appointing him as the new pandemic response chief, Dr. Jha said: “To the American people, I promise I will be straightforward and clear in sharing what we know, in explaining what we don’t know and how we will learn more, and what the future will ask of all of us.”



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## NATION

### SC ALLOWS UPSC ASPIRANTS WITH DISABILITIES TO APPLY FOR IPS

The Supreme Court on Friday allowed people with disabilities who have cleared the civil services written examinations time till April 1 to provisionally apply to the Union Public Services Commission (UPSC) for selection to the Indian Police Service (IPS), Indian Railways Protection Force Service (IRPFS) and the Delhi, Daman & Diu, Dadra and Nagar Haveli, Andaman and Nicobar Islands and Lakshadweep Police Service (DANIPS).

A Bench led by Justice A.M. Khanwilkar directed the Secretary-General of the UPSC to receive applications either physically or by courier till 4 p.m. on April 1.

#### Exclusion challenged

The apex court said the applications would be considered based on the verdict of a petition filed by an NGO, National Platform for the Rights of the Disabled, that has challenged a government notification excluding people with disabilities from these services.

The court clarified that the ongoing selection process in the civil services would continue uninterrupted.

The interview stage in the selection process starts from April 5.

The hearing began with the Centre, represented by both Attorney-General K.K. Venugopal and Solicitor-General Tushar Mehta, seeking two weeks' time to file a reply to the NGO's petition.

### KERALA HC UNDERLINES FILM INDUSTRY IS NOT ABOVE THE LAW, ARMS WOMEN AGAINST WORKPLACE SEXUAL HARASSMENT

The unambiguous message in the Kerala High Court's orders on the implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act is this: It is indefensible for the Malayalam film industry, or any other film industry for that matter, to defer implementing the law against workplace sexual harassment. The court was ruling on a public interest litigation filed by the Women in Cinema Collective (WCC), among others, arguing that actors' associations and production houses be held accountable for sexual harassment of women. The ruling is significant in many ways for an industry largely unorganised and driven by informal relationships. First, the court clarifies that a production unit is bound to maintain an internal complaints committee (ICC) if it employs 10 or more actor-artistes. The court also underlined that the law extends this protection to "any person employed at a workplace whether on regular, temporary, ad hoc or daily wage basis, either directly or through an agent including a contractor". Second, even while observing that organisations like the Association of Malayalam Movie Artists (AMMA), Kerala Film Chamber of Commerce, etc, do not have an employer-employee relationship with film professionals, it asked them to form a joint committee to deal with sexual harassment of women, to inspire "sufficient confidence to women professionals in a production unit" and "make the right to life and personal liberty of the women in the film industry more meaningful and fruitful."

These are affirming words. It also throws into stark relief the dispiriting context and an environment of misogyny in which the WCC fought this legal battle. The WCC was formed as a



response to one of the most horrific sexual crimes in the history of Indian cinema — the abduction and sexual assault of a Malayalam actor in which fellow actor Dileep is an accused. Instead of solidarity from the powerful people of the film industry, the WCC faced outright hostility and sexist dismissal. The WCC had moved court alleging that the AMMA had violated the Vishakha guidelines by its failure to provide a grievance redressal mechanism to the actor.

Grey areas might well exist even after the ruling. When does a production unit come into operation, for instance? What if a freelance casting director asks for sexual favours at a place that is not a workplace? These are issues for the film industries to explore and sort out. A heartening aspect was the support that the WCC received from film professionals in Hindi cinema and elsewhere — the CINTAA impleaded itself in the case, in support of the WCC. In many ways, this is a result of the mobilisations and disruptions in the entertainment world as a result of #MeToo. For women in cinema, while substantive equality might be a long distance away, the Kerala HC ruling represents a significant victory.

## UPHOLD THE LAW

In the crime at Rampurhat, West Bengal, both the victims and the alleged perpetrators are reportedly associated with the state's ruling party, the Trinamool Congress. Bhadu Sheikh, deputy pradhan, was murdered in Botugi village, and in the hours after Sheikh's murder, a group of people set ablaze houses of the suspects' relatives, killing eight people — all of them belonging to the minority community, and including women and children. The Bengal police has said that Sheikh's murder did not have a political angle, but the killings appear to be part of a larger dismal pattern in the state: In West Bengal, the electoral dominance of the TMC in rural areas has been accompanied by violence, factionalism and a deterioration of the rule of law, in many ways mimicking and deepening the political culture that became entrenched during Left rule. For Chief Minister Mamata Banerjee, fresh from the glow of her comprehensive victory over the BJP in the state last year, the killings are a call to take urgent steps to bring an end to the political culture of violence and impunity in Bengal.

In over three decades of Left Front rule, CPM workers came to dominate nearly every aspect of social and political life, and the political Opposition was all too often dealt with violently. Banerjee's party appears to have only strengthened this way of doing politics. "Syndicate" culture — initially limited to certain construction projects in urban Bengal — has become a catch-all phrase that denotes the entrenched nexus between politics, corruption, organised crime such as extortion and distribution of political patronage. The lack of a cadre-based Opposition in rural areas means that personal and business rivalries find expression as violent factional conflicts. In this setting, the police apparatus appears to take its cue from the political masters: In Rampurhat, for example, questions are justifiably being asked about the absence of police forces in areas where arson and violence took place after Sheikh's murder. Given that it is the Party that controls and circumscribes all factions and facets, it is from its leadership that the process of reform must also begin.

Speaking in the aftermath of the killings, Banerjee said that "... the possibility of a larger political conspiracy to malign the image of the State cannot be ruled out and the investigation will make all-out efforts to unearth all those who are behind the occurrence of the incident". That sounds suspiciously like spectre-mongering. The police must bring the perpetrators to book, no matter what their political loyalties. And the TMC must make a beginning towards dismantling the Syndicate culture, to purge the violence from the state's body politic that continues to take a toll on its men, women and children. In her third term, with an impressive mandate, touted as a leader





who could play a leading role in the national Opposition space, CM Banerjee has the political capital to rescue her state by unambiguously upholding the rule of law.

#### EXPLAINED: CALCUTTA HC ORDERS CBI PROBE INTO BOGTUI KILLINGS, HERE'S HOW THE AGENCY INVESTIGATES

Calcutta High Court on Friday ordered the Central Bureau of Investigation (CBI) to investigate the killings in Bogtui village of West Bengal's Birbhum district, where eight persons were burnt alive on Tuesday, hours after the murder of a Trinamool Congress panchayat leader.

The court, which had initiated a suo motu case on Wednesday, directed the CBI to submit a preliminary report on April 7, when the matter will be heard again. The court directed the state government "to extend full cooperation to CBI in carrying out the further investigation".

#### How does the CBI take up cases?

Unlike the NIA, CBI cannot take suo motu cognizance of a case in a state — whether in a matter of corruption involving government officials of the Centre and PSU staff, or an incident of violent crime.

In order to take up corruption cases involving central government staff, it either needs general consent (see last question) of the state government, or specific consent on a case-to-case basis. For all other cases, whether involving corruption in the state government or an incident of crime, the state has to request an investigation by the CBI, and the Centre has to agree to the same.

In case the state does not make such a request, the CBI can take over a case based on the orders of the High Court concerned or the Supreme Court.

#### Can the CBI decline to take up a case for investigation?

After a state makes a request for an inquiry by the CBI, the Centre seeks the opinion of the agency. If the CBI feels that it is not worthwhile for it to expend time and energy on the case, it may decline to take it up. In the past, the CBI has refused to take over cases citing lack of enough personnel to investigate, and saying it is overburdened.

In 2015, the agency had told the Supreme Court that it could not take any more Vyapam scam cases because it did not have enough staff to investigate them.

"CBI is the country's premier investigation agency, and it is expected to probe complex and sensitive cases. It cannot probe every case that a state is willing to hand over to it," a CBI officer said.

According to a former CBI officer, in nine out of 10 instances, the Centre seeks the opinion of the agency before accepting or refusing a case.

Calcutta High Court, Central Bureau of Investigation, Trinamool Congress, Birbhum killings, Birbhum violence, West Bengal violence, Calcutta HC, CFSL, 8 dead in Birbhum violence, Birbhum violence deaths, Indian Express

"In 10% of cases, the Centre directly orders the registering of a case if it suits the ruling dispensation to do so. Once, in a Northeastern state, an additional chief secretary was beaten up and the state government wanted the CBI to investigate. The agency, after a preliminary probe,



refused to accept the case on the ground that it was too small an incident for the CBI to get involved, and that the state police were fully capable of carrying out the probe," the officer said.

#### **What is the CBI's workload currently?**

According to the latest Annual Report of the Central Vigilance Commission, the CBI registered 608 FIRs in 2019 and 589 FIRs in 2020.

In 2020, a total 86 cases related to demands for bribes by public servants for showing favour, and 30 cases for possession of disproportionate assets were registered.

Out of 676 cases in the year (including FIRs and Preliminary Enquiries), 107 cases were taken up on the directions of constitutional courts and 39 on requests from state governments/ Union Territories.

There are over 1,300 vacancies in the CBI. As on December 31, 2020, against a sanctioned strength of 7,273, only 5,899 officials were in position, and 1,374 posts were lying vacant.

#### **What is the role of state consent in an investigation by the CBI?**

Since 2015, as many as nine states — Maharashtra, Punjab, Rajasthan, West Bengal, Jharkhand, Chhattisgarh, Kerala, Mizoram and Meghalaya — have withdrawn general consent to the CBI. Opposition-ruled states have alleged the CBI has become its master's voice, and has been unfairly targeting opposition politicians.

Withdrawal of general consent means that to probe any case in these states, CBI would have to take prior permission from the state government. CBI has claimed that this has tied its hands.

In November last year, the Supreme Court expressed concern over CBI's submission that 78% of its 150 requests for sanction to investigate cases were pending with state governments that had withdrawn consent to the CBI.

On the other hand, in as many as 177 cases involving 455 public servants, CBI had not got sanction for prosecution from the central government till the end of 2020.

## **TWO FREEDOMS AND THE HIJAB IN OUR MIDST**

Upon hearing the petitions of Muslim students seeking permission to wear the hijab inside educational institutions, the Karnataka High Court recently ruled that wearing the hijab is not an essential practice in Islam. The judges also held that neither the prescription of a uniform in schools nor the Karnataka government's order of February 5 disallowing the wearing of the hijab in schools where there was a uniform were violative of Article 25 of the Constitution.

#### **Two concepts of freedom**

In the debates around the hijab issue, two concepts of freedom emerge. One is whether Muslim women 'freely' choose to wear the hijab or do so because they are socially conditioned to believe that al haya (modesty) is a womanly virtue. However, this question can be asked of any of the choices we make, as women, men or transgender people. For instance, one can also ask whether women freely choose to wear high heels or are brainwashed by societal discourses about feminine beauty.



The other is the question of the freedom of the individual or of a community vis-à-vis the state. Consider the following set of questions that help explicate this: Am I free to eat whatever I choose or have I given up this freedom to the state? (Think of the ban on beef in parts of India.) Am I free to have sexual relations with whomsoever I choose or can the state interfere and tell me whom I can or cannot have such relations with? (Laws prohibiting homosexuality come to mind.) Am I free to have as many children as I want or can the state impose a one-child policy, as China did?

Each of these freedoms is also a right: My right to eat whatever I want, my sexual rights, my reproductive rights. At the heart of 'liberalism' is the question of liberty or freedom posed as the freedom of the individual (the 'I') vis-à-vis the state/social contract (the 'we'). How much of my freedom do I give up to the state when I enter the social contract, and how much do I keep for myself? In social contract theory, this maps on to the distinction between the public and the private spheres. The freedom that I keep for myself, I exercise in the private sphere. When I enter the public sphere, I am a citizen, not a private person. I cannot do as I will.

And hence we have the distinction between a liberal state and an illiberal state. In a liberal state, the sphere of individual freedom is at a maximum. The state is minimalist. In an illiberal state, the private sphere is kept to a minimum. Citizens have given up most their freedom to the state and have few rights.

In a secular state, religion is in the private sphere. This means two things. One, I am free to practise my religion; I have not given up this freedom to the state. The state cannot interfere in my practice of religion. Two, the state itself does not profess any religion. The juxtaposition of A and B, as defined above, can create logical contradictions. Let me illustrate this with an example: Namaz is an Islamic practice. A Muslim must offer namaz five times a day. What if a Muslim happens to be at a public place, such as a railway platform, at the time when namaz needs to be offered? Should there be spaces for namaz in all public spaces such as schools, airports and train stations? But then, public spaces are supposed to be free of religion in a secular state. Where does the private sphere end and the public begin? Likewise, if a Muslim student is made to remove the hijab at the school, does this uphold the secular nature of the school or trample on her religious right to wear the hijab?

A further criticism is that the public sphere in India is implicitly Hindu. Sikhs are allowed to wear turbans, Hindu girls are allowed to wear the bindi or bangles, and these don't stand out as aberrations; the hijab does. I would like to counter this argument in two ways: First, the hijab is not banned in the public sphere in India, as it is in some Western liberal democracies such as France. The issue at hand pertains to the uniform of schools. As discussed above, when a citizen enters the social contract, she/he gives up some freedom in the process. Something similar happens when one voluntarily enters into a contract with an institution, such as a school or a club. For instance, a school can have an attendance policy for students and require them to attend at least 80% of the classes. If a student voluntarily takes admission in the school, she/he gives up her freedom to attend classes as per her will. She must attend 80% of the classes. The uniform issue is similar.

#### **Essential religious practice**

Second, it may still be argued that schools allow turbans, bindis and bangles. Why not the hijab? The debate here meanders into the question of which of these is an essential religious practice. Is wearing the turban an essential practice of the Sikhs? Harjot Oberoi's historiographical work on Punjab in the 18th-19th centuries reveals something curious: The doli (palanquin) bearers in



Dalhousie, though Sikh, smoked tobacco during their months of hard labour away from home. During these summer months, they also cut their hair and kept it short. When they returned home for the winter, they paid a few annas and were 'reinitiated' into 'Sikhism'. This is but one example. Oberoi gives several such instances of the amorphous nature of religious practices in 19th century Punjab.

From this apparent amorphous fluidity, how did we reach a point where the keeping of body hair (kesh) has become one of the 'essential practices' of Sikhism? Clearly, something happened between the 19th century and now: The Khalsa movement rose, and so did the Singh Sabha. The Singh Sabha identified a pure, authentic Sikhism, which was based on the texts/scripture, i.e. the Adi Granth. All those practices that were not in keeping with the Adi Granth were seen as corrupt accretions. Hence, Sikhism needed to be 'reformed' to remove these corruptions and bring it back in line with the texts/scriptures. Hindu reform movements like the Arya Samaj did something similar: They identified a pure Hinduism, as specified in the Vedas.

This equation of a religious community with a scripture or text is a feature of the Abrahamic religions. To ask whether there are essential religious practices in Hinduism, Sikhism, Buddhism is to ask the wrong question, and to do harm to these non-Abrahamic traditions. I would go a step further and assert that the practice of Islam and Christianity in the Indian context too is characterised by a fluidity that defies essence. Mother Mary wears a saree in churches in Bengaluru. Diwali is celebrated in the Nizamuddin Dargah. Hence, the discourse of the essential religious practice needs to be re-thought in a largely pagan context such as the Indian.

#### OVERLOOKING 'REASONABLE ACCOMMODATION'

The story so far: The Karnataka High Court has ruled in favour of the State's circular that students in educational institutions should only wear prescribed uniforms, and where no code was prescribed, they should wear "such attire that would accord with equality and integrity and would not disrupt public order". The decision effectively upheld the denial of entry to students wearing the hijab. The court rejected an argument in support of permitting Muslim girls wearing headscarves that was based on the principle of 'reasonable accommodation'. This meant that the court did not favour making any change or adjustment to the rule that could have enabled the students to maintain their belief or practice even while adhering to the uniform rule.

#### What is it?

'Reasonable accommodation' is a principle that promotes equality, enables the grant of positive rights and prevents discrimination based on disability, health condition or personal belief. Its use is primarily in the disability rights sector.

Article 2 of the UN Convention on the Rights of People with Disabilities (UNCRPD) defines reasonable accommodation as "necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms".

The International Labour Organization (ILO), in its recommendation on HIV/AIDS and the world of work, defines it as "any modification or adjustment to a job or to the workplace that is reasonably practicable and enables a person living with HIV or AIDS to have access to, or participate or advance in, employment".





### How does the principle work?

The general principle is that reasonable accommodation should be provided, unless some undue hardship is caused by such accommodation.

In 2016, the ILO came out with a practical guide on promoting diversity and inclusion through workplace adjustments. The need for workplace accommodation may arise in a variety of situations, but four categories of workers were chosen for the guide: workers with disabilities, workers living with HIV and AIDS, pregnant workers and those with family responsibilities, and workers who hold a particular religion or belief. These categories of workers come across different kinds of barriers at work. These may result in either loss of employment or lack of access to employment. “The provision of reasonable accommodation plays a major role in addressing these barriers and thus contributes to greater workplace equality, diversity and inclusion,” says the ILO guide.

