



CURRENT AFFAIRS for UPSC

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DreamIAS



INTERNATIONAL

IT TAKES A PARTY-STATE

Spare a thought for China's adolescents. In the Middle Kingdom, run as it is by a coterie of communists, post-pubescent "acting out" will no longer be considered a step in young people's journeys towards finding themselves. Their acts of rebellion — often manifested in "bad behaviour" — are to be seen as a failure on the part of parents, who will be punished for the misdemeanours of their offspring, according to the draft Family Education Promotion law. In essence, the state is telling young people that their individuality and agency is a myth. There is a charitable explanation for this paternalism. China, after all, is still ostensibly communist and Karl Marx did say "social being determines consciousness". Perhaps, in a conservative, authoritarian society, punishing parents for their children's misdeeds is the only way for an all-powerful state to force its way into the familial dialectic. It is more likely, though, that a task as important as raising future acolytes for the party-state is too important to be left to parents. It may take a village to raise a child, but in Xi's China, it takes the state to make a citizen. The proposed law is just the latest in a series of interventions that have seen the state countering what it appears to view as the cultural and political (which are, historically, dangerously synonymous in China) degradation of young people. In the last few months, the education ministry has limited the number of hours children can play computer and online games and the government has been urging young men to "be less feminine". Last year, it issued the "Proposal to Prevent the Feminisation of Male Adolescents" to schools, seemingly to counter the influence of South Korean music and television in the country. Being an adolescent is hard enough. But in China, it looks like young men and women have a harder time of it than most.

CHINA'S HYPERSONIC GLIDE VEHICLE TEST

A report in the London-based Financial Times on Saturday, citing various sources, says China in August tested a nuclear-capable hypersonic glide vehicle that circled the globe before speeding towards its target. Hypersonic speeds are 5 or more times the speed of sound.

The test, as reported

The FT report mentions five people familiar with the test as saying the Chinese military launched a rocket that carried a hypersonic glide vehicle, which flew through low-orbit space before cruising down towards its target. The test has caught US intelligence by surprise, the report says. "The missile missed its target by about two-dozen miles, according to three people briefed on the intelligence. But two said the test showed that China had made astounding progress on hypersonic weapons and was far more advanced than US officials realised. The test has raised new questions about why the US often underestimated China's military modernisation," the report reads. The report cites a security official, and another Chinese security expert close to the People's Liberation Army, as saying the weapon was being developed by the China Academy of Aerospace Aerodynamics (CAAA), under the state-owned China Aerospace Science and Technology Corporation that makes missile systems and rockets for China's space programme. Both sources reportedly said the vehicle was launched on a Long March rocket, which is used for the space programme.

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The significance

According to the report, two people familiar with the test said the weapon could, in theory, fly over the South Pole. That would pose a big challenge for the US military because its missile defence systems are focused on the northern polar route. The report quotes the China Academy of Launch Vehicle Technology as saying on an official social media account on July 19 that it had launched a Long March 2C rocket, its 77th launch. On August 24, it announced a 79th flight. But there was no announcement of a 78th launch, which sparked speculation about a secret launch, the report notes. "The US, Russia and China are all developing hypersonic weapons, including glide vehicles that are launched into space on a rocket but orbit the earth under their own momentum," the report says. India's DRDO tested a hypersonic vehicle in September last year. Asked about China's test, a senior DRDO scientist said, "The exact details on technology used by China in this particular test are not known through media sources. But most of the hypersonic vehicles primarily use the scramjet technology. This extremely complex technology, which also needs to be able to handle high temperatures, makes the hypersonic systems extremely costly. It is all about how long can you sustain the systems at those extreme conditions. Most military powers in the world are in the process of developing hypersonic systems." Scramjets are a category of engines designed to handle airflows of speeds in multiples of the speed of sound.

Implications for India

"This test by China certainly needs to be watched closely by the world, especially India considering relations with China in the recent past," said Air Marshal Bhushan Gokhale (Retd), former Vice Chief of Air Staff. "Such capabilities also highlight the threat for our space assets along with the surface assets. The offence system operating at these speeds would mean requirement to develop defence systems at these speeds." He added, "India too is working on hypersonic technologies. As far as space assets are concerned, India has already proved its capabilities through the test of ASAT." Hypersonic technology has been developed and tested by both DRDO and ISRO. Last September, DRDO successfully flight-tested the Hypersonic Technology Demonstrator Vehicle (HSTDV), with a capability to travel at 6 times the speed of sound. A solid rocket motor of Agni missile took it to an altitude of 30 km where the cruise vehicle separated as planned. The hypersonic combustion sustained and the cruise vehicle continued on its desired flight path at a velocity of six times the speed of sound for more than 20 seconds. "The scramjet engine performed in a textbook manner. With this successful demonstration, many critical technologies such as aerodynamic configuration for hypersonic manoeuvres, use of scramjet propulsion for ignition and sustained combustion at hypersonic flow, thermo-structural characterisation of high temperature materials, separation mechanism at hypersonic velocities etc. were proven." DRDO had said in a statement. Last December, an advanced Hypersonic Wind Tunnel (HWT) test facility of the DRDO was inaugurated in Hyderabad. It is a pressure vacuum-driven, enclosed free jet facility that simulates Mach 5 to 12.

43 COUNTRIES CALL ON CHINA AT UN TO RESPECT UIGHUR RIGHTS

Forty-three countries have called on China to "ensure full respect for the rule of law" for the Muslim Uighur community in Xinjiang, in a statement read at the United Nations on Thursday that sparked outrage from Beijing. The declaration, signed by the United States as well as several European and Asian member states and others, accused China of a litany of human rights

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violations against the Uighurs, including torture, forced sterilisation and forced disappearances. “We call on China to allow immediate, meaningful and unfettered access to Xinjiang for independent observers, including the UN High Commissioner for Human Rights and her office,” the countries said in a joint statement, read at the United Nations by France. “We are particularly concerned about the situation in the Xinjiang Uighur Autonomous Region,” the statement continued, citing “credible” reports that “indicate the existence of a large network of ‘political reeducation’ camps where over a million people have been arbitrarily detained.”

‘Emancipating people’

Beijing has long denied accusations of ethnic cleansing against Uighurs and other Muslim Turkic people in Xinjiang, where experts have estimated that more than one million people are incarcerated in camps. Its ambassador to the United Nations Zhang Jun furiously denounced on Thursday what he termed the “lies” and “a plot to hurt China”. “Xinjiang enjoys development and the people are emancipating themselves every day and are proud of the progress made,” he said.

Up for a friendly visit

And while Mr. Zhang told media that China was willing to host a “friendly” visit to the region, he did not agree to an inquiry by the UN human rights commissioner. He accused Washington, Paris and London of having a “terrible human rights record.” Beijing accused the U.S. for “ethnic cleansing” against Native Americans and accused France of committing “crimes against humanity” in its former colonies.

U.S. WILL DEFEND TAIWAN AGAINST CHINA

The United States will defend Taiwan if China attacks it, President Joe Biden said, prompting a warning from Beijing on Friday that its determination to take back the democratic island should not be underestimated. China regards self-ruled Taiwan as its own territory and has vowed to one day seize the island, by force if needed. Beijing’s sabre-rattling has ramped up in recent years, exacerbating fears the island of 23 million people could become a major global flashpoint. At a CNN town hall, Mr. Biden was asked whether the U.S. would come to Taiwan’s defence if China invaded. “Yes,” he responded. “We have a commitment to that.” Mr. Biden’s statement was at odds with the long-held U.S. policy known as “strategic ambiguity”, where Washington helps build Taiwan’s defences but does not explicitly promise to come to the island’s help in the event of war. The policy is designed to deter a Chinese invasion and also discourage Taiwan from formally declaring independence — something Beijing regards as a red line. Mr. Biden’s comments were welcomed on Friday by Taiwan, which has pushed to bolster international alliances to protect itself from Beijing. “The U.S. government has demonstrated, through actual actions, their rock solid support for Taiwan,” Presidential Office spokesperson Xavier Chang said in a statement. But Beijing warned that Mr. Biden’s comments risked “damaging Sino-U.S. relations,” warning Washington on Friday to “act and speak cautiously on the Taiwan issue”. “China has no room for compromise on issues involving its core interests,” Foreign Ministry spokesman Wang Wenbin said at a regular press briefing. Later on Friday, The White House clarified that it was still guided by the 1979 Taiwan Relations Act, in which Congress required the United States to provide weaponry to “enable Taiwan to maintain sufficient self-defense capabilities”.



No change of policy

“The President was not announcing any change in our policy, and there is no change in our policy,” a White House spokesperson said. “We will uphold our commitment under the act to support Taiwan’s self-defence, and we will continue to oppose any unilateral changes in the status quo,” the spokesperson said. Defense Secretary Lloyd Austin, on a visit to NATO headquarters in Brussels, declined to discuss “hypotheticals” but said the United States “will continue to help Taiwan with the sorts of capabilities that it needs to defend itself”. Mr. Biden made a similar pledge in August during an interview with ABC, insisting that the U.S. would always defend key allies, including Taiwan, despite the withdrawal from Afghanistan in the face of the victorious Taliban. Mr. Biden said the U.S. made a “sacred commitment” to defend NATO allies in Canada and Europe and it’s the “same with Japan, same with South Korea, same with Taiwan.” The White House subsequently told reporters on both occasions that U.S. policy on Taiwan “has not changed.” China has ramped up economic, diplomatic and military pressure on Taiwan since the 2016 election of President Tsai Ing-wen, who views Taiwan as already sovereign and not part of “one China.” Military pressure has escalated in the last year with China sending waves of fighter jets and nuclear-capable bombers into Taiwan’s air defense zone.

INDIA, U.S. MILITARIES MATCH SKILLS IN ALASKA

The 17th edition of the India-U.S. bilateral exercise, Yudh Abhyas 2021, got under way at the Joint Base Elmendorf Richardson, Alaska, U.S., with the two sides set to hone their skills in counter-terror operations in mountainous terrain and cold climate conditions. Interestingly, this is the only India-U.S. service exercise continuing in bilateral format.

Malabar trilateral

The India-U.S. Malabar naval exercise became trilateral with the addition of Japan in 2015 and further brought in all the Quad partners together with the inclusion of Australia in 2020. Similarly, Japan joined the India-U.S. bilateral air exercise, Cope India, as an observer in 2018 and the plan is to make it trilateral in phases. India and the U.S. also hold a tri-service exercise. “The exercise aims at enhancing understanding, cooperation and interoperability. It will focus on combined arms manoeuvres in cold climatic conditions and is primarily aimed at sharing tactical level drills and learning best practices from each other,” the Army said. The exercise scheduled from October 15 to 29 will culminate after a 48-hour validation phase. Exercise Yudh Abhyas is the largest running joint military training and defence cooperation endeavour between the two countries, the Army said. From the U.S. side, 300 soldiers belonging to the First Squadron (Airborne) of the 40th Cavalry Regiment and 350 soldiers of the 7 Madras infantry battalion of the Army are participating in the exercise. The 14-day training schedule includes activities on joint training in a counter-insurgency, counter-terrorism environment under the U.N. mandate, the Army said. “This will help them in undertaking joint operations at the battalion level in mountainous terrain with cold climatic conditions under the ambit of the U.N.” The previous version of this exercise was organised at the Mahajan Field Firing Ranges in Bikaner in February 2021. At the opening ceremony, Maj. Gen. Brian Eifler, Commander U.S. Army, Alaska, stressed the importance of free exchange of ideas, concepts and best practices and the necessity to learn from each others’ experiences.



Cope India

Other than the Malabar exercise, Japan had sent observers for the first time during Cope India 2018 as an Observer in 2018. As was reported by The Hindu then, the U.S. had proposed a trilateral air exercise with the three countries and so Japan was included as an Observer and the exercise elevated to trilateral level in phases. This leaves the bilateral Army exercise in which too the U.S. had suggested the inclusion of Japan a few years ago but was not accepted by India at that time. It could happen in the future, an official source added.

UN UNVEILS FUND FOR 'PEOPLE'S ECONOMY' IN AFGHANISTAN

The United Nations said on Thursday it had set up a special trust fund to provide urgently-needed cash directly to Afghans through a system tapping into donor funds frozen since the Taliban takeover last August. With the local economy “imploding”, the aim is to inject liquidity into Afghan households to permit them to survive this winter and remain in their homeland despite turmoil, it said. Achim Steiner, the UN Development Programme’s (UNDP) administrator said that Germany, a first contributor, had pledged €50 million (\$58 million) to the fund, and that it was in touch with other donors to mobilise resources. “We have to step in, we have to stabilise a ‘people’s economy’ and in addition to saving lives we also have to save livelihoods,” Mr. Steiner told a news briefing. “Because otherwise we will confront indeed a scenario through this winter and into next year where millions and millions of Afghans are simply unable to stay on their land, in their homes, in their villages and survive. The implications of that are not difficult to understand,” he said.

Economy set to contract

The International Monetary Fund said on Tuesday that Afghanistan’s economy is set to contract up to 30% this year and this is likely to further fuel a refugee crisis that will affect its neighbouring countries, Turkey and Europe. The Islamists’ takeover saw billions in central bank assets frozen and international financial institutions suspend access to funds, although humanitarian aid has continued. Banks are running out of money, civil servants have not been paid and food prices have soared. Mr. Steiner said the challenge is to repurpose donor funds already earmarked for Afghanistan. “Discussions over the last few weeks have focused on how we do find a way to be able to mobilise these resources in view of the economic implosion that is now unfolding and the international community’s repeated commitment not to abandon the people of Afghanistan,” he said. Kanni Wignaraja, director of UNDP’s regional bureau for the Asia Pacific, said that cash will be provided to Afghan workers in public works programmes, such as drought and flood control programmes, and grants given to micro-enterprises. Temporary basic income would be paid to the vulnerable elderly and disabled, she said. The UNDP had costed activities to be covered over the first 12 months at approximately \$667 million, she added.

ENGAGING THE TALIBAN

India’s participation in a meeting of 10 nations with Taliban officials in Moscow and the signing of a joint statement that recognised the “new reality” in Afghanistan signal a decisive shift in the country’s approach towards the Islamist group. India had earlier taken a strong position against any kind of engagement with the Taliban. In recent months, when the Taliban were making steady advances towards Kabul, India had established contacts with the Taliban’s political office in Doha,

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Qatar, but this is the first time India met a top Taliban delegation, which included Deputy Prime Minister Abdul Salam Hanafi, and, according to a Taliban spokesperson, promised to send aid. India has vital interests in Afghanistan. Over the 20 years, it has made investments worth billions of dollars which it would want to be protected. Last time the Taliban, which have close ties with anti-India terrorist groups such as LeT and the JeM, were in power, India saw a rise in violent incidents in Kashmir as well as the hijacking of an Indian plane to Kandahar. Now the Taliban say they will not allow Afghan soil to be used by any terrorist organisation. It is in India's interest to make sure that the Taliban walk the talk. It would also not like to see an isolated Taliban being a Pakistani satellite. To meet these goals, given the new reality in Afghanistan, engagement with the Taliban looks a strategic necessity. But this is a policy that needs to be pursued more through regional diplomacy than bilateral engagement. Bilaterally, India does not have much clout with the Taliban. But Afghan's new rulers, who are struggling with an economy on the brink of collapse, are keener this time to engage with regional powers. So the Moscow 10, which includes China, Pakistan, Iran and the Central Asian republics, has some leverage. These countries also have shared interests in seeing the Taliban severing its terror ties and Afghanistan being stabilised. If not, instability could, once again, spread beyond Afghanistan's border. For this, the Taliban should be ready to open up their government, share power with other political and ethnic communities, and start respecting the fundamental rights of Afghans. The last 40 years of Afghanistan's history are a brutal example of what could go wrong if one party or group tries to amass all powers in its hands. Despite these historical precedents, the Taliban have shown little readiness to change their ways. In the joint statement, India and the others asked the Taliban to keep their commitment on forming an inclusive government and ensure that their territory is not being used by terrorist groups. These calls should not end with the statements. While India and other regional countries should help Afghans during this period of economic miseries, they should also use their collective economic and political clout to mount pressure on the Taliban to make political concessions at home.

JAILED RUSSIAN OPPOSITION LEADER WINS TOP EU PRIZE

Imprisoned Russian Opposition leader Alexei Navalny was awarded the European Union's top human rights prize on Wednesday in a clear slap to President Vladimir Putin. In awarding the Sakharov Prize to Mr. Navalny, the European Parliament praised his "immense personal bravery". The 45-year-old activist was poisoned with a nerve agent last year and promptly arrested upon his return to Moscow from treatment in Germany and later imprisoned. "He has campaigned consistently against the corruption of Vladimir Putin's regime, and through his social media accounts and political campaigns, Navalny has helped expose abuses and mobilise the support of millions of people across Russia. For this, he was poisoned and thrown in jail," Parliament President David Sassoli said in a statement. He called for Mr. Navalny's immediate release. The recognition of Mr. Navalny will further sour relations between the 27-nation bloc and Russia. These ties have been on the decline for years, especially following Moscow's 2014 annexation of Ukraine's Crimean Peninsula and its support for a separatist insurgency in eastern Ukraine. The impact reverberated beyond the EU as well. Days after Russia suspended its mission at NATO and ordered the closure of the alliance's office in Moscow in retaliation for NATO's expulsion of Russian diplomats, the organisation's chief said he embraced the news. "I welcome the fact that a strong voice ... in Russia has been awarded this prize," NATO Secretary General Jens Stoltenberg



told reporters. He said the prize was a call for “his unconditional release from prison” and to have an “international investigation” into it.

THE OTHER QUAD

The virtual meet of the Foreign Ministers of India, the U.S., Israel and the UAE is a strong manifestation of the changes in West Asian geopolitics. If Israel and the UAE did not even have formal diplomatic relations a year ago, their growing economic and strategic cooperation is opening up opportunities for other powers, including India. External Affairs Minister S. Jaishankar, now in Israel, joined the quadrilateral conference after meeting his Israeli counterpart Yair Lapid, where they had agreed to launch talks for a free trade agreement. The four-nation meeting also points to India’s strategic desire to adopt a regional foreign policy strategy towards West Asia, transcending its bilateralism. Over the years, India has built vibrant bilateral ties with all the countries in the grouping. It is a member of the Quad with the U.S., Australia and Japan, which have common concerns and shared interests on East Asia. Israel is one of India’s top defence suppliers. The UAE is vital for India’s energy security. The Gulf country, which hosts millions of Indian workers, has also shown interest to mediate between India and Pakistan. In the past, there were three pillars to India’s West Asia policy — the Sunni Gulf monarchies, Israel and Iran. Now that the gulf between the Sunni kingdoms and Israel is being narrowed, especially after the Abraham Accords, the normalisation agreements signed between Israel and the UAE and Bahrain under the tutelage of the Trump administration, India faces fewer challenges to a regionalist approach. Mr. Jaishankar has hinted that there would be more meetings among the four countries. While it is too early to speak of the strategic significance of such a grouping, there are areas where it can deepen its engagement — trade, energy ties, fighting climate change and enhancing maritime security. But India should also be mindful of the challenges in the region. The U.S. is clearly seeking to lessen its footprint here as part of its pivot to East Asia to tackle China’s rise, which is redrawing West Asia’s traditional equations. India should be careful not to get sucked into the many conflicts of West Asia that could intensify amid growing regional rivalries. While the Abraham Accords made it easier for India to find common ground with the Israelis and the Emiratis, the contradiction between this emerging bloc and Iran remains as intense as ever. India, which sees itself aligned with the U.S. in the Indo-Pacific, faces deepening insecurities in continental Asia after the American withdrawal from Afghanistan. And it will have to work closely with countries such as Iran to deal with the challenges emanating from a post-American Afghanistan. So the challenge before New Delhi is to retain a healthy relationship with Iran even as it seeks to build a stronger regional partnership with the U.S.-Israel-UAE bloc.

THE NUCLEAR PROLIFERATOR WHO WAS NEVER INDICTED

One key question is unlikely to go away despite the passing of A.Q. Khan, the world’s biggest nuclear proliferator, who developed COVID-19 complications. Why did the United States never indict this Dutch-trained Pakistani metallurgist for stealing western nuclear secrets and operating an illicit international nuclear-smuggling network for more than a quarter of a century? After all, the U.S. has indicted lesser known individuals, including as recently as last year, for conspiring to smuggle nuclear goods to Pakistan.



The beginnings

Khan began his nuclear smuggling in the mid-1970s while working in the Netherlands as an engineer at Urenco, a European consortium, where he furtively accessed blueprints of centrifuges for enriching uranium. With the help of the designs he stole and the nuclear components and materials he procured illicitly from Europe and North America, Khan played a central role in Pakistan's nuclear-weapons development, although China's covert assistance was critical to its ultimate success. Until Pakistan's 1998 nuclear tests, Khan focused on smuggling western nuclear goods to his country. Thereafter, Pakistan's nuclear czar established a nuclear supermarket, selling starter kits and components to countries the U.S. considered rogue states — Iran, Libya and North Korea. Yet, the U.S. never indicted Khan. Why the world's nuclear non-proliferation leader did not indict the top global nuclear-smuggling kingpin is an issue that has not even been examined.

The Lubbers revelations

Former Dutch Prime Minister Ruud Lubbers revealed in 2005 that the Netherlands sought to arrest Khan in 1975 and then again in 1986 but that on each occasion, the Central Intelligence Agency (CIA) advised his country to back off. With Dutch authorities deferring to U.S. intelligence, Khan was allowed to return to the Netherlands repeatedly, with his last visit being in 1992. In fact, after Khan was tried in absentia and sentenced to four years in prison in 1983 for stealing secret blueprints, the Amsterdam court lost his legal files, with the main judge suspecting the CIA's hand in the disappearance. In 1985, Khan's sentence was overturned on a technicality — he had not been served the summons. Instead of seeking a retrial, authorities abandoned prosecuting the most momentous crime committed in the Netherlands since the Second World War. As Lubbers said, "The last word is Washington. There is no doubt they knew everything, heard everything." So, why did the U.S. protect Khan? Probably the same reason why Washington ignored mounting evidence of Pakistan's nuclear-weapons advances. As The New York Times reported in 1998 that "without China's help, Pakistan's bomb would not exist", but that the U.S. "pursued policies that proved almost as essential to the Pakistani bomb program" as the Chinese assistance. In the 1980s, while Khan's network was smuggling western nuclear items to Pakistan, the CIA was smuggling billions of dollars of weapons to anti-Soviet guerrillas in Afghanistan via Pakistan. Add to the picture another Cold War dimension that Lubbers alluded to: New Delhi's warm ties with Moscow and the 1974 nuclear test induced the U.S. to turn a blind eye to Pakistani proliferation to help balance India.

A role switch

The U.S.'s concerns were stirred only after Pakistan's 1998 nuclear tests, which emboldened Khan's metamorphosis from a buyer to a seller. After Iran and Libya later admitted receiving nuclear items from Pakistan-linked black marketeers, U.S. pressure compelled Pakistan to open investigations into Khan's activities. What followed was a remarkable charade. In a state-scripted confession, Khan appeared on national television in 2004 asking for forgiveness, saying he had acted entirely on his own in transferring nuclear goods to other countries. Pakistani dictator General Pervez Musharraf then quickly pardoned Khan. But to prevent the uncovering of the military's own role in the nuclear-smuggling scandal, Musharraf also barred international investigators from questioning Khan. Before long, the charade started unravelling. Khan disowned



his confession, saying it had been forced upon him by Musharraf, while the Islamabad High Court ruled his house detention unlawful. Khan lived the rest of his life in his comfortable Islamabad villa, with state-provided security. Yet, the U.S. readily acquiesced in the charade from the beginning, despite knowing well that Khan could not have operated alone in a country that has always been in the grip of its military. British investigative journalists Adrian Levy and Catherine Scott-Clark, in their book on the scandal, concluded that Khan's underground trade was "supervised by Pakistan's ruling military clique". Musharraf himself, according to French intellectual Bernard Henri Lévy, was in the know of "Khan's dark machinations".

The North Korean link

In exchange for supplying centrifuges to Pyongyang, Pakistan received North Korean ballistic missile technology, helping it to build its first intermediate-range, nuclear-capable missile, Ghauri. North Korea's nuclear-weapons capability, however, relies not on enriched uranium but on plutonium, which the Khan network did not traffic. Iran apparently received second-hand gear — discarded Pakistani centrifuges, some with traces of enriched uranium. Libya was sold basic kits, from ageing centrifuges to natural uranium. As Pakistan's Kahuta facility advanced from entry-level P-1 aluminium centrifuges to P-2 maraging-steel centrifuges — which could spin almost twice faster, thus doubling the rate of uranium enrichment — Khan's network palmed off the old centrifuges on other nations. However, until Khan's very last breath, Pakistan's military generals ensured that no outside investigator questioned him.

The law of consequences

Against this background, America's shielding of Khan, who long championed a "Muslim bomb", paralleled its policy of not penalising the Pakistani military's nexus with terrorist groups, thus leading to unforeseen but far-reaching consequences. Such dual shielding paved the way for Pakistan's emergence as the world's sole state sponsor of Islamist terrorism protected by nuclear weapons. Today, the U.S. maintains contingency plans to seize Pakistan's nuclear weapons if they risk falling into terrorist hands. Such a threat, however, comes from jihadists within Pakistan's military and nuclear establishment. The U.S. has added Iran's Islamic Revolutionary Guard Corps to its list of foreign terrorist organisations but not Pakistan's rogue Inter-Services Intelligence, with which the CIA has sustained long-standing ties. But as if to underscore the law of unintended consequences, the U.S., through its humiliating Afghanistan defeat at the hands of a terrorist militia, has tasted the bitter fruits of the Pakistani generals' cross-border use of jihadist proxies from behind their protective nuclear shield.

