THE EDITORIAL PAGE

CODE OF MISCONDUCT

Election Commission has curtailed West Bengal campaign, now both parties must rein in their goons

THE ELECTION COMMISSION'S unprecedented decision to invoke its special powers under Article 324 of the Constitution to prematurely end the election campaign in West Bengal, 24 hours ahead of schedule, is an indictment of the state government. The EC's move was apparently provoked by the violence that erupted on Tuesday, during BJP President Amit Shah's roadshow in Kolkata. This had been preceded by a deeply polarising campaign. The past six rounds of voting in the state have seen violence and intimidation, especially by the cadres of the ruling Trinamool. The Opposition, not just the BJP but also the CPM and the Congress, have complained that the administration has not been fair in allowing a level-playing field. Now the state government must heed the EC, and rein in the unruly mobs.

An ugly spectacle played out on the Kolkata streets on Tuesday: BJP cadres and student activists of the Trinamool did not even spare the statue of the renaissance icon Ishwar Chandra Vidyasagar. Both are ruling parties — the BJP at the Centre and the Trinamool in Kolkata — and as parties in government, expected to behave more responsibly. Instead, the top leaders of both parties have sharpened the rhetoric during the campaign, making Chief Minister Mamata Banerjee's claim to protect a liberal order and complaints by Prime Minister Narendra Modi and Shah about polarisation and poll violence in Bengal ring hollow. The vandalised bust of Vidyasagar is a symbol of all that has gone wrong with politics in West Bengal. This 19th century social reformer worked to usher in a liberal social order that valued the dignity and rights of individuals over all forms of oppressive collective claims. Competitive politics in West Bengal in the past few decades has diminished the individual's agency in civic life and subsumed the citizen under the rubric of the party; the party identity today overrides all other selves and cadres are willing to kill and die for it. The trend didn't begin with the Trinamool, or the BJP. The Congress and the Left used violence to dominate the streets and win elections in the 1960s and thereafter. The Trinamool, which won office by promising *poriborton*, and the BJP, which wants to displace the Trinamool, too follow the same strategy as they pursue political dominance.

All leading players in West Bengal must pause and reflect on their contribution to the entrenching of a culture of political violence. But in the immediate term, the blame must necessarily be owned more by the Trinamool which rules the state. There is a serious threat that the violence may outlive the campaign season and carry on beyond May 23. The Mamata Banerjee government must act urgently to ward off that spectre.

IBC HITS AND MISSES

Time taken for resolution process falls, but continues to exceed prescribed limits

EVEN AS THE time taken for resolution under the Insolvency and Bankruptcy Code (IBC) continues to exceed the outer limit prescribed under the law, the process is yielding better outcomes in a shorter time frame as compared to the erstwhile regime. In FY19, financial institutions recovered close to Rs 70,000 crore through resolution under the IBC, estimates rating agency Crisil. This works out to a recovery rate of 43 per cent. In comparison, recoveries under the preceding regime through various channels — debt recovery tribunals, securitisation and reconstruction of financial assets, and enforcement of the securities interest act (SARFAESI) and Lok Adalats — stood at Rs 35,000 crore in FY18.

Yet there is cause for concern. The time taken for successful resolution continues to exceed that envisaged in the law. Under the law, the insolvency resolution process is to be completed in 180 days, which can be extended by another 90 days to a maximum of 270 days. But, of the 1,143 cases that are currently outstanding under the IBC, 362 cases or 32 per cent are pending for more than 270 days. In a few of the big ticket cases, the resolution process has exceeded 400 days. Part of the delay in resolution can be attributed to the absence of buyers, differences between members of the committee of creditors, as well as legal challenges mounted by existing promoters not willing to let go of their companies. Then, there are issues of institutional capacity which need to be addressed. However, despite these delays, Crisil estimates that it takes around 324 days for cases to be resolved under the IBC — in comparison, as per the World Bank's Doing Business Report 2019, it took 4.3 years under the earlier regime.