A modified working environment, shortened or staggered working hours, additional support from supervisory staff and reduced work commitments are ways in which accommodation can be made. Suitable changes in recruitment processes — allowing scribes during written tests or sign language interpreters during interviews — will also be a form of accommodation.

### What is the legal position on this in India?

In India, the Rights of People with Disabilities Act, 2016, defines ‘reasonable accommodation’ as “necessary and appropriate modification and adjustments, without imposing a disproportionate or undue burden in a particular case, to ensure to persons with disabilities the enjoyment or exercise of rights equally with others”.

The definition of ‘discrimination’ in Section 2(h) includes ‘denial of reasonable accommodation’. In Section 3, which deals with equality and non-discrimination, sub-section (5) says: “The appropriate Government shall take necessary steps to ensure reasonable accommodation for persons with disabilities.”

In *Jeeja Ghosh and Another v. Union of India and Others* (2016), the Supreme Court, while awarding a compensation of ₹10 lakh to a passenger with cerebral palsy who was evicted from a flight after boarding, said: “Equality not only implies preventing discrimination ..., but goes beyond in remedying discrimination against groups suffering systematic discrimination in society. In concrete terms, it means embracing the notion of positive rights, affirmative action and reasonable accommodation.” The Supreme Court elaborated on the concept in *Vikash Kumar v. UPSC* (2021). This was a case in which the court allowed the use of a scribe in the Union Public Service Commission examination for a candidate with dysgraphia, or writer’s cramp. The court ruled that benchmark disability, that is a specified disability to the extent of 40%, is related only to special reservation for the disabled in employment, but it need not be a restriction for other kinds of accommodation. It also said failure to provide reasonable accommodation amounts to discrimination.

In the recent Karnataka verdict on wearing the hijab, the High Court did not accept the argument based on a South African decision that reasonable accommodation can be made for allowing minor variations to the uniform to accommodate personal religious belief. The appeal against the verdict in the Supreme Court provides an opportunity to see if the concept can be used in the realm of belief and conscience too.





## BIGGER PICTURE: KARNATAKA LOCAL POLLS, OBC RIDER, AND THE GHOST OF A 2015 CENSUS

Data from an unpublished caste census that was carried out by the Karnataka government when the Congress was in power in the state between 2013-2018 has assumed significance in the state in the light of a recent Supreme Court order mandating political reservations for Other Backward Castes in the country only on the basis of empirical data on numbers and backwardness of caste groups.

Polls for 198 seats in the Bengaluru city corporation, 1,083 zila panchayat seats in 30 districts, and 3,903 seats in 175 taluk panchayats in Karnataka have been due for over a year.

### The 2015 survey

In April 2015, then Congress CM Siddaramaiah had commissioned a socio-economic caste census at a cost of Rs 133 crore to assess the status of various caste groups in Karnataka. The census was led by H Kantharaj, the chairman of the Karnataka Backward Classes Commission at the time. It was the first such exercise after 84 years.

A leaked version of the report indicated that dominant and politically powerful castes in the state like the Lingayats and Vokkaligas constitute, respectively, only 9.8% of the population (instead of a general estimate of 17%) and 8.2% (instead of 15%) of the six crore population.

### The politics

The Siddaramaiah government did not release the report's findings, submitted in 2017, reportedly under pressure from Congress leaders and ministers who feared an adverse effect in the 2018 Assembly polls. The BJP had demanded the release of the report at the time, as well as when the JD(S)-Congress coalition government took over following the polls.

Now, the Congress is demanding that the Kantharaj committee be cited by the Karnataka government in the Supreme Court, saying it meets the requirement of empirical data for reservation in local polls. Asserting that OBCs have been denied political representation for decades, Siddaramaiah, who belongs to the OBC Kuruba community, said recently: "The BJP government should use the report to argue before the Supreme Court and ensure social justice for the backward classes. There is no need for a separate survey."

OBCs have emerged as a key support group for the BJP in Karnataka. "Those elected in local polls tend to be the ones who drive support for a party at the grass-root level," noted a government source.

In polls to city and town municipal councils held in December 2021, prior to the Supreme Court's January 19, 2022, order saying polls could be held only with empirical data, the Congress had won 501 of the 1,884 wards in 58 municipalities, compared to the BJP's 433.

Earlier, polls were held for city corporations in Belagavi, Dakshina Kannada, Kalburgi, Dharwad, Davangere and Mysuru in the last two years, where the BJP fared well.

"We are holding discussions with the chairman of the backward classes commission, Jayaprakash Hegde. In a few days, we are going to sit with legal experts," Rural Development Minister K S Eshwarappa, also an OBC leader, said last week.



### The Supreme Court 2010 order

Beginning with a 2010 Constitution Bench judgment, where the validity of political reservations for OBCs under Articles 243-D(6) and 243-T(6) under the Constitution was challenged, the Supreme Court has emphasised the need for OBC quota in elections to be backed by empirical data – unlike reservation for OBCs, along with SCs, STs, in education and employment. The 2010 judgment ruled that “identification” of “backward classes” under Articles 243-D(6) and 243-T(6) should be distinct from the identification of SEBCs (Socially and Economically Backward Castes) for the purpose of Article 15(4) and that of backward classes for Article 16(4). Both these Articles entitle governments to make laws for uplift of backward classes.

“In the absence of updated empirical data, it is well nigh impossible for courts to decide whether reservations in favour of OBC groups are proportionate or not,” the Supreme Court said.

### The Maharashtra case

While the Supreme Court 2010 order was not acted upon by states, in 2019-2020, Maharashtra’s move to reserve over 50% seats in local polls was disputed in court. In March 2021, a three-judge Supreme Court Bench set out a three-step rule to empirically establish the need for OBC quota – 1) a state commission must “conduct contemporaneous rigorous empirical inquiry into the nature and implications of the backwardness qua local bodies, within the state”; 2) specify the proportion of reservation required to be provisioned local body wise in light of recommendations of the commission; and 3) total “reservation (must) not exceed the aggregate of 50% of the seats”.

### Maharashtra response

The Shiv Sena-NCP-Congress government issued an ordinance to get around the Supreme Court order and reserved 27% of local poll seats for OBCs. The matter again reached the Supreme Court, and on December 6, 2021, it ruled out holding of local elections without empirical data. On December 15, it ordered that all seats declared OBC by the state government be declared general for local polls. On January 19, 2022, it said all states must follow the triple test condition laid down by the court in the March 2021 order for OBC reservations in elections.

### The Karnataka case

In Karnataka, 33% of seats in local bodies have been reserved for OBCs and 18% for SC/STs, which might now be under a cloud.

The terms of several local bodies in the state ended over a year ago, including of the Bruhat Bengaluru Mahanagara Palike (BBMP) in September 2020 and of 1,098 zila panchayat members and 3,903 taluk panchayat members in March 2021.

The BBMP polls were initially delayed on account of the BJP government moving to increase the number of seats in the city corporation from 198 to 243 through delimitation. The state has now cited the Supreme Court order seeking empirical data as a block to holding polls.

## CHANGING THE JURISPRUDENCE OF SCARCITY

The road to a medical education in India is anything but smooth. One is not talking about the actual years of study and residency, but of making it to the portals of a decently equipped and staffed college. The competition is fierce. The National Eligibility-cum-Entrance Test draws 16 lakh candidates for 88,000 MBBS seats, the preparation starts years ahead robbing the aspirants of the

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



joys of childhood, coaching factories such as the ones in Kota proliferate, tensions mount, deaths by suicide increase, heartbreaks exceed exultation. And then there is the overarching shadow of reservations, the undoubted major premise in the prospectus. Starting with the advent of the Constitution in 1950 for a 10-year period, reservations have continued uninterrupted at an ever-increasing pace owing to a combustion of unrealised aspirations, increasing awareness of historical wrongs, political expediency and vote banks. As much as we have wanted to move away from a caste-based society, we have become even more wired into one where caste predominantly dictates reservation, and reservation determines accessibility to education and employment.

### **Courts and quotas**

The courts have struggled to balance the competing demands of preference and unrestricted competition cast as merit. Initially the judiciary's bent towards equality made it view reservations and quotas through a less-than-welcoming lens. Later on, it recognised that substantive equality does mandate a catch-up philosophy to bring the less fortunate up to levels where competition can be had on more equal terms. Courts have moved up the percentage scale of what they considered permissible, and come around to the halfway mark of 50%, the common negotiating point of resolution. The Supreme Court used a simple explanation to justify this stoppage point: reservations are an exception to the rule of equality, an exception cannot exceed the norm, ergo stop at 50%. It seems to have held on to this principle enunciated in the Balram (1972), Indra Sawhney (1992) and Maratha reservation (2021) cases.

How long more, one has to see, because the court is getting besieged by States which have a higher percentage of the population in the catchment area for reservation and see both social justice and electoral benefit converge in higher reservation points. Thus, there have been attempts to provide reservation to students of rural schools, students of State Board schools, etc. The latest is Tamil Nadu's attempt to secure a 7.5% preference for governmental school students in an across-the-board horizontal reservation on the ground of a cognitive gap irremediable by (or some may say caused by) years of schooling in such schools; the Madras High Court is now testing its constitutional correctness. But one may take it that as long as ground conditions remain, the battle for increased reservations will continue and this will be the dominant player in determining who gets into, or is excluded from, medical colleges.

It needn't be this way. We have become conditioned to the condition and mentality of shortages in education, and our courts have responded correspondingly with the jurisprudence of scarcity, perpetually grappling with large volumes of students chasing low numbers of seats, and in so doing balancing past wrongs against present denials, an exercise which can never be satisfactory. But rarely has the court taken it upon itself to ask the broader question: why are we consigned to be perpetually in this state of scarcity? Isn't there a legal right for Indians to have a medical education system which is accessible and affordable, which can accommodate the youngsters who want to make this their profession? The country needs doctors, teachers need jobs, students need education. Every end of the triangle connects, but there is a yawning gap in the middle made up of enabling policy and action. The right to health and to a good education is part of the right to life, under our expanded conceptualisation of Fundamental Rights.

### **Turn around the dismal situation**

The Prime Minister's recent observations occasioned by the plight of the Indian medical students returning from Ukraine are on point. Why can't we provide education to our students instead of them having to go abroad, he asked. Their travails arise not just out of the current situation;



apparently, they are driven to seek unregulated agents to obtain indifferent quality education abroad with uneven chances of fitment into the medical system here. His query can well be the galvanising point for turning around the dismal medical education scheme. It does not take much to open up the field for investment and employment of capital and talent.

Restrictive rules limiting entrants should be pruned; why should only trusts or societies provide education? The more the restrictions, the more the ways to circumvent them. Focus on enabling and mandating quality infrastructure and capable teachers and keeping standards high. Have a sensible pricing policy, realise that investments need returns, and that there are students who are willing to pay. Don't drive the commercials into the black market by unreasonable and unnecessary restrictions. Mandate scholarships as the social commitment of the institution. Calibrate a policy of reservation, total and partial scholarships with freedom to run the institution and make a reasonable profit. Let not the government appropriate the seats of private institutions; instead, it can focus on running its own colleges better. Structure tax benefits which will make it viable to start and run medical colleges, and allow minority institutions too to avail of the benefits of Section 80G of the Income Tax Act for donations to its colleges with perhaps a requirement that some, not excessive, seats are for general allotment. Beyond a wholesome regulation, let market forces operate to obtain the benefits of pricing and quality. Give up the substratum of power of officialdom, tailor policy and implementation to meet real needs, create the supply for the demand, and focus on capacity building of institutions and individuals. That's good Atmanirbhar Bharat.

#### FREEZE OUT

On Tuesday, after possibly the longest pause, of 137 days, in India's retail fuel prices in recent years, oil marketing companies raised petrol and diesel prices by about 80 paise a litre, following up with a similar increase on Wednesday. A ₹50 hike was also effected in domestic cooking gas prices. Fuel prices were last tweaked in November 2021, following the Deepavali-eve cut in petrol and diesel excise duties. The interregnum between then and now, coinciding with the five Assembly election battles, also witnessed the sharpest spike in global crude oil prices among recent instances of price freezes in India's 'deregulated' petroleum products market. From around \$73 a barrel on November 4, crude prices are now around \$110 after shooting past \$130, immediately after Russia's invasion of Ukraine. Ordinarily, oil marketing companies reset retail prices daily, based on an average of the previous 15 days' global prices for their preferred basket of crude. The Government has distanced itself from fuel pricing decisions, asserting there was no official directive to keep prices down. There is no evidence that oil firms had built up such large strategic reserves at earlier prices that they did not need to react to an over 50% cost surge for a commodity whose demand is met largely through imports. That price hikes, in small doses, have begun only after government formation in poll-bound States, makes it abundantly clear that a nudge and a wink from the majority owner of the state-run oil players had goaded them into swallowing higher costs, compelling private players to follow suit to compete.

Holding free market prices hostage to electoral politics, deployed ever so often in recent years, including the last time these five States went to the polls and the 2019 Lok Sabha campaign, is politically unfair, economically untenable and reflects an extremely cynical state machinery deployment tactic. That bulk diesel prices have been raised by ₹25 per litre to ₹122, indicates that several more hikes are in the offing to close the gap between costs and pump prices. Inflation, already above the comfort level, may rise further and the Government may intervene with more duty cuts at some point. But there are larger red flags to fret about. No sane global investor will





bid for Bharat Petroleum Corporation Limited, for instance, if pricing freedom is effectively curtailed after an Election Commission of India (ECI) briefing. This practice warrants wider consternation, not only because it undermines a level-playing electoral field in favour of the ruling dispensation but also opens the door for more such creeping diktats or deviations from policy positions for temporary gains in voter perceptions. Just as mysterious fuel pricing decisions have become par for the course, other transient departures from stated policy can also become governance habits. While governments are obviously tempted to create optics of benevolence towards the common voter, the ECI needs to rise up to take a firm stand on reversals or deferrals of routine decisions in poll season.

## THE CONTROVERSY OVER THE PROPOSED MEKEDATU WATER PROJECT

The story so far: The stage appears set for a summer of discontent yet again, as Karnataka and Tamil Nadu are heading for a political confrontation over the Mekedatu drinking water project across river Cauvery, proposed by the former. Within days of Tamil Nadu Assembly's resolution against the project, Karnataka's legislative assembly is set to counter it with a resolution seeking the project's early implementation and clearances from the Centre.

As Karnataka heads into an election year in 2023, the Mekedatu issue has been resonating within Karnataka and in Tamil Nadu as well. With Cauvery being an emotive issue that binds people in the Cauvery basin districts in Old Mysore region, Mekedatu is likely to impact election results.

In Karnataka, the latest development on Cauvery has brought together the political class across parties, which were divided over the issue just a month ago by accusing each other of delaying the project. The BJP government was on tenterhooks after Congress took out a 170-km padayatra from Mekedatu to Bengaluru seeking the project's early implementation. They also accused the Centre of delaying the project for political gains in Tamil Nadu. The padayatra was dubbed by the ruling dispensation as a political tool to consolidate the dominant Vokkaliga votes in the Old Mysore region who lean towards the regional party Janata Dal (Secular).

However, closing ranks, leaders of BJP, Congress and JD (S) have objected to the Tamil Nadu Assembly's resolution as they see it as an "interference" in a project that has been proposed within the jurisdictional limits of Karnataka. With the Chief Minister Basavaraj Bommai taking the lead by announcing piloting of a resolution, parties feel that it was "unfair" on the part of Tamil Nadu, which has implemented drinking water projects across Cauvery in its territorial jurisdiction, to oppose a drinking water project proposed by Karnataka.

As far as Tamil Nadu is concerned, it has executed drinking water supply projects from what is available to it, without seeking to make any additional claim.

### **What is the project?**

Originally mooted in 1948, Mekedatu (which translates as Goat's crossing) is a drinking water cum power generation project across river Cauvery. Karnataka gave the project shape after the final award of the Cauvery Water Disputes Tribunal was notified in February 2013 allocating the riparian states their shares. After a pre-feasibility study report was submitted in 2018, the State submitted a detailed project report to the Central Water Commission in 2019. The ₹9,000 crore balancing reservoir at Mekedatu on the Karnataka-Tamil Nadu border envisages impounding of 67.15 tmc (thousand million cubic) ft. of water. The project, which will involve submergence of nearly 5,100 hectares of forest in Cauvery wildlife sanctuary hosting rich flora and fauna, will help





the state in utilising the additional 4.75 tmc ft. of water allocated by Supreme Court in 2018 for consumptive use for drinking purpose for Bengaluru and neighbouring areas. Karnataka's share in the award has been decided at 284.75 tmc ft. In July 2019, the Expert Appraisal Committee on River Valley and Hydroelectric Projects constituted by the Union Ministry of Environment, Forest and Climate Change (MoEFCC) has said the proposal could be reconsidered only after Tamil Nadu and Karnataka reach an "amicable solution."