TROUBLE IN BANGLADESH

The UN, the U.S. and India have condemned incidents of majoritarian violence against Bangladesh's Hindu minority community during Durga Puja in the past few days. What is particularly worrying is that the attacks which have left at least six people dead and dozens injured, have followed, according to the Government, fake news reports shared over social media, indicating a conspiracy to instigate the violence. The mob violence appears to have begun in Comilla, in Chittagong district, where an image allegedly showing disrespect to the Koran was circulated, and resulted in several major mob attacks on Hindu temples and homes belonging to the minority community. The Narendra Modi government, which has sought to preserve good



relations with Bangladesh's Sheikh Hasina government, has also praised the authorities for moving quickly to take control of the situation. According to the police, more than 450 people have been arrested over the past week of violence and more than 70 cases filed in different parts of Bangladesh. Prime Minister Hasina has promised strict action and sought to reassure minorities during an address via videoconference to Hindu devotees at the Dhakeshwari national temple. In a message for New Delhi, she also said that Bangladesh's big neighbour must be sensitive to the situation, and alluding to violence against minorities in India, asked that "nothing is done there [India] that affects our country [Bangladesh]". The Indian High Commission in Dhaka, which was in touch with law and order officials at the Centre, also stepped in to meet with members of the Bangladeshi Hindu community, including representatives from the ISKCON group that was attacked. The ISKCON headquarters in West Bengal as well as BJP leaders also called on Mr. Modi to personally intervene. Given the seriousness of the attacks and the fear that has gripped the Hindu minority in Bangladesh, the international and Indian concern is not surprising. However, New Delhi will have to act cautiously in light of all the various links between India and Bangladesh. While the Indian High Commission's act of meeting local minorities comes from a sense of compassion, it could be read as an act of interference. The impact of the Citizenship (Amendment) Act in 2019 had a widespread effect in Bangladesh, and at least 12 people were killed in protests against Mr. Modi's visit to Dhaka earlier this year. As a regional leader, India has every right to be concerned about the plight of communities in the subcontinent. However, it must ensure that its domestic drivers do not upset carefully built foreign relations. And any act that is seen as religiously partisan is bound to destabilise the otherwise close and productive relations between the two countries, which have a shared history of cooperation over much of the past 50 years.



DreamIAS



NATION

A SHADOW FOREIGN POLICY FOR THE FIRST TIME

India does not have a tradition of shadow cabinets lurking behind the government in power with ready alternative approaches to policy matters. The opposition challenges government policies, but provides no alternatives to be adopted in the event of a change in government. It is only at the time of elections that a manifesto is put forward, but that does not become the policy of the government automatically. The opposition uses think tanks and NGOs to float ideas, which may become part of policy if they become publicly acceptable. Since there has been a consensus on foreign policy, a shadow foreign policy was out of the question. But for the first time, a document has emerged from the Centre for Policy Research (CPR) in the nature of an alternative to the present foreign and defence policies named 'India's Path to Power: Strategy in a world adrift'. It is authored by eight well-known strategists and thinkers. In 2012, many of the same authors had produced another document, 'Non-alignment 2.0', in the light of the global changes at that time, as a contribution to policymaking, without criticising the policies of the government. But the new government in 2014 had its own ideas and not much attention was given to the study. The present document, however, is in the nature of an alternative to the foreign and defence policies of the Modi government, as some of its tenets are not considered conducive to finding a path to power for India in the post-pandemic world. The eight conclusions are quite logical and reasonable, but the tenor and tone of the paper is one of criticism and need for course correction.

Change in foreign policy

The first term of the Modi government was remarkable for its innovative, bold and assertive foreign policy, which received general approbation. Prime Minister Narendra Modi led from the front and took the credit for overcoming the hesitations of history. He laid out his priorities and pursued them with vigour. After his unconventional peace initiatives with Pakistan failed, he took a firm stand and gained popularity at home. His wish to have close relations with the other neighbours did not materialise, but his helpful attitude to them even in difficult situations averted any crisis. He brought a new symphony into India-U.S. relations and engaged China continuously to find a new equation with it. India's relations with Israel and the Arab countries became productive. Mr. Modi's enhanced majority in the second term was partly on account of his foreign policy successes. It was when the second Modi government dealt with some of the unfinished sensitive matters, which were essentially of a domestic nature (Article 370, citizenship issues and farming regulations), that their external dimensions led to a challenge to its foreign policy. Questions were raised in the West about human rights and the state of democracy in India. The opposition in India began to question the foreign policy postures of the government. The pandemic, the economic meltdown and China's incursion into Ladakh added to the woes of the government. The cumulative effect of these developments is reflected in the CPR report. It says, "The foundational source of India's influence in the world is the power of its example. This rests on four pillars, domestic economic growth, social inclusion, political democracy and a broadly liberal constitutional order. If these integral pillars remain strong, there is no stopping India... The most significant change in the last decade or so is that we cannot take for granted the success of India's development model... But the fundamental sources of India's development and international influence look increasingly precarious. We must confront this changed outlook...



Nourishing the foundations of India's success requires a conscious political effort, and it is a strategic imperative..."

Set the house in order

This assertion at the beginning of the report is the heart of the report and it is repeated in different forms. In other words, the finding is that domestic issues have impacted foreign policy and, therefore, India should set its house in order to stem the tide of international reaction. "It is important that we acknowledge the perverse impact of domestic political and ideological factors that are driving our foreign policy... Political polarisation and majoritarianism will lead to a diminished India — one that may struggle to meet the challenges and opportunities that lie... ahead," asserts the report. It also says that the confused international order that followed the global crisis saw an "omnidirectional Indian foreign policy." These harsh statements are likely to be challenged by the government, which will claim that India has stood true to its own foundational values and there is no "authoritarian model of development". Once the basic premise is set aside, the report has many positive elements, which will help policymakers to rethink policy. For instance, the report rightly points out that "it would be incorrect and counterproductive for India to turn its back on globalisation..." It also suggests that SAARC should be revived and that India should rejoin the Regional Comprehensive Economic Partnership and continue its long-standing quest for membership in the Asia-Pacific Economic Cooperation. The report also stresses the importance of strategic autonomy in today's world where change is the only certainty. As for the India-U.S.- China triangle, the report makes the unusual suggestion that India should have better relations individually with both the U.S. and China than they have with each other. The report contains detailed analyses on different regions and key countries, but the general thrust is that all is not well with Indian foreign policy and a fundamental change is necessary to meet the present situation. The report concludes that since China will influence India's external environment politically, economically and infrastructurally, there is no feasible alternative to a combination of engagement and competition with China. The approach of the present government is not very different. There is implicit criticism of the Pakistan policy when the report asserts, "as long as our objectives of policy towards Pakistan are modest, resumption of dialogue and a gradual revival of trade, transport and other links are worth pursuing." A considerable part of the report is devoted to issues relating to defence, the nuclear doctrine, space, cyberspace and the ecological crisis. On the looming environmental disaster, the report states that since India is still at an early stage of its modern development trajectory, it is not yet locked into an energy-intensive pattern of growth. Much of its infrastructure remains to be built. It suggests all is not well with the present strategy for environmental protection and economic development. The eminent stature of the authors and the CPR will certainly compel detailed studies of the report in the run-up to the next elections and beyond as the time frame suggested for change is the next decade. But the significance of the report is that it reveals the end of the era of consensus foreign policy and presents a shadow foreign policy for the first time in India. It remains to be seen whether any of the opposition parties will adopt it and fight the next election on the platform provided by the report.



CHINA'S MEDIA HAIL BHUTAN DEAL AS 'BREAKTHROUGH'

Thursday's agreement between China and Bhutan on a "three-step roadmap" to speed up border talks will "break the deadlock" in negotiations, reports in the Chinese media have said. Bhutan and China signed the agreement at a videoconference on Thursday. China's Assistant Foreign Minister Wu Jianghao said the MoU "will make a meaningful contribution to speeding up the negotiation on demarcation and promoting the process of establishing diplomatic ties between the two countries", the Chinese Foreign Ministry said in a statement. The statement also quoted Bhutan Foreign Minister as saying Bhutan "will work with China to implement the MoU, unswervingly push forward the negotiation on demarcation, and be committed to strengthening bilateral relations". While Bhutan's Foreign Ministry issued a brief press release on the agreement, neither side has released details on the roadmap. The Chinese state media did, however, hail the MoU as the first "breakthrough" in the border talks, which began in 1984, with 20 rounds held. Wang Shida, a South Asia scholar at the China Institutes of Contemporary International Relations, a think-tank affiliated to the Ministry of State Security, told the Party-run Global Times the MoU "is a milestone and would help break the deadlock." "The boundary issue between China and Bhutan is special because it not only relates to Bhutan but also has become a negative factor for China-India ties," he said. "If China and Bhutan make progress in solving boundary disputes, India will have fewer chances and excuses to make troubles on border areas."

Doklam factor

Wang Se, another expert at CICIR, expressed the commonly held view in Beijing that India's concerns over the Doklam plateau, the site of the 2017 stand-off with China, was one reason for negotiations stalling in the past couple of years with New Delhi wary over a border deal that "would undermine its interests". "After the Doklam standoff, China and Bhutan did not hold a meeting for border talks for a long time, which shows India was exerting great influence on Bhutan," he said. As the talks go forward, it remains unclear to what extent China would be willing to make territorial concessions, which a settlement would require from both sides. Earlier negotiations had dealt with territories in Bhutan's north and west, including Pasamlung and Jakarlung valleys in the north and Doklam to the west. China had, according to reports, previously offered a package solution that would see Beijing controlling Doklam and ceding the northern valleys. The inclusion of Sakteng into the dispute last year was seen by some observers as a negotiating tactic to bring Bhutan back to the table. Since the 2017 stand-off with India, Beijing has already strengthened its de facto control over much of the Doklam plateau, located strategically along the India-China-Bhutan trijunction. Barring the face-off site where India had objected to a road being built that would push the tri-junction point further south, China has deepened its presence elsewhere on much of the plateau and faced little opposition from Bhutan in doing so. Chinese media last year even showed images of a newly built village in Doklam, in territory disputed by Bhutan and China. While no details of the three-step roadmap have been revealed, Mr. Wang added that the roadmap might follow the three-step process of the India-China border talks. It remains to be seen, however, if the border negotiations with Bhutan would be as tortuous. Qian Feng of Tsinghua University told the South China Morning Post that the steps "might include setting up a framework first, confirming the specific disputes with an exchange of maps, and then a resolution stage."



IN THE CROSS HAIRS, CIVILIANS AND KASHMIRI HARMONY

Over the past two weeks, more than 11 civilians and nine Army troops have been killed by militants in the Kashmir Valley. Most of the targeted civilians have been Hindus, though there have also been Muslims, and a Sikh. The Hindus killed include Kashmiri Pandits and migrant labour.

Wave of fear, insecurity

The immediate reaction to these killings has been a flight of Pandits who had returned to the Valley under the 2006 Prime Minister's programme for the return and rehabilitation of migrants, which offered jobs in the Valley to Pandit teachers. Pandit organisations say that as many as a third of the returnees have left; even those of the 800 families that stayed through the insurgency years have begun to leave. Though Kashmiri political parties and civil society, as well as Lieutenant-Governor Manoj Sinha's administration, have pleaded with them to stay, their pleas are unconvincing given the very real insecurity created by the killings. The plight of migrant labour is equally grave. Most are attempting to leave the Valley and return to their home States. The administration has ordered that those who are not able to immediately return be sheltered in police stations and guarded camps. In other words, like refugees. Whether they will then be aided to return to their homes remains to be seen; likely they will. These two groups are not alone in wishing to flee. A fresh wave of fear has gripped the Valley, with most residents fearing they may be caught between the militants and the administration. Allegedly, over 700 people have been taken into detention by the police, under suspicion of supporting militancy. Meantime, according to intelligence agencies, potential militant targets include religious leaders, panches and the media. It was widely anticipated that Pakistani armed groups would be emboldened to revive cross-border infiltration following the Taliban's takeover in Afghanistan. Now it seems that their strategy repeats elements of the insurgency of the 1990s. As happened then, the insurgency was prefigured by attacks on Pandits who were seen by Islamist militants as an arm of India because they were Hindus, and Muslims who worked in the State administration or central Indian agencies such as Doordarshan.

Attacks and the aim

The attacks were intended to both communalise the Valley and paralyse its administration, and over time succeeded in doing so, albeit only partially. The Prime Minister Atal Bihari Vajpayee's ceasefire negotiations with cross-border armed groups in 2000 were shattered by the killing of over 100 Bihari labourers, but the years of peace building that followed, from 2002-2014, restored a large degree of administration and created conditions for the return of Pandits — sadly at far too gradual a pace — and of migrant labour. Whether cross-border and local militant groups succeed in once again communalising the Valley is debatable. Much depends on the policy the Union administration adopts in response. There are two quite separate issues involved: one, reassuring the minorities in Kashmir as well as the wider public of the Valley; two, a rethink on counter-insurgency strategy, including its cross-border tentacles.

Some reassurance

Hearteningly, every single opinion group in Kashmir has condemned the killings. Mosques have broadcast their criticism. Kashmiri political parties have voiced their opposition to such militancy,



as have political leaders, including the Hurriyat and Mirwaiz Umar Farooq. Civil society groups have issued statements of protest. Local community leaders and neighbours have visited Pandit homes to offer aid and support. This wave at the ground level can provide a strong base for reassurance, if encouraged. Encouragement can begin with the Lieutenant-Governor. Thus far, Mr. Sinha's administration does not appear to have consulted either the Kashmiri Pandit organisations, or the various groups that have condemned the killings, on which steps can be taken to restore a degree of confidence. This is surprising, given that these groups, added together, comprise a formidable cross-section of public opinion, and with their support, militancy can once again be socially marginalised, as it was during the peace-building years. From available information, it appears that the bulk of the recent civilian killings have been carried out by what the Army calls 'hybrid militants', because they are locally recruited and trained, have regular jobs and are part-time militants using basic weapons such as country pistols. The implications are that the field of militancy has grown more dispersed, with wider public support, despite counter-insurgency successes in degrading large armed groups such as the Lashkar-e-Taiba and the Jaish-e-Mohamed. In this context, any opportunity to marginalise militancy is vital.

Setback for Kashmiri Pandits

Many have begun asking whether Kashmiri Pandits will ever be able to return to the Valley, as the Narendra Modi administration had promised in August 2019. There is no doubt that the recent civilian killings have been a major setback to prospects of return. It is also the case that Kashmiri Pandit organisations have increasingly complained of administrative neglect on returns over the past year. A recurring point that is made by some of them is that the administration, while focusing on returns, needs to simultaneously pay attention to securing Pandit families that never left. Their condition has worsened as their numbers have shrunk; though less covered by the media, the same problem has begun to affect the Sikh minority too, whose numbers have shrunk over the past decade-plus. The Kashmiri Pandit tragedy has continued for 30 years now, and like all compounded tragedies requires a range of actions, from security to justice to reconciliation. Beginning with security, which is the first requirement to enable justice and reconciliation to follow, it is a mistake to imagine that gated enclaves alone will provide it, or even that stepped up counter-insurgency operations will minimise the risk. Each measure is useful if accompanied by community support, but neither is a solution to the security dilemma by itself. True, targeted killings will only cease when insurgency does. But peace-making combined with counter-insurgency has proved more efficient in ending insurgency in democratic countries than counter-insurgency alone, in our own experience as well as across the world. Thus far, the Union administration has not held out any olive branches; on the contrary, its implementation of the August 2019 decisions has added one cause for resentment after another, the latest being the multiple use of Article 311(2) to dismiss government employees without an enquiry or hearing. A policy for Pandit property recovery that had not been thought through did not help either; apparently it has now been corrected. Political science and sociology both tell us that an insecure majority is unlikely to protect vulnerable minorities; it is focused on its own survival. The arrest of over 700 people in the aftermath of the recent civilian killings has added to the majority's sense of insecurity, because it raises questions about why police intelligence has not narrowed the field of suspects as should, surely, be professionally required.



Approach to Pakistan

The Narendra Modi administration appears to have adopted a multi-pronged approach to Pakistan recently, beginning with a ceasefire and extending to an invitation to the Pakistani National Security Adviser for a regional meeting on Afghanistan, while giving the Army a free hand on cross-border infiltration. Why then is it not adopting a similarly multi-pronged approach in the Valley, where civil and human rights remain severely restricted and the administration lacks the transparency that oversight and grievance-redress commissions provided? Without overall civil and human rights, how can minority rights be protected or minority returns be encouraged?

ARMY TRAINS OFFICERS POSTED ALONG LAC IN TIBETOLOGY

With a view to orienting its officers and men posted along the Line of Actual Control (LAC) in Tibetan culture and also preparing them to better understand the information warfare, the Army has begun a course in Tibetology in a tie-up with the Central Institute of Himalayan Cultural Studies in Arunachal Pradesh. The first batch of 15 participants was trained from March to May this year. "Understanding Tibetan traditions, cultural peculiarities, democracy and political influence and so on empowers our men and officers to understand where we are going and where we are operating," said a senior Army officer at the 5 Mountain Division at Tenga in Arunachal Pradesh. Officers posted in the area would be considered for the course. The Army's Training Command, ARTRAC, has identified seven institutes for Tibetology across the country, two of which are in the northeast. The other one is the Namgyal Institute of Tibetology in Sikkim.

Second course soon

Such training was happening earlier too but now it has been formalised. On a trial basis, the first batch was held from March to May, and the Army has entered into a Memorandum of Understanding with the institute. The second course is scheduled to begin next month. Currently, two courses a year are planned with about 15-20 participants in each course. Around 150 officers have been trained so far across the country at various centres, the officer stated. A longer course was being planned and a proposal for a three-month course had been sent to ARTRAC, another officer noted. "The officers who are trained will function as trainers in their battalions and in a few years, we will have a sizable number of personnel with understanding of Tibetan issues," the officer explained. During the 42 days of the preliminary course, Tibetan history, geopolitics and current political dynamics were covered in the form of lectures and case studies, the officer added. Lamas who were proficient in Tibetan issues were hired from the Bomdila Monastery to teach the course.

UAVS BOOST ARMY WATCH IN EASTERN SECTOR

The Army Aviation has recently got control of Heron-I unmanned aerial vehicles (UAV) in the eastern sector — these were earlier with the Artillery — bringing all aviation assets under one roof and augmenting its ability to keep an eye on Chinese activities across the border. The move comes just months after the raising of a new Aviation Brigade at Missamari in Assam. "Army Aviation got control of the UAVs in August this year from Artillery. There are certain advantages of UAVs or remotely piloted aircraft (RPA) being with Army Aviation," an officer said. The Army Aviation Brigade at Missamari was raised in March this year to enable better command and

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



control of aviation resources, the officer said, adding that in the future battlefield, manned and unmanned aircraft teaming will reap huge dividends. The Brigade operates the Cheetah and Advanced Light Helicopter (ALH) Dhruv utility helicopters, Rudra weaponsied ALH and Heron-I UAVs. Three RPA flights are working under the Army Aviation squadrons which consists of around 14 UAVs, according to the officer. With the UAVs being under the Army Aviation, the receipt capability has become seamless and more responsive, officials said. All aerial assets are under one umbrella which allows optimised employment of RPAs during operations in conjunction with other aviation assets. "It also helps in upgradation of flight safety management and practices and also boosts training infrastructure for RPA aircrew," the first officer cited above said. "It also ensures better maintenance and serviceability by optimising the supply chain and spares management," the officer said and added, "It smoothens out the command and control process especially during operations." Talking to a group of visiting journalists on the new inductions, Lt. Col. Amit Dadwal posted at the base said it has given them round the clock capability for surveillance as well as operations. He said the ALH has become the backbone of the main operations of the Army as of now. "With the ALH we have been doing night casualty evacuation," he added. The Army has 90 ALH and 75 Rudra helicopters in service, which are indigenously designed and developed by Hindustan Aeronautics Limited (HAL). The Army Aviation is also very soon slated to induct a surveillance downlink system, anti-aircraft missiles, countermeasures against missile systems, new generation surveillance pods among others which will enhance the existing role to manifold. In the last few years, the Army and Air Force have significantly upgraded their defences in the eastern sector, including induction of new equipment, as part of efforts to match China's build up and infrastructure development on its side of the Line of Actual Control (LAC). There has also been a major impetus to infrastructure development in the region. The Israeli Heron-I UAVs are in the process of being upgraded and officials said they will also be deployed in this sector in due course. In addition, the Army has recently leased four Heron-TP Medium Altitude Long Endurance (MALE) unmanned aerial vehicles (UAV) from Israel Aircraft Industries which are much more capable than the Heron-1s. These are expected to be deployed in eastern Ladakh in the backdrop of the standoff, which began last year and is still continuing. During the standoff in eastern Ladakh, the Army Aviation had seen a quantum jump in the employment of helicopters along the northern borders. However, a major issue of concern is the ageing fleet of Cheetah and Chetak helicopters and their delayed replacement. The technical life of these helicopters will wind down from 2023, which will further exacerbate the deficiencies. The Ka-226T utility helicopter deal with Russia along with the indigenous Light Utility Helicopter (LUH) are meant to replace them but the Ka-226T deal has been stalled for several years over the percentage of indigenisation.

IN THE LINE OF DEFENCE, WITH GROWING POWERS

During the Kargil war in 1999, the Army and other intelligence agencies faced a peculiar problem. Their interception centres in the high-altitude region were unable to interpret the wireless communication of the Pakistani intruders. The Pakistanis spoke in Dardi, Balti, Pushto and Farsi as they occupied key heights along the Line of Control (LoC). A small unit of the Border Security Force (BSF), posted at Channigund, was asked to interpret and analyse the conversations taped by the agencies on a cassette. BSF Inspector Habibullah, a local from Drass, assisted the Army in translating the wireless conversations in Dardi and Balti. According to a book, BSF: India's First Line of Defence, edited by Anirudh Deshpande, associate professor, History, Delhi University, the

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BSF Inspector “also helped in motivating local youths for working as porters” as large number of population had fled the area in panic due to shelling from across the border. Though the BSF played a key role in the Kargil war — it was the first to send five specific intelligence inputs about a Pakistani build-up, months before the war commenced in May 1999 — the achievements of the central armed police force (CAPF) that reports to the Ministry of Home Affairs, were lost in footnotes of government reports. The BSF was raised on December 1, 1965 after the India-Pakistan war. Till then, the border with Pakistan was guarded by the armed battalions of State police who were ill-equipped to stop trans-border crimes and infiltration. The then Prime Minister, Lal Bahadur Shastri, constituted a commission of secretaries and based on its report the BSF was raised. Its first director general (DG) was police officer K.F. Rustamji. Former police officer P.V. Rajagopal, who authored an autobiographical narrative on the founding DG, quotes Rustamji : “After handing over charge as IGP Madhya Pradesh, I reached Delhi and wrote my joining report on 21 July 1965...I became the head of a one-man organization. I was the sole Borderman; nobody below me, nobody above me...”

Pivotal role

It was raised by drawing personnel from the State armed police, the armed forces and from 25 battalions (a battalion is 1,000 personnel approximately). The BSF has now expanded to around 200 battalions. The BSF played a pivotal role in the 1971 Bangladesh liberation war. The BSF and its counterpart — the Border Guards Bangladesh — are now commemorating 50 years of Bangladesh’s liberation (formerly East Pakistan) through year-long events. The 56-year-old force, deployed along the Bangladesh (4,096.7 km) and Pakistan (3,323 km) borders, is currently at the centre of a political storm after the MHA enhanced its operational limits in Punjab, West Bengal and Assam. The MHA, through a notification in the Gazette of India on October 11, enhanced the “arrest, search and seize” powers of BSF up to 50 km from the international boundary in the States of Punjab, West Bengal and Assam. In Gujarat, the limit was reduced from the existing 80 km to 50 km and in Rajasthan, the 50 km limit has remained unchanged. Opposition parties have questioned the move, terming the order an attack on federalism. According to the Seventh Schedule of the Constitution, policing is a State subject. However, according to the BSF Act, 1968, passed by Parliament and the rules framed in 1969, the BSF has been assigned three primary tasks while deployed along the borders — promote a sense of security among the people living in the border area; prevent trans-border crimes/unauthorised entry into or exit from the territory of India and prevent smuggling and any other illegal activity. In border areas, the BSF can “arrest, search and seize” in cases pertaining to smuggling of narcotics, prohibited items, illegal entry of foreigners and offences punishable under any other Central Act and select provisions of the Code of Criminal Procedure (CrPC). The BSF does not have policing powers and after apprehending a suspect, it can only conduct “preliminary questioning” and the seized consignment or a suspect have to be handed over to the local police within 24 hours. Such powers under CrPC are already available to other central forces such as the Indo-Tibetan Border Police (ITBP), the Central Reserve Police Force (CRPF) and the Sashastra Seema Bal (SSB). The ITBP (raised to protect the China border) and the SSB (for Bhutan and Nepal border) are also border guarding forces but can be deployed in the hinterland at the request of State governments. In 2011, the Congress-led UPA government proposed legislation to grant similar powers to the BSF across the country, but the Bill was not passed. In 2012, Narendra Modi as Gujarat’s Chief Minister had written to the then Prime Minister, Manmohan Singh, opposing the Centre’s proposed move. Over the years, the BSF’s



role expanded and it was also deployed in areas affected by Left-wing extremism (LWE), for law and order situation and on election duty. The October 11 notification replaces a 2014 notification under the BSF Act, 1968, which also empowered the BSF to conduct counter-insurgency operations in the States of Manipur, Mizoram, Tripura, Nagaland, Meghalaya, Jammu and Kashmir and Ladakh.