In the months after the IBC kicked in, operational creditors had taken the lead in initiating the corporate insolvency resolution process (CIRPs) against errant debtors. But thereafter, financial institutions stepped up. In fact, in the quarter ended March 2019, the number of CIRPs initiated by financial creditors exceeded those initiated by operational creditors. But it is difficult to say whether this trend will continue after the Supreme Court ruling on the RBI's February 12 circular. The quashing of the circular has opened the door for banks to tackle the issue of bad loans outside the IBC process, a route they might prefer.

LOW BLOW

The third ever dive into the Mariana, the world's deepest aquatic point, finds new species — and plastic litter

EARLIER THIS MONTH, Victor Vescovo, a retired naval officer, journeyed to the deepest depths of the earth's abyss — the frightening Mariana Trench in the Pacific Ocean. In what has now become the deepest dive ever made by a human inside a submarine, Vescovo descended approximately 35,853 ft inside the intimidating aquatic pit. He came across sea creatures, including four new species — prawn-like crustaceans called amphipods. However, in that dark abyss, what also stared back at him: A plastic bag and candy wrappers.

More people have walked the surface of the moon than the Mariana, and plastic making its way to such a space is a sobering reminder of how deep the rot has spread. The relentless pursuit of plastic, driven by multiple industries worldwide, typically looking for cheaper, more durable alternatives to costly materials, is squeezing the life out of nature. Earlier this year, there were reports of a British research team which captured amphipods that scavenge on seabeds from six of the world's deepest ocean trenches. When they eventually sampled them in a laboratory, more than 80 per cent of the creatures were found to have plastic in their guts. Reports routinely talk of sea animals, especially whales, getting beached which have plastic in them.

Arguably, one of the first synthetic polymers — plastic is one such — was invented in 1869 by John Hyatt (in the form of celluloid). He was trying to find a substitute for natural ivory that was in demand owing to a spike in popularity of billiards gear. Hyatt's discovery was seen as a harbinger for elephants that had to be slaughtered for ivory. Nature and its resources, it was reported, had to be preserved, and hence the significance of plastic. Vescovo was witness to the irony of how plastic — aided by unaccountable human activities — now poses the gravest danger, instead, to any preservation.

What goes UP

One can speak of two sub-waves in state where caste and religion form bedrock of people's political understanding

ASHUTOSH VARSHNEY

IT IS WIDELY believed that Uttar Pradesh will determine who wins power on May 23. In 2014, if the BJP, instead of 71 seats, had won only 10 seats, as it did both in 2004 and 2009, it would still have formed the government, but in a substantially constraining alliance. Instead, a wave thrust Narendra Modi into power, and the alliance partners were reduced to political insignificance.

During my recent field visit to East UP, I did not detect a Modi wave. Instead, one can speak of two sub-waves, one among the upper castes, and another sweeping through the Dalit-Muslim-Yadav communities. The BJP is the primary beneficiary of the former, and the SP-BSP-RLD Mahagathbandhan of the latter.

To derive the larger meaning of these two sub-waves, one will have to rely on observations emerging from elsewhere in the state, as well as refer to UP's underlying caste and religious arithmetic. Any claim that economic development can generate a decisively large multi-caste, multi-religious coalition and deliver election victories runs up against the basic political realities of UP.

It is not that nobody discussed the government's toilet construction or its provision of gas connections during my field trip, but most conversations, within minutes, turned to caste — and religion-based political leanings. Moreover, the discussion never veered towards class as a variable. Caste and religion formed the bedrock of people's political understanding. And it has been so for a long time.

Let us begin with the first cut into UP's political arithmetic. Basically, it is a 20-20-20-40 state: 20 per cent upper caste, 20 per cent Dalit, 20 per cent Muslim and 40 per cent OBC. Some communities are a bit smaller (Muslims, for example, are 19.2 per cent of the state), others slightly larger (Dalits are roughly 21 per cent), and the upper caste and OBC figures are sample-based estimates. But, overall, the 20-20-20-40 division is a good starting point for political analysis.