#### **How will it benefit Karnataka?**

The water from Makedatu is to be pumped to quench the thirst of the burgeoning population of Bengaluru which is estimated to be around 1.3 crore. Currently, more than 30% of Bengaluru is dependent on borewell water. Ramanagara and Bengaluru rural districts will also benefit. Along with the 5th stage of the Cauvery Water Supply Scheme, which will be completed shortly, the water from Makedatu is projected to meet the water requirement of the State capital for the next 30 years. Besides, there are also plans to generate 400 MW of power. The revenue earned from power generation is expected to compensate the Government its investment on the project within a few years. Karnataka argues that the reservoir will also help to ensure monthly flow stipulated in the award for Tamil Nadu rather than harm the neighbouring State's interest in any way.

#### **What is the current status?**

The project is now before the Cauvery Water Management Authority. The Authority is exploring the possibility of having an exclusive discussion on the project, when the matter is sub judice. Apart from writing to the Centre to withdraw the permission given to prepare the detailed project report (DPR), Tamil Nadu has also filed a petition before the Supreme Court, explaining its objections against the project. The Centre and Karnataka have also filed counter affidavits.

#### **What is Karnataka's stand?**

Karnataka says that there is no case for Tamil Nadu after its share of 177.75 tmc ft. of water is ensured at the inter-State border gauging centre at Biligundlu. Also, the project falls inside the jurisdictional limit of Karnataka and Tamil Nadu's permission is not needed. The State also argues that since there is no stay in any court for the project, Karnataka can go ahead. On utilising the surplus water, Karnataka says that any allocation in this sphere should be done after hydrology studies to ascertain the quantum of excess water available in the basin.

#### **Why is Tamil Nadu opposed to it?**

Tamil Nadu feels that Karnataka, through the project, will impound and divert flows from "uncontrolled catchments" to it, a component which was taken into account by the Tribunal in the 2007 order while arriving at the water allocation plan for the State. As per an estimate, around 80 tmc ft of water flows annually to Tamil Nadu, thanks to the catchments including the area between Kabini dam in Karnataka and Billigundulu gauging site on the inter-State border, and the area between Krishnaraja Sagar dam in Karnataka and the gauging site. As the upper riparian State has adequate infrastructure even now to address the water needs of Bengaluru, there is no need for the Makedatu project, according to Tamil Nadu. Makedatu also does not find mention in the Tribunal's final order or the Supreme Court judgement. Besides, given the unpleasant experiences that it has had with Karnataka in securing its share of the Cauvery water, as per the monthly schedule of water release, Tamil Nadu is wary of assurances from the other side.



### Is Karnataka ready for negotiation?

No. A recent suggestion by the Union Water Resources Minister Gajendra Singh Shekhawat for a negotiated settlement raised a storm in Karnataka's political circles and the State Water Resources Minister Govind Karjol met him to reiterate the State's stand. Karnataka has said that there is no scope for negotiation in any interstate river water sharing issue where the tribunal award has been concluded and Karnataka's right on water has been established after the award has been gazetted.

### EXPLAINED: WHAT IS PAR TAPI NARMADA RIVER-LINKING PROJECT & WHY ARE TRIBALS IN GUJARAT PROTESTING AGAINST IT?

On March 21, the tribals in Gujarat will hold a public meeting in Kaprada in Valsad district to protest against the Centre's Par Tapi Narmada river-linking project. This will be the fourth such protest meet after the first on February 28 in Dharampur of Valsad district, the second one on March 5 in Vyara of Tapi district, and the third meet on March 11, in Dang district.

The Par Tapi Narmada link project was envisioned under the 1980 National Perspective Plan under the former Union Ministry of Irrigation and the Central Water Commission (CWC).

The project proposes to transfer river water from the surplus regions of the Western Ghats to the deficit regions of Saurashtra and Kutch. It proposes to link three rivers — Par, originating from Nashik in Maharashtra and flowing through Valsad, Tapi from Saputara that flows through Maharashtra and Surat in Gujarat, and Narmada originating in Madhya Pradesh and flowing through Maharashtra and Bharuch and Narmada districts in Gujarat.

The link mainly includes the construction of seven dams (Jheri, Mohankavchali, Paikhed, Chasmandva, Chikkar, Dabdar and Kelwan), three diversion weirs (Paikhed, Chasmandva, and Chikkar dams), two tunnels (5.0 kilometers and 0.5 kilometers length), the 395-kilometre long canal (205 kilometre in Par-Tapi portion including the length of feeder canals and 190 km in Tapi-Narmada portion), and six powerhouses.

Of these, the Jheri dam falls in Nashik, while the remaining dams are in Valsad and Dang districts of South Gujarat.

An official of the Ukai dam explains how the excess water in the interlinked Par, Tapi and Narmada rivers which flow into the sea in the monsoon would be diverted to Saurashtra and Kutch for irrigation. "During the monsoon season, the water which is supplied to Saurashtra through the state government from Sardar Sarovar dam will be saved and used for other purposes. Presently the water of Sardar Sarovar is used in urban areas and for irrigation in Saurashtra", says the dam official.

### How will the project affect villages?

According to a report by the NWDA, about 6065 ha of land area will be submerged due to the proposed reservoirs. A total of 61 villages will be affected, of which one will be fully submerged and the remaining 60 partly. The total number of affected families would be 2,509 of which 98 families would be affected due to the creation of the Jheri reservoir, the only one in Maharashtra, spread over six villages. In Gujarat, 793 families from 17 villages will be affected by the Kelwan reservoir, 563 families by the Dabdar reservoir across 11 villages, 379 families by Chasmandva



reservoir spread over seven villages, 345 families would be affected by Chikkar reservoir across nine villages and 331 families would be affected due to Paikhed reservoir spread over 11 villages.

The affected villages are located in Surgana and Peint talukas in Nashik and Dharampur taluka of Valsad, Vansda taluka of Navsari and Ahwa taluka of Dang districts in Gujarat.

“The affected families may lose their lands or houses or both in the submergence when the reservoirs are created”, says the NWDA report. As per the report, the affected families would be compensated for the loss of their lands and houses and those whose houses are submerged, would be resettled.

#### **What are the tribals’ fears?**

The districts where the project will be implemented are largely dominated, by tribals who fear displacement. Three public meetings have already been organised by the tribals to protest the project. The fourth meet will be held in Kaprada in the Valsad district. After Kaprada, one more public meeting is due to be held at Mandvi in Surat district, the date for which is yet to be announced.

The movement is backed by Samast Adivasi Samaj, Adivasi Samanvay Manch, Adivasi Ekta Parishad and Congress MLA Navsari Anant Patel.

### **UNSEEING BHAGAT SINGH: WHY INDIA HAS STOPPED AT ONLY TALKING ABOUT HIM**

The Punjab government’s decision to display a likeness of Bhagat Singh — based on a painting by one Amar Singh — rather than any of the revolutionary’s four available authentic photographs at its offices is illustrative of the approach taken over the years by India’s governments towards the hero who was hanged by the British on this day, March 23, ninety years ago.

The image — and imagery — that is frequently invoked on social media and in political discourse derives from certain romanticised stereotypes rooted in the folklore around the unparalleled bravery and fearlessness of Bhagat Singh, who was only 23 when he gave his life for the nation.

#### **Pre-independence: Mixed signals**

From 1929, when he was arrested and jailed, to 1931, news and pictures of Bhagat Singh — his statements in court and hunger strikes for better prison conditions — were published widely in newspapers in multiple languages across India. And yet, after his execution, Bhagat Singh’s own writings were allowed to slip into oblivion.

Between 1931 and 1936, at least 200 pieces of writing, including nearly 100 books in Hindi, Tamil, Urdu, English, Punjabi, and other languages — many of them written by Bhagat Singh’s comrades and contemporaries, and individuals who knew him personally — were proscribed. Some of these writers were penalised; Jitendra Nath Sanyal, who was acquitted in the Lahore Conspiracy Case, was jailed for two years for writing Bhagat Singh’s biography.

Only four authentic photos of Bhagat Singh exist. All other depictions are likenesses based on paintings done later.

The first major personality to eulogise Bhagat Singh was EV Ramasamy Naicker, founder of the anti-Brahminical Self-Respect Movement, who wrote an editorial in the March 29, 1931 issue of his journal Kudi Arasu. Months later, Periyar got Bhagat Singh’s seminal 1930 essay ‘Why I am an



'Atheist' published in the September 27, 1931 issue of The People of Lahore. A translation in Tamil, by P Jeevanandham, was published in Kudi Arasu in 1934.

### The Expert

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Dr B R Ambedkar wrote a mild editorial in his Marathi newspaper Janta at the time, and prominent leaders of the national movement, including Gandhi, Nehru, Sardar Patel, Subhas Bose, and Madan Mohan Malviya paid tributes through press statements.

Interestingly, while Gandhi accepted black flowers in Karachi from activists of the Naujawan Bharat Sabha for not being able to save the life of Bhagat Singh, a Congress resolution condoling the sacrifice of Bhagat Singh, Rajguru, and Sukhdev ran into hurdles. As per Gandhi's wish, the resolution moved by Nehru and seconded by Malviya, paid tribute to Bhagat Singh, but asked the nation's youth to not follow his path. It passed by only a thin majority of delegates.

Gandhi also refused to associate with the memorial planned by Naujawan Bharat Sabha and Punjab Congress leaders in Lahore, for which an appeal for a fund of Rs 10 lakh was issued. The plan could not come through as the Naujawan Bharat Sabha was banned, and Congress leaders in Punjab dragged their feet in view of the Mahatma's disinclination.

A cropped version of the 1923 National College group photo on the front page of The Tribune, Lahore, on April 13, 1929.

Bhagat Singh's undisputed appeal for the youth notwithstanding, none of the more than 1,000 universities of independent India, including more than 250 controlled by the government, was named after him. It is only recently that an engineering college in Ferozepur, Punjab, which already carried his name, has been upgraded to a university. A proposal to name Chandigarh airport after Bhagat Singh is stuck in technicalities.

Until four decades after his execution, Bhagat Singh's writings were not collected in a single volume; however, they are now available in many languages and in international editions. The Bhagat Singh Chair at Jawaharlal Nehru University remains unfilled 15 years after it was created, and no major academic programme or research has been organised under its aegis.

Bhagat Singh (as also others like Chandrashekhar Azad and Masterda Surjya Sen) does not find a place in the portrait gallery of Parliament's Central Hall, even though the somewhat lesser known revolutionary Hemu Kalani, who was executed before he turned 20 in 1943, was featured in 2003 after then Home Minister L K Advani took a personal interest.

In 1929, Bhagat Singh and Batukeshwar Dutt had thrown bombs in the same complex, then called the Central Assembly, to "make the deaf hear". The reluctance to name institutions after Bhagat Singh, honour him in Parliament, or promote his ideas and vision even while paying lip service to him in speeches reflects a dichotomy similar to the one of not using his authentic picture in government offices and advertisements.

Indeed, a statue of Bhagat Singh was unveiled in the Parliament House complex by then President Pratibha Patil in 2008. But even in this case, members of the revolutionary's family had complained about the way he looked. Freedom fighters too had objected, and Fahmida Riaz, the





late Urdu poet from Pakistan, had written a poem saying this was not the face of the real Bhagat Singh.

When the Government of India issued Rs 5 and Rs 100 coins in Bhagat Singh's centenary year 2007-8 showing him wearing a hat, Akalis in Punjab protested that his turbaned form had not been depicted. Interestingly, in the 1970s, then Chief Minister Giani Zail Singh had unveiled a statue of Bhagat Singh with a hat in the presence of his younger brother Kultar Singh at Nawanshahr (Now Shaheed Bhagat Singh Nagar), but the statue was later replaced with a turbaned version.

#### EXPLAINED: THE AHIR REGIMENT DEMAND

An ongoing agitation by members of the Ahir community disrupted traffic on a 6-kilometre stretch of the Delhi-Gurgaon highway on Wednesday. The protesters have been camping near Kherki Daula toll plaza in Gurgaon since February 4, demanding an Ahir Regiment in the Indian Army.

##### **What is the genesis of the demand for an Ahir Regiment?**

The Ahirwal region, which includes the southern Haryana districts of Rewari, Mahendragarh, and Gurgaon, and is associated with Rao Tula Ram, the Ahir hero of the revolt of 1857, has traditionally contributed soldiers to the Indian Army in large numbers. The region has seen the loudest clamour for the creation of an Ahir Regiment, even though the demand has also been raised in other states with sizeable Ahir populations.

The community was brought into national limelight after the story of the bravery of the Ahir troops of Haryana in the Battle of Rezang La in 1962 was widely known. Most of the soldiers of C Company of the 13th Battalion of the Kumaon Regiment perished fighting the Chinese onslaught, but broke the enemy's advance to Chushul.

Members of the community have long argued that the Ahirs deserve a full-fledged Infantry Regiment named after them, not just two battalions in the Kumaon Regiment and a fixed percentage in other regiments. The demand got a boost during the 50th anniversary of the 1962 War in 2012 when the saga of the Ahirs' heroism was recounted repeatedly, and has received renewed traction in the 60th anniversary year. Various political parties have thrown their weight behind the demand in recent years.

##### **What is the history of the Ahirs in the Indian Army and Kumaon Regiment?**

Ahirs are recruited in the Indian Army in various regiments including fixed class regiments (one or more castes in fixed numbers) like Kumaon, Jat, Rajput, and mixed class regiments (of all castes) like the Brigade of the Guards or The Parachute Regiment in the Infantry and various other regiments, and in Corps like Artillery, Engineers, Signals, and Army Service Corps.

Ahirs were initially recruited in sizable numbers in the 19 Hyderabad Regiment, which was the predecessor of the Kumaon Regiment. This regiment had earlier mainly recruited from Rajputs from Uttar Pradesh and Muslims from the Deccan plateau among other castes.

##### **What was the role of Ahirs in the Battle of Rezang La?**

The Ahirs of 13 Kumaon deployed at Rezang La in Eastern Ladakh resisted the Chinese attack on them until almost the entire company of 120 troops had been wiped out.





The battle was fought on November 18, 1962 at a height of 17,000 feet. The ill-equipped troops of the Charlie Company of 13 Kumaon under the command of Major Shaitan Singh fought ferociously against hundreds of attacking Chinese soldiers. Out of the 117 troops killed, 114 were Ahirs, and only three survived with serious injuries. The killed Ahir troops belonged to the Rewari-Mahendragarh belt of Haryana.

When the winter ended and the bodies of the dead soldiers were recovered, many were found holding on to their weapons in the trenches after their ammunition had run out. Major Shaitan Singh was awarded the nation's highest gallantry award, Param Vir Chakra, posthumously, eight soldiers received the Vir Chakra, and several others were awarded the Sena Medal and Mentioned-in-Despatches.

#### **What position have political parties taken on the demand for an Ahir Regiment?**

Over the past decade, support has come from parties across the spectrum, but especially from ones with a presence in Ahir areas of influence — in Haryana, UP, Bihar, and even Maharashtra.

#### **What has been the Army's response to the demand?**

The Army has rejected the demand for any new class or caste based regiment. It has said that while the older regiments based on castes and regions like the Dogra Regiment, Sikh Regiment, Rajput Regiment, and Punjab Regiment will continue, no new demands on the lines of an Ahir Regiment, Himachal Regiment, Kalinga Regiment, Gujarat Regiment or any tribal regiment would be entertained.

Gen Kadyan said that while the military does not subscribe to the colonial theory of 'martial races', which led to the creation of single class or caste regiments, the regimental system has stood the test of time, and has acquired an Indian nationalist character. Politicians should not pursue "narrow political gains" using the Army, he said.

### **BREATH TAKING DISPLAY BY SARANG AT WINGS INDIA-2022**

The highlight of the first day of Wings India-2022 — four-day Civil Aviation show by the Ministry of Civil Aviation at Begumpet Airport in Hyderabad — was the aerobatics display put up by three pilots of the Indian Air Force.

The display by IAF's Sarang team had its moment when the two choppers flew trailing white plume to create a heart-shaped formation.

The aerobatic manoeuvres by three Dhruv helicopters at noon with the sun shining overhead had people craning their necks to look up and hear the familiar thumping sound created by the blades of helicopters.

Beginning with a sortie coming from left of the Begumpet Airport with trailing white plume, the pilots showed their control by making the machines do one impossible feat after another.

### **UNDERSTANDING HYPERSONIC WEAPONS**

The story so far: On Saturday, the Russian Defence Ministry spokesperson Major General Igor Konashenkov said the "Kinzhal aviation missile system with hypersonic aeroballistic missiles destroyed a large underground warehouse containing missiles and aviation ammunition in the



village of Deliatyn in the Ivano-Frankivsk region.” On Monday, U.S. President Joe Biden confirmed that Russia used hypersonic missiles in its offensive in Ukraine.