Territorial limit

“The BSF does not have any investigating powers. Say, if a drone has been spotted near the Punjab border and has to be tracked beyond the 15 km limit, the present notification gives us a legal teeth to conduct the searches in nearby areas and not be constrained by territorial limit. We anyway alert all the agencies and the local police,” said a senior BSF official. The recent order only enhances the BSF’s “territorial jurisdiction”, said the official, giving the force an opportunity to also conduct independent searches. “But the FIR and investigation has to be done by the local police and concerned agency only, we have no such powers. The 50-km limit is being implemented to enforce uniformity,” the official added. Further explaining the order, the official said it would remove any confusion as the territorial limit was 15 km, 50 km and 80 km in different States. “In case of northeast States, except Assam and Arunachal Pradesh, the BSF’s jurisdiction was already there in the whole of the other five States. Even the Central Acts and CrPC, where the BSF is empowered to act, there are certain specified sections. There is no change in the sections and the Act, this notification has only increased the territorial jurisdiction.” After the Kargil war, a committee on internal security headed by retired IAS officer N.N. Vohra recommended that all internal security duties should be dealt by one force, which led to the gradual withdrawal of the BSF from Kashmir Valley. The BSF has a thin presence in the interiors of J&K now. Its primary responsibility is guarding the 192-km international border in Jammu and a few kilometres along the LoC that is protected by the Army. The force’s rise has not come without controversies. It has faced allegations of civilian killings and human rights violations. In 1993, BSF personnel opened fire at a procession at Bijbehara in South Kashmir, killing 43 people. In 2011, Felani Khatun, a 15-year-old girl from Bangladesh, was shot dead by BSF soldiers while she was entering Bangladesh from Cooch Behar district of West Bengal. Photographs of the teenager’s body that remained hanging on the barbed wire fence for several hours before being brought down created a huge public outcry in Bangladesh. This led to a policy change and the BSF was asked to use non-lethal weapons along the densely populated Bangladesh border. BSF officials later complained that they often came under violent attack by cattle smugglers active along the West Bengal border and the non-lethal weapon policy was an impediment to their operational capabilities. That issue remains unsettled. But now, with enhanced territorial limits in States, the border agency is set expand its operations, especially at a time when the borders remain tumultuous.

THE POOR CONDITIONS OF PROTECTORS

In December 2020, Deputy Commandant Vikas Kumar of the Central Reserve Police Force (CRPF)’s elite unit, CoBRA (Commando Battalion for Resolute Action), was seriously injured when an IED planted by Maoists went off in Sukma district, Chhattisgarh. He succumbed to his injuries the next day. A month earlier, in Chintagufa area of Sukma, Assistant Commandant N. Purushottam Bhalerao was seriously injured along with nine other commandos when an IED went off during an anti-Maoist operation. Bhalerao succumbed to his injuries. In April this year, two police



constables — Omkar Raika and Pawan Chaudhary — of the Rajasthan Police were shot dead by suspected drug smugglers when they were carrying out routine checks of vehicles at checkpoints in Bhilwara district.

Paying tributes

In memory of these and other colleagues killed, all the police forces of the State and Centre observe October 21 as Police Commemoration Day. This year, tributes were paid to 377 personnel who lost their lives in the line of duty between September 1, 2020, and August 31, 2021. As the CRPF is deployed in the highly disturbed areas of Jammu and Kashmir, the Northeast and the Left-Wing Extremist-affected States, the highest casualties (82) were seen in this force. The Indo-Tibetan Border Police (ITBP), which guards the border from Ladakh to Arunachal Pradesh at forbidding heights, lost 54 of its personnel, while the Border Security Force lost 47 personnel. Among the State Police forces, Chhattisgarh, which is combating the Maoist menace, lost the most personnel (32) followed by J&K (17) and Karnataka (17). October 21 is observed as Police Commemoration Day as it was on this day in 1959 that a pitched battle was fought against the Chinese in Ladakh close to the border. The Chinese opened fire killing 10 CRPF personnel. They took seven as prisoners, while three escaped. The incident went down in the history of the forces as an example of unflinching loyalty to the nation, dedication to duty and daring of the highest order. Year after year, a contingent of the police comprising personnel of all ranks from all States and paramilitary forces of the country visit Hot Springs to pay homage to those who lost their lives that day. A memorial at the spot is testimony to the sacrifices made by our forces. On it is etched the famous epitaph by John Maxwell Edmunds: "When you go home/ Tell them of us/ And say/ 'For your tomorrow,/ We gave our today'." A company of the ITBP stands guard here even today in the extreme cold, guarding the border within visual distance of Chinese soldiers deployed across the border.

Don't let sacrifices go in vain

Despite the onerous nature of their duties, the police are a neglected lot. They get paid low salaries, have a poor quality of life and are often deprived of basic facilities. Yet they risk their lives to protect citizens. The morale of the paramilitary personnel is not of the desired level. Those who cleared recruitment exams in 2003 but joined the force in 2004 or later are not eligible for pension under the old norms. Canteen and medical facilities are dismal. Items sold through the Central Police Canteens are not exempted from GST. It is high time the government takes note of the grievances of the police and paramilitary personnel and not let their sacrifices go in vain. There are notable variations in the ex-gratia amounts given to the next of kin of the police who are killed. While certain States like Delhi and Tamil Nadu pay ₹1 crore, several other States dither to pay even half that amount. The Centre and the States need to bring about uniformity in the amount paid. While the Centre pays ex-gratia to the families of the Central Armed Police Forces which may be short of ₹1 crore, the balance should be borne by the States as ₹1 crore is reasonably sufficient to see the family through hard days. Care should be taken to ensure that the next of kin are not deprived of a decent living. Payments from the public exchequer need to be made judiciously.



LOWERING, THE BAR

Deprivation of liberty even for a single day is one day too many.” Nearly a year ago, reproaching the Bombay High Court for denying bail to TV anchor Arnab Goswami, Supreme Court Justice D Y Chandrachud had unambiguously stated the principle which courts must uphold in order to remain the “first line of defence” of the liberty of citizens. He was also reaffirming what the highest court of the land had said earlier: That “bail, not jail” must be the judiciary’s reflex; that the process must not descend into punishment. That the accused — innocent till proven guilty — must not be consigned to long stints in prison when they pose no danger of influencing the investigation, or escape. But the refusal of a special court to grant bail to Aryan Khan, son of actor Shah Rukh Khan, raises the question: Why is it that, despite such clear guidelines, the lower courts, more often than not, give the benefit of the doubt to the prosecution and the state? Of course, Khan’s innocence or lack of it must be established through due process. The 23-year-old was detained by the Narcotics Control Bureau in a drug bust on a cruise ship even though no drugs were found in his possession, he has no previous history of crime or drug abuse, and no blood test was carried out. The NDPS Act distinguishes between a drug consumer and peddler, and forbids treating the former as hardened criminals. The NCB, however, seems not to have made crucial distinctions, and has charged all those arrested in this case of “conspiracy” under a harsher provision of the law (Section 29). If there was any lesson from the public ordeal of actor Rhea Chakraborty last year, similarly accused by the NCB on the basis of WhatsApp chats, eventually amounting to little, it was this: There is a line between the pursuit of justice and headline-hunting through high-profile cases — and the NCB appears to not know the difference. In Chakraborty’s case, which spun off from a web of conspiracy theories surrounding the suicide of actor Sushant Singh Rajput and which set off a toxic media coverage, the NCB had brought a grave charge against the actor. She was charged under Section 27 A of the NDPS Act, which accused her of being involved in “financing” drugs. The Bombay High Court, while granting her bail last year, rejected the NCB’s charges as “highly disproportionate” and “extremely unreasonable”. The court also rejected the prosecution’s argument that “celebrities” be treated harshly and made an example of, saying that no actor must “incur any special liability” in the eyes of the law. At a time when a powerful executive does not shrink from using investigative agencies or harsh laws as weapons, the judiciary’s reluctance to stand up for personal liberty has costs — for an Aryan Khan or a Rhea Chakraborty, or the legions of less privileged languishing in prisons or in the many habeas corpus cases that have seen unconscionable delay. “The writ of liberty runs through the fabric of the Constitution,” Justice Chandrachud had said. If only the spirit behind his words runs down the judiciary as well.

BENGAL CAN’T BAR CBI FROM PROBING CRIMES IN STATE

The Union Government told the Supreme Court that the Mamata Banerjee Government in West Bengal does not have any “absolute” power to keep the Central Bureau of Investigation (CBI) from investigating crimes inside the State. It said that “no power, not even the Union Government”, has the authority to rattle the autonomy of the premier agency to conduct investigations, especially in cases of post-poll violence transferred to it by the Calcutta High Court, in which the State police are under a cloud. The Union Government, through the Department of Personnel and Training, was responding to a suit filed by the West Bengal Government against the Union of India under Article 131 of the Constitution. The State has challenged the CBI’s jurisdiction to register FIRs and



conduct investigations in the State in myriad cases. West Bengal said it had withdrawn “general consent” to the CBI way back in 2018. The State said the CBI’s actions were a direct attack on the federal structure of governance and aimed at harassing ruling Trinamool Congress leaders in the State. The case came up for hearing before a Bench of Justices L. Nageswara Rao and B.R. Gavai on Friday. The Bench said the arguments in the case need to be heard in detail, and posted it for hearing on November 16. In its affidavit, the Union Government, while maintaining that West Bengal’s power to withhold consent to the CBI was far from absolute, accused the latter of “suppressing” information that the post-poll violence cases were transferred to the agency by the Calcutta High Court. It said withdrawal of general consent would not stand in the way of constitutional courts entrusting the CBI with the cases “where it is found that the State police would not effectively conduct a fair and impartial investigation”. Besides, the CBI was empowered to probe cases concerning any of the Central subjects enumerated in the Union List in the Seventh Schedule of the Constitution, the affidavit said, adding that the alleged crimes under investigation were offences under parliamentary laws.

QUESTIONS AROUND THE ELECTION OF DEPUTY SPEAKER

Hardoi MLA Nitin Agrawal was on Monday elected Deputy Speaker of the Uttar Pradesh Assembly, which has barely five months left in its tenure. Agrawal won on a Samajwadi Party (SP) ticket in 2017, but switched loyalty to the BJP along with his father, the multi-term MLA, former UP minister and former Rajya Sabha member Naresh Agrawal, in 2018. In 2019, SP sought his disqualification from the Assembly under the anti-defection law. The petition remained pending until days before Monday’s election, when it was rejected by the Speaker. Technically, Agrawal, who was elected Deputy Speaker with BJP support against an SP nominee, continues to be an SP member of the Uttar Pradesh Assembly. The developments raise several questions, and refocus attention on the 17th Lok Sabha which, more than two years after it was constituted in 2019, remains without a Deputy Speaker.

What does the Constitution say about the Deputy Speaker?

Article 93 says: “The House of the People shall, as soon as may be, choose two members of the House to be respectively Speaker and Deputy Speaker thereof and, so often as the office of Speaker or Deputy Speaker becomes vacant, the House shall choose another member to be Speaker or Deputy Speaker, as the case may be.” Article 178 contains the corresponding position for Speaker and Deputy Speaker of the Legislative Assembly of a state.

Is it mandatory under the Constitution to have a Deputy Speaker?

Constitutional experts point out that both Articles 93 and 178 use the words “shall” and “as soon as may be” — indicating that not only is the election of Speaker and Deputy Speaker mandatory, it must be held at the earliest.

What are the time-frame and rules for the election of the Deputy Speaker?

All that the Constitution says is the election must be held as soon as possible. Generally speaking, the practice in both Lok Sabha and the state Legislative Assemblies has been to elect the Speaker during the (mostly short) first session of the new House — usually on the third day after oath-



taking and affirmations take place over the first two days. The election of the Deputy Speaker usually takes place in the second session, even though there is no bar on having this election too in the first session of the new Lok Sabha/Assembly. But the election of Deputy Speaker is generally not delayed beyond the second session without genuine and unavoidable constraints. In Lok Sabha, the election of Deputy Speaker is governed by Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha. According to the Rule, the election “shall be held on such date as the Speaker may fix”, and the Deputy Speaker is elected once a motion proposing his name is carried. There are similar provisions in the State Legislative Assembly Rules. Once elected, the Deputy Speaker usually continues in office until the dissolution of the House. Under Article 94 (Article 179 for state legislatures), the Speaker or Deputy Speaker “shall vacate his office if he ceases to be a member of the House of the People”. They may also resign (to each other), or “may be removed from...office by a resolution of the House of the People passed by a majority of all the then members of the House”.

Do the powers of the Speaker extend to the Deputy Speaker as well?

Article 95(1) says: “While the office of Speaker is vacant, the duties of the office shall be performed by the Deputy Speaker”. After the first Speaker, G V Mavalankar, died in harness, M Ananth Ayyangar officiated as Acting Speaker for the remaining tenure of the House (from March 7, 1956 till May 1957), and was then elected Speaker of the second Lok Sabha. After the Speaker of the 13th Lok Sabha, G M C Balayogi, passed away in March 2002, Deputy Speaker P M Sayeed remained Acting Speaker until that May, when Manohar Joshi was elected Speaker. In general, the Deputy Speaker has the same powers as the Speaker when presiding over a sitting of the House. All references to the Speaker in the Rules are deemed to be references to the Deputy Speaker when he presides. It has been repeatedly held that no appeal lies to the Speaker against a ruling given by the Deputy Speaker or any person presiding over a sitting of the House in the absence of the Speaker. (Kaul and Shakhder, 7th edition, p. 137)

Does being Deputy Speaker protect an MP or MLA from the law of disqualification?

No — with one specific exemption. Para 5 of the Tenth Schedule (commonly known as the anti-defection law) says that a person who has been elected Speaker/ Deputy Speaker shall not be disqualified if he, by reason of his election to that office, voluntarily gives up the membership of the political party to which he belonged immediately before such election — and does not, so long as he continues to hold such office thereafter, rejoin that political party or become a member of another political party. This exemption applies to the Rajya Sabha Deputy Chairman, Chairman/ Deputy Chairman of a state Legislative Council, and Speaker/ Deputy Speaker of a state Legislative Assembly as well.

Can courts intervene in cases of a delay in electing the Deputy Speaker?

A petition before the Delhi High Court has argued that the delay in the election of the Lok Sabha Deputy Speaker violates Article 93 of the Constitution. There is no precedent of a court forcing the legislature to elect the Deputy Speaker. However, experts said the courts do have jurisdiction to at least enquire why there has been no election to the post of Deputy Speaker, since the Constitution does envisage an election “as soon as may be”. In general, the courts do not intervene



in the procedural conduct of Parliament. Article 122(1) says: “The validity of any proceedings in Parliament shall not be called in question on the ground of any alleged irregularity of procedure.”

NO PLACE FOR WOMEN IN KARNATAKA

Karnataka’s Ministers and other Bharatiya Janata Party (BJP) leaders are currently outdoing each other in unchecked hate speech against women. A second-time Minister of Health, K. Sudhakar, speaking at a World Mental Health Day event at the prestigious National Institute of Mental Health and Neurosciences (NIMHANS) in Bengaluru, decided to expound on the “healing properties” of the “great Indian family”, and regretted that Indian women were either choosing to remain unmarried or not have children, or worse, have children using surrogacy. These bizarre and unrelated “facts” were not drawn from any of the (still fortunately reliable) National Family Health Surveys (NFHS), or even local regional data sets. When he did ground his remarks in the YouGov-Mint-CPR Millennial Survey, which clearly states there is no gender difference in these trends, he managed to change the foot in his mouth, asserting that the “traditional family” and its value system would be a solace to mentally troubled youth. His assertions succeeded in giving his mates a chance to provide further “justifications” that were even more delusional. C.T. Ravi, the National General Secretary of the BJP, who has single-handedly coarsened the political discourse in Karnataka, chimed in to “qualify” this statement. Not all women were like that, he said, adding that only the “modern” ones, or those working in the Information Technology/Biotechnology (IT/BT) sector, lived in micro families and aped women in the U.K. and the U.S. In fact, the “mindset of modern women has broadened too much”, he helpfully added.

Delusional statements

All these delusional statements would have been laughable had they not come from people in power, who decide not only the priorities of Government policies but put in place the State’s laws. Or, even scarier, they are coming from people in power who are willing to share space with those who resort to violence to confine that alarmingly “broadened” mind of the Karnataka woman. An increasing number of cases are being reported of hyperactive Bajrang Dal, Sri Ram Sene, Hindu Jagarana Vedike and other right-wing men’s groups intervening in inter-faith relationships using violent methods. Karnataka Chief Minister Basavaraj Bommai, who had recorded with pride the alacrity with which his State’s police had acted in checking the “moral policing” of a woman in a burqa seen with a man (presumably of another faith), chose to justify such assertions of moral values when vultures of the same feather were involved. Such “actions and reactions” of Hindu male vigilantes, he said, speaking at Mangaluru in Dakshina Kannada, a region that has been severely polarised, were not just inevitable but necessary in order to check those “hurting sentiments in society”. The latest round of misogyny, which has gone alarmingly uncontested by those very IT/BT women who are often the face of the State’s, and especially Bengaluru’s, flourishing economic profile, is part of a deepening public discourse on women. The new Home Minister, Araga Jnanendra, in his first reaction to the Mysuru gang rape incident in August 2021, did not hesitate to shame and blame the victim — an MBA student at that — chastising the couple for having visited those “dangerous” places. The University of Mysore obediently followed that “suggestion” of securing women’s safety by confining them to hostels after 6 p.m. (The order was quickly withdrawn). In Karnataka, as now in most of India, love is a four-letter word. Feminist historians, among others, have shown that the tired chant of a “culture in danger” or the “family



in danger” has been repeatedly invoked over the last 150 years, particularly at times when women assert and claim their rights to education, jobs, safe public spaces, etc. “Family/tradition in danger” seems to be an inexhaustible capital for those who are alarmed by what Indian women have achieved, particularly hard won legal rights since the late 1970s. What we are witnessing is a backlash against the language of autonomy and rights through an invocation of nationalist and kinship ideals. Such statements must not be isolated from other actions of the Karnataka Government. Karnataka recently decided to shut down close to 187 santwana kendras (mediation and counselling centres), set up in 2001 and easily among the most sought after services by women facing domestic abuse and violence in rural areas and small towns. Ostensibly, this shutdown was proposed on the grounds that the State could not spare ₹6 crore from its Budget, and did not want to replicate Central programmes.

NCRB data

Remember that the National Crime Records Bureau (NCRB) data for 2020 found that 30% of crimes against women were by family members — sons, husbands, fathers and uncles. According to the fifth round of the NFHS, Karnataka witnessed the largest increase in spousal violence, from 20.6% in NFHS-4 to 44.4% in NFHS-5. By raising the volume on “culture” and “society” in danger, the State simultaneously shuts the door, and, therefore, the public eye, on what High Court judges across the country have proclaimed as one of the most dangerous places for women — the home. Santwana kendras were crisis centres providing legal education, psychological counselling and recuperative strength to victims of domestic violence. Reports from as recently as 2015 had confirmed how crucial they had become for women’s mental wellness in all parts of Karnataka, their services largely being availed of by Other Backward Classes (OBCs), Scheduled Castes (SCs), Muslims and Scheduled Tribes (STs), in short, among the less privileged in the caste/class hierarchy. Overt power has now been conceded to (male) vigilante groups to forcefully intervene in what they believe are assaults on vaguely defined Indian, or more properly, Hindu culture. Brutal and macabre acts of violence in ending interfaith relationships are now becoming commonplace, as in the “beheading” of Arbaaz Aftab Mullah in Belagavi by men who had threatened the victim and have been identified as belonging to the Sri Ram Sene. To date, no arrests have been made in this murder case. It is these acts of violence that the Chief Minister has publicly condoned. At the same time, Karnataka’s eagerness to match if not outdo the Uttar Pradesh model of governance is also taking the form of weaponising the law to show women their place. Raucous demands have been made to pass an “anti-love jihad” law. This twin strategy, of combining law with violence, successfully replaces a language of rights with a discourse on nation and kinship. It replaces women’s recourse to legal strategies and empathetic counselling with the moral authority of nation and kin, largely exercised by men. Perhaps it is not accidental that in a Cabinet that has only one woman member, the Minister in charge of Women and Child Development in Karnataka is Achar Halappa Basappa, a man whom Myneta reports as having one criminal case against him. Only they can be trusted to govern Karnataka’s daughters.

SHE, THE PEOPLE

AICC general secretary Priyanka Gandhi Vadra’s announcement ahead of the Uttar Pradesh assembly polls that the Congress would give 40 per cent of its tickets to women candidates opens up possibilities and challenges for a party that is in an ill-lit and narrow place in the state. It could



also set off ripples that go beyond it, and spill over from UP to other states. For the Congress, it is a bold attempt to break out of a long and unchecked decline over three decades, during which it has steadily lost its mobilisation capacity among caste and religious groups in UP after having shed its umbrella character long ago. The party has been unable to step up to the task of redefining itself in the face of a two-pronged challenge — the rise of caste-centric regional outfits on one side, and of an ideologically aggressive BJP on the other. The reservation of tickets for women could be the Congress's attempt to leap over its own political weaknesses by appealing to a constituency that cuts across caste and community cleavages. A constituency that has been breaking ceilings in a range of sectors and coming of political age amid larger social shifts and technological transitions — unnoticed, or recognised only belatedly, by politics. The Congress will find that the daunting work of organisational follow-through remains. For a party that won only seven seats (two of them women) in the 403-member UP assembly in 2017, finding and fielding a larger number of women candidates will be easier announced than done. For the decision to be more than tokenism, the party must also take the next step to ensure that the women candidates are not only daughters and wives or proxies of male relatives, that its candidates' list acknowledges and rewards the growing political ambitions and aspirations of the aam aurat. That will be a tall order for a party that appears to have lapsed into political passivity even in erstwhile bastions like UP, rousing itself weakly to fight elections. Lack of organisational follow-up has shrunk the possibilities of similar decisions in other states — for instance, even as the Nitish Kumar government commendably increased the reservation for women in panchayats to 50 per cent, up from 33 per cent, that has not significantly helped in widening the political opportunity for women in Bihar. The political party in the state has been unable and/or unwilling to take the process of empowerment to the next level by connecting the dots upwards, playing a bridging role. In the 2019 Lok Sabha election, for the first time, the voter turnout for men and women was almost equal — 66.79 per cent and 66.68 per cent respectively. Political parties like the JD(U), TMC and BJD in the states and the BJP nationally have begun to tailor their agenda and programme to the irreversible forces set in motion by the growing political visibility of women. And yet, the number of women elected to Parliament and state legislatures still lags unconscionably. A beginning has been made in UP, but to take it forward, to draw the vital linkages between processes that are bottom-up and top-down, much political work remains to be done, both by the Congress and its competitors.

FOR CHANGE

A recent advisory from the National Medical Commission (NMC) emphasising the need to avoid derogatory references to the LGBTQIA+ community in medical textbooks or teaching methods has underscored the value of institutional awareness on issues concerning queer and trans people. The advisory came after the Madras High Court voiced concern over “unscientific and derogatory information” in some textbooks. The NMC cautioned medical universities, colleges and other institutions to avoid such references while teaching subjects relating to gender. The institutions were also asked not to approve books with such references, while textbook authors were instructed to amend what has been written on issues such as virginity and homosexuality. The circular represents the fruition of efforts by Justice N. Anand Venkatesh, who framed guidelines in an order in June, to protect the community's rights. He had expanded the scope of a writ petition filed by a lesbian couple for protection against harassment into one that went into the status of those who did not conform to gender identity assigned at birth or to hetero-normative sexual orientation. The court's attention was then drawn to psychiatry, forensic medicine and toxicology

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



textbooks. Justice Venkatesh had suggested that the NMC and the Indian Psychiatric Society bring in necessary changes in the curriculum. The judge had directed the police not to harass sexual minorities, but later noted with consternation that such harassment was not only continuing, but sometimes extended to NGOs and other allies of the LGBTQIA+ community. He mooted changes to the police conduct rules to provide for punishing erring police personnel in this regard. He also noted disparaging references in the media. He found that a psychiatrist had referred a gay man for cognitive behavioural therapy, while prescribing anti-depressants and drugs meant to treat erectile dysfunction under the wrong impression that sexual orientation required some sort of therapy. In the course of the hearing, the judge had subjected himself to counselling so that he could overcome his own mindset, limitations in understanding and lack of exposure to issues of gender non-conformity and to go beyond the binary understanding of sex and sexuality. Judicial intervention generally has a salutary effect on the behaviour of the state, its institutions and structures. However, barring specific directions, the spirit of judicial orders, especially with regard to social issues, rarely percolates to every limb of the administration. The queer and gender non-conforming people have found an ally in the court, but they would need greater effort on the part of the authorities at various levels, if their rights are to be protected. In any case, any change in law in terms of recognising same-sex relations or understanding self-identification of gender must be complemented by an attitudinal change in society at large.

NO EXCUSES PLEASE, INDIA AWAITS A FULL CASTE

The Narendra Modi government has finally elaborated on its reasons for not disclosing the caste data collated in the Socio-Economic and Caste Census (SECC) 2011. The Government's affidavit filed in the Supreme Court of India last month by the Union Ministry of Social Justice and Empowerment — in response to a writ petition by the Maharashtra government — has also tried to explain away the exclusion of full caste enumeration in the forthcoming Census exercise, which is expected to resume in 2022 after the COVID-19 pandemic-induced interruption. The official arguments focus on the impracticability of full caste enumeration, suggesting that operational difficulties are simply too overwhelming.

Overstating 'mistakes', 'flaws'

As detailed in the affidavit, while the total number of castes counted in the 1931 Census was 4,147, the SECC of 2011 returned over 46 lakh caste names. Such a humongous number of castes were returned partly because Indian people use the names of their caste, sub-caste, clan, gotra and surnames interchangeably. Moreover, the enumerators also got confused over the spellings and classification of the castes. The question is, if the 46 lakh caste names that were returned in the SECC 2011 were the results of "mistakes by the enumerators" or "inherent flaws in the manner of conducting census" as alleged in the official affidavit, why could not those mistakes and flaws be rectified in a decade? The Union Cabinet had appointed an Expert Committee headed by the then NITI Aayog Vice-Chairman Arvind Panagariya in July 2015, charging it with the classification of caste names returned in SECC 2011. The Government's affidavit admits that no other member was appointed to the committee. Therefore, neither did the committee ever meet nor did it fulfil its mandate in six years. Who is responsible for this negligence? The extent of errors in caste enumeration is also being exaggerated. The affidavit cites the example of Maharashtra to show that while the aggregate number of castes enlisted in the central lists of Scheduled Castes (SC) and



Scheduled Tribes (ST) and the State list of Other Backward Classes (OBC) is 494, the caste names returned by the SECC 2011 for the State stood at 4.28 lakh. But the affidavit also states that “99% of the castes enumerated had [a] population of less than 100 persons”. Out of the total population of 10.3 crore in the State, 8.8 crore people could be classified under 2,440 castes, each having a population of over 1,000. Therefore, the proliferation of caste names and the consequent difficulty in their classification have arisen not because of the majority, but a tiny proportion of the total population. This is further corroborated by an action taken report on the recommendations of the Standing Committee on Rural Development on “BPL Survey (currently Socio Economic & Caste Census, 2011)”. In this report dated August 31, 2016, the Union government is quoted as categorically stating that the data errors on caste and religion in SECC 2011 accounted for 1.34 crore out of 118.64 crore people, i.e., only around 1% of the total enumerated population. How can the same government now characterise the entire findings of the caste census as “fraught with mistakes and inaccuracies”?