Further subdivisions mark each of these larger aggregations. Some of the subcategories have become politically significant and are noteworthy. The largest upper castes — Brahmins (9-10 per cent of the state's population) and Thakurs (7-8 per cent) — do not always agree. Shia Muslims, a small commu-

> Turnout rates of the major communities are critical. It is generally believed that low aggregate turnouts would help the Mahagathbandhan. Since the upper castes vote less than the lower castes, low average turnouts at the constituency level tend to advantage those parties that have a base among the lower castes. As for the Muslims, they seemed so resolutely anti-BJP that their turnout should be larger than in 2014.

nity, have had historical differences with the much larger Sunnis, and often voted for the BJP. Dalits are divided among the Jatavs (10-12 per cent) and non-Jatavs (8-10 per cent). The latter category has further subdivisions, though no other Dalit caste constitutes more than 4 per cent of the state's population. Finally, the Yadav (9-10 per cent) and non-Yadav (30-31 per cent) distinction among the OBCs has been extensively noted. The non-Yadav category is basically a congeries of many small castes, none touching the 4 per cent mark.

One can now put together the basic arithmetic of the two sub-waves. The Mahagathbandhan is heavily centred around the Jatavs, Yadavs, Jats and Muslims, adding up to roughly 40-42 per cent of the population. The BJP's vote is concentrated among the upper castes, some non-Yadav OBCs (for example, Mauryas, Lodhs and Kurmis, each about 2 per cent of the state's population), and select non-Jatav Dalits. Had all non-Yadav OBCs and all non-Jatav Dalits been part of the BJP's base, the party's catchment area would have been a whopping 58-60 per cent, but that is not the case. For example, the Pasis, the second largest Dalit caste, constituting roughly 3 per cent of the state population, are split between the Mahagathbandhan and the BJP. The best inference is that the BJP's base roughly matches the Mahagathbandhan's. It is around 40-42 per cent of the state's population.

The notion of "party base" does not imply that the entire caste would vote for a single party. That does not normally happen. All that it means is that a vast majority of the caste — roughly 70 per cent and above — would vote for a given party or alliance. Since 2004, the BJP has been consistently getting at least 70 per cent of upper caste vote, SP at least 70 per cent of Yadav vote, and BSP at least 70 per cent of Dalit vote.

What, then, would determine the results this time around?

First and foremost, unlike 2014, the non-BJP vote is not entirely split. Three regional parties — BSP, SP and RLD — have joined in an alliance. If the SP and BSP had come together in 2014, their combined vote share, and the BJP's, would have been identical (42 per cent), assuming votes of each alliance

partner were transferred to the other. In the 2017 state assembly elections, the combined vote share of SP and BSP (44 per cent) was greater than that of the BJP (40 per cent). Even if some slippage takes place this time in the SP-BSP vote and the BJP holds on to its 40-42 per cent share, at the aggregate level the two sides are, at the very least, equally matched.

Second, the aggregate matching has to be locally disaggregated. The base of each party is not evenly distributed. For example, although Yadavs are only 9-10 per cent of the state's population, they are 15 per cent of many constituencies in East UP. Similarly, many seats are over 30 per cent Muslim. The Jats are mostly in West UP. If a party's base is not evenly spread, its results can be better.

Third, wherever the Congress party has put up upper caste candidates, especially Brahmins, they will cut into the BJP's Brahmin vote, especially if the candidates have substantial local following. This point was well understood when the Mahagathbandhan excluded the Congress. In my conversations in East UP, the BJP's local leaders readily admitted that this was happening. Of course, it was also initially believed that if the Congress took large chunks of the Muslim vote, it would hurt the Mahagathbandhan. My East UP impression is that Muslims were determined to defeat the BJP and were voting strategically. They would not vote in large numbers for Congress candidates, if they were definitely losing.

Fourth, turnout rates of the major communities are critical. It is generally believed that low aggregate turnouts would help the Mahagathbandhan. Since the upper castes vote less than the lower castes, low average turnouts at the constituency level tend to advantage those parties that have a base among the lower castes. As for the Muslims, they seemed so resolutely anti-BJP that their turnout should be larger than in 2014.

How all of this would end up will be known only on May 23. Political analysis can't predict the number of seats. It can only lay out the factors that would determine the outcome.