#### **What are hypersonic weapons?**

They are manoeuvrable weapons that can fly at speeds of at least Mach 5, five times the speed of sound. The speed of sound is Mach 1, and speeds above Mach 1 are supersonic and speeds above Mach 5 are hypersonic. Hypersonic weapons travel within the atmosphere and can manoeuvre midway which combined with their high speeds make their detection and interception extremely difficult. This means that radars and air defences cannot detect them till they are very close and have only little time to react.

Hypersonic missiles are a new class of threat because they are capable both of manoeuvring and of flying faster than 5,000 kilometres per hour, which would enable such missiles to penetrate most missile defences and to further compress the timelines for response by a nation under attack, says a 2017 book Hypersonic Missile Nonproliferation published by RAND Corporation.

#### **What is the status of Russian, Chinese and U.S. programmes?**

According to Russian news agency TASS, the Kinzhal air-launched hypersonic missile system was unveiled by Russian President Vladimir Putin on March 1 and has an operating range of over 2,000 km. The basic carrier of the missile is the MiG-31K fighter jet as well as the Tu-22M3 bomber.

Last October, top U.S. military officer Gen. Mark Milley, Chairman of the joint chiefs of staff confirmed that China had conducted a test of a hypersonic weapon which he termed was “close to a Sputnik moment” and was “very concerning”, referring to the event in 1957 when the Soviet Union put the first satellite in space. Earlier in the month, The Financial Times had reported that China tested a nuclear-capable hypersonic missile in August that circled the globe before speeding towards its target, demonstrating an advanced space capability that caught U.S. intelligence by surprise. However, China has denied that it was nuclear capable. This has put the spotlight on the global development of hypersonic weapons by several countries, especially the advancements made by China and Russia. In addition to the Chinese test, in early October, Russia announced that it had successfully test launched a Tsirkon hypersonic cruise missile from a Severodvinsk submarine deployed in the Barents Sea which hit a target 350 kms away.

The U.S. has tested hypersonic weapons for decades. The first vehicle to exceed Mach 5 was a two-stage rocket launched in 1949 which reached a speed of Mach 6.7, under Project Bumper. While the U.S. has active hypersonic development programmes, the Congressional Research Service (CRS) memo said it was lagging behind China and Russia because “most U.S. hypersonic weapons, in contrast to those in Russia and China, are not being designed for use with a nuclear warhead.” The U.S. is now looking to accelerate its own programmes, though it is unlikely to field an operational system before 2023. The Pentagon’s budget request for hypersonic research for financial year 2022 is \$3.8 billion, up from \$3.2 billion it requested a year earlier. The Missile Defence Agency additionally requested \$247.9 million for hypersonic defence.

However, as stated by the U.S. Principal Director for Hypersonics Mike White, the Department of Defence has not yet made a decision to acquire hypersonic weapons and is instead developing prototypes to assist in the evaluation of potential weapon system concepts and mission sets.

Debunking some of the claims surrounding hypersonic weapons, Physicists David Wright and Cameron Tracy wrote in the Scientific American dated August 1, 2021 stating their studies



indicate that hypersonic weapons “may have advantages in certain scenarios, but by no means do they constitute a revolution.” “Many of the claims about them are exaggerated or simply false. And yet the widespread perception that hypersonic weapons are a game-changer has increased tensions among the U.S., Russia and China, driving a new arms race and escalating the chances of conflict,” they wrote. The U.S. has six hypersonic programmes, divided among the Air Force, Army and Navy, according to them.

#### **What is the status in other countries?**

The CRS Memo noted that although the United States, Russia, and China possess the most advanced hypersonic weapons programmes, a number of other countries — including Australia, India, France, Germany, and Japan — are also developing hypersonic weapons technology. India operates approximately 12 hypersonic wind tunnels and is capable of testing speeds of up to Mach 13, according to CRS. “Reportedly, India is also developing an indigenous, dual-capable hypersonic cruise missile as part of its Hypersonic Technology Demonstrator Vehicle (HSTDV) programme and successfully tested a Mach 6 scramjet in June 2019 and September 2020,” the memo stated. This test was carried out by the Defence Research and Development Organisation (DRDO) and demonstrated the scramjet engine technology, a major breakthrough. In a scramjet engine, air goes inside the engine at supersonic speed and comes out at hypersonic speeds. A hypersonic version of the BrahMos supersonic cruise missile is also under development.

### **LADAKH’S PLAN TO SAVE ITS WOLVES: STUPAS & INSURANCE**

OVER THE past couple of years, village communities in Ladakh have been building Stupas next to traditional wolf traps, committing to stop killing wolves. They have also begun creating their own local insurance schemes to compensate for livestock that are preyed on by wolves.

Now, a paper, “A community based conservation initiative for wolves in the Ladakh Trans-Himalaya”, has been published in *Frontiers*, an international ecology journal, describing the success of the initiative. The Tibetan wolf is one of the world’s most ancient species and is critically endangered in the country, protected as a Schedule I animal under the Wildlife Protection Act.

Shandong are traditional trapping pits with inverted funnel-shaped stone walls, usually built near villages or herder camps. Typically, a live domestic animal is placed in the pit to attract the wolves. Once the wolves jump into the pit, the walls prevent them from escaping. The trapped wolves are usually stoned to death.

In a survey covering over 25,000 sq km, the NCF enumerated 94 Shandong in 58 of the 64 surveyed villages in Leh district between June 2019 and March 2020. Thirty of these had been used to kill wolves in the past 10 years.

The village councils have now begun creating insurance schemes, as part of a pilot project launched by NCF, to compensate for livestock lost to wolves. “Wolves hunt in packs and target even bigger animals like Yak, cattle or horses, thus causing higher financial losses. Killing one horse would cost a villager between Rs 60,000-80,000,” said NCF’s Dorjay Rigzin, who is a part of the project.

The Wildlife department provides compensation for loss of livestock due to wolves, but not more than Rs 7,000-8,000. “Besides the process is complicated. For instance, one has to provide proof that a wolf has killed livestock. Then, to apply for compensation, villagers need to travel to Leh



town, which is hundreds of kilometres away — they would often have to trek for two-three days even before reaching a road to Leh. It is far more economical to simply kill the wolf,” said Rigzin.

Under the insurance programme, the amount contributed by each villager can range from Rs 1,200-2,400 annually for each animal, which can take the village corpus to Rs 30,000-1 lakh collectively in a year — this amount is matched by the NCF, according to Bijoor.

The insurance amount is collected annually and the payout is also annual, based on an assessment of how many animals are killed during the year. “The village committee decides if the case is authentic. One of the biggest problems in government-run schemes is that of false claims,” said Bijoor.

Out of 32 sub-species of wolves that are recognised, two are believed to inhabit the Indian subcontinent: the Tibetan Wolf, whose range extends from trans-Himalaya into Tibet and China, and the Indian wolf that ranges over peninsular India.

Dean of Wildlife Institute of India (WII) and wolf expert, Dr Y V Jhala, says lineages of wolves in India are some of the most ancient in the world.

“Unlike the Indian wolf, which we know numbers around 3,000, there is not enough data on the Tibetan wolf. Although one scientific paper has estimated that there are 500 of them. This is because the nature of the topography in Ladakh, which is remote and formidable, makes a survey difficult to conduct. Both sub-species are critically endangered and yet, there are no conservation projects launched by the Government for wolves,” he said.

It was in 2017 that the NCF started working with communities and religious leaders to support the neutralisation of the Shandong while preserving their structure, and assisted the communities to build Stupas.

In June 2018, the Chushul community neutralised all the four Shandong in their area and built a Stupa next to one. The next year, the Rumptse community in the Gya-Miru region of Changthang followed suit — as did the Himya community in 2021.

“Some villages had more than one Shangdong. They would be built near winter grazing grounds, or near corrals where sheep or goats were kept. Apart from keeping a goat or sheep in the Shangdong as bait, sometimes villagers would capture wolf cubs and keep them in the Shangdong to kill the mother wolf that would come to the cubs’ aid,” said Rigzin.

## THE COMPLEXITIES OF INTRODUCING AFRICAN CHEETAHS TO INDIA

The story so far: The cheetah, which became extinct in India after Independence, is all set to return with the Union Government launching an action plan. According to the plan, about 50 of these big cats will be introduced in the next five years, from the Africa savannas, home to cheetahs, an endangered species.

### **What was the distribution of cheetahs in India? What were the habitats?**

Historically, Asiatic cheetahs had a very wide distribution in India. There are authentic reports of their occurrence from as far north as Punjab to Tirunelveli district in southern Tamil Nadu, from Gujarat and Rajasthan in the west to Bengal in the east. Most of the records are from a belt extending from Gujarat passing through Maharashtra, Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Jharkhand and Odisha. There is also a cluster of reports from southern Maharashtra





extending to parts of Karnataka, Telangana, Kerala and Tamil Nadu. The distribution range of the cheetah was wide and spread all over the subcontinent. They occurred in substantial numbers.

The cheetah's habitat was also diverse, favouring the more open habitats: scrub forests, dry grasslands, savannas and other arid and semi-arid open habitats. Some of the last reports of cheetahs in India prior to their local extinction are from edge habitats of sal forests in east-central India, not necessarily their preferred habitat.

In Iran, the last surviving population of wild Asiatic cheetahs are found in hilly terrain, foothills and rocky valleys within a desert ecosystem, spread across seven provinces of Yazd, Semnan, Esfahan, North Khorasan, South Khorasan, Khorasan Razavi and Kerman. The current estimate of the population of wild Asiatic cheetahs is about 40 with 12 identified adult animals. They occur in very low density spread over vast areas extending to thousands of square kilometres.

#### **What caused the extinction of cheetahs in India? When did they disappear?**

The cheetah in India has been recorded in history from before the Common Era. It was taken from the wild for coursing blackbuck for centuries, which is a major contributor to the depletion of its numbers through the ages. Records of cheetahs being captured go back to 1550s. From the 16th century onwards, detailed accounts of its interaction with human beings are available as it was recorded by the Mughals and other kingdoms in the Deccan. However, the final phase of its extinction coincided with British colonial rule. The British added to the woes of the species by declaring a bounty for killing it in 1871.

The consistent and widespread capture of cheetahs from the wild (both male and female) over centuries, its reduced levels of genetic heterogeneity due to a historical genetic bottleneck resulting in reduced fecundity and high infant mortality in the wild, its inability to breed in captivity, 'sport' hunting and finally the bounty killings are the major reasons for the extinction of the Asiatic cheetah in India.

It is reported that the Mughal Emperor Akbar had kept 1,000 cheetahs in his menagerie and collected as many as 9,000 cats during his half century reign from 1556 to 1605. As late as 1799, Tipu Sultan of Mysore is reported to have had 16 cheetahs as part of his menagerie.

The cheetah numbers were fast depleting by the end of the 18th century even though their prey base and habitat survived till much later. It is recorded that the last cheetahs were shot in India in 1947, but there are credible reports of sightings of the cat till about 1967.

#### **What are the conservation objectives of introducing African cheetahs in India? Is it a priority for India? Is it cost effective?**

Based on the available evidence it is difficult to conclude that the decision to introduce the African cheetah in India is based on science. Science is being used as a legitimising tool for what seems to be a politically influenced conservation goal. This also in turn sidelines conservation priorities, an order of the Supreme Court, socio-economic constraints and academic rigour. The issue calls for an open and informed debate.

Eminent biologist and administrator T.N. Khoshoo, first secretary of the Department of Environment, spoke out strongly against the cheetah project in 1995. "The reintroduction project was discussed threadbare during Indira Gandhi's tenure and found to be an exercise in futility," he said, pointing out that it was more important to conserve species that were still extant such as



the lion and tiger, rather than trying to re-establish an extinct species that had little chance of surviving in a greatly transformed country.

Mr. Khoshoo's views are in sync with the 2013 order of the Supreme Court which quashed plans to introduce African cheetahs in India and more specifically at Kuno national park in Madhya Pradesh.

The officially stated goal is: Establish viable cheetah metapopulation in India that allows the cheetah to perform its functional role as a top predator and to provide space for the expansion of the cheetah within its historical range thereby contributing to its global conservation efforts.

African cheetahs are not required to perform the role of the top predator in these habitats when the site (Kuno) that they have identified already has a resident population of leopards, transient tigers and is also the site for the translocation of Asiatic lions as ordered by the Supreme Court of India in 2013. In other open dry habitats in India there are species performing this role, e.g., wolf and caracal, both of which are highly endangered and need urgent conservation attention. Even the Government's official estimate is expecting, at best only a few dozen cheetahs at a couple of sites (that too only after 15 years) which will require continuous and intensive management. Such a small number of cats at very few sites cannot meet the stated goal of performing its ecological function at any significant scale to have real on ground impact. Clearly, there are far more cost-effective, efficient, speedier and more inclusive ways to conserve grasslands and other open ecosystems of India.

Apart from establishing a cheetah population in India, the stated objectives include: To use the cheetah as a charismatic flagship and umbrella species to garner resources for restoring open forest and savanna systems that will benefit biodiversity and ecosystem services from these ecosystems.

Asiatic lions and a variety of species already found in these ecosystems can very well perform this role and more. If the government is serious about restoration and protection of these habitats, it first needs to remove grasslands from the category of wastelands and prevent further degradation, fragmentation and destruction of these habitats. Investing directly in science-based restoration and inclusive protection of these ecosystems will yield results much more quickly and sustainably than the introduction of African cheetahs.

Another goal is to enhance India's capacity to sequester carbon through ecosystem restoration activities in cheetah conservation areas and thereby contribute towards the global climate change mitigation goals. Experts contend that this objective does not require the introduction of African cheetahs, at a cost of ₹40 crore, with the attendant risks of diseases which haven't really been dealt with.

**What is the current status of this project? What are the chances of it succeeding?**

According to the Government, Kuno is ready to receive the cheetahs. About a month ago a team of government officials visited Namibia to inspect the cheetahs that would be sent to India, review the arrangements and to reach an agreement for the transfer of the cats. It is being reported that Namibia wants India's support for lifting the CITES ban on commercial trade of wildlife products, including ivory. The draft memorandum of understanding shared by Namibia reportedly contains a condition requiring India to support Namibia for "sustainable utilisation of wildlife". Negotiations are currently underway to finalise the MoU and it is expected to be signed by the end of March.



The cheetahs are to be provided by the Cheetah Conservation Fund, an NGO, and not the Namibian government. Three to five cheetahs are expected to be part of the first group of cats and these are expected to arrive as early as May 2022 and released in the wild by August 15.

Given all the challenges, especially the lack of extensive areas extending in hundreds if not thousands of square kilometres with sufficient density of suitable prey, it is very unlikely that African cheetahs would ever establish themselves in India as a truly wild and self-perpetuating population. A likely unfortunate consequence of this initiative will be the diversion of scarce conservation resources, distraction from the real conservation priorities and a further delay in the translocation of lions to Kuno.

#### AFRICAN TECHNIQUE USED TO TRANSLOCATE DEER FROM KEOLADEO

An uncommon experiment with Africa's Boma technique undertaken at Keoladeo National Park in Rajasthan's Bharatpur district for capturing and translocating spotted deer is set to improve the prey base in Mukundara Hills Tiger Reserve, situated 450 km away. The move will lead to herbivores populating the forests ahead of the proposed shifting of two tigers to Mukundara. The Boma capturing technique, which is popular in Africa, involves luring of animals into an enclosure by chasing them through a funnel-like fencing. The funnel tapers into an animal selection-cum-loading chute, supported with grass mats and green net to make it opaque for animals, which are then herded into a large vehicle for transport to another location.

This old technique was earlier utilised to capture wild elephants for training and service. Following its adoption in Madhya Pradesh in recent years, Boma has been put to practice for the first time in Rajasthan for sending the ungulates to the prey-deficient Mukundara reserve as the kills for tigers and leopards.

The National Tiger Conservation Authority's (NTCA) technical committee has approved a proposal to shift two tigers from Ranthambhore National Park to Mukundara, which lost two tigers and two cubs in 2020 and is now left with an eight-year-old tigress. The reserve, spread across 759 sq. km area, was created with the portions of Darrah, Chambal and Jawahar Sagar wildlife sanctuaries in south-eastern Rajasthan.

#### Six deer shifted

Keoladeo National Park's director Mohit Gupta told The Hindu that six chitals or spotted deer were shifted by using the Boma technique in the second week of March. The herbivores were confined without any physical contact in the enclosure spread over 10 hectares for a few days with the management of grass feed and water and their movement was monitored from watch towers.

The passive capture of ungulates with this Boma technique will make a significant contribution to the prey base management in the State. A similar translocation will be carried out for Kailadevi wildlife sanctuary in Karauli and Nahargarh wildlife sanctuary near Jaipur.

The translocation of herbivores would reduce preying upon rural cattle, sheep and goat around the tiger reserves, he said.