Complex, yet feasible

Population census in a vast and uniquely diverse country such as India cannot but be a complex exercise. Over the decades, the census machinery has moved on a learning curve, credibly enumerating complicated categories such as language and religion, which also display considerable diversity. For instance, as per Paper 1 of 2018 on the Language Census of 2011, the number of initial raw returns of mother tongues had totalled 19,569 for the entire country. Following scrutiny, editing and linguistic grouping, these raw returns were first rationalised into 1,369 mother tongues and subsequently classified on the basis of at least 10,000 or more speakers for 22 scheduled and 99 non-scheduled languages, i.e., 121 languages at the all-India level. While caste appears to be an even more complex category than language in the Indian context, technologies to enumerate and analyse complex big data have become easily accessible today. Yet, the affidavit cites the absence of an all-India Registry of Castes to rule out the conduct of full caste enumeration in the forthcoming census. Why could such a registry of castes and tribes not be created till date by the Union and State governments, acting together, by combining the central lists of SCs and STs and the State lists of OBCs? The aggregate number of castes and tribes included in those lists would currently be around 5,000 at the all-India level. For any individual State, the maximum number of castes cannot be above 500. Rationalisation and classification of the numerous raw caste returns into a maximum of 500 castes at the State level or around 5,000 castes at the all-India level, is eminently feasible. Training manuals for the enumerators can also be drawn up on the basis of a single, consolidated caste list for each State. This could have been attained by the expert committee appointed by the Union cabinet by now, but for its innate dysfunctionality. Rather than rectifying its administrative failings, the Union government is now citing it as evidence to construct a theorem of logistical impossibility.

Within the framework

The Government’s affidavit also cites the absence of categorical constitutional or statutory requirements to count castes other than SCs and STs in the Census. However, Articles 15(4) and 15(5) of the Indian Constitution have explicitly recognised “socially and educationally backward classes of citizens” as a category distinct from SCs and STs and enabled the State to make special provisions for their advancement. Counting the population of these Backward Classes would therefore be very much within the constitutional framework. Yet, the official affidavit alleges that



full caste enumeration may compromise the basic integrity of the Census exercise, distorting the fundamental population count itself. If enumeration of individual castes under the “SC”, “ST” and “Other” categories in all censuses since 1951 have not led to such perverse outcomes, why should the additional enumeration under another “OBC” category cause such a catastrophe? Such deliberate scaremongering has no basis in the laws or the Constitution. The logistical or legal justifications of the Union government to not disclose caste census data and refuse to conduct a full caste enumeration in the forthcoming Census do not stand scrutiny. Rather, it creates ground for suspicion whether the establishment has vested interests in concealing the real numbers and proportions of various castes in the Indian population. Such subterfuge would not be acceptable to a wide spectrum of social movements and political parties, who are demanding full caste enumeration.

ALARMING HUNGER OR STATISTICAL ARTEFACT?

This year’s Global Hunger Index (GHI) did not go down well with the government. This was expected given that it ranks India 101 out of 116 countries for which reliable and comparable data exist. To add insult to injury, the GHI puts India far below some of its neighbouring countries. Barring last year’s rank of 94 out of 107 countries, India’s rank has been between 100 and 103 since 2017. This year’s slide in the rank assumes significance especially in the context of COVID-19. Is India’s performance on hunger as dismal as denoted by the index or is it partly a statistical artefact? This question assumes immediacy, especially since the government has questioned the methodology and claimed that the ranking does not represent the ground reality. This calls for careful scrutiny of the methodology, especially of the GHI’s components. The GHI has four components. The first — insufficient calorie intake — is applicable for all age groups, whereas the remaining three — wasting (low weight for height), stunting (low height for age) and mortality — are confined to children under five years. The data on deficiency in calorie intake, accorded 33% weight, is sourced from the Food and Agriculture Organization’s Suite of Food Security Indicators (2021). Had the GHI been estimated using the latest data on calorie intake, usually provided by the National Sample Survey Office, things might have looked even worse given that the leaked report of 2019 indicated that consumption expenditure in India declined between 2011-12 and 2017-18 by 4%. In rural India, it was worse at about 10% per annum. The data on child wasting and stunting (2016-2020), each accounting for 16.6% of weight, are from the World Health Organization, UNICEF and World Bank, complemented with the latest data from the Demographic and Health Surveys. Under-five mortality data are for 2019 from the UN Inter-Agency Group for Child Mortality Estimation. Contrary to what is being claimed by the government, the assessment of the situation of hunger is not based on the results of a ‘four question’ opinion poll, conducted telephonically by Gallup. However, this does not mean that the GHI is free from inadequacies.

A problematic component

Conceptually, the GHI is largely children-oriented with a higher emphasis on undernutrition than on hunger and its hidden forms, including micronutrient deficiencies. The first component — calorie insufficiency — is problematic for many reasons. The lower calorie intake, which does not necessarily mean deficiency, may also stem from reduced physical activity, better social infrastructure (road, transport and healthcare) and access to energy-saving appliances at home, among others. Recent analysis establishes that ‘physical disease environment’ at the State level



also significantly influences the calorie intake. For a vast and diverse country like India, using a uniform calorie norm to arrive at deficiency prevalence means failing to recognise the huge regional imbalances in factors that may lead to differentiated calorie requirements at the State level. From this vantage point, a large proportion of the population in Kerala and Tamil Nadu may get counted as calorie deficient despite them being better in nutritional outcome indicators. So, prevalence of calorie deficiency in these States may be overestimated. Conversely, there are States that have a higher average level of calorie intake, such as Bihar and Uttar Pradesh, but their needs may even be higher than the earmarked level of required calories for India as a whole because these States have high prevalence of communicable diseases and low level of mechanisation in the economy. Thus, it is likely that the existing methodology might underestimate the prevalence of calorie deficiency in these States. All this raises questions on the appropriateness of the calorie component of the index. India's own official estimates of prevalence of calorie deficiency are not free from this anomaly.

Tackling wasting and stunting

The GHI highlights India's dismal record in a domain that it can hardly defend, which is child undernutrition. India's wasting prevalence (17.3%) is one among the highest in the world. Its performance in stunting, when compared to wasting, is not that dismal, though. Child stunting in India declined from 54.2% in 1998–2002 to 34.7% in 2016–2020, whereas child wasting remains around 17% throughout the two decades of the 21st century. Stunting is a chronic, long-term measure of undernutrition, while wasting is an acute, short-term measure. Child wasting can manifest as a result of an immediate lack of nutritional intake and sudden exposure to an infectious atmosphere. Quite possibly, several episodes of wasting without much time to recoup can translate into stunting. However, a higher order of priority was accorded to stunting, both in research and policy, for the right reasons as it is a stable indicator and does not oscillate with minor changes in circumstances, while wasting does. Sporadic emergent circumstances in different regions may increase wasting prevalence. Effectively countering episodes of wasting resulting from such sporadic adversities is key to making sustained and quick progress in child nutrition. Thus, variations in wasting prevalence across the region should guide the relative emphasis of policy attention. If India can tackle wasting by effectively monitoring regions that are more vulnerable to socioeconomic and environmental crises, it can possibly improve wasting and stunting simultaneously. There seems to be no short-cut way of improving stunting without addressing wasting. Additionally, studies say that COVID-19 is likely to exacerbate child undernutrition in general and child wasting in particular. Such insights should have driven social policy to counter the adverse impacts of COVID-19 on food and nutrition insecurity. Unfortunately, India lost this opportunity as Integrated Child Development Scheme services were either non-functional or severely disrupted — partly because the staff and services were utilised to attend to the COVID-19 emergency.

An exception

India's relatively better performance in the other component of GHI — child mortality — merits a mention. Studies suggest that child undernutrition and mortality are usually closely related, as child undernutrition plays an important facilitating role in child mortality. However, India appears to be an exception in this regard. India's child mortality rate has been lower compared to Sub-Saharan African countries despite it having higher levels of stunting. This implies that though



India was not able to ensure better nutritional security for all children under five years, it was able to save many lives due to the availability of and access to better health facilities. The low ranking does not mean that India fares uniformly poor in every aspect. Should we then dismiss the GHI as it shows India in a bad light and relegate it to political white noise because it does not suit us? Or should we gracefully accept its insights informing us that our performance in some aspects might actually be dismal and requires urgent attention and course correction? This ranking should prompt us to look at our policy focus and interventions and ensure that they can effectively address the concerns raised by the GHI, especially against pandemic-induced nutrition insecurity.

(V) IN SPOTLIGHT FOR LYNCHING, THE NIHANG SIKHS: THEIR HISTORY IN PUNJAB, AND CURRENT STATUS

A group of Nihangs has claimed responsibility for the brutal murder of a 35-year-old man at the Singhu border farmers' protest site on Friday, allegedly because he had disrespected the Sikh holy book. In April 2020, Nihangs had attacked a Punjab Police party in Patiala and chopped off the hand of an assistant sub-inspector when stopped for a curfew pass in the midst of the lockdown.

Who is a Nihang?

Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits. The order can be traced back to the creation of the Khalsa by Guru Gobind Singh in 1699, according to Sikh historian Dr Balwant Singh Dhillon. "Etymologically the word nihang in Persian means an alligator, sword and pen, but the characteristics of Nihangs seem to stem more from the Sanskrit word nihshank which means without fear, unblemished, pure, carefree and indifferent to worldly gains and comfort," he said.

Is there a count of Nihangs in Punjab?

Scholars say it is difficult to give a specific count, given that Nihang Sikhs are divided into many factions. Broadly, there are three factions: Baba Budha Dal, Tarna Dal, and Baba Bidhi Chand Dal. The Budha Dal (basically considered a faction of the elderly) and the Tarna Dal (formed as a band of the young) are divided into further factions, including around a dozen factions in the Tarna Dal. Bhai Pritpal Singh, head granthi of the gurdwara Dukh Nivaran Sahib, Patiala, said there are more than 30 factions of Nihangs in Punjab, big and small. According to Rajinder Kaur, Assistant Professor of Religious Studies at Guru Nanak College, Budhlada, "Because of a large number of factions and their dynamic nature — they keep moving from one place to another (chakravarti or chalda vaheer) — it is very difficult to have a specific count of the Nihangs". Dr Dhillon said the Nihangs today constitute a small community. In the absence of a central command or leadership, they are loosely organised. They are stationed at their deras all year round, but set out on an annual pilgrimage of Anandpur Sahib, Damdama Sahib, Talwandi Sabo, and Amritsar, and take part in religious events and exhibit their martial skills and horsemanship.

Why have Punjab politicians not been very vocal on the Singhu lynching?

"The lynching can never be justified but the issue of desecration of sacred scripture of Sikhs is a very sensitive issue, so politicians have avoided getting into it," a Sikh scholar said. "Another factor



was that politicians did not want to have confrontation with Nihangs, who leave their homes and have no fear of death.”

What is Nihang Sikhs’ role in history?

Nihangs played a major role in defending the Sikh panth against attacks and persecution by Mughal governors in the early decades of the 18th century, and then during the invasions of the Afghan Ahmad Shah Durrani between 1748 and 1767. When the Khalsa army was divided into five battalions in 1734, a Nihang or Akali battalion was led by Baba Deep Singh Shahid. Nihangs also took control of the religious affairs of the Sikhs at the Akal Bunga (now known as Akal Takht) in Amritsar, where they held the grand council (Sarbat Khalsa) and passed the Gurmata (resolution). Their clout came to an end after the fall of the Sikh Empire in 1849; the British appointed a manager (sarbrah) for the administration of the Golden Temple in 1859. During the militancy years, the then Baba Budha Dal chief Nihang chief, late Baba Santa Singh, fell afoul of the mainstream Sikhs when he, at the instance of Indian government, went on to rebuild the Akal Takht that had been damaged during Operation Bluestar in June 1984. “Some Nihangs, including Ajit Singh Poothla, collaborated with the Punjab police to eliminate Sikh militants,” Dr Dhillon said. There were others who supported the militants. Dr Gurmeet Singh Sidhu, professor and Guru Gobind Singh Chair at Punjabi University, Patiala, recounts an instance where a Nihang misled a police party about the movement of alleged terrorists in an area.

What is their source of income today?

The major Nihang factions have under their control a number of gurdwaras, where devotees make offerings. The major factions also have agricultural land, and earn income by renting out shops in their properties. The Budha Dal also runs three schools. “Admission in the schools is purely on merit,” Budha Dal secretary Diljit Singh Bedi said. Asked about income and expenditure, Bedi said, “There are a number of cantonments of Budha Dal in different parts of the state, where the in-charges maintain records of income and expenditure.”

How are Nihangs different from other Sikhs, and other Sikh warriors?

“Nihangs observe the Khalsa code of conduct in its strictest sense. They do not profess allegiance to any earthly master. Instead of saffron, they hoist a blue Nishan Sahib (flag) atop their shrines,” Dr Dhillon said. Nihangs use the slogans ‘chhardi kala’ (forever in high spirits) and ‘tiar bar tiar’ (state of ever-preparedness) for unforeseen events. “The Nihangs are fond of a drink called shardai or sharbati degh (sacrament drink) which contains grounded almonds, cardamom seeds, poppy seeds, black pepper, rose petals and melon seeds. When a small measure of cannabis is added to it, it is termed sukhnidhan (treasure of comfort). A higher dose of cannabis in it was known as shaheedi deg, or sacrament of martyrdom. It was taken (while) battling enemies,” Dr Dhillon said.

(V) MUTING THE MOB

First they came for a Tanishq ad — and the mighty Tata empire did not stand up to a communal campaign against an image of an inter-faith home. A year later, the mob has trained its outrage on Fabindia, for advertising a festive collection that it called Jashn-e-Riwaaz. The public display of



bigotry was endorsed by BJP MP from Bengaluru, Tejasvi Surya, who accused the clothing brand of “Abrahamising” the Hindu festival of Diwali, and warned it of “economic costs”. Other self-styled defenders of Hinduism plunged into this ridiculous battle by doing a close reading of the foreheads of the models in the ad — and rejecting them because they did not wear bindis. Instead of shrugging off this absurd campaign, Fabindia has withdrawn the ad. That Hinduism and Hindus need to be defended against a phrase in Urdu — a language born in the north Indian heartland, one of 22 scheduled languages listed in the Constitution, spoken and written by freedom fighters and poets, lovers and lyricists, a strand entwined in the DNA of this diverse country — is a laughable proposition. But it gathers menace in the hands of an indignant mob that tweets first, thinks later. It becomes dangerous when hate and bigotry are so easily amplified by social media — and when the right to take offence is licensed by politicians who, it appears, wish only to speak the language of polarisation and divisiveness. And so, a mob of trolls, intent on torching the shared ritual and common ground of diversity, grows into a vigilante force. True, such intolerance feeds on the complicity of politicians such as Surya and the dispiriting lack of trust in the state to defend the citizen or the businessman. But it is also emboldened by the silence of the biggest names of India Inc, who have enormous resources to defend themselves. Their reticence will not buy them a reprieve — it will not protect the bottom line nor prevent a campaign of calumny, as the recent tarring of Infosys as “anti-national” or the labelling of Fabindia, as stolid an example of indigenous “Make in India” enterprise as any, as “anti-Hindu” reveal. It is time for corporate India as a whole, and not just individual businesses, to look hard at the balance sheet of such capitulation, to realise that the mob will not stop at one ad. By deleting “Jashn-e-Riwaaz” — Urdu for a “festival of tradition” — or scrapping an ad campaign in the hope of muting the mob, it shrinks the space for both freedom and enterprise. And paves the way for another salvo from the bullies of new India.

A GLOBAL PLAYER IN SOLAR POWER

Large-scale solar projects in Tamil Nadu have seen rapid growth in recent years. In the past five years, the cumulative installed capacity witnessed a four-fold increase to 4.4 GW, as of March 2021. Aiding this capacity addition is the State’s reasonably high insolation levels and matching solar potential, estimated at 279GW. The sharp decline in the prices for solar and resulting cost competitiveness is another factor.

Types of technologies

Tamil Nadu released the Solar Policy of 2019, aiming for 9GW of solar installations by 2023. To meet this target, the current capacity would need to be more than doubled. To do this, Tamil Nadu must keep up with market trends and incorporate innovations in the sector. ‘First-generation’ solar cells use mono-crystalline and multi-crystalline silicon wafers. While the former is made from a single crystal of silicon (of higher purity), the latter is made by combining several fragments. The efficiency of mono-crystalline panels is about 24%, while for multi-crystalline panels it is about 20%. Crystalline silicon technologies are one of the oldest in the market and occupy 95% of the global photovoltaic (PV) market. Mono-crystalline cells are dominant today. Although mono-crystalline panels are priced higher than multi-crystalline ones, the difference is diminishing and will soon attain parity. This would result in mono panels being preferred over multi due to their higher efficiency, greater energy yield and lower cost of energy. Newer technologies incorporating crystalline silicon focus on bifacial solar cells, capable of harvesting



energy from both sides of the panel. Bifacials can augment the power output by 10-20%. Within this, the Passive Emitter and Rear Contact technology is predicted to gain popularity. However, it is yet to achieve price parity for large-scale deployment. The thin film technologies developed later are classified as the 'second generation' of solar PVs. They are manufactured by depositing single or multiple layers of PV material on a substrate, typically plastic or glass. In addition to being used in solar farms and rooftops, thin films with their low thickness, light weight and flexibility are also placed on electronic devices and vehicles. Mainstream thin films utilise semiconductor chemistries like Cadmium Telluride. However, the efficiency of thin films is lower than that of crystalline silicon. This has affected their popularity and market share. New and upcoming solar cells are grouped as 'third generation' and contain technologies such as perovskite, nanocrystal and dye-sensitised solar cells. Perovskites have seen rapid advances in recent years, achieving cell efficiency of 18%. They have the highest potential to replace silicon and disrupt the solar PV market, due to factors such as ease of manufacture, low production costs and potential for higher efficiencies. Nanocrystal and dye-sensitised solar cells are variants of the thin film technology. These are in early stages for large-scale commercial deployment. There is also interest in the use of Graphene Quantum-dots for solar PVs. Graphene is made of a single layer of carbon atoms bonded together as hexagons. Solar cells made of graphene are of interest due to high theoretical efficiency of 60% and its super capacitating nature. Quantum-dot PVs use semiconductor nano crystals exhibiting quantum mechanical properties capable of high efficiency of about 66%. However, both these are in the early stages of research. Considerable advances have also been made in developing solutions that better integrate solar PVs into the grid. These include weather forecasting and power output prediction systems; operation monitoring and control systems; and scheduling and optimisation systems. Additionally, automatic systems have been developed for the smooth resolution of output fluctuations. These technologies must be considered.

Policy support

Policy support is essential to fast-track adoption of new technologies. A portion of the budget for renewable energy targets should be set aside exclusively for new technologies. Grants and subsidies can also be provided for their adoption. This can mitigate the higher initial costs of such technologies and help establish the market. Efforts must be taken to address gaps in research, development, and manufacturing capabilities in the solar sector through sector-specific investment and incentives. There must also be greater industry-academia collaborations and funding opportunities for startups. A comprehensive sector-specific skilling programme is also required for workers. All these efforts would help Tamil Nadu become a global player in the solar power sector.

SCRIPTING HISTORY

India scripted history on Thursday with its COVID-19 vaccine doses administered crossing the one-billion mark — accomplished in just about nine months after the vaccination programme rollout on January 16. What is even more outstanding is the targeting of adults. Unlike the established universal immunisation programme, for infants and children, India has never undertaken any massive universal adult vaccination programme. That this exercise involving thousands of health-care workers and others was carried out even while in the midst of a huge



number of daily cases in April-May during the second wave makes it even more remarkable. It became possible only because vaccine manufacturers, the Serum Institute and Bharat Biotech, were able to ensure uninterrupted vaccine availability even if supply was limited in the beginning. If the Serum Institute had the foresight to begin manufacture in advance, Bharat Biotech's capability to quickly develop an indigenous vaccine with the ICMR ensured that India did not have to endlessly wait for vaccine supplies from other countries. If there was hesitancy initially even among health-care workers, who were the first to be eligible to receive the vaccines, the deadly second wave led to a huge leap in vaccine uptake; vaccination was opened up to all priority groups and to everyone above 18 years before the second wave peaked in early May. India could have probably reached this grand milestone earlier had time not been wasted in asking States to procure vaccines directly from the two manufacturers at a higher cost to vaccinate the 18-44 age group. While basking in glory, it is important not to lose sight of the bigger goal of vaccinating all eligible adults by the year-end. Even as vaccine supply is increasing, the pace of the vaccination drive has to be speeded up to meet the objective. If over 75% of the eligible adults have already been vaccinated with one dose, the proportion of adults who are fully vaccinated is only 31%. Since vaccination with two doses is necessary to increase the protection level, efforts should be directed at increasing the pace of second dose vaccination. China has already administered over 2.2 billion doses and fully vaccinated over 75% of the eligible population even by mid-September. Crossing the one-billion mark became possible as India stopped the export of vaccines, impacting most low- and middle-income countries. On October 14, nearly six months after halting exports, India finally supplied vaccines to four countries; further supplies will depend on production and demand. It is imperative that vaccine production is quickly ramped up to meet demand. Any more delay in meeting international obligations will greatly hurt India's credibility as a reliable vaccine supplier to the global South.

INSACOG TO TRACK SARS-COV-2 IN SEWAGE

The decline in daily new infections across India has prompted INSACOG, the consortium of labs focused on sequencing coronavirus variants, to "prioritise" new surveillance approaches. In a bulletin dated October 11, but made public on Monday, INSACOG (India SARS-CoV-2 Genome Consortium) notes: "In view of currently declining cases and importance of early detection of increased transmission in the future, INSACOG will prioritise developing and expanding a SARS-CoV-2 sewage surveillance program." The CSIR-Centre for Cellular and Molecular Biology, which is also part of the INSACOG network, has since early 2020 been collecting sewage from large drains in cities to check for the presence of the virus. Because a large fraction of those afflicted by the virus are asymptomatic but are carriers of infection, their body fluids and stool often contain traces of the virus. Finding large proportions of it in public drains can often be a precursor to a fresh outbreak, with a rise in symptomatic infections. A study on these lines in Hyderabad had estimated that nearly 6% of the city may have been exposed to the virus from March to August 2020. India has been observing a steady decline in new infections with a seven-day average of 16,000 cases a day. The all-time low, since the first wave abated in February, was around 11,000 daily. It was after this decline that the second wave started, primarily led by the emergence of new variants such as Alpha, Kappa and Delta. "Delta (B.1.617.2 and AY.x) continues to be the main VOC (Variant of Concern) in India. No new VOI (Variant of Interest) or VOC are noted in India," the communique noted. As of last week, 1,04,441 coronavirus samples have been sequenced for their genetic structure, though the bulk of these are from two States: Maharashtra and Kerala.

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



GENE EDITING GUIDELINES FACING DELAY

Even as the Centre investigates allegations that unauthorised genetically modified (GM) rice was exported to Europe, it is yet to decide on a research proposal from its own scientists which would allow plants to be genetically modified without the need for conventional transgenic technology. Scientists at the Indian Agricultural Research Institute are in the process of developing resilient and high-yield rice varieties using such gene editing techniques, which have already been approved by many countries, and they hope to have such rice varieties in the hands of the Indian farmers by 2024. However, the proposal for Indian regulators to consider this technique as equivalent to conventional breeding methods, since it does not involve inserting any foreign DNA, has been pending with the Genetic Engineering Appraisal Committee for almost two years. The IARI has previously worked on golden rice, a traditional GM variety which inserted genes from other organisms into the rice plant, but ended trials over five years ago due to agronomic issues, said Director A.K Singh. The Institute has now moved to newer technologies such as Site Directed Nuclease (SDN) 1 and 2. They aim to bring precision and efficiency into the breeding process using gene editing tools such as CRISPR. “In this case, you are just tweaking a gene that is already there in the plant, without bringing in any gene from outside. When a protein comes from an outside organism, then you need to test for safety. But in this case, this protein is right there in the plant, and is being changed a little bit, just as nature does through mutation,” said Dr. Singh. “But it is much faster and far more precise than natural mutation or conventional breeding methods which involve trial and error and multiple breeding cycles.”

E-CIGARETTES DON'T HELP SMOKERS QUIT CIGARETTES

E-cigarettes have often been suggested as a potential means to help smokers quit. These are battery-operated devices that heat a liquid made of nicotine, flavourings and other chemicals to make an aerosol that users inhale into their lungs. But how far do these prevent smokers, once they have switched from cigarettes to e-cigarettes, from going back to cigarettes? An analysis by the Herbert Wertheim School of Public Health and Human Longevity Science at University of California San Diego and UC San Diego Moores Cancer Center, published in the journal JAMA Network Open, has found that e-cigarette use — even on a daily basis — did not help smokers successfully stay off cigarettes. Using data from the US Population Assessment of Tobacco and Health (PATH) longitudinal study, researchers identified 13,604 smokers between 2013 and 2015 who were followed over two sequential annual surveys to explore changes in use of 12 tobacco products. At the first annual follow up, 9.4% of these established smokers had quit. Among them, 62.9% remained tobacco-free, while 37.1% had switched to another form of tobacco use, including 22.8% who used e-cigarettes, with 17.6% of switchers using e-cigarettes daily. At the second annual follow-up, individuals who switched to any other form of tobacco use, including e-cigarettes, were found more likely to relapse compared to former smokers who had quit all tobacco, by a total of 8.5 percentage points. Among recent former smokers who abstained from all tobacco products, 50% were 12 or more months off cigarettes at the second follow-up and were considered to have successfully quit smoking; this compared to 41.5% of recent former smokers who switched to any other form of tobacco use, including e-cigarettes.