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YES, COALITIONS CAN

The reforms initiated by the UF government have not got their due

YOGINDER K ALAGH

AS WE move to the real possibility of some kind of strategic planning in June, the effectiveness of coalition regimes becomes an interesting question. The late T S R Subramanian, cabinet secretary in the Deve Gowda/ I K Gujral United Front government, wrote an interesting book setting out the contours of reform during his tenure in the ministry. It is an impressive chronicle by any standard.

Planning in a strategic sense was revived and agriculture was accorded priority after the thoughtless WTO agreements signed by the Narasimha Rao government. A special programme was designed to revive water deliveries and public sector investment in agriculture was revived, inducing private on farm revival.

P Chidambaram brought back an offer from the Germans for large power projects and Parliament approved the special arrangement for negotiating such plants (STPs). As the power minister, I asked for and got these powers by declaring I am not corrupt and my country must get the advantage Chidambaram negotiated. The first big transmission system in a STP was sanctioned to British Power. That the process was completed was not even known to the NDA government, which claimed this reform as its own much later.

Special arrangements of a transparent

> In the 50th year of India's Independence, the prime minister announced Suvarna Jayanti Fellowships for 50 distinguished young Indian scientists so they could work at the frontiers of knowledge and technology with Indian money and not be dependent for foreign grants. At that time they were to get a fellowship, corresponding to the highest public sector salaries in India and a laboratory grant of a crore.

nature were authorised to negotiate offers of STPs from foreign governments with Parliament's unanimous approval. The power sector was in a virtual logjam at the end of the Narasimha Rao government's tenure. We encouraged trans border trade of energy with neighbouring countries. The National Grid was around the corner.

India conducted negotiations with France for nuclear power strategies via the thorium route.

In the 50th year of India's Independence, the prime minister announced Suvarna Jayanti Fellowships for 50 distinguished young Indian scientists so they could work at the frontiers of knowledge and technology with Indian money and not be dependent for foreign grants. At that time they were to get a fellowship, corresponding to the highest public sector salaries in India and a laboratory grant of a crore. The bureaucracy which never liked schemes that give status to men of science did not change the money value of these schemes, inflation was left to do its dirty work. As a result, the scheme is a today a pale shadow of what it was in the UF times.

Water security to me is more important as a national task than food security for any national coalition. Water, energy and other non renewable resources like land will set the eventual limits of growth in the country.

When the Union Ministry of Water Resources (MoWR) asked me to chair a committee to develop a draft framework law for the water sector, I accepted the task. This work has gained relevance because in 2017, the MoWR introduced a Bill on The National Water Framework in Parliament in 2017. It follows, in the main, the draft act my committee had prepared with one change — the Bill did not accept my committee's recommendation that everyone must be entitled to a minimum amount of water.

The framework drafted by the committee headed by me is meant to provide the larger structure for organising support mechanisms to states and communities. These pertain to local government agencies, community-based institutions, management of ponds, water bodies, watersheds, aquifers and river basins. Once these mechanisms are fully in place, the role of the national agency is largely that of a facilitator. The framework provides for a web based information system(WRIS). It will use mapping systems and satellite-based technologies.

The water resources law has to detail how to give every India a minimum quantity of water to survive.

The writer, a former Union minister, is an economist

MAY 16, 1979, FORTY YEARS AGO

ASSURING THE POLICE

UNION HOME MINISTER H M Patel assured the Lok Sabha that it would be his endeavour to see that "definite decisions" on issues relating to the improvement of working conditions of the police personnel were reached before the end of the current financial year. The Centre would take up the issue with the state governments, he said, while replying to points raised during a calling-attention notice on the police stir in Punjab. He appealed to policemen to give up recourse to agitational methods and continue functioning as a disciplined force. Patel said recommendations made by the National Police Commission in its interim report were being processed and would be discussed with different States

"to evolve a national consensus".