#### Healthy ratio

Mr. Vardhan called for maintaining a healthy male-female ratio in the prey base, as the elimination of female animals would result in loss of productivity. "A deer takes six to eight months to give



birth and adds to its numbers. Stepping up the prey base has emerged as one of the prime challenges before the wildlife authorities," he said.

## STUDY REVEALS MAJOR DECLINE IN GOLDEN LANGUR HABITAT

A recent study by scientists has suggested a significant decline in the habitat of the golden langur (*Trachypithecus geei*), an endangered primate species distributed in the trans-boundary region of Bhutan and India.

A recent paper titled "Future simulated landscape predicts habitat loss for the golden langur: a range-level analysis for an endangered primate" throws light on whether the habitat of the endangered primate is protected or not.

### Suitable areas

Golden langurs are easily recognised by the colour of their fur, and are distributed in the forested habitats of Tsirang, Sarpang, Zhemgang and Trongsa districts of Bhutan. In India, fragmented and isolated populations of the species are distributed in Chirang, Kokrajhar, Dhubri and Bongaigaon districts of Assam.

While most of the suitable areas in the northern range distributed in Bhutan are connected, except for a few dispersed small patches in the northeast, the model depicts a scattered distribution with fragmented populations in the southern part of the range located in Assam. Only 14.39% of the future suitable areas fall inside the protected area (PA) network of both countries in the entire global distribution range. The possible new suitable area gain predicted inside the PAs will remain at 547 square km, which is less than the loss of (1,412 square km) suitable habitats from the PAs, the study says.

### Conservation efforts

Scientists say most of the southern populations in Assam are currently distributed in reserve forests that are under higher levels of anthropogenic pressures. There are several forest fragments in lower Assam holding small and isolated populations of golden langur without any conservation initiatives except for efforts by a few local people and non-governmental agencies. In recent years, studies from these areas have reported human-langur conflict cases, and the intensity of these cases is increasing because of enhanced human footprint in the habitat of the species.

Recently, villagers near the Kakoijana Reserve Forest in Assam's Bongaigaon district opposed the State government's decision to earmark the area as a wildlife sanctuary. Earlier, in the 1990s, the extraction of timber by extremist groups in the region had resulted in the destruction of forest patches in southern Assam.

While recent community conservation programmes by the government yielded positive results for the golden langur population of Manas National Park, fragmented and isolated populations are still severely threatened.





## BUSINESS & ECONOMICS

### HEARTENING MILESTONE

The Centre's announcement that India's merchandise exports have already surpassed the target set for this fiscal year, with overseas shipments crossing a record \$400 billion mark by March 21, brings much-needed cheer to an economy still struggling to recover from the bruising impact of the COVID-19 pandemic. The export rebound, coming on the back of last fiscal's pandemic-induced slump in global demand, is particularly heartening as the key value-added sectors of engineering goods and apparel and garments have done well this year. Engineering goods, in particular, have registered almost 50% year-on-year growth, while ready-made garments logged a more than 30% increase, in the April-February period, as per provisional data from the Commerce Ministry. However, in terms of the sheer scale of increase, petroleum products were the standout performer as the global surge in oil prices lifted the dollar value of overseas shipments of goods produced at India's refineries by 150% over the first 11 months of the fiscal. The fact that the export growth has been achieved against the backdrop of persistent logistical challenges, including container shortages and port congestion that have pushed up freight rates, is laudable and reflects the concerted effort made by the government in coordination with industry and the country's overseas missions. Interestingly, Commerce and Industry Minister Piyush Goyal made a pointed reference to the role played by India's embassies and envoys in exploring new opportunities for Indian products, and if the current momentum in exports is to be sustained in the coming years, the diplomatic corps will need to enlarge their role in trade promotion.

Still, the cheer of attaining the milestone needs to be tempered by the acknowledgment that multiple challenges persist on the trade front. Imports have outpaced exports this year, almost doubling the trade deficit in the April-February period to more than \$175 billion. The gap is wider than the pre-pandemic year of 2019-2020 as well and points to the pressing need to step up the pace of export growth if the deficit is to be shrunk meaningfully. While global inflation in commodity prices certainly contributed to enlarging the value of both exports and imports, the fact that project goods were the only item of import, among the 30 broad categories listed by the Ministry that contracted over the 11-month period, is also cause for disquiet. The lack of overseas purchases of capital goods for new projects is a clear indicator that private Indian businesses are still wary of making fresh investments given the lack of momentum in personal consumption. With the war in Ukraine and sanctions on Russia now posing fresh problems for exporters seeking to ship goods to not only these countries but other markets in Europe as well, policymakers must go beyond stopgap measures such as enabling rupee-rouble trade and expedite ongoing negotiations on the raft of free trade agreements so as to at least help lower some of the tariff walls.

### PURE TIME PREFERENCE THEORY

The pure time-preference theory of interest is an economic theory that seeks to explain the phenomenon of interest. American economist Frank Fetter was the best-known proponent of the pure time-preference theory in the 20th century through his 1904 book *The Principles of Economics*. There have been various theories that have been proposed throughout history, including the exploitation theory of interest, the productivity theory of interest, and the abstinence theory of interest, to explain why interest is charged when money, or any other good, is loaned out. The pure time-preference theory states that interest arises when present goods are exchanged for future goods because people, considering all other things being equal, prefer



present goods over future goods. So, for example, an individual may prefer to have ₹100 in the present moment over the same ₹100 at some time in the future, *ceteris paribus*. So, unless an individual expects to receive an amount that is more than ₹100 rupees in the future, he would be reluctant to part with the ₹100 that is in his possession at the moment.

Time preference refers to the relative importance that an individual places on the present versus the future. If an individual prefers immediate consumption over future consumption, he is said to possess high time-preference. On the other hand, if an individual prefers future consumption over immediate consumption, then he is said to possess low time-preference. A person with low time-preference is likely to save and invest money with an eye on the future while a person with high time-preference may be more likely to spend his money on immediate needs.

### **Different theories on interest**

Proponents of the pure time-preference theory of interest disagree with both the productivity theory of interest and the abstinence theory of interest. The productivity theory of interest argues that interest arises because borrowers competing for loans are willing to pay additional money as interest. The assumption here is that borrowers expect to earn profits by investing the borrowed amount in some productive project and use some of the resulting profits to pay interest. The abstinence theory of interest, on the other hand, proposes that interest arises because lenders need to be enticed to postpone consumption to the future or they would not be willing to lend their money or goods. The pure time-preference theory also differs from the simple time-preference theory of interest which states that interest rates are determined by both the time preference of lenders and the productivity of capital. According to the simple time preference theory, the time-preference of lenders determines the minimum interest rate while competition between borrowers determines the actual interest rate.

The pure time-preference theory of interest argues that interest rates are determined purely by the time-preference of lenders alone without any role being played by the productivity of capital. In this view, the owners of present goods or present capital play the role of buyers of future goods or future capital. Since people prefer present goods over future goods, they would be willing to exchange present goods for future goods only at a discount. So, for example, if a capitalist expects to receive ₹100 of cash flow from a business in a year, given that all other things being equal and since he prefers present goods over future goods, he would only be willing to invest an amount that is less than ₹100 in the business. It should be noted that, according to the pure-time preference theory, interest payment is not an enticement for capital owners to lend their money. Instead, owners of capital independently determine how much goods or capital they want to lend and the rate at which to discount future goods or capital.

## **GLOBAL UNCERTAINTIES, INDIA'S GROWTH PROSPECTS**

On February 28, 2022, the National Statistical Office (NSO) released India's GDP data for Q3 of 2021-22 along with Second Advance Estimates (SAE) for 2021-22. Post COVID-19, the normalisation of the Indian economy has now been disturbed by the ongoing geopolitical uncertainties.

### **Growth performance**

In the COVID-19 year of 2020-21, both real GDP and GVA contracted by minus 6.6% and minus 4.8%, respectively. The NSO's SAE show that real GDP and GVA growth are estimated to recover



to 8.9% and 8.3%, respectively, in 2021-22. Despite this improvement, the magnitude of real GDP at ₹147.7 lakh crore in 2021-22 is only marginally higher than the corresponding level of ₹145.2 lakh crore in 2019-20. The NSO's GDP data highlights that in 2021-22, the nominal GDP growth at 19.4% is significantly higher than the real GDP growth due to an inordinately high implicit price deflator (IPD)-based inflation rate of 9.6%. Monetary policy authorities need to take note of this.

The magnitudes of all demand components in 2021-22 have surpassed their corresponding levels in 2019-20. However, the growth of consumption and investment demand — as measured by private final consumption expenditure (PFCE) and gross fixed capital formation (GFCF) in 2021-22 over 2019-20 is only 1.2% and 2.6%, respectively, suggesting sluggish revival in domestic demand. On the output side, the 2021-22 magnitude of the trade, transport et.al sector, which has many contact-intensive segments, has remained below its corresponding level in 2019-20 by ₹2.9 lakh crore. Growth in the construction sector in 2021-22 was at only 1.9% over 2019-20.

On a quarterly basis, both GDP and GVA show normalising growth with waning base effects. Real GDP growth moderated from 20.3% in Q1 to 5.4% in Q3 of 2021-22. Similarly, real GVA growth also fell from 18.4% to 4.7% over this period. The implied Q4 GDP and GVA growth rates are estimated to be even lower at 4.8% and 4.1%, respectively. Thus, without a base effect, quarterly growth performance appears to be averaging at less than 5%. Assuming some base effects to continue in the first two quarters, the annual growth in 2022-23 may not be more than 7%. Even this may not be realised due to the ongoing geopolitical conflict.

#### **Crude upsurge impact**

It is difficult to arrive at precise estimates of the impact of the increase in global crude prices, but some idea can be provided using the Reserve Bank of India (RBI)'s recent estimates (2021) of the growth and inflation effects of an increase of U.S.\$10/bbl., ceteris paribus. The estimated impact is a reduction in real GDP growth by 27 basis points and an increase in CPI inflation by 40 basis points. This is based on using the baseline global crude price level of U.S.\$75/bbl. For the full year of 2022-23, we may consider an average global crude price of U.S.\$100/bbl. as a benchmark, although in the short run, it has already surged to U.S.\$123.21/bbl. (average Brent crude price for the week ending March 7, 2022). An increase of U.S.\$25/bbl. from the baseline price of U.S.\$75/bbl. would lead to an estimated reduction in growth of 0.7% points and an increase in inflation of nearly 1% point. With reference to baseline growth for 2022-23 at 7% and CPI inflation at 5%, the revised levels of these may be put at 6.3% and 6%, respectively, due to the impact of crude price upsurge by an assumed margin of U.S.\$25/bbl. through the year. The impact would be much larger if the margin of increase is enhanced. If the prices of other imported commodities also increase, the inflation impact will be higher.

#### **Other challenges**

In regard to fiscal implications, reference may be made to the budgeted nominal GDP growth forecast for 2022-23 at 11.1%. Assuming a revised real growth component of 6.3% and an IPD-based inflation component of 6.5%, which may be slightly higher than the corresponding CPI inflation, we may have a revised nominal GDP growth close to 13.0%. Applying on this, a tax buoyancy of 1, the resultant Centre's gross tax revenues (GTR) would be higher than the budgeted magnitude of ₹27.6 lakh crore by a margin of about ₹3.2 lakh crore. Alongside, there would also be increases in some components of expenditures linked to prices of petroleum products, including petroleum and fertilizer subsidies. The Government should attempt to keep the fiscal deficit at the budgeted level.



Other economic challenges emanating from global uncertainties may include a worsening of the current account balance due to higher import bills with a depreciating rupee. A study by the RBI in 2019 had estimated an increase in the current account deficit (CAD) following a U.S.\$10/bbl. increase in global crude price, to be nearly 0.4% points of GDP. Thus, for an increase of U.S.\$25/bbl. in global crude prices, the CAD may increase by 1% point of GDP. The RBI Professional Forecasters Survey's median estimate of CAD at 1.9% of GDP for 2022-23 may have to be revised upwards to 2.9%.

There would also be some sectoral supply-side bottlenecks and cost escalation. Sectors that draw heavily on petroleum products, such as fertilizers, iron and steel foundries, transportation, construction and coal, would be adversely affected. Due to the discontinuation of transactions through SWIFT, there would be some disruption in trade to and from Russia and Ukraine. However, the respective shares of imports and exports from these countries relative to India's overall imports and exports are limited. There would also be some adverse effects with regard to financial flows. Net foreign portfolio investment (FPI) outflows during October to December 2021 increased to U.S.\$6.3 billion. Net foreign direct investment (FDI) inflows have also been falling during this period although they have remained positive.

Policymakers may have to exercise a critical choice regarding who bears the burden of higher prices of petroleum products in India among consumers and industrial users, oil marketing companies and the Government. If the oil marketing companies are not allowed to raise prices of petroleum products, the bill for oil sector-linked subsidies would go up. If the central and State governments reduce excise duty and value-added tax (VAT) on petroleum products, their tax revenues would be adversely affected. If, on the other hand, the burden of higher prices is largely passed on to the consumers and industrial users, the already weak investment and private consumption would suffer further. If growth is to be revived, maximum attention should be paid to supporting consumption growth and reducing the cost of industrial inputs with a view to improving capacity utilisation. The Government may have to strike an appropriate balance among these options.

As developed countries are being forced to raise their interest rates and inflationary pressures continue to mount in India and abroad, the RBI may find it advisable to raise the policy rate with a view to stemming inflationary pressures and outward flow of the U.S. dollar even as the growth objective would be served by fiscal policy initiatives.

#### EXPLAINED: HOW COSTLIER BULK DIESEL WILL HIT CONSUMERS

Oil marketing companies (OMCs) on Sunday hiked the price of diesel by about Rs 25 per litre, making the fuel significantly more expensive for bulk consumers such as malls, factories and the railways compared to retail consumers as oil refiners face elevated prices of crude oil. The price of Brent crude has risen about 43 per cent since the beginning of the year to \$111.4 per barrel up from \$78.11 per barrel. India imports about 85 per cent of its crude oil requirements.

#### **What is the difference in the prices of diesel for bulk and retail buyers of diesel?**

The price of bulk diesel is now about Rs 25 per litre higher than that of diesel at retail points of oil marketing companies across the country. In Mumbai, the bulk price of diesel has been hiked to Rs 122 per litre compared to Rs 94.14 per litre at retail points in the city, according to sources at oil marketing companies.





State-owned OMCs Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd. and Hindustan Petroleum Corporation Ltd. have held the retail prices of petrol and diesel constant since November 4 last year despite a sharp increase in global crude oil prices. Ordinarily, the price of petrol and diesel are revised daily in line with international prices of petroleum products. According to analysts, OMCs are currently facing significant losses on the sale of both petrol and diesel.

#### **What will be the impact of the hike in the price of bulk diesel?**

Key bulk buyers of diesel like the Indian railways, malls, transport companies and factories will face significantly higher prices than retail consumers. Industry has noted that the move to hike bulk diesel prices will incentivise bulk consumers to source fuel at retail points.

“There is a massive surge of demand at fuel stations (retail outlets) due to increased delta of ~ Rs 25/ltr between Retail and Industrial price of diesel, leading to heavy diversion of Bulk HSD (Direct Customers) to retail outlets. There is also a very heavy lifting of fuel by dealers and both B2B & B2C customers, who have advanced their purchases, to top up their tanks and capacities in anticipation of price increase which is overdue.” said a spokesperson of Reliance BP Mobility Ltd (RBML) which operates over 1380 retail fuel outlets across the country.

Sources at RBML confirmed that it had reduced the supply of both petrol and diesel at retail points as it was facing losses on the sales of both products. When the price of crude oil had hit record highs in 2008, Reliance was forced to shut fuel retail operations as it was not able to match the subsidised prices offered by state owned OMCs.

Union Minister for Petroleum and Natural Gas Hardeep Singh Puri confirmed last week that the consumption of petroleum products had increased sharply in anticipation of fuel price hikes.

### **EXPLAINED: WHY INDIA'S FOREX RESERVES FELL BY NEARLY \$10 BILLION, THE HIGHEST IN 2 YEARS**

India's foreign exchange reserves fell by \$9.64 billion to \$622.275 billion during the week ending March 11, 2022, as the rupee depreciated against the US dollar amid the rise in crude oil prices and capital outflows due to sustained selling by foreign portfolio investors (FPIs). This is the biggest fall in reserves in nearly two years after it plunged by \$11.98 billion during the week ending March 20, 2020, when the Covid-19 pandemic hit India and FPIs pulled out funds.

#### **Why have the reserves declined?**

When the rupee fell below the 77 level after the Russia-Ukraine war intensified and crude oil prices flared up, the Reserve Bank of India (RBI) sold dollars to prevent a further slide in value. The RBI's intervention — dollar sales through PSU banks — started when the rupee crossed the 76-level and headed to the 77-mark.