IMPROVING LIVESTOCK BREEDING

Livestock breeding in India has been largely unorganised because of which there have been gaps in forward and backward integration across the value chain. Such a scenario impacts the quality of livestock that is produced and in turn negatively impacts the return on investment for livestock farmers. Approximately 200 million Indians are involved in livestock farming, including around 100 million dairy farmers. Roughly 80% bovines in the country are low on productivity and are reared by small and marginal farmers. To enhance the productivity of cattle, the Rashtriya Gokul Mission was initiated in 2014 with a focus on the genetic upgradation of the bovine population through widespread initiatives on artificial insemination, sex-sorted semen, and in vitro fertilization.

Entrepreneurship development

The revised version of the Rashtriya Gokul Mission and National Livestock Mission (NLM) proposes to bring focus on entrepreneurship development and breed improvement in cattle, buffalo, poultry, sheep, goat, and piggery by providing incentives to individual entrepreneurs, farmer producer organisations, farmer cooperatives, joint liability groups, self-help groups, Section 8 companies for entrepreneurship development and State governments for breed improvement infrastructure. The breed multiplication farm component of the Rashtriya Gokul Mission is going to provide for capital subsidy up to ₹200 lakh for setting up breeding farm with at least 200 milch cows/ buffalo using latest breeding technology. The entrepreneur will be responsible for the arrangement of and would be able to sell at least 116 elite female calves every year out of this farm from the third year. The entrepreneur will also start generating income out of the sale of 15 kg of milk per animal per day for around 180 animals from the first year. This breeding farm will break even from the first year of the project after induction of milk in animals. Moreover, the strategy of incentivising breed multiplication farm will result in the employment of 1 lakh farmers. The grassroots initiatives in this sphere will be further amplified by web applications like e-Gopala that provide real-time information to livestock farmers on the availability of disease-free germplasm in relevant centres, veterinary care, etc. The poultry entrepreneurship programme of the NLM will provide for capital subsidy up to ₹25 lakh for setting up of a parent farm with a capacity to rear 1,000 chicks. Under this model, the hatchery is expected to produce at least 500 eggs daily, followed by the birth of chicks that are in turn reared for four weeks. Thereafter, the chicks can be supplied to local farmers for rearing. Under this model, the rural entrepreneur running the hatchery will be supplying chicks to the farmers. An entrepreneur will be able to break even within 18 months after launching the business. This is expected to provide employment to at least 14 lakh people. In the context of sheep and goat entrepreneurship, there is a provision of capital subsidy of 50% up to 50 lakh. An entrepreneur under this model shall set up a breeder farm, develop the whole chain will eventually sell the animals to the farmers or in the open market. Each entrepreneur can avail assistance for a breeder farm with 500 does/ewe and 25 buck/ram animals with high genetic merit from the Central/State government university farms. This model is projected to generate a net profit of more than ₹33 lakh for the entrepreneur per year. For piggery, the NLM will provide 50% capital subsidy of up to ₹30 lakh. Each entrepreneur will be aided with establishment of breeder farms with 100 sows and 10 boars, expected to produce 2,400 piglets in a year. A new batch of piglets will be ready for sale every six months. This model is expected to generate a profit of ₹1.37 crore after 16 months



and 1.5 lakh jobs. The revised scheme of NLM coupled with the Rashtriya Gokul Mission and the Animal Husbandry Infrastructure Development Fund has the potential to dramatically enhance the productivity and traceability standards of our livestock.

PLUGGING THE LEAK

Since June, the export of about 500 tonnes of rice from India has triggered an uproar in several European countries on the grounds that it was genetically modified (GM) rice. This emerged during a check by the European Commission's Rapid Alert System for Food and Feed that was testing rice flour by the French company Westhove. In June, France had issued a notification for unauthorised GM rice flour, identifying India as the point of origin, and alerting Austria, Belgium, the Czech Republic, Germany, Italy, the Netherlands, Poland, Spain, the U.K. and the U.S. as the possible destination of products made with the flour. So in August, the American food products company Mars, fearing GM contamination, announced that it was recalling four of its product lines of 'Crispy M&M'. GM-free rice that is tagged as 'organic rice' is among India's high-value exports worth ₹63,000 crore annually. India does not permit the commercial cultivation of GM rice, but research groups are testing varieties of such rice in trial plots. So the suspicion is that rice from some of these test-plots may have "leaked" into the exported product. The Indian government has denied this possibility with a Commerce Ministry spokesperson alleging that the contamination may have happened in Europe "to cut costs". However, India has indicated that it will commission an investigation involving its scientific bodies. India's history of crop modification using GM is one of test-plants finding their way to commercial cultivars before they were formally cleared. Thus, Bt-cotton was widely prevalent in farmer fields before being cleared. Though they have not been cleared, Bt-brinjal and herbicide-tolerant cotton varieties too have been detected in farmer fields. Though the Genetic Engineering Appraisal Committee is the apex regulator of GM crops, it is mandated that trials of GM crops obtain permission from States. Because of the close connections between farmers and State agriculture universities, which are continuously testing new varieties of crops employing all kinds of scientific experiments ranging from introducing transgenes to other non-transgenic modification methods, and the challenges of ensuring that trial plots are strictly segregated from farms, there is a possibility that seeds may transfer within plots. Because many Indian farmers are dependent on European imports, the Centre must rush to assuage importers that India's produce is compliant with trade demands. The fractious history of GM crops in India means that passions often rule over reason on questions of the safety of GM crops, and so India must also move to ensure that research into all approaches — GM or non GM — should not become a casualty in this matter of export-quality compliance.

THE FOUNDER OF A 'MINI-INDIA'

Sir Syed Ahmad Khan, an iconic social reformer and founder of the Aligarh Muslim University (AMU), which has completed 100 years, was born on October 17, 1817. That was a long time ago, but his thought process is as relevant today as ever before.

Integration through education

With the new National Education Policy, the role of education in national integration has been rekindled. National integration is a reality today. During colonialism, it was an ideal for Sir Syed.



His distinctiveness lay in the way he used education as a tool for national integration. He said in 1883: “It is the... verdict of all the nations and great seers of the world that national progress depends on education and training (of the people). If, therefore, we desire the prosperity and development of our nation, we should strive for a national system of education to educate our people in science and technology.” Some scholars on colonial history have criticised some of Sir Syed’s statements on social order and his perceived closeness with the colonial government. However, to draw a generalised conclusion on Sir Syed’s convictions merely through the lens of some quotes without understanding their context would not be a fair way to assess his legacy. A person’s text should be judged in the context of the time in which they lived. The period of Sir Syed’s life was characterised by rapid transition — Mughal rule yielding to British imperialism. We must not underestimate the challenges posed by the new order for someone brought up in the old order. Sir Syed embraced change against all the odds. When Sir Syed started his project of educational renaissance, he invited all Indians to come together to join hands in the struggle against illiteracy. This arose from his wish to unshackle Hindus and Muslims from medieval thinking towards broad-mindedness, reason and progress. It is critical to understand that while his approach always remained inclusive, he gave special attention to Muslims as Hindus had embarked to the path to scientific education much earlier than Muslims. It is a known fact that the debate on the tension between religion and science had settled earlier among Hindus than Muslims. Sir Syed laid out his vision for Hindu-Muslim unity in a speech in January 1883 where he said, “India is like a bride which has got two beautiful and captivating eyes — Hindus and Muslims. Within the ranks of the Hindus or Muslims themselves, or even between brothers as also between fathers and sons, mothers and daughters, there is dissension. But to make it perennial is a symptom of the decay of the family, the country, and of the nation.”

Inter-faith understanding

The bonhomie between the two communities has always existed since the inception of the Mohammedan Anglo-Oriental (MAO) College, the precursor of AMU. This was not a small task. During colonial rule, a narrative of hatred had been engineered by the British. Sir Syed led by example. During the Bismillah ceremony of his grandson Ross Masood, Sir Syed placed him in the lap of his friend Raja Jai Kishan Das. When Sir Syed established a madarsa in Ghazipur, he elected Raja Dev Narayan Singh as patron of the school. Sanskrit was one of the five languages taught at this school. The managing committee of MAO College comprised 22 members of whom nine were Hindus. Sir Syed laid the foundation of comparative religious studies and revived the spirit of Dara Shikoh’s philosophy — to bring major communities of India together by finding commonalities in their religions and assimilate them as a one mighty stream. This is why AMU established the Dara Shikoh Centre for Interfaith Understanding. Section 5 (2)(b) of the AMU Act empowers the university to promote the study of religions, civilisation and culture of India. In AMU’s 100 years, it has not only contributed to nation-building but also played a role in India’s quest for building friendly ties with the Muslim world. For this, AMU is recognised as an institution of national importance under the Seventh Schedule of the Constitution. During the course of history, AMU has passed through many challenges but never has it abandoned its inclusive character. Apart from drawing students from 26 other countries, it has students from 31 States and Union Territories and thus represents India’s multi-religious, multi-racial and multi-lingual character. This is why Prime Minister Narendra Modi, during the centenary celebrations of AMU in 2020, called the institution a “mini-India”. Mr. Modi underscored the principles of ‘nation first’ and ‘Sabka Saath,



Sabka Vikas, Sabka Vishwas', while emphasising that Sir Syed established AMU with a rational, progressive and scientific mindset. It is appreciable that the Prime Minister invoked the contribution of a 19th century reformer in the making of 21st century India. This is a testament to the vision of a man who was far ahead of his times.

KUSHINAGAR, BUDDHIST PILGRIMAGE TOWN AND SITE OF BIG INFRA PUSH

Prime Minister Narendra Modi inaugurated the Kushinagar international airport on Wednesday in the presence of ministerial colleagues, Uttar Pradesh Chief Minister Yogi Adityanath, and representatives from 12 countries including a special Sri Lankan delegation led by minister Namal Rajapaksa, a son of Prime Minister Mahinda Rajapaksa. The airport in eastern UP, the third international airport in the election-bound state, will mainly service the Buddhist tourism circuit. The Sri Lankan Airlines flight carrying monks and dignitaries was the first to land at the airport.

Kushinagar and The Buddha

Among the most important of Buddhist pilgrimages, Kushinagar was where The Buddha attained Mahaparinirvana (ultimate salvation) in c. 483 BC. Today's Kushinagar is identified with Kushinara, capital of the ancient Malla republic, which was one of the 16 mahajanapadas of the 6th-4th centuries BC. The area went on to be part of the kingdoms of the Mauryas, Shungas, Kushanas, Guptas, Harshavardhana, and the Palas. Kushinara is believed to have been inhabited until at least the 12th century. The first excavations in Kushinagar were carried out by Alexander Cunningham and ACL Carlleyle, who unearthed the main stupa and the 6-metre-long statue of the Reclining Buddha in 1876. Kushinagar is among the very few places in India where The Buddha is depicted in reclining form.

Buddhist tourism sites

In 2016, the Ministry of Tourism announced the Buddhist Circuit as the country's first transnational tourism circuit, covering sites in Nepal and Sri Lanka alongside those in India. "It is surprising that while Buddhism originated in India and seven of the eight main Buddhist pilgrimage sites are in India, our country gets not even 1 per cent of Buddhist pilgrims in the world," then Tourism & Culture Minister Mahesh Sharma had told The Indian Express. The ministry's map of the Buddhist Circuit includes Bodh Gaya, Vaishali, and Rajgir in Bihar, Kushinagar, Sarnath, and Shravasti in UP, and Lumbini in Nepal. The Buddha was born as the prince Siddhartha Gautama in c. 563 BC in Lumbini, and he lived until the age of 29 with his parents in the Shakya capital of Kapilavastu. He attained enlightenment under the Bodhi Tree in Bodh Gaya, and gave his first sermon at Sarnath near Varanasi. He taught in the area around Rajgir, where he was built a forest monastery by king Bimbisara of Magadha, and he lived the largest part of his life as The Buddha in Shravasti. He delivered his last sermon in Vaishali.

Cultural diplomacy

There is an awareness in the government that the absence of tourist infrastructure is a major reason why India loses out to Southeast Asian nations such as Indonesia and Thailand. The hope is that world-class facilities will be able to attract Buddhist tourists to India, and boost revenues and employment generation. A Buddhist Circuit tourist train covers all destinations in 14 days,



and helicopter services and more airports are in the pipeline. The push is intended to assert and consolidate India's position as the original centre of Buddhism, against the claims from China. Since the announcement of the Buddhist Circuit in 2016, a total Rs 343 crore has been sanctioned for the project under various schemes, of which Rs 278 crore has been released, a Tourism Ministry official said.

MEMORIES OF A BRICK CITY

On the banks of the Dhansiri River sprawls a city that's the cosmopolitan and commercial heart of Nagaland today. The ruins that dot its landscape, among them a set of mysterious mushroom-domed pillars, are testament to an equally distinguished past. Dimapur was once the seat of the Dimasa kingdom, also called Cachar, which was established by the Dimasa Kachari people and ruled parts of the Brahmaputra valley from at least the 13th century — the time of the earliest available written records, although Dimasa rule in Dimapur may go back as far as the 10th century, according to historian Uttam Bathari — to the 19th, when it was annexed to British India. There are two accounts of the way in which Dimapur got its name. Most scholars are of the opinion that it is derived from the Dimasa Kachari words di (water) and ma (large) — referring to the Dhansiri — and Sanskrit pura (city). Others are of the view that Dimapur is a corruption of 'Hidimbapur', meaning the city of Hidimbi, a character in the Mahabharata who married the Pandava prince Bhima and gave birth to Ghatotkacha, believed to be the progenitor of the Kacharis. Meanwhile, other accounts often refer to the 'brick city'. For instance, in the Ahom chronicles, Dimapur is referred to as the Che-din-chi-pen (town-earth-burn-make) meaning 'brick town'. The Kacharis have been described as "the original autochthones of Assam". S.K. Bhuyan in Kachari Buranji writes that they built political and administrative units, vestiges of which have lingered till this day. Captain Thomas Fisher, the first superintendent of Cachar after the kingdom's annexation by the British in 1832, said the Kacharis had gradually built an empire over Assam, Sylhet, Mymensing, and the valleys to the east of the Brahmaputra, their original seat being at Kamrup; and that their rule ultimately embraced everything from Kamrup down to the sea.

Far and wide

Evidently, the Kacharis were widely distributed and exercised their sovereignty throughout Assam in different ages, with different names and in different places. According to Bhuyan, the kingdom of Cachar ruled by Tamradhwaj Narayan, a contemporary of the Ahom king Swargadeo Rudra Singh in the early 18th century, and by Govinda Chandra at the time of the British occupation, was only one of numerous states founded by the Kachari people. Dimapur, which was the capital of the kingdom from the 13th century to the 16th, was originally enclosed on three sides by a brick wall four feet wide, 16 feet high and two miles long, surrounded by an outer ditch 16 feet in width and 12 feet in depth, except on the southern side where the Dhansiri formed a natural moat. On the eastern side, there was a fine solid gateway with brick masonry of pointed double arches. The gate was secured by heavy double doors, the hinges of which were seated in holes pierced in solid stone blocks. There were half-quadrant-shaped turrets at both ends of the battlements, and niches like ornamental windows between these turrets and the archway. High up, on either side of the arch, is a carving of sunflowers that were originally faced with brass so as to present a dazzling spectacle when seen sparkling in the sun from afar.



Watering the fields

In Deodhai Ahom Buranji, there are references to the Kacharis constructing tanks and harnessing water from rivers by cutting canals. They made small dams or water channels to divert streams and irrigate their fields. There were large numbers of excavated tanks, big and small, near settlements and cultivated sites in the Dhansiri valley. These were used for both agricultural and domestic purposes, the river providing a perennial source of water. The presence of so many tanks — 52 in all — in the vicinity of Dimapur indicates that it supported a large population. The 19th-century surveyor and mountaineer H.H. Godwin-Austen's plan of the city revealed three tanks — one within the walled enclosure, and two enormous ones outside. The former seems to have been for drinking and the latter for irrigation. One of the major activities of the king was the construction of irrigation works, which also indicates the existence of an organised workforce under the state that could be deployed for agricultural purposes. The development of crafts like masonry, quarrying, metal smithing and brick-making, and the architectural edifice, all point to the presence of craft specialists. B.C. Allen in his gazetteer has suggested that thin flat native bricks were used to build the monuments, indicating that the Dimasa kings had brickmaking centres of some sort. Stone blocks used in the monuments were procured from the Naga Hills and transported to the capital complex in elephant carts, which had wooden wheels attached to shafts with iron axles. The use of brass and iron shows that metalwork was fairly developed. The 15th century was characterised as the golden age of Dimasa rule by T. Bloch and E. Gait. It's one of many epochs and civilisations that have been neglected and forgotten, thanks to colonial administrators who branded the people of the north-east as 'primitives', 'savages' and 'godless'. This attitude was passed down to Indian scholars, too, and the region was viewed as an isolated frontier with no connection to the cultural continuum of India for a very long time. I believe it's high time we became the voice for many such unrecognised places from the past, and began to accord the civilisations of the north-east their place in the history of India.

THE BLUEREVOLUTION

For Niyati Rao, who is busy setting up a fine dine in Mumbai, it's a mad rush to get home-grown ingredients. She has worked at Wasabi at The Taj in Mumbai, and knows that importing ingredients like kombu, nori or wakame wouldn't be a sustainable business model, nor would it bring 'Indianness' to a platter. It's for chefs like her and for those who want to harness the untapped seaweed business that the government has come up with an investment of some ₹640 crore. It hopes to increase seaweed production to 10 crore tonnes by 2025 under the Pradhan Mantri Matsya Sampada Yojana. For now, Niyati's hunt has ended at AquAgri, a private seaweed processing unit, in Tamil Nadu's Manamadurai town. From here, she has been able to procure vast quantities of dry seaweed, and is now experimenting with it in her kitchen. Seaweed, she says, adds a note of piquancy to each dish: as garnish in salad or a sprinkling on a hearty soup, the dense oceanic notes bring a rich umami depth to any vegetarian dish. Even something as ordinary as butter, when infused with seaweed, opens up new gastronomical delights, she says.

Stabilising factor

Indians have only just started flirting with the possibility of using the product in the hospitality industry; but seaweed has long been sourced by the food industry for its stabilising properties. When processed, it loses its pungency, and seaweed products such as agar gel can withstand high

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



temperatures — it can be used as a stabiliser and thickener in pie fillings, icings and meringues. As it is tasteless, it does not interfere with the flavour of the food, and in ice creams it is used to inhibit the crystallisation of ice. Agar-agar, the main ingredient in falooda and jigarthanda, is a seaweed-based product. Earlier, seaweed was collected by fishermen through natural harvesting. It was only in 2000 that the Council of Scientific and Industrial Research–Central Salt and Marine Chemicals Research Institute (CSIR-CSMCRI), along with Pepsico, started cultivating seaweed through the bamboo raft method on an experimental basis. Later, AquAgri joined hands with CSIR-CSMCRI and ICAR-Central Marine Fisheries Research Institute (ICAR-CMFRI) and now, the shoreline in places including Mandapam in Tamil Nadu’s Rameswaram are dotted with floating farms of seaweed. Buttressed by studies done by ICAR-CMFRI and CSIR-CSMCRI, fisherwomen in these regions have been trained in cultivating a species of seaweed called *Kappaphycus alvarezii* that yields carrageenan. Carrageenan is an additive used to thicken, emulsify, and preserve food and drinks — it’s a commercially viable venture.

Fertiliser of the future

Alginate, another extract, is used in restructured and reformed food products such as chicken nuggets. As a binder and emulsifier, it helps meat retain its shape. The seaweed extract, when injected into meat, helps retain its moistness and freshness. Suguna Foods and Venky’s are other major clients of AquAgri. Although many are wary of using plain dried seaweed in food, cultivation in a controlled environment could result in more people consuming this product packed with vitamins and minerals, say buyers. Seeing the nutrient value of this sea vegetable and encouraged by the Indian Farmers Fertiliser Cooperative, AquAgri manufactures a product called Sagarika, derived from the sap of red and brown algae, which acts as a bioenhancer and stimulates the internal growth of plants. Researchers say that an extract from seaweed also helps in the faster germination of seeds, and this was successfully tested on cotton seeds. As organic farming becomes the buzzword, seaweed is becoming the fertiliser of the future.

Flavour of the sea

In medicine, research shows a lot of exciting possibilities. ICAR-CMFRI, Kochi, has used seaweed as the main ingredient in various nutraceutical products, from anti-obesity tablets to anti-arthritis and anti-diabetic pills. At AquAgri, research is on to make a biofilm from seaweed extract, to be used as a dissolvable cast to dress wounds. Economically, seaweed has empowered women in and around Rameswaram. It is cultivated nine months in a year, and harvested every 45 days; one kilo of dried seaweed fetches ₹50 to ₹55. Jayakumar, principal scientist, ICAR-CMFRI, Mandapam, points out that as the cultivation is less labour-intensive and less-technology driven, it has been taken up by almost 600 women in the region. Industries related to seaweed processing also have a huge potential for those specialising in microbiology, chemistry and food technology. Tapping into this unrealised potential is the ‘Blue Revolution’ that the government is hoping for, but increasing production is the challenge. B. Johnson, scientist, ICAR-CMFRI, points out, “What we produce now is not even enough for the domestic market.” The reason behind the slow decline in production, say scientists, is that seaweed cultivation has been going on for the past two decades, decreasing the virility of the seeds. Some want seeds to be imported from the Philippines, and for the government to increase the area under cultivation. And so, it may not be very long before pouches of dried seaweed jostle for space in supermarket aisles along with casks of seaweed wine.



In restaurants around the corner, the menu may well have sushi wrapped in Indian-made nori sheets, each bite bringing in the heady flavour of the sea.

WHY HAS OCTOBER BEEN SO RAINY ACROSS INDIA?

The monsoon is over but several parts of the country are still receiving rainfall. Delhi, Kerala, Madhya Pradesh and Uttarakhand, for example, have received very high rainfall in the last few days, resulting in loss of life and property in some places. Delhi has just had one of its wettest 24-hour periods in several decades. Scientists say a combination of factors — delayed monsoon and development of low-pressure areas at multiple places — have resulted in these rainfall events at several places.

October rains

Rain in October is not unusual. October is considered a month for transition, during which the southwest monsoon withdraws and gives way to the northeast monsoon that largely affects southern peninsular India, mainly on the eastern side. Western disturbances, which begin to have significant interference in local weather over the extreme northern parts of India, commonly cause either rain or snowfall. Since late last week, Ladakh, the higher reaches of Kashmir and Uttarakhand have reported the season's first snowfall. Last week, two low-pressure systems were active simultaneously, one each over the Arabian Sea and the Bay of Bengal regions. Collectively, these triggered severe weather events over Kerala, Tamil Nadu, Andhra Pradesh, Telangana, Delhi, Madhya Pradesh, Uttarakhand, Odisha and West Bengal.

Delayed monsoon withdrawal

The four-month southwest monsoon season normally withdraws completely by early October. During the withdrawal phase, it causes thunderstorms and localised heavy rainfall. This year, however, the withdrawal began only on October 6 against a normal of September 17. So far, the monsoon has withdrawn completely from the Western, Northern, Central and Eastern India regions. But it remains active over the southern peninsula. Thus, Kerala, Tamil Nadu, Telangana, Karnataka and Andhra Pradesh have had significant rainfall during the last 10 days. Until Monday, the monsoon had not withdrawn from Manipur, Mizoram, Tripura, parts of West Bengal and Odisha and entire southern peninsular India. "As there has been a delay in the southwest monsoon withdrawal, good rainfall has continued over Odisha, the Northeast and south India," said Mrutyunjay Mohaptra, director general, India Meteorological Department (IMD). Normally, by mid-October, the monsoon winds reverse their direction of flow from the southwest to the northeast. "Even though the easterlies are beginning to replace the westerlies, the former is yet strengthen and fully establish. The easterly winds indicate the arrival of the northeast monsoon," said D Sivanand Pai, head, Climate Research and Services, IMD, Pune. This year, conditions for the onset of the northeast monsoon are expected to develop around October 25.

Extreme rains

For most days last week, at least two low-pressure systems remained active along the east and west coasts and over central India, bringing rains over large parts of the country. Delhi received 87.9mm (over a 24-hour period) between Sunday and Monday, making it the fourth wettest



October day for the national capital since 1901. The month of October has also been the fourth wettest so far. It has received 94.6 mm rains this month so far, which is next only to the 238.2 mm it received in 1954, the 236.2 mm in 1956, and 186.9 mm in the entire Octobers of 1910. Likewise, Balasore in Odisha recorded 210mm in a day and it was only the second such occasion in a decade for this month. While Tamil Nadu normally receives good rainfall between October and December, mainly during the northeast monsoon, Coimbatore (110mm) witnessed its wettest October day in a decade even before the onset of the northeast monsoon. The Western Ghats, northeast and central India are known as high-rainfall receiving regions. However, in recent years, it has been noted that intense spells during a short time span are increasingly becoming frequent. "Due to climate change, there is definitely a rising frequency in the extreme weather events round the year. But these specific occurrences of heavy to very heavy rains that we are seeing right now can be attributed to the formation of low-pressure systems," said Mohaptra. "Whenever there is a low-pressure system, depending on its strength, it results in heavy to very heavy rainfall activity. In addition, when a low-pressure system interacts with western disturbance, further intense rainfall occurs," he said.

Extreme rainfall in Kerala

A low-pressure system that formed in the east-central Arabian Sea moved and sustained over Kerala between October 15 and 17. Simultaneously, another low-pressure system prevailed over the north Andhra Pradesh coast and southern Odisha. The interaction between them strengthened the southwest winds which brought extreme rainfall over central and southern Kerala during the last weekend. At some places in Idukki, Ernakulam, Kollam and Kottayam districts, the 24-hour rainfall was over 200 mm. As many of these districts are hilly and covered with dense forests, the water run-off triggered landslides and mudslides.