COP UNREST

THE PUNJAB POLICEMEN'S stir, which entered its eighth day, as reports of demonstrations poured in from a number of places. While there was no addition to yesterday's figure of 125 of those summarily dismissed, the number of arrested policemen went up to 320. Yesterday's government's decision to increase their salary and allowances intended to indicate its commitment to the welfare of the employees, has apparently had no effect, if reports of demonstrations from Amritsar, Patiala, Hoshiarpur, Ropar and other places are any pointer. Claiming a steady improvement in the situation, the home secretary, R C

Kapila, told a news conference that only at some places the BSF was doing police duties, and, reiterated that its deployment was decided upon by the local authorities.

LIFTING CURFEW

THE ALIGARH DISTRICT authorities are considering lifting day curfew permanently "if the situation continues to be normal". Curfew was relaxed for seven hours from 9 am today in the entire city and Civil Lines area, and the day passed off peacefully, the district magistrate, V K Dewan said. Dewan said the curfew was relaxed in the Aligarh Muslim University area for the first time since Thursday night's disturbances. There was however no relaxation in the Shamshad Market area.

Disaster and opportunity

Sri Lankan tourism has been affected since April. Careful planning can help the country rebuild and rebound

AUSTIN FERNANDO

AFTER THE DISASTER on April 21, it becomes imperative to rethink the development landscape of Sri Lankan and Indian businesses. The new vision must integrate the business communities in the two countries, and one important — affected — business, that needs quick business response is tourism.

It is apparent that tourism is a mainstay of the Sri Lankan economy. It contributed US $575.9 million in 2010, US $2.9 billion in 2015 and US $ 4.4 billion in 2018. A US $5.5 billion target exists for 2019. Tourist arrivals have increased from 6,54, 476 in 2010 (1,26,882, 19.4 per cent Indians) to 1.8 million in 2015 (3,16,247, 17.5 per cent Indians); and, 2.3 million in 2018 (4,24,887, 18.2 per cent Indians). The estimated arrivals are three million for end-2019 and we expect 5,50,000 from India.

Though Sri Lanka's tourism industry quickly resurrected after the tsunami, the April 2019 disaster is different. President Maithripala Sirisena has already pledged to restore the industry and promised the appointment of a cabinet sub-committee to study how to promote tourism, including the provision of concessionary financial assistance. And the government has approved some proposals already. Prime Minister Ranil Wickremesinghe has reassured fast-tracked financial support for tourism revival. It is an urgent requirement; especially due to mass cancellations of future room bookings.

Then, there is psychological trauma, both domestically and internationally, in tourists and businessmen. In this context, we have to look at tourism priorities. One is air travel: Air Lanka has lost commuters very badly because the blasts have affected "positive location interest" and that could affect investors. Therefore, customer confidence restoration in this aspect is essential.

Taking the destination to customers and conveying what it stands for as an idea is an endeavour undertaken through several means. It was successfully done in the past which made Sri Lanka one of the world's best destinations, until April 20. The challenge now is to return to those glory days. Discussions have been held with several tourist associations in India to hold a seminar in Delhi to create awareness amongst the tourism-clientele groups. After the recent, unfortunate episode, the Indian interlocutors think that the "timing is wrong" for this exercise. Contrarily, I believe that this is the "gestation period" for advertising the destinations well, influencing potential tourists psychologically so their interest levels see a rebound.

At present, emergency regulations and night curfews are limited to facilitate investigations. Hopefully, these will be over soon. However, national security is the priority. These measures, in fact, might help in finding hidden, destructive materials, if any, which can only enhance the confidence levels about a tourist destination. In the interim, tourist arrivals can be planned on a selective destination basis. This status has to be coordinated with Indian businesses.