The RBI sold \$5.135 billion to banks on March 8 and simultaneously agreed to buy back the dollars at the end of the swap-settlement period. When the central bank sells dollars, it takes out an equivalent amount in rupees, thus reducing the rupee liquidity in the system. Dollar inflow into the market strengthened the rupee which hit the 77-mark against the dollar on March 8. On March 17, the rupee spurted by 41 paise to close at 75.80/81 against the US dollar on Thursday (March 17).



### What led to the pressure on the rupee?

Putting severe pressure on the rupee, foreign investors withdrew Rs 41,617 crore in March. This outflow has come after withdrawals of Rs 45,720 crore in February and Rs 41,346 crore in January. With this, FPIs have pulled out Rs 225,649 crore (excluding FPI investments in IPOs) since October 1, 2021, mainly anticipating an interest rate hike by the US Federal Reserve.

Moreover, Brent crude prices soared to a near 14-year high of \$140 as the Russia-Ukraine war intensified. As India imports nearly 80 per cent of its domestic requirements, high crude oil prices would have led to a steep rise in dollar requirement as well.

### Why did the foreign currency assets fall?

The main components of forex reserves are foreign currency assets (FCA), gold holdings and SDRs (special drawing rights) of the International Monetary Fund. The RBI sold dollars from its FCA kitty — kept in global central banks, foreign banks and foreign securities — to strengthen the rupee.

According to RBI's data, foreign currency assets plunged by \$11.108 billion to \$554.359 billion in the week ending March 11. The foreign currency assets include the effect of appreciation or depreciation of the dollar and non-US units like the euro, pound and yen held in the international exchange reserves.

However, with gold prices shooting up in the wake of the Russia-Ukraine war, the value of gold reserves increased by \$1.522 billion to \$43.842 billion in the aforesaid week.

However, the fall in India's foreign exchange reserves came after it had risen by \$394 million to \$631.92 billion during the previous week ending March 4. It had touched a lifetime high of \$642.453 billion in the week ending September 3, 2021.

## THE NATIONAL LAND MONETISATION CORPORATION

The story so far: The Union Cabinet on March 9 approved the creation of the National Land Monetisation Corporation (NLMC), the Special Purpose Vehicle (SPV) that Finance Minister Nirmala Sitharaman had announced in the Union Budget 2021-22, to carry out monetisation of government and surplus land holdings of public sector undertakings (PSU).

### What is the NLMC and what will it do?

The National Land Monetisation Corporation will be a firm, fully owned by the government, to carry out the monetisation of government and public sector assets in the form of surplus, unused or underused land assets. It will fall under the administrative jurisdiction of the Ministry of Finance and will be set up with an initial authorised share capital of ₹5,000 crore and a paid-up capital of ₹150 crore.

Apart from monetising underutilised or unused land parcels of Central Public Sector Enterprises (CPSEs), the Corporation will also facilitate the monetisation of assets belonging to PSUs that have ceased operations or are in line for a strategic disinvestment, with the aim of unlocking the value of these land holdings.

The surplus land and building assets of such enterprises are expected to be transferred to the NLMC, which will then hold, manage and monetise them.



According to an official statement released after a recent Cabinet meeting chaired by Prime Minister Narendra Modi, the setting of the NLMC “will speed up the closure process of the CPSEs and smoothen the strategic disinvestment process.”

The statement said it “will also enable productive utilisation of these under-utilised assets” by setting in motion private sector investments, new economic activities such as industrialisation, boosting the local economy by generating employment and generating financial resources for potential economic and social infrastructure.

Besides managing and monetising, the NLMC will act as an advisory body and support other government entities and CPSEs in identifying their surplus non-core assets and monetising them in an efficient and professional manner, maximising the scope of value realisation.

#### **What does monetisation mean?**

When the government monetises its assets, it essentially means that it is transferring the revenue rights of the asset (could be idle land, infrastructure, PSU) to a private player for a specified period of time. In such a transaction, the government gets in return an upfront payment from the private entity, regular share of the revenue generated from the asset, a promise of steady investment into the asset, and the title rights to the monetised asset.

There are multiple ways to monetise government assets; in the case of land monetisation of certain spaces like offices, it can be done through a Real Estate Investment Trust (REIT) — a company that owns and operates a land asset and sometimes, funds income-producing real estate. Assets of the government can also be monetised through the Public Private Partnerships (PPP) model.

There are different reasons why the government monetises its assets. One of them is to create new sources of revenue. The economy has already been hit due to the coronavirus pandemic and revenues are essential to fulfil the Narendra Modi government’s target of achieving a \$5 trillion economy.

Monetisation is also done to unlock the potential of unused or underused assets by involving institutional investors or private players.

Thirdly, it is also done to generate resources or capital for future asset creation, such as using the money generated from monetisation to create new infrastructure projects.

#### **How will the NLMC function?**

The firm will hire professionals from the private sector with a merit based approach, similar to other specialised government companies like the National investment and infrastructure Fund (NIIF) and Invest India. This is because asset monetisation of real estate requires expertise in valuation of property, market research, investment banking, land management, legal diligence and other related skill sets. The NLMC will undertake monetisation as an agency function and is expected to act as a directory of best practices in land monetisation.

#### **How much land is currently available for monetisation?**

According to the Economic Survey 2021-2022, as of now, CPSEs have put nearly 3,400 acres of land on the table for potential monetisation. They have referred this land to the Department of Investment and Public Asset Management (DIPAM).



As per the survey, monetisation of non-core assets of PSUs such as MTNL, BSNL, BPCL, B&R, BEML, HMT Ltd, Instrumentation Ltd etc are at different stages. In March 2020, for instance, BSNL had identified a total of ₹24,980 crore worth of properties for monetisation. The Railways and Defence Ministries, meanwhile, have the largest amount of government land in the country. The Railways have over 11 lakh acres of land available out of which 1.25 lakh acres is vacant. The Defence Ministry has in its possession 17.95 lakh acres of land. Out of this, around 1.6 lakh acres fall inside the 62 military cantonments while over 16 lakh acres are outside the cantonment boundaries.

#### **What are the possible challenges for NLMC?**

The performance and productivity of the NLMC will also depend on the government's performance on its disinvestment targets. In FY 2021-22, the government has just been able to raise ₹12,423.67 crore so far through various forms of disinvestment. In the budget 2021-22, the government had initially set a disinvestment target of ₹1.75 lakh crore which was later brought down to ₹78,000 crore. The Life Insurance Corporation IPO, which was supposed to raise ₹60,000 crore is now shrouded in uncertainty owing to the Russia-Ukraine crisis making stock markets volatile. If the IPO does not hit the markets by the end of March, the government would be missing its disinvestment targets by a wide margin.

The procedure to find a bidder for state-owned carrier Air India also took a considerable amount of time and negotiations before the Tata Group came in.

Besides, the process of asset monetisation does not end when the government transfers revenue rights to private players, identifying profitable revenue streams for the monetised land assets, ensuring adequate investment by the private player and setting up a dispute-resolution mechanism are also important tasks. Posing as another potential challenge would be the use of Public Private Partnerships (PPPs) as a monetisation model. For instance, the results of the Centre's PPP initiative launched in 2020 for the Railways were not encouraging.

It had invited private parties to run 150 trains of the Indian Railways but when bids were thrown open, nine clusters of trains saw no bidders while there were only two interested bidders for three clusters. Even for these three clusters, IRCTC — the Railways' own firm, was the single serious bidder. The presence of just a few serious bidders would also give rise to the possibility of a less competitive space, meaning a few private entities might create a monopoly or duopoly in operating surplus government land. For instance, questions were raised when the government removed the cap on the number of airports a single entity could bid for, resulting in the Adani Group taking possession of six city airports for ₹2,440 crore from the Airports Authority of India.

#### **WHAT IS THE NPPA'S ROLE IN FIXING DRUG PRICES?**

The story so far: Consumers may have to pay more for medicines and medical devices if the National Pharmaceutical Pricing Authority (NPPA) allows a price hike of over 10% in the drugs and devices listed under the National List of Essential Medicines (NLEM), this coming month. The escalation which is expected to have an impact on nearly 800 drugs and devices is propelled by the rise in the Wholesale Price Index (WPI). Lobby groups that represent domestic pharmaceutical companies have been engaging with the Central Government to ask it to extend the 10% annual hike to scheduled formulations under price control.





### **How does the pricing mechanism work?**

Prices of Scheduled Drugs are allowed an increase each year by the drug regulator in line with the WPI and the annual change is controlled and rarely crosses 5%. But the pharmaceutical players pointed out that over the past few years, input costs have flared up. “The hike has been a long-standing demand by the pharma industry lobby. All medicines under the NLEM are under price regulation. As per the Drugs (Prices) Control Order 2013, scheduled drugs, about 15% of the pharma market, are allowed an increase by the government as per the WPI while the rest 85% are allowed an automatic increase of 10% every year. The pharma lobby is now asking for at least a 10% increase for scheduled drugs too than going by the WPI,” said an industry expert.

### **Who regulates prices?**

The NPPA was set up in 1997 to fix/revise prices of controlled bulk drugs and formulations and to enforce price and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995-2013. Its mandate is to implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it, to deal with all legal matters arising out of the decisions of the NPPA and to monitor the availability of drugs, identify shortages and to take remedial steps.

The ceiling price of a scheduled drug is determined by first working out the simple average of price to retailer in respect of all branded and generic versions of that particular drug formulation having a market share of more than or equal to 1%, and then adding a notional retailer margin of 16% to it. The ceiling price fixed/revise by the NPPA is notified in the Gazette of India (Extraordinary) from time to time.

The NPPA is also mandated to collect/maintain data on production, exports and imports, market share of individual companies, profitability of companies etc., for bulk drugs and formulations and undertake and/ or sponsor relevant studies in respect of pricing of drugs/ pharmaceuticals.

Prices are revised when there is a rise in the price of bulk drugs, raw materials, cost of transport, freight rates, utilities like fuel, power, diesel, and changes in taxes and duties. The cost rises for imported medicines with escalation in insurance and freight prices, and depreciation of the rupee. The annual hike in the prices of drugs listed in the NLEM is based on the WPI. The NLEM lists drugs used to treat fever, infection, heart disease, hypertension, anaemia etc and includes commonly used medicines like paracetamol, azithromycin etc.

### **Why are inputs costs high?**

Speaking about the proposed move Chinu Srinivasan, co-convenor, All-India Drug Action Network (AIDAN), pointed out that one of the challenges is that 60%-70% of the country's medicine needs are dependent on China. “Self-reliance for India also means self-reliance in bulk drugs (Active Pharmaceutical Ingredients/APIs) and chemicals/intermediates that go into making the drug.” Mr. Srinivasan also said the method to calculate the annual ceiling price increase should be revisited. “WPI is dependent on price rise in a basket of a range of goods that are not directly linked with the items that go into the cost of medicines. More importantly, the unrealistic simple average method of calculating ceiling prices should be replaced by a cost-plus mechanism that was prevalent under the earlier DPCO 1995,” he said.



## WILL THE WAR IN UKRAINE RATTLE INDIA'S BANKS?

The story so far: S&P Global earlier this week forecast that banks in India would face 'headwinds' as a fallout of the Russia-Ukraine conflict. The rating agency flagged rising inflation and borrower 'stress' that could affect companies' ability to fully pay back loans.

### **How does a war in eastern Europe affect India?**

The war has impacted the production and movement of a wide range of raw materials and commodities. Ukraine, for instance, is the main source of sunflower oil imported into India. Supplies have naturally been hit and are bound to further push up the retail prices of edible oils.

The conflict has also forced Ukraine to shut two neon factories that account for about 50% of the global supply needed in the manufacture of semiconductors. As semiconductors become scarcer, user industries bear the brunt. Already, the global chip shortage has led to the waiting period for delivery of new premium cars in India being extended to several months. And with major carmakers having reported declines in sales for January and February, the profit outlook for these companies and their component suppliers looks significantly clouded. The domino effect on the automobile and other industries' supply chains could impair the ability of businesses, especially medium and small enterprises, to fully service their loans.

### **What are the other factors that may undermine a company's ability to repay loans?**

Oil has been on the boil ever since Russia invaded Ukraine on February 24. After zooming to \$139 a barrel — near historical highs — Brent crude prices were at the \$106 level as of Friday. With India's state-run oil marketing firms certain to raise the retail prices of petrol and diesel sooner than later, the higher cost of transportation is bound to feed into prices of goods from agricultural produce to raw materials for factories and to finished products headed to store shelves, thus quickening inflation across the board.

Higher input costs for manufacturers and service providers would leave them in a tough spot as they would have to choose between passing on the price increases to consumers — thus risking the already tenuous demand — and hurting their profitability if they opt to absorb the impact. Here again smaller businesses, that are most dependent on bank credit, are bound to be hit the hardest. If the war in Europe is prolonged, Indian banks could end up facing delays in the repayment of loans or possibly even having to write them off as 'bad'.

Separately, with the dollar benefitting from a global flight to less risky assets, as well as the start of the U.S. Federal Reserve's calibrated monetary tightening to rein in inflation from a 40-year high in the world's largest economy, the rupee is expected to weaken against the U.S. currency. With the exchange rate impacted, importers would have to shell out more rupees for the same dollar value of imports than before. Unless demand expands, allowing them to sell more, a weaker local currency eats into their profits, leaving them with lesser cash available to service loans.

Official data for February show that overall goods imports are growing faster than exports compared with a year earlier, widening the current account deficit (CAD). Widening CAD is likely to cause the rupee to weaken further to 77.5 to a dollar by March 2023, from 75, Crisil Ratings said on March 17.

Rising inflation, which is already just beyond the RBI's 6% upper tolerance limit, may nudge the central bank into raising benchmark interest rates. This means more interest will have to be paid



by companies that would likely face the prospect of lesser profit. Earlier this month, India Ratings said that the increase in commodity prices could result in a stretched working capital cycle for small and medium enterprises, weakening their debt servicing ability.

#### **Why is the situation particularly worrying for Indian banks?**

India's lenders had already been struggling to cope with an overhang of non-performing assets or bad loans even before the pandemic severely hurt overall economic momentum.

In its Financial Stability report for December 2021, the RBI warned that from a Gross Non-Performing Asset Ratio of 6.9% in September 2021, commercial banks were likely to see the metric rise to 8.1% in a baseline scenario, and possibly soar to 9.5% under a 'severe stress' situation by September 2022.

### THE SPRING BLUES

This week, India will complete two years since the Government embarked on what is now considered the harshest and quickest lockdowns in the world in a bid to block entry points for the infectious COVID-19 virus. The efficacy of that lockdown, both in terms of curbing infection rates (and mortality rates) and the accompanying hardships imposed on the population at large, can be debated at length. There is, however, little argument over the massive economic costs for the country. The RBI has underlined that some of that damage to India's GDP is permanent. This can be linked to businesses shutting shop for good, labourers migrating home (with many choosing not to return) and consumers turning increasingly reluctant. The rebuilding effort remains a work in progress, although record tax collections would suggest that all is well. Personal consumption and employment-driving contact-intensive sectors remain below pre-pandemic levels, even as other macro metrics have surpassed pre-COVID performance. Just as the virus appeared to be ebbing, triggering hopes of a revival in consumer confidence, the Russia-Ukraine conflict has thrown up fresh challenges, including high commodity and crude oil prices.

Health-care costs are considered a key factor for pushing several middle- and lower-income households below the poverty line, while high inflation affects all economic actors. The Russia-Ukraine situation has not only catapulted gas, oil and coal prices higher but also fertilizers, wheat, corn, and seed oil. A section of farmers growing crops such as wheat may gain, but inflation in essential items such as food and transport, will impact the poor the most. For now, India's oil marketing companies, who the Government has argued determine the retail prices of fuel, have shown extreme benevolence in holding rates at November 2021 levels and this may persist till Parliament's current session ends. This is, however, not fiscally sustainable, just as the Finance Ministry has argued that high global commodity prices are not. A prolonged conflict in Europe could tip the global economy into recession, even as monetary policy missteps and social risks associated with high inflation, could dampen growth, Moody's Investors Service warned last week. On the other hand, the Government's robust direct tax collections that have surpassed even revised estimates by ₹1.13 lakh crore, give it room to not just push forward the LIC share sale till market volatility subsides but also slash fuel taxes further, curb other inflationary pressures and expand the COVID-19 booster shots coverage. Unless people get more certainty about the pandemic's end-game, and have some money in their hands, it would be difficult to spur consumption enough to reach the necessary next stage of the recovery — a revival in private investments.



## EXPLAINED: WHY COOKING GAS IS COSTLIER, WHAT LIES AHEAD

Oil marketing companies have raised the price of liquefied petroleum gas (LPG) by Rs 50 per 14.2 kg cylinder in the first hike since October, as international crude prices have surged due to the war in Ukraine. Over 70 per cent of households are estimated to use LPG as their primary cooking fuel and 85 per cent have LPG connections. The hike in prices will impact household inflation expectations, and could further hit subdued consumption sentiment.