Rainy days ahead

The low-pressure system that affected Kerala has weakened now. But a similar system is still active over central India, because of which northern India is likely to receive good rainfall this week. Heavy rainfall events are predicted over Western Uttar Pradesh, Uttarakhand and Himachal Pradesh for Tuesday, with a 'red' alert having been issued by IMD for these regions. Another low pressure — located over Northern Odisha and Gangetic West Bengal — is active and its interaction with the moist easterly winds from the Bay of Bengal is expected to bring heavy rain over West Bengal, Odisha, Sikkim, and Bihar until Wednesday. The maximum impact in terms of extremely heavy rain (more than 204 mm in 24 hours) is likely over some places in West Bengal and Sikkim on Tuesday. Further, strong southeasterly winds from the Bay of Bengal are expected to cause very heavy rain over Arunachal Pradesh, Assam and Meghalaya until Wednesday.

FLOOD AND FURY

This monsoon season has given ample evidence of extreme weather events, long foretold by climate science experts. In July, a fortnight of torrential rain left a trail of destruction in the mountains of north India and the coastal parts of Western India. The elements have continued to behave chaotically even as the southwest monsoon retreats from the country and the easterlies are replacing the westerlies. At least 20 people are feared to have lost their lives in another bout of floods in Uttarakhand. In Kerala, incessant downpour in the past four days has swelled rivers



and caused landslides, sweeping away homes, bridges and claiming at least 38 lives — worse is feared with the IMD predicting another spurt of rainfall from Wednesday. Both states have issued flood alerts and begun to evacuate people from flood-prone areas. But these states require much more than emergency measures to address and mitigate their climate-related vulnerabilities. Whether in the Western Ghats or the Himalayas, there are pressing reasons for states to rethink development paradigms. The topography of most hilly regions makes them prone to landslides. Deforestation, quarrying, road construction and other land-use changes that pay short shrift to ecology increase vulnerabilities of such areas during episodes of heavy rainfall. That's why several expert committees have counseled utmost caution in implementing infrastructure projects in both the Himalayas and the Western Ghats. In 2011, for example, the Madhav Gadgil committee recommended that a roughly 1,30,000 sq km stretch spanning Gujarat, Karnataka, Kerala, Maharashtra and Tamil Nadu be declared an environmentally sensitive zone. The panel headed by one of the country's top ecologists called for strict regulation of developmental activities in this stretch. None of the six states agreed with its recommendations. Kerala, in particular, objected to the proposed ban on mining, restrictions on construction activities and embargoes on hydroelectricity projects. The substantially diluted recommendations of another committee headed by K Kasturirangan — it proposed to whittle down the Western Ghats' eco-sensitive zone by about half of what was earmarked by the Gadgil panel — also did not get much traction in the Western Ghat states. The Kerala government has opened the shutters of the Idukki dam as the state's largest reservoir is rapidly filling up with heavy rainfall. In recent years, state governments in most parts of the country have been criticised for leaving such decisions till it's too late. Dam operators blame the delay on not being alerted about extreme weather events in time. There's surely a case for greater coordination amongst forecasting agencies and reservoir management authorities. This would ensure the timely opening of dam spillways and create holding capacity in the reservoirs to absorb excess rainfall. With studies and IPCC reports warning about more destructive floods caused by sea-level rise and high-intensity rainfall, the country can ill-afford to delay investments in such disaster management systems.

AMUR FALCONS IN MANIPUR FOR ANNUAL MIGRATION

With the arrival of the migratory Amur falcons to Tamenglong district of Manipur for the annual stopover, State Forest and Environment Minister Awangbow Newmai has appealed to the people not to hunt the seasonal visitors. These falcons visit the district every year from breeding grounds in China and Russia before beginning their onward voyage to Africa for the winter — a journey of more than 30,000 km.

Satellite tagging

Officials who have been tracking the travel routes of these birds through satellite tagging said one Amur falcon had reached the district for the third year in a row. Mr. Newmai, in a statement, warned that the hunting of the bird was punishable under the Manipur Wildlife (Protection) Act, 1972 and could lead to three years of imprisonment and a fine of ₹25,000. The Minister launched a poster campaign on Thursday to create awareness among the people. Officials of the Wildlife Institute of India, Dehradun, were also present.

Less than 300 Sangai



In another development, officials said the population of the brow-antlered deer (Sangai) found only in Manipur stood at fewer than 300 in its natural habitat, the 40 sq km Keibul Lamjao National park in Bishnupur district. However, there was a silver lining, as officials said more and more people, including hunters, were coming forward to protect the deer and the migratory birds.



DreamIAS



BUSINESS & ECONOMICS

SLIDE IN CHINA'S GDP GROWTH AND IMPLICATIONS FOR INDIA

China's third-quarter GDP growth slowed to 4.9% as industrial output rose way below expectations in September, according to data released by the country's National Bureau of Statistics on Monday. "Since entering the third quarter, domestic and overseas risks and challenges have increased," Fu Linghui, spokesperson for the Bureau of Statistics, said in Mandarin at a press conference, according to a CNBC translation.

Is this worrying?

The main reason why growth was below expectation is the tepid rise in industrial production at 3.1% in September, way below the expected 4-4.5%. There are two factors here: One, it needs to be kept in mind that China was the first off the blocks when it comes to reviving growth after the pandemic. So, inevitably, even as the rest of the world struggles to get back to pre-pandemic levels, the Chinese recovery had already gathered steam and pre-pandemic milestones were crossed quarters ago. The base is consequently a factor in China's case. Second, and more worryingly, there are a combination of systemic issues evident in the latest data print that signal potential headwinds, both for the Chinese and the global economies. This includes a massive fuel crunch that is crimping the country's growth engine, worries of a systemic crisis in its real estate business precipitated by the Evergrande fiasco, and a souring of business sentiment amid the federal government's crackdown on multiple Chinese sectors and marquee companies that have been mascots of growth over the years. Monday's data release does offer indications that businesses were less keen to invest in new projects, according to a Reuters report. Also, the power shortage had a "certain impact" on normal production, the National Bureau of Statistics spokesperson said, according to the CNBC translation, while underlining that the economic impact is "controllable". The fuel/power crisis in China continues to fester. Factories and units across the country's industrial heartland in its south east have had to curtail output in late September as a surge in coal prices and a resultant electricity shortage prompted provincial governments to cut power supplies. The turmoil in the real estate sector, which accounts for about a quarter of China's GDP, is now beginning to show up in the data as well, with fixed asset investment for the first three quarters of the year coming in lower than expected. The drop in fixed asset investment is being primarily attributed to a perceptible slowdown in real estate investments. In August, real estate major Evergrande warned of a default and subsequently missed payments to investors in its offshore US dollar-denominated debt. The Peoples Bank of China said Friday that Evergrande is an exception and that other developers were unaffected. But there are lingering concerns of a cascading impact across sectors.

Would there be an impact on India?

There are concerns that a slowing Chinese economy could impact the incipient global recovery. India too could see an impact, given that the country's bilateral trade with China has grown nearly 50 per cent in the first nine months of 2021, according to Chinese government data. According to India's Commerce Ministry data, China was India's top trading partner in the April-July period, followed by the US, the UAE, Saudi Arabia and Singapore. India's imports from China rose to \$68.5



billion in the first nine month of 2021, up 52 per cent from the corresponding period in 2020, according to the China General Administration of Customs data, pushing India's trade deficit with China to \$46.55 billion in the first nine months of 2021, up from \$29.9 billion in the year-ago period. India's total trade with China touched \$90.38 billion during the January-September period, and is likely to cross \$100 billion by the end of the year. Some of India's major imports from China include smartphones and automobile components, telecom equipment, active pharmaceutical ingredients, and other chemicals. A slowing Chinese economy portends worries on the buoyant trade front, apart from the overall loss of momentum to the global post-pandemic economic recovery.

IMF OUTLOOK AND STATUS OF JOBS

Last week, the IMF unveiled its 2nd World Economic Outlook (WEO). The IMO comes out with the report twice every year — April and October — and also provides regular “updates” to it on other occasions. The WEO reports are significant because they are based on a wide set of assumptions about a host of parameters — such as the international price of crude oil — and set the benchmark for all economies to compare one another with.

What were the main takeaways from the WEO in October?

The central message was that the global economic recovery momentum had weakened a tad, thanks largely to the pandemic-induced supply disruptions. But more than just the marginal headline numbers for global growth, it is the increasing inequality among nations that IMF was most concerned about. “The dangerous divergence in economic prospects across countries remains a major concern. Aggregate output for the advanced economy group is expected to regain its pre-pandemic trend path in 2022 and exceed it by 0.9 per cent in 2024. By contrast, aggregate output for the emerging market and developing economy group (excluding China) is expected to remain 5.5 per cent below the pre-pandemic forecast in 2024, resulting in a larger setback to improvements in their living standards,” it stated. There are two key reasons for the economic divergences: large disparities in vaccine access, and differences in policy support. But possibly the most important takeaway from the WEO this time is about the employment growth likely to lag the output recovery (Chart 1). “Employment around the world remains below its pre-pandemic levels, reflecting a mix of negative output gaps, worker fears of on-the-job infection in contact-intensive occupations, childcare constraints, labor demand changes as automation picks up in some sectors, replacement income through furlough schemes or unemployment benefits helping to cushion income losses, and frictions in job searches and matching,” the IMF stated. Within this overall theme, what is particularly worrisome is that this gap between recovery in output and employment is likely to be larger in emerging markets and developing economies than in advanced economies. Further, young and low-skilled workers are likely to be worse off than prime-age and high-skilled workers, respectively.

What does this mean for India?

As far as GDP is concerned, India's growth rate hasn't been tweaked for the worse. In fact, beyond the IMF, several high-frequency indicators have suggested that India's economic recovery is



gaining ground. But what the IMF has projected on employment — that the recovery in unemployment is lagging the recovery in output (or GDP) — matters immensely for India. To begin with, according to the data available with the Centre for Monitoring Indian Economy (CMIE), the total number of employed people in the Indian economy as of May-August 2021 was 394 million — 11 million below the level set in May-August 2019. To put these numbers in a larger perspective, in May-August 2016 the number of employed people was 408 million. In other words, India was already facing a deep employment crisis before the Covid crisis, and it became much worse after it. As such, projections of an employment recovery lagging behind output recovery could mean large swathes of the population being excluded from the GDP growth and its benefits. Lack of adequate employment levels would drag down overall demand and thus stifle India's growth momentum.

Why could employment lag output growth in India?

There are several possible reasons. For one, as mentioned above, India already had a massive unemployment crisis. Labour economists such as Santosh Mehrotra, who is Visiting Professor at the Centre for Development Studies, University of Bath (UK), cite a number of additional issues. "The first thing to understand is that India is witnessing a K-shaped recovery. That means different sectors are recovering at significantly different rates. And this holds not just for the divergence between the organised sector and unorganised sector, but also within the organised sector," Mehrotra said. He pointed out that some sectors such as the IT-services sectors have been practically unaffected by Covid, while e-commerce industry is doing "brilliantly". But at the same time, many contact-based services, which can create many more jobs, are not seeing a similar bounce-back. Similarly, listed firms have recovered much better than unlisted firms. The second big reason for worry is that the bulk of India's employment is in the informal or unorganised sectors (Table 2). The informal worker is defined as "a worker with no written contract, paid leave, health benefits or social security". The organised sector refers to firms that are registered. Typically, it is expected that organised sector firms will provide formal employment. So, a weak recovery for the informal/unorganised sectors implies a drag on the economy's ability to create new jobs or revive old ones. Last week, IMF Chief Economist Gita Gopinath pointed out that the number of people using the Mahatma Gandhi National Rural Employment Guarantee Act provisions was still 50-60% above pre-pandemic level. This suggests that the informal economy is struggling to recover at the same pace as some of the more visible sectors.

How informal is India's economy?

Table 3, sourced from the 2019 paper 'Measuring Informal Economy in India' (SV Ramana Murthy, National Statistical Office), gives a detailed breakup. It shows two things. One, the share of different sectors of the economy in the overall Gross Value Added (GVA or a measure of overall output from the supply side just as GDP is from the demand side). Two, the share of the unorganised sector therein. The share of informal/unorganised sector GVA is more than 50% at the all-India level, and is even higher in certain sectors, notably those that create a lot of low-skilled jobs such as construction and trade, repair, accommodation, and food services. This is why India is more vulnerable.



WHY GLOBAL FUEL PRICES ARE UP, HOW INDIA IS IMPACTED

As the global recovery gains strength, the price of crude oil is nearing its highest level since 2018, while the price of natural gas and coal are hitting record highs amid an intensifying energy shortage.

Why are fuel prices rising?

The price of Brent Crude breached the \$85 per barrel mark earlier this week reaching its highest level since 2018 on the back of a sharp increase in global demand as the world economy recovers from the pandemic. Key oil producing countries have kept crude oil supplies on a gradually increasing production schedule despite a sharp increase in global crude oil prices. The price of Brent crude has nearly doubled compared to the price of \$42.5 per barrel a year ago. In its latest round of meetings, the OPEC+ group of oil producing countries reaffirmed that they would increase total crude oil supply by only 400,000 barrels per day in November despite a sharp increase in prices. The output of the top oil-producing countries – Saudi Arabia, Russia, Iraq, UAE and Kuwait — would still be about 14 per cent lower than reference levels of production post the increase in November. OPEC+ had agreed to sharp cuts in supply in 2020 in response to Covid-19 global travel restrictions in 2020 but the organisation has been slow to boost production as demand has recovered. India and other oil importing nations have called on OPEC+ to boost oil supply faster, arguing that elevated crude oil prices could undermine the recovery of the global economy. Natural gas deliveries to Asia hit an all-time high of \$56.3 per mmbtu (Metric Million British Thermal Unit) for deliveries in November, according to SP Global Platts. Supply side issues in the US including disruptions caused by hurricane Ida and lower than expected natural gas supplies from Russia amid increasing demand in Europe have raised the prospect of natural gas shortages in the winter. International coal prices have also reached all-time highs as China faces a coal shortage that has led to factories across China facing power outages. A faster than expected recovery in global demand has pushed the price of Indonesian coal up from about \$60 per tonne in March to about \$200 per tonne in October.

What is the impact on India?

High crude oil prices have contributed to the prices of petrol and diesel regularly setting new record highs across the country in 2021. The price of petrol in the national capital is Rs 105.84 per litre up Rs 4.65 per litre over the last three weeks while the price of diesel is at Rs 94.6 per litre up Rs 5.75 per litre over the same period. India has seen a faster recovery in the consumption of petrol than of diesel after pandemic-related restrictions with petrol consumption up 9 per cent in September compared to the year ago period but diesel consumption remaining 6.5 per cent below 2020 levels. Diesel accounts for about 38 per cent of petroleum product consumption in India and is a key fuel used in industry and agriculture. S&P Global Platts Analytics noted in a report that demand for diesel in India was expected to go up in the next few months with the upcoming festive season set to accelerate the economic recovery and push up diesel consumption. Platts Analytics did however predict that India's total demand for crude oil would only surpass pre pandemic levels in 2022. High international gas prices have led to an upward revision in the price of domestically produced natural gas. The Petroleum Planning and Analysis Cell (PPAC) set the price of natural gas produced by state owned ONGC and Oil India under the nomination regime to \$2.9 per mmbtu up from \$1.79 per mmbtu in the previous six month period. The PPAC also

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



increased ceiling price of \$6.13 per mmbtu for gas extracted from ultra deep water, and high pressure, high temperature discoveries from \$3.62 per mmbtu in the previous six month period. The increase in gas prices has put upward pressure on the price of both Compressed Natural Gas (CNG) used as a transport fuel and Piped Natural Gas (PNG) used as a cooking fuel. The price of CNG was hiked twice by a total of Rs 4.56 per kg this month to Rs 49.8 in the national capital and the price of PNG rose by Rs 4.2 per scm (standard cubic meter) of PNG to Rs 35.11 per SCM. High international prices of coal have added to a coal shortage at India's thermal power plants by forcing thermal plants using imported coal that could not pass on the higher price of coal to procurers to stop supplying power. Low coal stocks at a number of coal fired thermal power plants have led to power outages in a number of states including Punjab and Rajasthan and have forced states to buy power at well above normal prices on the power exchange.

A CLEAN ENERGY TRANSITION PLAN FOR INDIA

Energy security warrants the uninterrupted supply of energy at affordable prices. India faces the twin challenges of meeting the aspirations of its 1.3 billion population even as it safeguards its energy security and contributes to global efforts to mitigate climate change. Thanks to the Electricity Act of 2003, the installed coal-fired thermal power plant (TPP) generation capacity in India more than doubled from 94 GW to 192 GW between March 2011 and 2017. This sharp increase in the installed capacity has enabled the government to increase per capita electricity consumption by 37% while reducing peak demand deficit from 9.8% (2010-11) to 1.6% (2016-17). However, India has a long way to go in providing electricity security to its people since its per capita electricity consumption is still only a third of the global average.

Thermal plants are the core

Coal is the only fuel that India has in abundance and the geopolitics of India's neighborhood do not permit ready access to piped natural gas. TPPs contributed 71% of the 1,382 billion units (BU) of electricity generated by utilities in India during FY 2020-21 though they accounted for only 55% of the total installed generation capacity of 382 GW (as of March 2021). Coal, therefore, plays a vital role in India's ongoing efforts to achieve Sustainable Development Goal 7, which is "to ensure access to affordable, reliable, sustainable and modern energy for all".

Renewable energy

While variable renewable energy (VRE) sources (primarily, wind and solar) account for 24.7% of the total installed generation capacity, as of March 2021, they contributed 10.7% of the electricity generated by utilities during FY 2020-21. However, the ramp-up of VRE generation capacity without commensurate growth in electricity demand has resulted in lower utilisation of TPPs whose fixed costs must be paid by the distribution companies (DISCOMs) and passed through to the final consumer. The rapid growth of VRE sources in India has been largely aided by policy measures as well as financial incentives whose cost is borne by the consumer. The current level of VRE in the national power grid is increasing the cost of power procurement for DISCOMs, leading to tariff increases for electricity consumers. Specifically, the Forum of Regulators has estimated the total additional burden of grid integration of VRE sources includes ₹1.11 of balancing cost and ₹1.02 of stranded capacity cost, totalling ₹2.13 per unit. Therefore, India must implement a plan to increase energy efficiency and reduce the emissions of carbon dioxide (CO₂)



and airborne pollutants from TPPs without making power unaffordable to industries that need low-cost 24x7 power to compete in the global market.

Contours of a plan

We have developed a time-bound transition plan for India's power sector involving the progressive retirement of 36 GW of installed generation capacity in 211 TPPs (unit size 210 MW and below) based on key performance parameters such as efficiency, specific coal consumption, technological obsolescence, and age. The resulting shortfall in baseload electricity generation can be made up by increasing the utilisation of existing High-Efficiency-Low-Emission (HELE) TPPs that are currently under-utilised to accommodate VRE and commissioning the 47 government-owned TPPs (total capacity of 31.6 GW) that are at an advanced stage of construction in which ₹1,77,742 crore have already been invested by government utilities. These TPPs have already signed power purchase agreements with the respective DISCOMs; and thanks to the two-part tariff policy, their fixed costs must be borne by power consumers irrespective of their usage. In addition, the Nuclear Power Corporation of India Limited (NPCIL) is also constructing 11 nuclear power plants with a total generation capacity of 8,700 MW that will supply 24x7 power without any CO₂ emissions.

Capacity increase

With the implementation of our transition plan, the total installed capacity of TPPs operated by utilities will increase from the current level of 209 GW (as of September 2021) to 220 GW by FY 2029-30 even after retiring 211 inefficient and obsolete TPPs that are more than 25 years old and need major sustenance capital expenditures (Capex) for life extension, modernisation, and retrofit of flue gas desulphurisation plants (FGDs). The combined thermal (220 GW) and nuclear (15 GW) capacity of 235 GW can meet the baseload requirement (80% of peak demand) during the evening peak in FY 2029-30 without expensive battery storage, while the optimal utilisation of existing and under-construction HELE TPPs with faster-ramping capabilities and lower technical minimums also facilitates VRE integration. As per our transition plan, India's power generation from TPPs is expected to reduce from the FY 2020-21 level of 71% to 57% of the total electrical energy (2,172 BU) projected to be generated by utilities during FY 2029-30. Further, the share of HELE TPPs in the total TPP generation capacity will increase from the FY 2018-19 level of 25% to 44% in FY 2029-30. More importantly, the share of inefficient TPPs with obsolete technology in the total TPP generation capacity will reduce from the FY 2018-19 level of 46% to 4%. Consequently, total CO₂ emissions from the power sector will go down by 57 Mt even as coal-fired electricity generation is projected to increase by 21% to 1,234 BU in 2029-30.

Estimated benefits

Since HELE TPPs minimise emissions of particulate matter (PM), SO₂, and NO₂, our transition plan offers operational, economic, and environmental benefits including avoidance of sustenance Capex and FGD costs in the 211 obsolete TPPs to be retired besides savings in specific coal consumption and water requirement leading to reductions in electricity tariffs and PM pollution. This plan prioritises the installation of high-efficiency electrostatic precipitators that can remove 99.97% of the PM pollution without extensive shutdowns or hiking tariffs unlike expensive, imported FGDs. The implementation of this plan will enable India to safeguard its energy security



and ensure efficient grid operations with lower water consumption, PM pollution, and CO2 emissions. Ultimately, this plan demonstrates India's commitment to climate change mitigation by optimising the use of our land, coal, water, and financial resources with indigenous technology.

POWERING THE ENERGY SECTOR

In an energy-dependent country like India, the availability of energy supplies at affordable rates is pivotal for fulfilling developmental priorities. But the energy sector is beset with problems. The distribution sector has for long been the bane of the power sector, consistently making huge losses owing to problems such as expensive long-term power purchase agreements, poor infrastructure, inefficient operations, and leakages and weaknesses in State-level tariff policies. Most discoms are deep into the red as high aggregate technical and commercial (AT&C) losses are chipping into their revenues.

Dismantling state monopoly

Against this backdrop, the Electricity (Amendment) Bill of 2020 is a game-changing reform. The wide-ranging provisions of the Bill will set the process of de-licensing power distribution after the monopoly of the state is dismantled. This will provide the consumers with an option of choosing the service provider, switch their power supplier and enable the entry of private companies in distribution, thereby resulting in increased competition. In fact, privatisation of discoms in Delhi has reduced AT&C losses significantly from 55% in 2002 to 9% in 2020. Open access for purchasing power from the open market should be implemented across States and barriers in the form of cross subsidy surcharge, additional surcharge and electricity duty being applied by States should be reviewed. Discoms and regulators should be brought on board for proper implementation of open access, which will provide more options to consumers to choose their discom just as they are able to choose telecom providers. The question of tariffs needs to be revisited if the power sector is to be strengthened. Tariffs ought to be reflective of average cost of supply to begin with and eventually move to customer category-wise cost of supply in a defined time frame. This will facilitate reduction in cross subsidies. All this will happen when discoms are made autonomous and are allowed by regulatory authorities to revise tariffs without interference from the States. Electrical energy should be covered under GST, with a lower rate of GST, as this will make it possible for power generator/transmission/distribution utilities to get a refund of input credit, which in turn will reduce the cost of power. Other antidotes to the problem include use of technology solutions such as installation of smart meters and smart grids which will reduce AT&C losses and restore financial viability of the sector.

Push for renewal energy

The impetus to renewal energy, which will help us mitigate the impact of climate change, is much needed. One option is to encourage roof-top solar plants. Despite its inherent benefits, the segment has shown relatively slow progress with an estimated installed capacity of 5-6 GW as on date, well short of the 2022 target. Another welcome feature of the Bill is the strengthening of the regulatory architecture of the sector. This will be done by appointing a member with a legal background in every electricity regulatory commission and strengthening the Appellate Tribunal



for Electricity. This will ensure faster resolution of long-pending issues and reduce legal hassles. The Bill also underpins the importance of green energy by proposing a penalty for non-compliance with the renewable energy purchase obligations which mandate States and power distribution companies to purchase a specified quantity of electricity from renewable and hydro sources. This will ensure that India gradually moves towards non-fossil fuels thereby helping it meet its global climate change commitments. Some other significant features of the Bill such as the creation of an Electricity Contract Enforcement Authority to supervise the fulfillment of contractual obligations under power purchase agreement, cost reflective tariffs and provision of subsidy through DBT are commendable. Early passage of the Bill is critical as it will help unleash a path-breaking reform for bringing efficiency and profitability to the distribution sector.

IS THE COAL CRISIS OVER?

Initially, there was a huge debate on whether there was a coal crisis at all. We aren't discussing coal any more. Hence, wasn't there a crisis? Or, if there was one, is it all over? "Crisis" is a subjective term. There are no objective criteria of determining whether there is a crisis or not. However, "shortage" can be determined objectively. No one can deny the fact that the supply of coal in India is well below the demand. Whereas the demand is nearly a billion million tonnes (MT), the supply is well below 800 MT within the country. When this shortage becomes acute, in terms of the availability of coal at power plants, it is sometimes called a crisis. The acute shortage can be on the account of production, an increased demand or a failure of supply chain management when the stocks are sufficient at the pit head but requisite supply is not made to the power plants. Coal crises keep recurring in the country primarily due to the shortage in coal production. Ironically, India sits on 300 billion MT of coal and, as mentioned earlier, our annual requirement is around a billion MT per annum. A similar crisis had occurred in 2014. Back then, it was on account of a Comptroller and Auditor General who played to the gallery after making his calculations just like an accountant. It led to devastating consequences and coal production suffered. The crisis was managed through meticulous planning and execution. The immediate coal crisis is attributed to an increase in the demand for power on account of the post-pandemic economic recovery, an increase in international prices of coal, unseasonal rainfall and a mismanagement of the supply chain within the country. Apparently, some of it has been managed and we are no longer discussing the crisis. No one seems to be talking about the stagnation in the production of coal by Coal India Limited (CIL). The production has stood at 600 MT for the past three years. Had the production grown at the rate at which it was increasing (8-9%) during 2014-16, the current production of CIL itself would have been more than 750 MT. Also not being discussed is the stagnant coal production from the non-CIL domain. A number of mines were allocated to entities other than CIL. Why haven't these mines augmented coal production? Non-CIL coal production fell from 128 MT in 2019-20 to 120 MT in 2020-21. The dependence on imported coal increased and, hence, when the international prices shot up, as they did recently, there is a crisis. The crisis will recur in case the coal production is not augmented. How then can the production of coal be increased? Some of the answers lies in what happened during 2014-16.

Supported, not monitored

CIL has a fabulous team. It needs to be supported and not "monitored". The Union Government has an important role to play. CIL should focus on mining. Government officers should interact



with the States, but before that, this ongoing “war” between the Union Government and the States will have to stop. Ironically, all the coal resides in States that are ruled by non-National Democratic Alliance (NDA) parties. Officers from the Union Government will have to go down to the States, convey a value proposition and sit with State-level officers to resolve issues related to land acquisition and forest clearances. During 2014-16 not a single meeting with the States was held in Delhi. All meetings were held at the State headquarters. The Union Government will also have to take up clearance-related issues with the Ministry of Environment, Forest and Climate Change. CIL, which had reserves of around ₹35,000 crore in 2015, now appears to be strapped for funds, especially cash flows as power generating companies (GENCOs) owe more than ₹20,000 crore to CIL. Funds will have to be arranged for the expansion of existing mines as well as the opening of new ones. First, the Union Government should stop squeezing more funds out of CIL as it has done during the past few years by way of dividends to balance its own Budget, when this money should have been used for opening new mines and expanding existing ones. Second, it should consider providing cash to CIL against the dues owed by GENCOs. Non-CIL production will have to be augmented. There was an inter-ministerial Coal Project Monitoring Group (CPMG), which was set up in 2015 to fast-track clearances, that became dormant. This will need to be revived. The coal crisis may be temporarily over, but if the fundamentals of the crisis are not taken care of, it is likely to recur. What also needs to be looked at is the financial crisis that is brewing in the power sector. GENCOs have a receivable of more ₹2,00,000 crore from distribution companies. They, in turn, owe more than ₹20,000 crore to CIL. There is, hence, a serious cash crunch though most of these entities show profit in their balance sheets.

THE GLOBAL TAX REVOLUTION

International tax jurisprudence received a shot in the arm when 130 countries agreed to introduce a new global tax regime for taxing multinational corporations (MNCs) operating the globe over. For over a century now, the corporate tax system was based on the application of the twin principles of the source rule and the residence rule. All that a MNC had to do to avoid high tax in a country where they did business was to get registered in a tax haven. Globalisation allowed MNCs to replace fears of double taxation with the joys of double non-taxation by exploiting mismatches between the tax laws of various countries and by cutting taxable profits. A digitalised world made their task easier. Tax havens came in handy for the MNCs. It became easier with the rise of intangible assets, which could easily be shifted from one country to another. But shifting of profits to low tax havens deprived poor countries of revenue by as much as 5% as compared to an alternative system where profits are taxed based on the current location of companies, revenues, their employees and their wage codes. Small countries wanted investments on a grand scale. That could be achieved with low direct taxes. Countries like Belgium, Britain, India and Indonesia brought in Digital Services Taxes on the local sales of foreign firms with online platforms. The U.S. objected and threatened retaliatory tariffs. Hence, realisation dawned on all the countries that the time had come for a radical change in the tax system. U.S. Treasury Secretary Janet Yellen announced that it was time to end the “race to the bottom” on corporate tax. Egged on by the Organisation for Economic Co-operation and Development (OECD), 130 countries achieved a historic agreement in June on a more stable and fairer international tax architecture. As per the agreement, MNCs would no longer pay taxes in the country where they register their headquarters for tax purposes, but would pay in the country where they generate their sales. A minimum global tax of 15% on profits would be introduced in all countries. How did this happen? The Global

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Financial Crisis of 2008 forced all countries to change the international tax rules to prevent base erosion and profit shifting. Anti-abuse provisions, new transfer pricing documentation provisions, countering harmful tax practices more effectively taking into account transparency and economic substance and the introduction of an effective dispute resolution mechanism were the objectives that were agreed upon. The OECD estimates that the proposal to levy 15% minimum tax on global corporations that do business in each country would fetch additional \$150 billion per year and move taxing rights of over \$100 billion in profits to different countries. Taxing rights would be reallocated so that a slice of the profits could be levied according to the location of a company's sales. A minimum rate of 15% would be levied on such a slice of profits. As per the agreement, countries where MNCs operate would get the right to tax at least 20% of the profits exceeding a 10% margin. India, China, Russia, Germany and other countries have signed the agreement, which has to be implemented from 2023. But there are hurdles to cross. India would have to reconsider the equalisation levy. Revenue from the equalisation levy should be compared with the 15% global minimum tax. The Ministry of Finance said significant issues, including the share of profit allocation and the scope of subject-to-tax rules, would have to be addressed and a consensus agreement had been reached on October 8. The draft rules would reset the system for international taxation and subject MNCs to new nexus and profit allocation rules. Simultaneous implementation of the law by all the signatories to the agreement would be a stupendous job. If achieved, it may herald the dawn of the 'Golden Era' of direct taxes. Revamping India's Direct Tax Code to sail with the concept of global minimum tax requires effort, which is easier said than done.

INVESTING FOREX RESERVES IN EQUITIES CAN FETCH HIGHER RETURNS

Investment of India's rising foreign exchange reserves in equity funds, especially index funds, can fetch higher returns as interest rates which have been on a declining trajectory over the last four decades in advanced economies, have touched their historic lows, a Reserve Bank of India (RBI) report has said. "Investment in equities is considered to be risky, especially for a central bank, which is responsible for safeguarding the reserves. However, investment of a small portion of the reserves in an index fund has the potential to augment the return of the portfolio," said an RBI report on 'The low yield environment and Forex Reserves management'. Total forex reserves were \$ 639.51 billion as on October 8, 2021. Investment in S&P 500 across various business cycles and financial booms and busts reveal that the CAGR return in 5 years, 10 years, 15 years, 20 years, 25 years and 30 years would have been 13.3 per cent, 11.1 per cent, 7.3 per cent, 5.4 per cent, 7.4 per cent and 8.5 per cent, respectively, it said. "This implies that if held for a long to very long period of time, despite volatility in the interim, it can not only preserve the capital but also fetch a return much higher than most of the investments," the report said. As at end-March 2021, out of the total foreign currency assets of \$536.69 billion, \$359.88 billion was invested in securities, \$153.39 billion was deposited with other central banks and the BIS and the balance \$23.43 billion comprised deposits with commercial banks overseas. All these avenues carry very low interest rates. Gold reserves were worth \$38 billion. "The return on the S&P 500 equity index funds is comparable to that on gold over a long period of time," it said. A number of central banks are increasingly making investment in equities in some form or the other. Swiss National Bank, for example, has an investment of 20 per cent of its reserves in equities. Further, the regional governments of the major advanced economies issue bonds which, in many countries, carry the implicit guarantee of the sovereign, the RBI report said. "They also yield better return than the sovereigns. Reserve managers could invest a small percentage of their reserves in such sub-

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national debt securities across the developed countries like Germany, Australia, Canada, etc and US agency bonds,” it said. Similarly, even the best rated supranational agencies yield better than sovereigns in most of the cases. If reserve managers can go further down the credit curve, then they can earn even higher yield. Reserve managers usually invest in highly rated sovereigns like G10 countries as they have deep bond markets and meet safety and liquidity criteria of the reserve managers. However, there are some countries which are relatively stable financially, are highly rated and offer better yields than some of the G7 countries, the RBI report said.

GREENFIELD HOPES

The ebbing of the second wave of the pandemic, accompanied by the gradual lifting of restrictions across States, have not only spurred an improvement in several economic indicators but also led to a much-awaited investment revival. Data from investment monitoring firm Projects Today reveal that investment commitments and indicators of actual capital expenditure on the ground recorded a more than robust sequential growth in the July-September quarter after an insipid Q1. Even though enhanced central government infrastructure spending is partly responsible, this uptick is surprising for another reason — the first half of 2021-22 has now seen fresh investments higher than the pre-COVID year of 2019-20, with private capital outlays up nearly 49% to ₹4.87-lakh crore. Whether or not this growth rate is sustained, the implementation of the “PLI” scheme to promote manufacturing investments in India is expected to spur more investments in textiles, pharma, electronics over the second half of this year and 2022-23. Critics may call it a retro-style import substitution push, but if it manages to nudge a few investments away from Vietnam, Cambodia and now, Bangladesh, at a time the world is looking to reduce its China dependence, this is worth the effort. Initial evidence suggests some investors have been converted. Speedy implementation is, however, essential to ensure the expected gains accrue — of the 13 sectors for which PLIs have been announced, nine have been notified so far, and the others must be spelt out quickly lest global investors pick another destination. The handing over of Air India to the Tata group — the first outright sale of a public sector firm in almost two decades — will ring in some much-needed confidence in the Government’s much-reiterated stance that it has no business to be in business. With its efforts to repair some of the damage to the long-bleeding telecom sector and finally fix the festering folly of pursuing retrospective tax cases that it had termed as ‘tax terrorism’ while in the Opposition, the Government has been making the right noises. These decisions still have to be taken to their respective logical conclusions swiftly, for an enduring shift in perceptions, and outcomes on the ground. Moreover, as it seeks to seal economic partnership pacts or scale up ties with key markets like the EU, the U.S. and the U.K., India needs to also invest some of this energy into improving its image on key socio-economic parameters and the adherence to the ‘rule of law’ while refraining from fresh mistakes and heavy-handed regulations like the much-opposed draft norms for e-commerce. In a world where capital is increasingly influenced by environmental, social and governance standards, these factors merit more policy attention as well.

CREDIT SCORE MYTHS THAT CAN HARM FINANCIAL HEALTH

A strong credit score is key to your financial health as it can provide you with access to the best offers on loans and credit cards. However, building or maintaining a high credit score through responsible behaviour is a continuous process. One needs to be aware of ‘good and desirable’

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actions that impact your credit score positively and stay away from the bad ones. Here are some common myths around credit scores:

Myth 1

Checking my credit score frequently will lower the score

When you apply for any kind of loan or a credit card, the lender fetches your credit report from a credit bureau to gauge your creditworthiness. This is commonly known as a 'hard enquiry.' Too many hard enquiries from lenders within a short span can reduce your score as it indicates credit hunger. However, when you check your credit score on your own, it is known as a 'soft enquiry.' Soft enquiries have no impact on your score. In fact, it is advised to check your credit report every 2 or 3 months, to track your credit score and take action to build it. Regularly checking your credit score can also help detect errors that may emerge in your credit report.

Myth 2

My score will improve with increase in income

Your credit score is determined by your behaviour with credit and is not related to income. Missing EMI repayments, high credit-utilisation ratio, frequent and multiple applications for loans and cards can severely damage your credit score, irrespective of your income. However, higher income does impact your overall loan eligibility, as it reflects higher repayment capacity. Despite a strong credit score, those with lower income may not be eligible for select credit cards or high-ticket loans.

Myth 3

Settling a credit account helps in improving credit score

Settling your loan or credit card account is different from closing your loan or card account. Closure of an account means deactivating a loan or credit card after full repayment of outstanding dues as per schedule, with no outstanding amount remaining. When one is unable to pay the outstanding amount for some time, the lender may choose to extend the option to settle the account through a one-time payment option, where a certain amount of the debt may also be written off. When you decide to settle your credit account, the credit bureaus are informed; this starts reflecting in your credit report as a 'settled' account. You need to know this 'settled' account remains in your credit report for a long time, and all your future loan or credit card applications are likely to be adversely impacted. Since you missed repaying as per the schedule and settled the account, lenders will consider you as a 'risky' borrower in future and may be hesitant to approve your loan or credit card applications.

Myth 4

Banks will lend to me because I have never taken any credit in the past

Many people assume that having no loans or credit cards can make it easy for them to avail credit as they do not have any existing credit obligations to fulfil. This is not correct. Having active credit accounts and displaying good repayment behaviour against them is a positive sign for lenders. If



you have fared well with your credit obligations in the past and continue to do so, your risk of defaulting in future is relatively less and you can get credit approval with better offers and at preferential rates. On the other hand, indiscipline in handling credit in the past makes you a risky customer and bureaus give you a low credit score making it difficult to avail loans and cards. But, if you have never taken any loan or credit card in your life, you do not have any credit history. Having no credit history leaves providers with no data to analyse the risk of credit provided to new to credit applicants. Many large lenders refrain from approving credit applications of such applicants. If you are new to credit, you also miss out on pre-approved loans and card offers from various lenders, apart from several benefits such as preferential rates.

Myth 5

Closing old credit cards is good for my credit score

We often tend to close old credit cards to save annual fees or just because we don't use them any more. However, this may not be advisable if you do not have a long credit history, haven't availed many credit products, or have a low credit score. Before closing an old credit card, do consider a couple of aspects. First, it's always good to have a good mix of credit products in your portfolio because it shows your ability to manage different types of credit. So, before closing an old credit card, do take a close look at the total account in your credit report. If you have not taken too many credit products, you may want to continue with the card for a stronger product mix. Second, lenders look at the length of your credit history when you apply for any kind of loan or a credit card and, having a credit card here with a long history and good repayment record may help. So, if your credit history with other credit products is not very long, continuing with an older credit card is recommended. Also, remember that when you close a credit card, your credit limit would reduce, which may lead to a higher credit utilisation ratio that would negatively impact your score.

WILL TATAS BE ABLE TO TURN AROUND AIR INDIA?

On October 8, Department of Investment and Public Asset Management (DIPAM) Secretary Tuhin Kanta Pandey announced at a press conference that the Tata Sons subsidiary, Talace Pvt. Ltd., had won the bid for the national carrier Air India. He said that after the setting of a reserve price of ₹12,906 crore, the Tata Sons subsidiary had emerged the winner, quoting a figure of ₹18,000 crore. The other shortlisted bidder, Ajay Singh of SpiceJet, had quoted ₹15,100 crore. Within minutes, Ratan N. Tata, Chairman Emeritus, Tata Sons, and Chairman, Tata Trusts, put out a tweet, "Welcome back, Air India!"

What will Tata Sons get?

The Air India group is made up of these components: Air India, Air India Express, Air India Engineering Services Limited (AIESL), Air India Air Transport Services Limited (AIATSL: ground handling services to the Air India group and other airlines) and Airline Allied Services Limited, or AASL (Alliance Air); the Hotel Corporation of India (Centaur hotels and the Chefair flight kitchens); and Air India SATS Airport Services Private Limited. The Air India sale is the third attempt by the Government of India (incidentally, all under the National Democratic Alliance regime), the earlier bids having been made in the early 2000s and 2017-2018. This time around, the government offered management control and sale of 100% equity share capital, each, of Air India and Air India



Express and a 50% equity share capital of Air India SATS Airport Services Private Limited — which the Tatas have won.

It was the mountain of dues and deep losses that prompted the sale. How will the debt be cleared?

The airline's total debt at the end of August this year was ₹61,562 crore. Of this, Tata Sons (its holding company Talace Pvt. Ltd.) would be taking over ₹15,300 crore, with a cash payment of ₹2,700 crore. The rest, an estimated ₹46,262 crore, will be moved to Air India Assets Holding Ltd (AIAHL), a special purpose vehicle formed by the government to handle the debt and non-core assets of Air India such as land and buildings. Much of the debt is related to the merger between Air India and the other state-owned carrier, Indian Airlines, which was cleared by the Cabinet on March 1, 2007 to form the National Aviation Company of India Limited (NACIL). Preceding this development — the merger — the then United Progressive Alliance government had in 2005 approved the purchase of 68 aircraft by Air India (from Boeing), and a year later, 43 planes for Indian Airlines (from the Airbus 320 family for \$2.2 billion). The Boeing deal was for 23 777s, 27 787s and 18 737s (for the low-cost carrier Air India Express). Boeing has also built and transferred a state-of-the-art maintenance, repair and overhaul (MRO) facility at Nagpur. Following the mounting losses, there was an investigation into allegations about the nearly ₹70,000-crore deal that had caused a financial loss to the "already stressed national carrier". It also inducted A320Ns on lease from ALAFCO (Aviation Lease and Finance Company) in 2017. As far as debt clearance is concerned, the government is to transfer to the AIAHL about ₹16,000 crore of unpaid fuel bills and other pending dues that Air India owes to airports and vendors. In short, it will hold about 75% of the airline's debt that the Tata Group is not taking over. An aviation consultant said the Tatas could also take over an additional and estimated ₹9,000 crore worth of lease obligations for over 40 Air India jets. The non-core assets, including land and buildings that are estimated to be valued at ₹14,718 crore, are being transferred to the AIAHL. There are reports that the government is planning to add the feeder/regional airline, Alliance Air (the second Air India subsidiary), to this mix with an eye on selling it. If this happens, the government will completely exit the airline business. According to Mr. Pandey, the airline loses ₹20 crore a day. And, from 2009-10 to date, the government has infused over ₹1,10,276 crore into the airline: ₹54,584 crore in cash support and ₹55,692 crore in loan guarantees. The sale deal is expected to be wrapped up by December-end (though some experts say it could go on till March). The four Air India subsidiaries — AIATSL, AASL, AIESL and the Hotel Corporation of India Ltd. — and non-core assets that include the fabled collection of art work, paintings and artefacts and other non-operational assets have been transferred to the AIAHL.

Do the Tatas have a business model ready?

Air India, the Ministry of Civil Aviation and the Tata Sons did not respond to queries from The Hindu on the subject. However, aviation experts have tried to piece things together. The contours cover human resources, fleet management, flight scheduling and technology services. The Tatas already have two airlines, which are still in poor financial health: Vistara (a joint venture with Singapore Airlines Limited as a 51:49% stake partnership) and Air Asia India, a low-cost service, in which the Tatas have a nearly 84% stake. An aviation analyst said that going by the data from the Directorate- General of Civil Aviation (DGCA), the Tatas could now have a 26% share of the domestic aviation market that would put them behind market leader IndiGo with its estimated 57% market share. Opinion is that there could be mergers and synergy between the four airlines.



What are the positives and the negatives?

The Air India deal catapults the conglomerate into the big league, making it the largest player from India on international routes. First, the positives. The brand, Air India, has an instant connect. According to a Tata data-sheet, there will be a fleet strength of 141 aircraft (117 from Air India and 24 from Air India Express), and a widespread domestic and international footprint (over 7,000 slots and codeshare agreements) with a significant share of the revenue from international operations. Its non-stop flights from India to the United States are a high point. There is also a repository of bilateral rights, which experts say could be used to expand flights in a big way to Europe, Africa and South America. The Air India frequent flyer programme has nearly three million members. The airline has experienced crew, ground staff and engineers. It is also part of the 26-member global aviation grouping, Star Alliance. According to an aviation expert, the negatives would be linked to the structure of its finance lease/bridge loans and operating leases for a part of its fleet, the poor state of the cabins, seats and in-flight amenities on most of its aircraft fleet, staff strength in certain administrative functions, the cost contracts for some of its subsidiaries, and the training and safety record of Air India Express. The total number of permanent and contractual employees of Air India and Air India Express is 13,500. According to Captain Mohan Ranganathan, a retired airline instructor pilot, aviation safety expert and an industry watcher, "The Tatas have got just the airline, aircraft, routes and landing slots. The hangars and engineering belong to the AIESL, and will all be sold off separately. If the Tatas want them, they have to bid and pay!" Former Executive Director, Air India, Jitender Bhargava, in a commentary, has said, "The question of how rapidly the Tatas can make the airline profitable needs to be viewed in the context of the impact of the pandemic, additional domestic factors such as price sensitivity of Indian passengers and high operational costs."

SIAC RULING IN FUTURE RETAIL-RELIANCE RETAIL DEAL, AND HOW IT GIVES AMAZON A BOOST

The Singapore International Arbitration Centre (SIAC) has ruled against lifting the interim stay that an emergency arbitrator had placed on the Future Retail-Reliance Retail deal in October last year. The ruling is a leg up to Amazon's claims that the deal between Kishore Biyani's Future Retail and Mukesh Ambani-led Reliance Retail was a violation of its "contractual rights".

What does the latest ruling by SIAC mean for the Future Retail-Reliance Retail deal?

In the legal tussle between Amazon and Future Retail, Amazon has so far had the upper hand when it comes to orders in its favour, be it from the SIAC or the Supreme Court. In its ruling, the SIAC has held that the emergency arbitrator was right in putting an interim hold on the Future Retail-Reliance Retail deal, and that they have not been "vitiating by any subsequent events or proceedings". Experts say the latest ruling will prove to be another stumbling block in the Future Retail-Reliance Retail deal, thereby delaying the possible merger, as the Supreme Court ruling is also in Amazon's favour. Future Retail will, in all likelihood, wait for the final decision on the issue before going ahead either way with the plan, an expert said. Earlier this year, the Supreme Court had upheld the enforcement of an order by the SIAC emergency arbitrator which had put on hold the Future Group's deal with Reliance Retail, a subsidiary of Reliance Industries Limited. In its judgment, the apex court had held that such an award can be within the Arbitration Act as these



orders were an “important step in aid of decongesting the civil courts” and providing quick interim relief to parties in the arbitration.

Why is Amazon opposed to a Future Retail-Reliance Retail deal?

The tussle dates back to 2019 when Amazon had signed a deal with Future Coupons, the parent company of Future Retail. As per the deal, which was then worth Rs 2,000 crore, Amazon had acquired 49 per cent in Future Coupons. As part of the deal between Amazon and Future Coupons, Future Retail would be able to place its products on Amazon’s online marketplace. According to Amazon, the deal had then also given it a ‘call’ option, which enabled it to exercise the option of acquiring all or part of Future Retail’s shareholding in the firm within 3-10 years of the agreement. In August 2020, when Future Retail inked a Rs 24,713 crore deal to sell its retail, wholesale, logistics and warehousing units to Reliance Retail, Amazon claimed the deal violated the “contractual rights” it had with Future Coupons. On its part, the Future Group had said it had not sold any stake in the company, and was merely selling its assets and therefore had not violated any terms of the contract. Although Indian laws do not recognise the concept of international arbitration and emergency orders issued by such tribunals, the orders are usually “respected” by business houses.

ELECTRONICS MAKER FOXCONN’S ELECTRIC VEHICLES PLAN

Taiwanese electronics manufacturer Foxconn has unveiled three white-label electric vehicles in an effort to showcase its capabilities at a time when global smartphone makers like Apple and Xiaomi — which are Foxconn’s customers — have been working on coming out with their own EV models.

Foxconn’s announcement

Foxconn Technology Group, which is the world’s biggest contract manufacturer for electronics, unveiled three prototype electric vehicles on Monday (October 18). The unveiling is being billed as Foxconn’s pitch to invite global vehicle original equipment manufacturers (OEMs) showcasing the company’s manufacturing capabilities in the EV segment.

Vehicle manufacturing plans

The company announced that Taiwan’s Yulon Motors will be its first customer for electric vehicles manufacturing, but Foxconn’s plans to enter vehicle manufacturing have been in the works. Last month, the company agreed to an automotive manufacturing plant in Ohio from ailing startup Lordstown Motors for \$230 million — giving it a booster shot in the areas of automobile assembly capacity, equipment and talent. The plant was previously run by General Motors. According to Reuters, this follows plans to build another manufacturing facility in Thailand as well as a chipmaking plant in Taiwan.

Timing of announcement

Apple is yet to formally announce the project or even decide on a manufacturing partner — however, CEO Tim Cook has hinted earlier that the company has been working on autonomy as a core technology. Additionally, Chinese smartphone company Xiaomi Corp CEO Lei Jun announced



on Tuesday that the company will mass-produce its own cars in the first half of 2024. In March, Xiaomi had said it would commit to investing \$10 billion in a new electric car division over the next ten years. And even though the company has announced its intent formally to get into EVs, like Apple, it is yet to reveal if it will produce the car independently or via partnership with a manufacturer.

KEEPING THE POLICY ALIVE AND KICKING

Some time ago, the Madras High Court ordered all vehicles in the State of Tamil Nadu to be sold only with a 'five-year, bumper-to-bumper' cover. That order is now on hold as insurers have asked for time to design such policies and get the required regulatory permissions. The court's idea was for a multi-year policy with a bundle of covers. We had explained in Cover Note in the edition dated September 6, how such bundled, or package, policies can serve us better and can offer more efficient pricing. Multi-year policies have the added advantage of protecting us from our own forgetfulness to keep our insurance renewed! Let us look at a few package and multi-year policies. A basic motor-vehicles policy from the point of view of what is mandated is the Third-party (TP) Liability policy. This is packaged with an own-damage cover to make a comprehensive policy and can be further bundled with a menu of other optional covers like personal accident for the occupants, no-depreciation cover, road-side assistance, a cover ensuring a service vehicle while yours is being repaired and so on. The bells and whistles come at an additional cost but have their utility. Multi-year motor-vehicle policies have also been available. A 10-year TP policy for two-wheelers was introduced in 2014, but hasn't caught on much. A multi-year cover for cars was introduced in July 2018 and made compulsory for new vehicles including two-wheelers, from June 2020. However, this was withdrawn in August that year. Health insurance policies have been offered for two and three-year terms for quite some time now. This is attractive because of the premium discount as well as the fact that one is protected against the premium increases that have become significant. Home-insurance policies have been package policies for the longest time. The Householders' Comprehensive, policy dating back to the nationalised era of general insurance, had ten different covers packaged as one, including even personal-accident cover for household staff and continues to be on offer and many further options are now available, including some multi-year policies. Package policies and multi-year policies lend a dimension of convenience and practicality to buying and maintaining our portfolio of insurance.

Linking to dates

One more convenient insurance hack that will save our skins when we forget to renew is to fix convenient renewal dates. Life policies are often linked to birthdays or wedding anniversaries which makes it easy for people to remember. If your policy is linked to a tax benefit, more the reason you should meet the March 31 deadline and hence, its renewal date should give you enough breathing room.