### **Linked to global oil prices**

The price of LPG has been rising since November 2020; a 14.2 kg cylinder in Delhi now costs Rs 949 — Rs 355 or nearly 60 per cent costlier. Steady increase in crude prices due to the recovery in demand following the easing of Covid restrictions, slow restoration of production by oil exporters, and the Russia-Ukraine war have contributed to rising prices.

India's LPG prices are benchmarked to international prices of petroleum gas. Saudi Arabia's national oil company, Saudi Aramco, has set the price for LPG in March to \$769.1 per metric tonne (MT), up 5.9 per cent from \$726.4 per MT in January, and up over 104 per cent from the November 2020 price of \$376.3 per MT. The price of India's crude oil basket has risen from \$41 per barrel in November 2020 to \$115.4 as on March 23, 2022.

The government had stopped subsidies on LPG cylinders for most consumers in May 2020, adding to the price burden on consumers. Due to high inland freight costs, the government now provides subsidies only through its direct benefit transfer scheme to customers in remote areas.

### **Under-recoveries persist.**

Analysts note that despite the increase, OMCs are selling LPG at a loss — and further hikes are likely. "If we price crude at about \$100-110, the under-recoveries even after the recent price increase of Rs 50 per cylinder is to the tune of about Rs 100-125 per cylinder," Prashant Vasisht, Vice President & Co-Group Head at credit ratings agency ICRA, said.

### **PNG and CNG also costlier**

Rising international gas prices have also impacted the price of piped natural gas (PNG) and compressed natural gas (CNG) supplied by city gas distribution companies, as they source imported natural gas in addition to domestically produced natural gas to meet demand.

Indraprastha Gas Ltd hiked the price of CNG in Delhi by Re 1 per kg to Rs 59 and the price of PNG by Re 1 per SCM (standard cubic metre) to Rs 36.61 earlier this week. Prices of PNG and CNG are expected to rise further post the next price revision of domestically produced natural gas, which is set to come into effect for a six-month period starting April 1.

### **Households' LPG dependence**

LPG is the primary cooking fuel in more than 70 per cent of Indian households, and 85 per cent households have LPG connections, according to an independent study released on Thursday by the Council on Energy, Environment and Water (CEEW). However, 54 per cent households continue to use traditional solid fuels such as firewood, dung cakes, agriculture residue, charcoal, and kerosene, either exclusively or with LPG — increasing the exposure to indoor air pollution.





The CEEW findings are from the India Residential Energy Survey 2020, conducted in collaboration with the Initiative for Sustainable Energy Policy in FY 19-20 in nearly 15,000 urban and rural households across 152 districts in 21 most populous states.

### **Inflation expectations**

Inflation expectations in India have been sticky as households take time in believing that a high inflation phase is ebbing. Quantitative inflation expectations in India are formed based on households' experiences of food and fuel inflation, according to a January 2022 RBI working paper titled Taking Cognisance of Households' Inflation Expectations in India.

Households' median inflation perceptions for the current period moderated sequentially by 70 basis points to 9.7 per cent in January in the latest round of survey conducted by the RBI. But the current period perception is still higher than the perceptions recorded in the same period a year ago.

### **EYEING 'TURNAROUND', BBNL TO MERGE WITH BSNL BY MONTH-END**

The merger of Bharat Broadband Network Limited (BBNL) and Bharat Sanchar Nigam Limited (BSNL) will be completed this month, the latter's Chairman and Managing Director, P K Purwar, has said.

"BBNL is going to be merged in BSNL. This means that all of BharatNet work being done on an India basis will come to BSNL. The government has taken this policy decision," Purwar said at an event organised by All India Graduate Engineers and Telecom officers Association (AIGETOA).

The Indian Express had on January 9 reported that the government had decided to merge BBNL and BSNL by the end of this fiscal and that the latter was likely to finish BharatNet work, started by BBNL.

BBNL, a special purpose vehicle (SPV) of the Ministry of Communications, was incorporated in 2012 as a public sector unit. It was handed over the task of implementing the BharatNet project, which was till then known as National Optical Fibre Network (NOFN). The SPV is funded from the Universal Service Obligation Fund (USOF), which is raised from a Universal Access Levy (UAL) applicable to all telecom licence holders. It came into effect from April 1, 2002 and mandated that all telecom service providers must pay a percentage of their revenue into the USOF. During the event organised by AIGETOA, Purwar said telecom minister Ashwini Vaishnaw had called him up to discuss the details of the merger and asked him to "take over" BBNL before March 31.

### **What does BBNL do?**

BBNL, a special purpose vehicle of the Ministry of Communications, was incorporated in 2012 as a public sector unit. It was handed over the task of implementing the BharatNet project. The SPV is funded from the Universal Service Obligation Fund, which is raised from a Universal Access Levy applicable to all telecom licence holders.

"The Minister told me that we have a free hand to shape the turnaround. In the Budget, provision of around Rs 45,000 crore has been made for BSNL. It was earlier Rs 24,000 crore. Earlier provision was only for spectrum. Now, it is spectrum, capex and others. So the government wants to give you a free hand. Can you perform?," Purwar said, adding that BSNL was in the final stages of 4G testing and may soon started ground-level network testing and deployment.



Some officials from BBNL have, however, expressed their reservations against the proposed merger, saying the merger of the company with BSNL will give the latter direct access to the USOF, which is likely to “create controversy and impropriety issues”.

“All telecom operators contribute to the USOF. So if the government goes ahead with this merger, it will seem like only BSNL will get to use the fund. That could create problems for us,” a senior DoT official said, asking not to be named.

As per telecom licence agreements, telecom service providers have to pay 8 per cent licence fee on their revenue from sale of telecom service, of which 5 per cent goes towards the USOF.

With the merger of BBNL and BSNL, this fund — which currently stands at close to Rs 60,000 crore — is likely to go to BSNL and help the state-run telco come out of its crunch.



# DreamIAS



## LIFE & SCIENCE

### THE ARTEMIS PROGRAMME, NASA'S NEW MOON MISSION

The story so far: On March 17, the National Aeronautics and Space Administration (NASA) rolled out its Artemis I moon mission to the launchpad for testing at the Kennedy Space Centre in Florida, United States. The Space Launch System (SLS) rocket and Orion capsule of the mission were hurled out to the launchpad by NASA's Crawler-Transporter 2 vehicle.

#### **What is the Artemis mission?**

NASA's Artemis mission is touted as the next generation of lunar exploration, and is named after the twin sister of Apollo from Greek mythology. Artemis is also the goddess of the moon.

Artemis I is the first of NASA's deep space exploration systems. It is an uncrewed space mission where the spacecraft will launch on SLS — the most powerful rocket in the world — and travel 2,80,000 miles from the earth for over four to six weeks during the course of the mission. The Orion spacecraft is going to remain in space without docking to a space station, longer than any ship for astronauts has ever done before.

The SLS rocket has been designed for space missions beyond the low-earth orbit and can carry crew or cargo to the moon and beyond. With the Artemis programme, NASA aims to land humans on the moon by 2024, and it also plans to land the first woman and first person of colour on the moon.

With this mission, NASA aims to contribute to scientific discovery and economic benefits and inspire a new generation of explorers.

NASA will establish an Artemis Base Camp on the surface and a gateway in the lunar orbit to aid exploration by robots and astronauts. The gateway is a critical component of NASA's sustainable lunar operations and will serve as a multi-purpose outpost orbiting the moon.

Other space agencies are also involved in the Artemis programme. The Canadian Space Agency has committed to providing advanced robotics for the gateway, and the European Space Agency will provide the International Habitat and the ESPRIT module, which will deliver additional communications capabilities among other things. The Japan Aerospace Exploration Agency plans to contribute habitation components and logistics resupply.

#### **What is the mission trajectory?**

SLS and Orion under Artemis I will be launched from the Kennedy Space Centre in Florida, U.S. in the summer of 2022. The spacecraft will deploy the interim cryogenic propulsion stage (ICPS), a liquid oxygen/liquid hydrogen-based propulsion system that will give Orion the thrust needed to leave the earth's orbit and travel towards the moon.

On its way to the moon, Orion will be propelled by a service module provided by the European Space Agency (ESA). The spacecraft will communicate with the control centre back on Earth through the deep-space network. It will fly around 100 km above the surface of the moon and use its gravitational pull to propel Orion into an opposite deep orbit around 70,000 km from the moon, where it will stay for approximately six days. The aim of the exercise is to collect data and to allow mission controllers to assess the performance of the spacecraft.



To re-enter the earth's atmosphere, Orion will do a close flyby within less than 100 km of the moon's surface and use both the service module and the moon's gravity to accelerate back towards the earth. The mission will end with the spacecraft's ability to return safely to the earth.

#### **What are the future missions in the Artemis programme?**

The second flight under the programme will have crew on board and will test Orion's critical systems with humans onboard. Eventually, the learnings from the Artemis programme will be utilised to send the first astronauts to Mars. NASA plans on using the lunar orbit to gain the necessary experience to extend human exploration of space farther into the solar system.

### RECYCLING HEAT OF DATACENTRES

The story so far: Microsoft has partnered with Fortum, a Finnish energy company to heat homes, services and businesses in Finland with sustainable waste heat from a new datacentre region that Microsoft has planned to build in the Helsinki metropolitan area in Finland. The software giant claims the waste heat recycling concept from the datacentre region to be the world's largest scheme to recycle waste heat from data centres. The joint project takes place at the intersection of two megatrends: digitalisation and energy transition.

#### **What is a datacentre?**

A datacentre is a physical facility that organisations use to store their critical applications and data, process data and disseminate them to users. It is designed based on a network of computing and storage resources that enables delivery of shared applications and data. The key components of a datacentre are routers, switches, firewalls, storage systems, servers, and application-delivery controllers.

Many large datacentres are located in dedicated buildings. Smaller datacentres may be situated in specially designed rooms within buildings constructed to serve multiple functions. Since datacentres consume large amounts of energy, it's important to ensure the physical structures that house them are well-designed and insulated to optimise temperature controls and energy efficiency.

#### **How much heat do datacentres generate?**

The temperatures recorded in the hot aisles of a datacentre hover between 80 and 115 degrees Fahrenheit, according to Lifeline datacentres, a provider of datacentre facilities and services.

Global cybersecurity firm Kaspersky estimates over 75% of a datacentre's electricity becomes waste heat. It noted that in winter, a datacentre can provide heating up to 85 degrees Fahrenheit, similar to a gas boiler, with better energy efficiency than a heat pump in a new house.

#### **What is the scale of their carbon footprint?**

On a global level, datacentres consume around 200 terawatt-hours (TWh) of electricity, which is more than 1% of the world's total electricity. They contribute to 0.3% of all global CO2 emissions, according to the International Energy Agency.

Datacentre energy usage in some countries could take up to 15% to 30% of their total domestic electricity consumption by the end of the decade, according to predictive models by Eric Masanet





and Nuoa Lei of Northwestern University. Ireland's energy regulator says datacentres could use almost 30% of the country's electricity by 2027, endangering climate goals.

#### **What is Microsoft's plan to cut carbon emission in Finland?**

According to Microsoft, the recycled waste heat, along with other carbon reduction measures, can help the city of Espoo and its neighbouring communities to reach their CO<sub>2</sub> emission reduction targets. It can also help decommission Fortum's last coal-fired heat unit in the city.

The heat recycling system can provide clean heat to homes, businesses and public buildings in Helsinki, and can reduce up to 4,00,000 tons of CO<sub>2</sub> emissions annually, according to estimates by Fortum.

The company highlighted that once the new data centre region's waste heat capture is in operation, a total of about 60% of the area's heating will be generated by climate-friendly waste heat. Of this, 40% results from the datacentre region and the rest from other waste heat sources like purified waste water.

#### **How will this work?**

Fortum will capture the excess heat generated by the new datacentre region and transfer the clean heat from the server cooling process to homes, services and business premises that are connected to the district heating system.

District heating is the most popular method of heating in Finland. It is a system of generating heat in a centralised location by capturing heat and then distributing it to buildings for residential and commercial heating needs. The heat is transferred to customers as hot water which is pumped through insulated underground pipes.

The new generation of district heating is based on replacing fossil fuels with flexible solutions like renewable electricity, heat pumps and waste heat utilisation. Artificial intelligence will help optimise operations of the entire system.

#### **Which other countries recycle waste heat from datacentres?**

District heating is popular in the Nordic and Baltic countries, as well as in Russia and China, which have high heat demands during winters. Datacentres thrive in cold climates. Their location in cold climates helps to cut down on the need to cool server rooms. Cold weather is also an asset as technology companies shift to selling their heat which doesn't have a lot of demand in hot weather.

#### **Which other companies are doing this?**

Facebook is putting its waste heat to use by heating nearby homes in Odense, Denmark. The company claims that its servers can heat 6,900 homes in the area, according to a blog by Aquicore. Apple is building a datacentre in Denmark and plans to run it with renewable energy and use waste heat to warm up nearby office buildings.

Fast fashion retailer H&M has been distributing waste heat to nearby homes in Denmark since 2013 and has plans to build a new, 1 MW datacentre that will be capable of heating up to 2,500 apartments at full load.

An IBM datacentre in Switzerland is heating a nearby community pool. In Canada, communications company Quebecor donates its heat to the editorial office of a local newspaper.



## AMERICAN MATHEMATICIAN SULLIVAN WINS ABEL PRIZE

The Norwegian Academy of Science and Letters has awarded the Abel prize for the year 2022 to American Mathematician Dennis Parnell Sullivan, who is with the Graduate School and University Center of the City University of New York and the State University of New York at Stony Brook. The citation mentions that the award has been given, “For his groundbreaking contributions to topology in its broadest sense, and in particular its algebraic, geometric and dynamical aspects”.

Topology is a field of mathematics which was born in the 19th century and has to do with properties of surfaces that do not change when they are deformed. Topologically, a circle and a square are the same; similarly, surfaces of a doughnut and a coffee mug with one handle are topologically equivalent, however, the surface of a sphere and a coffee mug are not equivalent.

“Dennis P. Sullivan has repeatedly changed the landscape of topology by introducing new concepts, proving landmark theorems, answering old conjectures and formulating new problems that have driven the field forwards,” says Hans Munthe-Kaas, chair of the Abel Committee, in a press release given by the Academy.

The release further says that Prof. Sullivan has found deep connections between a variety of areas of mathematics. One of his key breakthroughs is in developing a new way of understanding rational homotopy theory.

## HARM IN THE NAME OF GOOD

The UN General Assembly has proclaimed March 21 as the International Day of Forests to celebrate and raise awareness about the importance of forests. On this day, countries are encouraged to organise activities such as tree planting campaigns to help increase the green cover, conserve biodiversity, and fight climate change. For decades, the Indian government has been spending billions of rupees in its efforts to increase the green cover through tree planting. Recently, the Central government, through the National Afforestation and Eco-Development Board, launched an ambitious ₹19,000 crore plan for an afforestation project to rejuvenate 13 major rivers. A press note from the government announced that “this project would increase ‘forest’ cover by 7,417.36 square kilometres in the vicinity of these rivers”. Will such a project really increase forest cover? And can forests be created through afforestation?

### Complex ecosystems

Forests are complex ecosystems that are built over years due to the interplay of birds, mammals, reptiles, insects, amphibians, fungi, microorganisms, water, soil, environmental conditions, and other factors. Unless these players are part of the rebuilding process, trees will remain as green cover rather than the enchanting, natural, complex ecosystems that they are.

It is argued that planting trees will help store carbon and reduce pollution. It is true that all trees — invasive species and native and non-native species — store carbon, but the other benefits which are critical vary widely depending on the species planted and the location of plantation. If wrong areas are selected for plantation, the natural habitat may get altered, which will cause habitat specialist species to become extinct. This will make the local environment and ecosystem less resilient. A classic example that we witness is the conversion of natural grasslands to wooded areas through tree planting. The Great Indian Bustard, once nominated to be India’s national bird, is now staring at extinction with fewer than 200 individuals. This is because many areas where



these large birds thrived have been lost due to tree planting. The Ranibennur Wildlife Sanctuary in central Karnataka, which was designated to conserve this species, is an example of this unscientific thinking. Similarly, the Jayamangali Conservation Reserve, another grassland habitat in Karnataka, hosted wolves. But now there are leopards there as the whole area has been planted with acacia, anjan, eucalyptus and tamarind trees. Other natural habitats such as woodland savanna, laterite grasslands, scrubland, wetlands and rocky outcrops that have evolved to support unique biodiversity have been systematically transformed from ecologically rich habitats into sterile landscapes due to tree planting.

### Planting native species

Some of these tree-planting campaigns claim to propagate native species. Native tree species is a very misused terminology in India. Though neem, peepal, banyan, and anjan may be native to India, they are non-native to many parts of the country. We tend to ignore this critical ecological criterion and take up planting of these species in all areas. Planting any kind of native tree species may probably help in urban settings but not in natural habitats.

Overall, it is not a bad idea to plant trees. But the aim should not be to only plant trees; it should be to make tree-planting activities friendly to local biodiversity. If we want to restore forests, we need to first understand systematically the native vegetation and the biodiversity that play a critical role in forming these forests. If we plant a range of locally found indigenous species, biodiversity will make a comeback. There is a rule of thumb in the tree-planting world: One should plant the right tree in the right place. And some add, 'for the right reason'. We should also monitor and examine the outputs of such tree-planting or restoration initiatives.

Another solution is to let forests come back on their own through protection. This is called assisted natural regeneration and is cheaper and more effective method. Scientific studies have shown that natural regeneration absorbs 40 times more carbon than plantations and host a lot more biodiversity. But of utmost priority is the task of halting deforestation and protecting existing forests.

While the government has embarked on the ₹19,000 crore project of planting trees, a report by the Centre for Science and Environment says that the government has cut the budget for wildlife conservation by 47% between 2018 and 2021. This means reduced support for forests and other habitat protection. We seem to be investing heavily in 'creating' forests while letting our natural forests that have evolved over centuries fade. Is this a sensible act?

### HOT POLES: ANTARCTICA, ARCTIC 40°C AND 30°C ABOVE NORMAL

Earth's poles are undergoing simultaneous freakish extreme heat with parts of Antarctica more than 70 degrees (40 degrees Celsius) warmer than average and areas of the Arctic more than 50 degrees (30 degrees Celsius) warmer than average.

Weather stations in Antarctica shattered records Friday as the region neared autumn. The two-mile high (3,234 meters) Concordia station was at 10 degrees (-12.2 degrees Celsius), which is about 70 degrees warmer than average, while the even higher Vostok station hit a shade above 0 degrees (-17.7 degrees Celsius), beating its all-time record by about 27 degrees (15 degrees Celsius), according to a tweet from extreme weather record tracker Maximiliano Herrera.

The coastal Terra Nova Base was far above freezing at 44.6 degrees (7 degrees Celsius).



It caught officials at the National Snow and Ice Data Center in Boulder, Colorado, by surprise because they were paying attention to the Arctic where it was 50 degrees warmer than average and areas around the North Pole were nearing or at the melting point, which is really unusual for mid-March, said center ice scientist Walt Meier.

“They are opposite seasons. You don’t see the north and the south (poles) both melting at the same time,” Meier told The Associated Press Friday evening. “It’s definitely an unusual occurrence.”

Lazzara monitors temperatures at East Antarctica’s Dome C-ii and logged 14 degrees (-10 degrees Celsius) Friday, where the normal is -45 degrees (-43 degrees Celsius): “That’s a temperature that you should see in January, not March. January is summer there. That’s dramatic.”

Both Lazzara and Meier said what happened in Antarctica is probably just a random weather event and not a sign of climate change. But if it happens again or repeatedly then it might be something to worry about and part of global warming, they said.

## IPR WAIVER PUSH

The story so far: At the World Trade Organization (WTO) negotiations, a consensus is in sight on a pending proposal championed by India and South Africa in 2020 that sought to remove intellectual property rights restrictions on the use of COVID-19 vaccines, drugs and diagnostic devices. The reprieve, however, will come with certain conditions, which are still under discussion.

### **What are the terms of the proposal?**

In October 2020, at the WTO’s Trade Related Aspects of Intellectual Property Rights (TRIPS) Council, India and South Africa proposed that the WTO do away with certain provisions of the TRIPS Agreement for the duration of the pandemic to facilitate access to technologies necessary for the production of vaccines and medicines. Such a waiver would aid scaling up of local production, critical to ensure wider access to affordable and effective vaccines. Most of these patents are held by pharmaceutical companies in the U.S. and the European Union. The waiver proposal was blocked at the TRIPS Council and the WTO ministerial Council though there have been several rounds of discussions involving ministers of several WTO member-countries. In the last year though 100 countries, including the U.S., supported the proposal, the EU remained a stumbling block. But now the EU too appears to be calling a truce.

### **What is the latest development?**

Reports have emerged that India, South Africa, the U.S. and the EU have arrived at an agreement. A draft of this agreement, that has been circulated among 164 members of the WTO, is likely to be taken up for discussion this fortnight. A consensus of all members is necessary for a proposal to be approved. The draft says all patent rights that protect the manufacturing of COVID-19 vaccines will be waived of for three-five years. Usually, there are multiple patents that cover even a single COVID vaccine and the draft says all of these line-patents too would stand temporarily waived. All member countries, through their governments, can authorise the manufacture as well as export of vaccines produced in these conditions.

### **Is this a breakthrough?**





There's conflicting opinion on this. On the one hand, the pandemic isn't over, and despite the widespread adoption of vaccines, (many of them employing very novel technology platforms such as mRNA and adenovirus vaccine technology) the evidence is overwhelming that vaccines are only protective against severe disease but ineffective at curbing transmission. It is possible that vaccines developed using the early strains of the virus may become ineffective over time and newer ones, potentially employing newer approaches, may be necessary in the months and years ahead. As relatively few countries have expertise in making vaccines, a waiver of this sort could help improve global access. These same set of reasons, critics of the draft say, could be used to argue that such a waiver for vaccines is too little, too late. Global facilities such as COVAX, that are charged with ensuring all countries get vaccines now have too many vaccines — a flip from merely three months ago — when there was a scarcity. India too has multiple manufacturers and technology platforms, and more than 60% of the population is fully vaccinated. All this, without patent waivers. While pharmaceutical patents have historically been impediments to the manufacture of affordable, high-quality drugs, the global nature of the pandemic has seen that even though richer nations hoarded vaccines, prioritising multiple inoculations for their citizens, over even a single shot for African countries, intellectual property rights on its own didn't prove to be a hurdle. There are other major lacunae in the draft agreement.

#### **What are some of the hurdles in the draft agreement?**

Critics say that central to the process of vaccine manufacturing are 'trade secrets' that specify the ingredients and chain of steps necessary to make them. The current waiver doesn't automatically compel patent rights holders to share this information with a potential manufacturer for free. Another drawback is that this waiver is limited to vaccines. The original proposal sought a waiver on therapeutics and diagnostics and the agreement only says that a "discussion" on this can be held after six months. Access to new drugs and diagnostic technologies are necessary to keep people safe everywhere.

#### **What do India's pharmaceutical companies say?**

Though no one has commented on the draft, prominent drug and vaccine companies in India haven't been very vocal on the need for a waiver. But the Organisation of Pharmaceutical Producers of India (OPPI), comprising Indian subsidiaries of western pharmaceutical companies, has been critical. Waiving of intellectual property rights will neither lead to increased production of vaccines nor practical solutions to fight the virus, as IP "is not the barrier" to vaccines. The Indian Drug Manufacturers Association, on the other hand, has supported it, with a caveat. They are more interested in "voluntary licences" by the patent holders to Indian companies with sufficient expertise in this field, and transferring technology to Indian companies against "reasonable" royalties.

### TRANSMISSION OF COVID-19 INFECTION RARE IN BABIES

The SARS-CoV-2 virus, which causes COVID-19, can be transmitted from mother to baby before, during and after childbirth, but such occurrences are rare, according to a study published in The BMJ.

The researchers found that less than two per cent of babies born to covid-infected mothers test positive for the virus.



However, they are more likely to test positive when the mothers have severe Covid or were diagnosed after childbirth.

The team led by researchers at the University of Birmingham in the U.K. also found that vaginal births and breastfeeding do not increase the likelihood of babies testing positive for SARS-CoV-2 when their mothers have the infection.

The study examined data from around the globe relating to more than 14,000 babies born to mothers with COVID-19. Overall, 1.8 per cent of the 14,271 babies with SARS-CoV-2 infection tested positive for the virus using PCR tests, the researchers said.

“Ours is the first study to use the World Health Organization’s methods to show that it is possible for the virus to be spread from the mother to baby while in the womb, during childbirth, and after delivery,” said study lead Shakila Thangaratinam, a professor at the University of Birmingham.

The researchers noted that mothers should be reassured about the low risk of viral transmission through vaginal birth, skin-to-skin contact and breastfeeding, all of which should be encouraged.

## RECOMBINATION OF TWO VIRUS VARIANTS SEEN SINCE 2020

Mutations are a natural phenomenon when viruses replicate. Generally, RNA viruses have a higher rate of mutations compared with DNA viruses. However, unlike other RNA viruses, coronaviruses have fewer mutations. This is because coronaviruses have a genetic “proofreading mechanism” that corrects some of the errors made during replication. This is applicable to SARS-CoV-2 viruses too. As a result, SARS-CoV-2 viruses have “higher fidelity in its transcription and replication process than that of other single-stranded RNA viruses” says a February 2021 paper in Nature.

### Providing fitness

The fate of new mutations depends on whether such mutations increase the fitness of the virus such as increasing the infectiousness of the virus and in light of many people being infected and/or vaccinated, the ability of the mutations to allow the virus to escape from immunity. Such mutations that provide increased fitness to the virus increase in numbers and become the dominant strain or variant.

But changes to the virus through natural collection of mutations involves small changes in the genome. But like in the case of influenza viruses, when a person is simultaneously infected with two different SARS-CoV-2 variants or strains or sub-lineages, chunks of genetic material from one variant can get mixed with the other. This is called recombination.

In the case of SARS-CoV-2 virus, such recombination has been seen right after the Alpha variant emerged. Alpha was the first variant to emerge in late-2020 in the U.K. At that time, the dominant strain that had spread to most countries was the Wuhan strain with a mutation called the D614G, which increased the transmissibility of the virus. According to a paper published on September 30, 2021 in the journal Cell, recombinant SARS-CoV-2 viruses were found in late 2020-early 2021 in the U.K.

### Recombinant sequences

The recombinant virus had a combination of the Alpha variant and the Wuhan strain. The recombinant virus had the mutations seen in the spike protein of the Alpha variant while the



remaining genome with the wild strain. Since the mutations seen in the Alpha variant made the virus more transmissible, the recombinant virus was found to spread.

#### EXPLAINED: HOW COVID-19 AFFECTS THE HEART

I would really begin by saying: this is not something new. Previous cases of flu have shown this. Post Spanish flu, we realised that a lot of the deaths happened because of the direct involvement of the flu itself, but it also leads to other reasons for mortality and morbidity. And heart was one of the important complications. Subsequently, we saw, after most flu outbreaks, the incidence of heart diseases goes up. And that is why people who are susceptible and who have heart disease are recommended to take flu shots. We want to prevent flu among individuals at high risk of heart disease.

This is no different with Covid-19. And we are seeing that this virus is also causing cardiological complications, subsequent to recovery from acute Covid-19. For example, there is a large study from the United States that looks at a US veterans' database of 1.54 lakh. The analysis showed that people who had Covid-19 had a higher risk of a range of cardiac problems a year later. Unfortunately, we know from serosurveys that a large majority of people in India have had Covid-19. So we are susceptible to these cardiac complications.

Having said that, we have seen that people who had a severe form of Covid-19 are much more likely to have these complications, compared to those who had a mild form. We know if you are vaccinated, you usually have a milder infection. So vaccines will prevent those complications. So that is another reason, beyond Covid-19, to get vaccinated.

#### The Expert

Dr Ambuj Roy is Professor of Cardiology at AIIMS, New Delhi. He has closely worked with the research team that has come out with national comprehensive guidelines for the management of post-Covid-19 sequelae.

#### What are the signs that indicate a patient might have developed heart complications after Covid-19?

Let us look at what are the types of complications being reported. One complication is heart attack; they typically present with a lot of heaviness in the chest, sweating, acute breathlessness, or just a crushing pain around the upper chest.

Besides, these people are known to have an arrhythmia. Patients present with palpitation, they develop very fast heartbeats, the heartbeat is irregular, fast, and the patient may feel giddy.

The third complication being reported is that it affects heart muscles. It has been shown in autopsies that in people who succumbed to Covid-19, the heart muscles have the virus. In some people, it can trigger inflammation of the heart, and can lead to the weakening of the heart muscles. This basically means that the pumping capacity of the heart muscle goes down. The patient experiences breathlessness and accumulation of fluid in the body.

Another complication is that Covid-19 makes you susceptible to clots. Your veins could develop clots and this could be potentially dangerous, because if these clots migrate to the lungs, it can lead to sudden choking of the blood supply to the body.



Who is getting hit the hardest? We are hearing about young people reporting cardiac complications.

If you look at the large study, people who have a more severe form of Covid-19 are most susceptible. Second, the elderly and patients with comorbidities are more susceptible. But given that India has a very large young population, even if your probability is small, we will see a lot of young people get hit. Even with a small increase in the risk in the younger population, there will be a lot of people with those complications.

#### **Why are people without a history of comorbidities reporting complications?**

I would first move away from this question. Because as South Asians, we are anyway prone to heart disease. This is now proven through multiple research done on Indian diaspora abroad, where they compared the risk of South Asians to that of the native population. The risk varies from study to study, but if I have to give a broad ballpark estimate, it is about two times higher among South Asians. Heart diseases typically develop a decade earlier in South Asia as compared to the West.

Traditionally, there are five risk factors for developing cardiovascular disease: tobacco use, diabetes, hypertension, bad cholesterol, and family history. I would put Covid-19 as one of the risk factors now.

So how do we detect this early, especially when many healthy, young, asymptomatic patients complaining of long Covid complications?

We should focus on what can be done to prevent these complications. The focus should be on risk factors. Any which way, every person should have one preventive cardiac check. It is a very simple check: of your blood pressure, blood sugar, blood cholesterol levels, of your weight, and diet.

We know that almost half of our people with hypertension are not aware of their condition because they have never measured it. High blood pressure is a silent killer — it won't show symptoms most of the time. If you look at the population level, just 10% in rural and 20% in urban areas have their blood pressure under control. So everybody should go for a preventive check-up. Even more now.

#### **We are seeing people undergoing ECHO tests, and cardiac MRIs. Is that needed?**

Clearly, in an asymptomatic person, that is not needed. There is a guideline we developed for the Health Ministry on post-Covid cardiac management. We have very clearly said that besides the very basic tests you need to do, if you don't have symptoms — you are doing well, you are back to doing your usual activity like you can do a good walk for 20 minutes without getting breathless, or you can walk with a person of your age and fitness as much as he can — then you do not need to go for any further tests.

But yes, if you have episodes of palpitations, breathlessness even when you walk a flight of stair, in those cases, we may need further tests.

There is a study from Germany, which does a detailed analysis of people who have Covid-19 versus uninfected people. It showed that even cardiac MRIs were no different in people who had Covid-19 versus those who did not have Covid-19. There was no additive value in doing these high-end tests. So unless you have symptoms, you don't need to do anything more than the very basic tests.





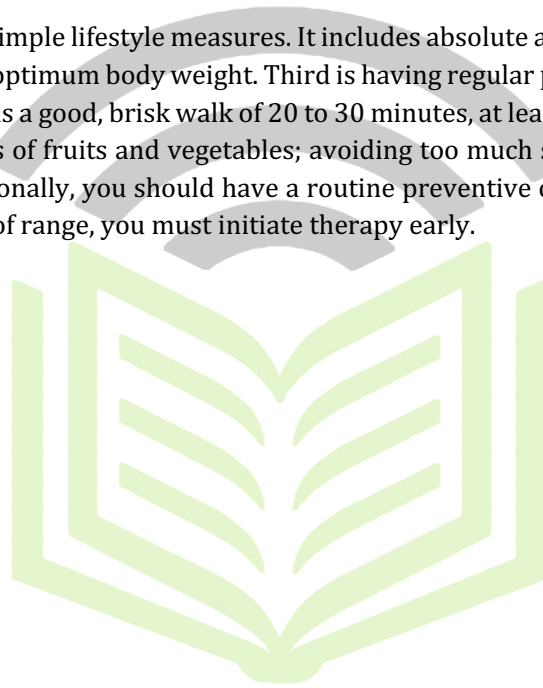
**So, when does a patient need to consult a specialist?**

In your convalescent stage, if you continue to have one of these symptoms — breathlessness, palpitations, faster heartbeat with minimal activity, or if you feel your heartbeat is irregular, or if you notice swelling on your limbs, or when you walk you feel some heaviness in the chest — these are the symptoms when you definitely need to quickly consult a specialist.

Other than that, if you are back to your usual physical activity, then there is nothing more needed than simple blood pressure, blood sugar, and blood cholesterol test — which are anyway mandated for anybody after 25 years of age.

**What are the preventive measures?**

This begins with very simple lifestyle measures. It includes absolute abstinence from tobacco. The second is maintaining optimum body weight. Third is having regular physical activity in your day-to-day life, which means a good, brisk walk of 20 to 30 minutes, at least 5-6 days in a week. Fourth is a prudent diet —lots of fruits and vegetables; avoiding too much sugar and salt and rich fried food in the diet. Additionally, you should have a routine preventive cardiac check of a very basic nature. If they are out of range, you must initiate therapy early.



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