Premium timing

You can ask your insurance firm to align all your policies to the same renewal date. They can do this by extending some policies/ cutting short others as a one-time exercise and bringing them all to the target date. If a single renewal date for all policies is too much of a financial outgo all at once, then spread them out to some on the first date of each quarter or a conveniently remembered



trigger date. It could be timed for your Deepavali bonus date or the date of interest on a fixed deposit. And if you are like a significant number of people who misplace policies, ensure you have registered on your insurance company's website so that you can access policy details online for reference at the time of renewal, for checking details while filing your I-T returns or indeed, when you are filing a claim. You can pool all your policies from various insurers, life, health, motor and so on into an e-insurance account and have them all in one place at the click of a mouse. This demat account, available through any insurer and even other financial service entities, will also come in handy for any policy updates such as address change or registered mobile number will be updated across policies and across insurers with one piece of communication. If you have moved home often, and are missing policy renewal notices, you will know what a blessing that can be!

OPENING THE FIELD

The next couple of weeks will be closely watched for cases of paddy stubble burning in Punjab and Haryana, that have mercifully been lower in number so far. But they will also matter for the availability of fertilisers to farmers across India. As reported by this newspaper, stocks of all nutrients, particularly di-ammonium phosphate (DAP) and muriate of potash (MOP), are at precariously low levels. Viral videos of farmers even looting fertiliser bags from trucks, including in the Union Agriculture Minister's constituency, mirror the desperation. Plantings of wheat, mustard, chana, masoor, potato, onion and other rabi crops are about to commence, if they haven't already. Soil moisture conditions are also most conducive, thanks to the surplus rains since September. Shortages of fertiliser — more so DAP, required right at the time of sowing — can be a dampener in such a situation. And with state elections ahead in Uttar Pradesh, Punjab and Uttarakhand, they can prove politically costly too. The Narendra Modi government will have its work cut out in the coming days managing supplies and, possibly, farmer anger. It should have raised the subsidy on non-urea fertilisers in time for the industry to plan imports. Given spiraling global prices — of fertilisers as well as inputs such as phosphoric acid, ammonia and sulphur — imports were viable only if companies could pass these on to farmers here. The government acted when they did; retail prices went up from Rs 24,000 to Rs 34,000 per tonne for some complex fertilisers. On October 12, it approved a substantial hike in the subsidy on DAP and three popular complexes. This decision ideally should have come much earlier to enable building of sufficient opening stocks for the rabi season. But now that imports can happen, the government must ensure that the material is moved quickly from the ports to the consumption centres. Once farmers are assured of enough stock in transit, the panic buying will stop and they may not mind even delaying sowing by a week. The government should also use the current supply crisis to wean away farmers from applying too much high-analysis fertilisers. Urea and DAP contain 46 per cent nitrogen (N) and phosphorus (P), respectively, while MOP has 60 per cent potassium (K). Why not replace them with NPK complexes such as 12:32:16 and 10:26:26, or single super phosphate having 16 per cent P and 11 per cent sulphur? Farmers need to know that India imports much of its fertiliser raw materials. These can be used for products delivering the same nutrients in just the required quantities, including in water-soluble form or even foliar application like IFFCO's Nano Urea. This crisis shouldn't be wasted: Bring urea under nutrient-based subsidy and let farmers think beyond DAP and MOP.



LIFE & SCIENCE

RUSSIANS LAND AFTER FIRST MOVIE SHOOT IN SPACE

A Russian actress and a film director returned to Earth on Sunday after spending 12 days on the International Space Station (ISS) shooting scenes for the first movie in orbit. Yulia Peresild, 37, and Klim Shipenko, 38, landed as scheduled on Kazakhstan's steppe at 0436 GMT, according to footage broadcast live by Russia's Roscosmos space agency. Mr. Shipenko appeared distressed but smiling as he exited the capsule, waving his hand to cameras before being carried off by medical workers for examination. Ms. Peresild, who plays the film's starring role and was selected from 3,000 applicants, was extracted from the capsule to applause and a bouquet of flowers. The actress said she is "sad" to have left the ISS. "It seemed that 12 days was a lot, but when it was all over, I didn't want to leave," she told Russian television. "This is a one-time experience." The team was ferried back to terra firma by cosmonaut Oleg Novitsky, who had been on the space station for the past six months. The filmmakers had blasted off from the Russia-leased Baikonur Cosmodrome in ex-Soviet Kazakhstan earlier this month, travelling to the ISS with veteran cosmonaut Anton Shkaplerov to film scenes for *The Challenge*. If the project stays on track, the Russian crew will beat a Hollywood project announced last year by Mission Impossible actor Tom Cruise, together with NASA and businessman Elon Musk's SpaceX. The Russian movie's plot centres around a surgeon who is dispatched to the ISS to save a cosmonaut.

ZEOLITE OXYGEN CONCENTRATORS: CHEMISTRY IN THREE DIMENSIONS

Chemists, when they are designing or building new molecules, can be thought of as architects and builders. An organic chemist can plan a blueprint for a new molecule, and synthesize it with precision out of atoms of carbon, oxygen, hydrogen and so on. After centuries of fine-tuning this skill, chemists in the early 20th century moved up to synthesizing long, thread-like one-dimensional polymers. The polyethylene of plastic bags is made from repeating units of the ethylene molecule, (importantly, the units are linked by the same firm chemical bonds as are seen within an organic molecule. This provides the stability that ensures that a shirt made from polyester-mixed yarn is long lasting). In biological systems, proteins are 1-dimensional polymers of amino acids.

Adding new dimensions

In recent years, this has been taken to a new level by the creation of extended 2- or 3-dimensional structures from linking together molecular units just as was done for polymers, but in two or three dimensions. The basic units go on fitting together to form large networks, like a wire mesh fence. The network is constructed by repeated additions of a molecule with symmetry. A few such networked sheets, when stacked one over another, form a functional 2-D entity. Because words like polymer do not do justice to this complex arrangement of atoms, such molecular networks are called frameworks. Uses for these Covalent Organic Frameworks (COFs) take advantage of their stability, large surface area, controlled pore sizes, and tunable chemical environments. Just as you choose the size of the 'pore'/hole in a wire mesh, frameworks can be designed to act as sieves in separating out molecules of a specified size. The smallest whiff of a toxic gas could be sensed - in an industrial environment, or in airline baggage. They are also suitable for both storing

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



energy (as capacitors) and for conducting it (along membranes in fuel cells). Metal Organic frameworks (MOFs) are structured like COFs but have metals in complexes with organic entities. The choice of metals is wide, from Beryllium to Zinc, though relatively abundant metals are preferred for economic and environmental reasons. They offer great advantages: for gas storage, as in the case of hydrogen storage in fuel cells; in catalysis, where they replace very expensive metals; in sensors; and in drug-delivery – anti-cancer and other drugs with severe side effects can be trapped in the porous confines of MOFs, to be released in small and steady doses.

Use of zeolites

Zeolites are highly porous, 3-D meshes of silica and alumina. In nature, they occur where volcanic outflows have met water. Synthetic zeolites have proven to be a big and low-cost boon. One biomedical device that has entered our lexicon during the pandemic is the oxygen concentrator. This device has brought down the scale of oxygen purification from industrial-size plants to the volumes needed for a single person. At the heart of this technology are synthetic frameworks of silica and alumina with nanometer-size pores that are rigid and inflexible. Beads of one such material, zeolite 13X, about a millimeter in diameter, are packed into two cylindrical columns in an oxygen concentrator. The chemistry here is tailored to the task of separating oxygen from nitrogen in air. Being highly porous, zeolite beads have a surface area of about 500 square meters per gram. At high pressures in the column, nitrogen is in a tight embrace, chemically speaking, with the zeolite. Interaction between the negatively charged zeolite and the asymmetric nucleus (quadrupole moment) of nitrogen causes it to be preferentially adsorbed on the surface of the zeolite. Oxygen remains free, and is thus enriched. Air has 78% nitrogen, 20.9% oxygen and smaller quantities of argon, carbon dioxide, etc. Once nitrogen is under arrest, what flows out from the column is 90%-plus oxygen. After this, lowering the pressure in the column releases the nitrogen, which is flushed out, and the cycle is repeated with fresh air. Global volunteer efforts have made available very detailed instructions on building your own oxygen concentrator, with locally available resources. In India, IISc has transferred the technology of making oxygen concentrators to over 20 companies.

ARCTIC MELT: WILL POLAR BEARS VANISH BY 2100?

The shrinkage of summer sea ice in the Arctic has long been a concern, as has been the survival of the species that depend on it for survival. A new study has now put a timeline to an impending disaster: If carbon emissions continue at current levels, summer ice will disappear by 2100 — and, along with it, creatures such as seals and polar bears. The study has been published in the journal *Earth's Future*.

Ice and life

In winter, most of the Arctic Ocean surface freezes, and scientists expect this to continue for the foreseeable future, even as climate warms. In summer, when some of the ice melts, winds and currents carry it for great distances — some of it into the North Atlantic, but much of it into the Arctic's farthest-north coasts, along Greenland and the Canadian islands. This results in a rich marine ecosystem. On the Arctic ice, algae bloom. These feed tiny animals, which in turn feed fish, which in turn feed seals, which feed polar bears at the top of the chain. The irregular topography also helps create lairs for seals, and ice caves for polar bears during the winter. But with a warming



climate, summer sea ice has been shrinking fast, and now consistently spans less than half the area it did in the early 1980s.

The findings

The study covers a 1 million-sq km region north of Greenland and the coasts of the Canadian Archipelago, where sea ice has traditionally been thickest round the year, and thus likely to be most resilient. The researchers looked at two scenarios: optimistic (if carbon emissions are brought in check) and pessimistic (if emissions continue as they are). By 2050, summer ice in this region will dramatically thin. Under the optimistic scenario, some summer ice could persist indefinitely. Under the pessimistic scenario, summer ice would disappear by the end of the century. Under the low-emissions scenario, ice from even the central Arctic will wane by mid-century, and will no longer endure through the year. Locally formed summer ice will persist in what is known as the Last Ice Area, but will now be only a metre thick.

The implications

The study forecasts that under the low-emissions scenario, at least some seals, bears and other creatures may survive. These species currently exist under similar summer conditions along western Alaska and parts of Hudson Bay. However, under the higher-emissions scenario, by 2100, even the locally formed ice will disappear in summer, the study has found. With no summer ice anywhere, there will be no ice-dependent ecosystems. "Unfortunately, this is a massive experiment we're doing," the Columbia University's Climate School quotes a senior research scientist Robert Newton, co-author of the study, as saying. "If the year-round ice goes away, entire ice-dependent ecosystems will collapse, and something new will begin," he is quoted as saying on the School's website. This may not mean the end of all life. "New things will emerge, but it may take some time for new creatures to invade." Fish, algae etc may come up from the North Atlantic, but it is not clear if they could survive there year round. "...it may be getting warmer, but the planet's rotation around the sun will not change, and any new occupants including photosynthetic organisms would have to deal with the long, sunless Arctic winter," the statement said.

WHAT IS ALLIUM NEGIANUM?

A plant discovered in Uttarakhand in 2019 has been newly confirmed as a new species of Allium — the genus that includes many staple foods such as onion and garlic, among 1,100 species worldwide. The new species is described in journal *PhytoKeys*. In 2019, Dr Anjula Pandey, Principal Scientist at ICAR-National Bureau of Plant Genetic Resources in New Delhi, together with scientists Drs K Madhav Rai, Pavan Kumar Malav and S Rajkumar, came across plants of this onion species, which they have named *Allium negianum*, in the border area of Malari village, in Chamoli district of Uttarakhand. It grows at 3,000 to 4,800 m above sea level and can be found along open grassy meadows, sandy soils along rivers, and streams forming in snow pasture lands along alpine meadows, where the melting snow helps carry its seeds to more favourable areas. With a narrow distribution, this newly described species is restricted to the region of western Himalayas and hasn't yet been reported from anywhere else in the world, according to a blog post from Pensoft Publishers, which brings out the journal. The scientific name *Allium negianum* honours the late Dr Kuldeep Singh Negi, an explorer and Allium collector. Although new to science, this species has long been known under domestic cultivation to local communities, the blog post said. It said that



according to locals, the onion from Niti valley was particularly good, even deemed the best on the market. So far only known from the western Himalaya region, *Allium negianum* might be under pressure from people looking to taste it, the blog post said. "... the researchers fear that indiscriminate harvest of its leaves and bulbs for seasoning may pose a threat to its wild populations," it said.

THE CARBON MARKETS CONUNDRUM AT COP26

If climate negotiations are compared to a game of diplomatic chess, Article 6 of the Paris Agreement would be the king to be checkmated and captured for concluding the Paris Agreement Work Programme (PAWP) at the 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC). Article 6 of the Paris Agreement introduces provisions for using international carbon markets to facilitate fulfilment of Nationally Determined Contributions (NDCs) by countries. The success of COP26 at Glasgow hinges, to a great extent, on the conclusion of carbon markets discussions. Despite several rounds of high-level meetings, it remains one of the most technical and highly contentious unresolved issues of the PAWP.

A sensitive issue

Developing countries, particularly India, China and Brazil, gained significantly from the carbon market under the Clean Development Mechanism (CDM) of the Kyoto Protocol. India registered 1,703 projects under the CDM which is the second highest in the world. Total carbon credits known as Certified Emission Reductions (CERs) issued for these projects are around 255 million which corresponds to an overall anticipated inflow of approximately U.S.\$2.55 billion in the country at a conservative price of U.S.\$10 per CER. Therefore, logically, India has a lot to gain from a thriving carbon market. However, with the ratification of the Paris Agreement, the rules of the game have changed. Unlike the Kyoto Protocol, now even developing countries are required to have mitigation targets. Developing countries are faced with a dilemma of either selling their carbon credits in return for lucrative foreign investment flows or use these credits to achieve their own mitigation targets. This has made Article 6 a highly sensitive issue that requires careful balancing of interests and expectations.

What should be debated

For developing countries, the new market mechanism is much more than a tool for achieving mitigation targets under the NDCs. Much like its predecessor, it should help promote sustainable development and assist climate change adaptation in the developing countries. It should encourage private sector participation and attract foreign investments to support low carbon development. While over 50% of the countries have communicated their intention of using market mechanisms to achieve NDC targets, India is not one of them as it aims to rely on domestic mitigation efforts to meet its NDC goals. It is the developed countries that would rely more on market mechanisms for achieving their climate targets as they would be comparatively low-cost options. The three critical issues that would be hotly debated in Article 6 negotiating rooms are CDM Transition, Accounting rules and Share of Proceeds to the Adaptation Fund. Let us examine them one by one. CDM transition: The CDM projects have gone through due diligence and credits have been issued under UNFCCC oversight. Therefore, the Article 6 mechanism should honour the previous decisions and allow for a smooth transition of these projects and credits to ensure not



only the viability of these projects but also inspire trust among the private investors in the UNFCCC decision-making process. However, some countries have cast doubts on the environmental integrity of these credits and while there is greater acceptance for transition of projects/activities, the same is not the case for transition of credits. If the decision regarding transition of CDM is not favourable, it could lead to a loss of billions of dollars worth of potential revenue to India alone. A possible landing zone can be that the new supervisory body to be formed under the Paris Agreement can re-examine the validity and rigour of such credits. Accounting rules: Article 6.4 mechanism is meant to incentivise the private sector and public entities to undertake mitigation activities for sustainable development. Under this mechanism, a country can purchase emission reductions from public and private entities of the host country and use it to meet its NDC targets. However, this does not automatically imply that emission reductions transferred from a host country be adjusted against its NDC targets. It must be appreciated that these reductions represent additional efforts of the private sector or public entities to mitigate greenhouse gas emissions, and in fact raise global climate ambition. This is also in line with the provision of Article 6.5 of the Paris Agreement wherein the host country is not required to undertake corresponding adjustment for the projects outside its NDC.

The path ahead

Being a developing country, India does not need to undertake economy-wide emission reduction targets at this stage of its development. This means, not all mitigation actions fall within the purview of its NDC. Therefore, it can significantly gain from the market mechanism under Article 6.4 by selling emission reductions that lie outside its NDC. The counter view of developed countries, that this will deter raising ambition levels, is flawed as such efforts will in fact be additional to what have been committed in the NDC. Robust accounting will ensure that there will be no double-counting of emission reductions. Share of Proceeds (SOP) to the Adaptation Fund: For developing countries, adaptation is a necessity. However, it remains severely underfunded compared to financing for mitigation activities. While developing countries emphasise that the SOP must be uniformly applied to Articles 6.2 and 6.4 to fund adaptation, developed countries want to restrict its application to Article 6.4. This would disincentivise the Article 6.4 mechanism and limit voluntary cooperation to the cooperative approaches under Article 6.2 favoured by developed countries. In a way, carbon markets allow developed countries to keep emitting greenhouse gases while developing countries benefit from the revenue generated from the sale of their carbon credits. Central to the discussions on Article 6 is equitable sharing of carbon and developmental space. Climate justice demands that developing countries get access to their fair share of global carbon space. As developing countries are nudged to take greater mitigation responsibilities, a facilitative carbon market mechanism that respects the principles enshrined in UNFCCC would greatly help accelerate their transition to low carbon development and would be a win-win solution for all countries.

GREENING THE LAST MILE

The handsome bird struts from one end of its perch to another, its bright red plume glistening in the morning sun. The jhujhurana, as it is locally called, or the King of Birds, cocks his head from side to side surveying his home enriched with dried moss and fern. As real estate goes for tragopans, this is one of the best, a naturalistic enclosure that imitates the bird's wild



surroundings. The aim is for breeding pairs to lay enough eggs to support the next generation of the species in the wild. The population of the western tragopan, the State bird of Himachal Pradesh, has seen a drastic decline, which is why the Saharan centre, a few hours from Shimla, was set up to boost its population. Wildlife filmmaker Munmun Dhalaria, who has documented the story, was impressed by the hard work put in by the caretakers of the facility. "Given how elusive and shy this bird is, it is quite incredible what the team has managed to achieve," she says. On last count, there were more than 45 birds at the centre. Six of them, raised in the pheasantry, were soft-released into the nearby Daranghati Wildlife Sanctuary last October. But there's a long way to go: the ultimate goal of all conservation breeding is to establish a stable population of the threatened animal or bird in the wild. The habitat of this bird continues to suffer from various threats such as fragmentation, grazing by livestock, tree-logging, and poaching, and there is no evidence to suggest that these issues were adequately addressed before releasing the birds into the wild.

Soft release

In neighbouring Haryana, another conservation breeding project is underway. For scientist Vibhu Prakash, who first noticed the steep decline in vulture populations, life has come full circle. It has been almost two decades since he moved from Mumbai to set up the Jatayu Conservation Breeding Centre in Pinjore, from where eight birds were released last October. Starting with just a few pairs of rescued vultures, the centre today houses more than 378 birds that include the slender-billed vulture, white-backed vulture and long-billed vulture. Prakash too opted for a soft release of the eight birds from a pre-release aviary where they were kept for seven to eight months to encourage their interaction with vultures in the wild. In soft releases, explains Prakash, the birds are released after they become familiar with the surroundings and interact with wild birds, helping them to join flocks and fly away. This greatly increases their chances of survival after release. One of the released vultures died of electrocution and another flew up to the mountains, but it grew weak and subsequently died. Prakash observed that the released vultures gradually increased their flying and soaring time as well as distance, but were not able to have a sustained flight with their wild counterparts. With variants of diclofenac [a cattle drug that's toxic to vultures that consume carcasses] still existing in farmlands, "we need to be extra cautious," says Prakash, which is why releasing the captive-bred birds in large numbers remains risky until every single variant of the killer drug has been removed.

Limited human contact

In the sand dunes of Rajasthan, another captive breeding project is underway, involving the great Indian bustard (GIB), but it is as shrouded in secrecy as India's nuclear programme. In order to boost populations of this critically endangered bird, six eggs were collected at the Jaisalmer centre to create a founder population, and a chick was successfully hatched artificially in 2019. Human contact is limited and the keepers are tight-lipped about passing on any information. Sutirtha Dutta from the Wildlife Institute of India explains, "This is an extremely difficult bird to deal with; it is heavy, a slow breeder, and extremely sensitive to human presence, so the challenges are many when it comes to breeding them in captivity". But there is unmissable joy in his voice when he describes the moment the first chick was hatched in captivity. "There is no doubt that conservation breeding has created a sense of hope for all of us when it comes to the GIB," he says. But as with the other birds, for the bustard too, their habitat continues to be rife with threats such



as power lines. So, is there any point in spending two decades breeding birds in captivity if the threats to their habitat do not abate? Dutta is optimistic, and emphasises that their plan is focused not just on breeding but also on working closely with the forest department to mitigate threats. “We need to do both ex-situ and in-situ conservation,” he says. Setting up a breeding centre and releasing a captive-bred creature into the wild is good optics, it allows policymakers to show that they have are ‘managing’ the problem. But conservation breeding cannot address the primary issue of declining habitats, which caused the problem in the first place. IUCN guidelines clearly state that a species should not be reintroduced till the reason why they went into a decline has been addressed in that location.

Fund scarcity

Conservation breeding is time-consuming and expensive. Prakash is concerned about the funds needed to manage the vulture breeding centre: the Royal Society for Protection of Birds has reduced its funding due to the pandemic, and government funds have also been drastically cut. While money is made available for creating the infrastructure, the later challenge of managing these centres, which includes feeding the animals and salaries for caretakers, is not adequately addressed. If there is one conservation breeding programme that has stood the test of time and managed to establish a significant population in the wild, it’s that of the smallest pig in the world — the pygmy hog. Set up in Assam by the world famous Jersey Zoo (now referred to as the Durrell Wildlife Conservation Trust), the breeding facility releases as many as 15 animals into the wild every year and has so far released 145 pigs. But here too, the habitat of the pygmy hog is under constant threat. Setting up camera traps in the sites where the pygmy hogs are released has enabled the team to gather documentary evidence that the animals are indeed breeding in the wild. Parag Deka, a veterinarian and project manager, and his colleague, Goutam Narayan, have dedicated their lives to bringing this relatively unknown mammal back from the brink. One of the biggest threats to the pygmy hog is the removal of grasslands. By working closely with the forest department in places such as Orang and Manas national parks in Assam, they have been able to make sure to some extent that the grasslands are not burnt during the breeding season of the pygmy hog. How have conservation breeding projects fared in other parts of the world? The California condor is a classic example of a magnificent vulture that made a comeback from the edge of extinction. The DDT pesticide had nearly wiped out its population, but an intense breeding programme has returned more than 300 birds to the wild. The oryx, an antelope with long, straight horns and distinct facial markings, once found all over the Arabian Peninsula, has become the poster child for breeding programmes. The antelope had been hunted to near-extinction till a successful captive breeding programme coupled with a ban on hunting helped revive its population in the wild. Today, more than a thousand oryx roam the wild and the species has been reintroduced in Saudi Arabia, Jordan and the UAE.

Field measures

The question is, given all the money spent on breeding animals in captivity, would it not be wiser to secure their habitats instead? Even in the case of the gharial, there are few studies to prove that the decades of captive breeding have made a significant impact on populations. In fact, a 2012 study in the Journal of Applied Ecology notes the importance of ‘field-based protection measures, which are essential in the face of threats like hydrologic diversions, sand-mining, fishing, and bankside cultivation’. M.K. Ranjitsinh Jhala, who has been instrumental in shaping India’s wildlife



policies, is critical of any captive breeding programme unless it is linked to a release policy. "Ex-situ conservation must only supplement in-situ conservation; it cannot be a substitute," he says. "Captive propagation can be an insurance against extinction, but the objective must be release and restoration to the wild and not letting the last survivors die in captivity, such as the Tasmanian thylacine, the American passenger pigeon, and the Schomburgk's deer of Thailand." And then there is politics, which also determines the fate of a species. A tussle could soon emerge if Rajasthan, which is breeding the GIB, refuses to hand over the birds for release in Gujarat, for instance. In the past, Gujarat refused to hand over Asiatic lions to a Madhya Pradesh sanctuary in spite of a Supreme Court order. Conservation breeding, reintroduction, translocation, and rewilding may have become buzzwords in conservation. But underlying all of them is the need on the part of human beings to 'fix' the problem they have created. Conservation practitioners are increasingly mindful that the real story begins after the gates of the breeding centres are opened. It's restoring the last mile that is crucial.

TRUMP TO LAUNCH SOCIAL MEDIA PLATFORM

Former U.S. President Donald Trump, banned from social media platforms Facebook and Twitter since the January 6 attack on the U.S. Capitol, has announced that he is launching a social media company, TRUTH Social, to "stand up to the tyranny of Big Tech". "We live in a world where the Taliban has a huge presence on Twitter, yet your favorite American President has been silenced," Mr. Trump said in a statement released via email by the Trump Media and Technology Group (TMTG). The platform will be made possible via the merger of TMTG and Digital World Acquisition Group, the email said, with TMTG eventually becoming a publicly listed company. The app is expected to roll out across the U.S. in the first quarter of next year, with a beta version being launched next month. "I am excited to send out my first TRUTH on TRUTH Social very soon. TMTG was founded with a mission to give a voice to all. I'm excited to soon begin sharing my thoughts on TRUTH Social and to fight back against Big Tech. Everyone asks me why doesn't someone stand up to Big Tech? Well, we will be soon!" Mr. Trump said. Presumably, a 'TRUTH' is the equivalent of a message or a tweet on Twitter. TMTG also announced that it is launching a subscription video on demand programme, featuring 'non-woke' programming. While as President, Mr. Trump had a penchant for tweeting throughout the day, though his tweets were normally concentrated in the early morning hours. Some of his messages often indicated shifts in foreign policy, others served as marketing messages for his presidency and campaign. The former President was known to call his political rivals names on Twitter. Since being expelled from social media sites, Mr. Trump has sought to restore his voice online in various ways. In July this year, he sued Twitter, Facebook and Google, saying he was the victim of censorship.