The online visa system works without hitches. The government halted the "free visas" offered from May 2019. If the free visa is re-introduced, it will attract tourists. However, in the backdrop of such a disaster, it will not get an easy nod. Instead, tighter visa/ border control systems will be demanded. Therefore, we must find a middle path solution, with the introduction of improved border security systems and technology.
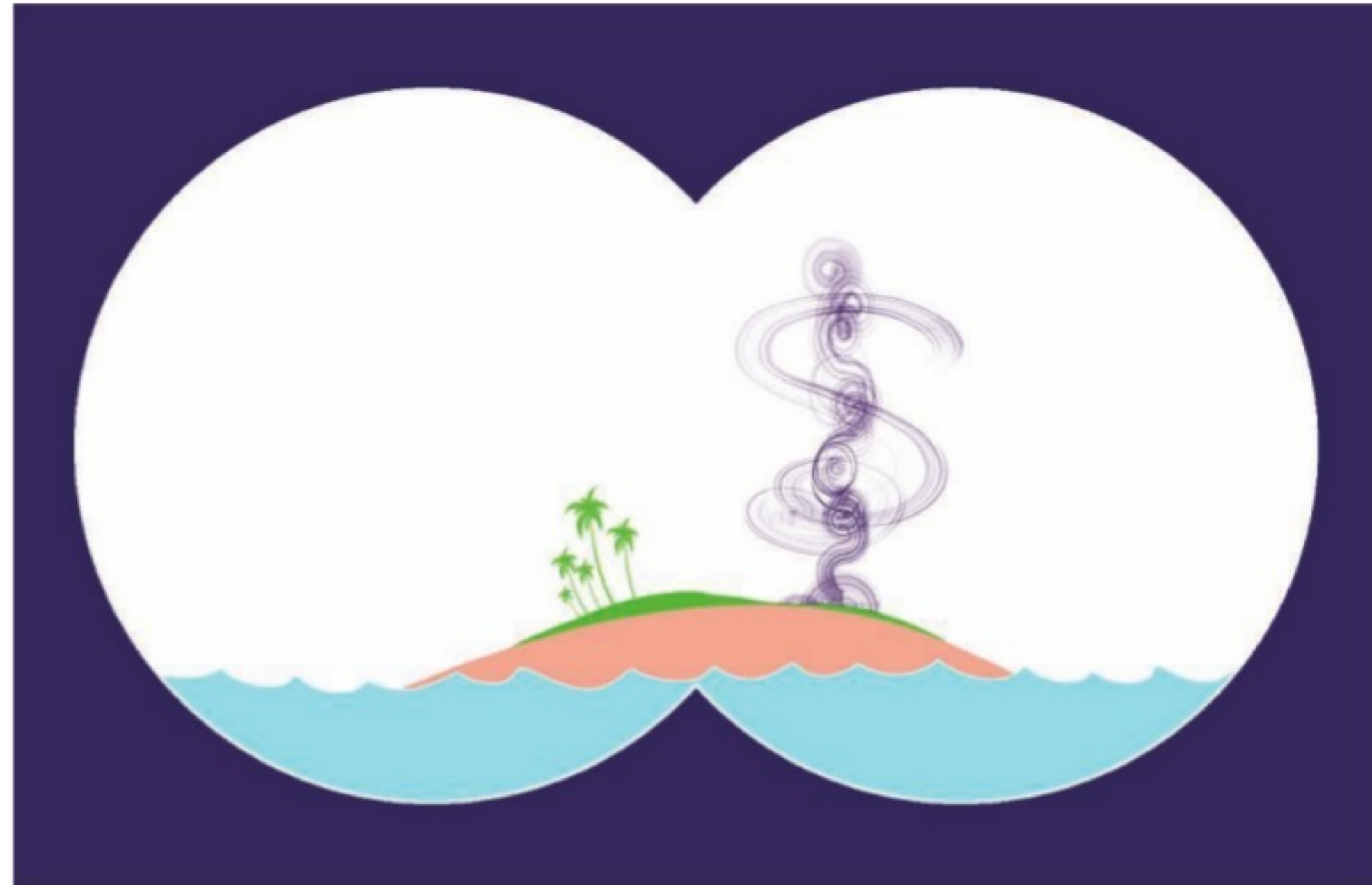
Already vehicular movements transferring tourists at the airport have been normalised. There will be unavoidable tighter security checks. If "guest country" tourist operatives undertake adequate security responsibility of tourists arriving in Colombo, it may motivate early relaxations. The "guest country" travel and tour companies can thus assist the "host country" businesses. Normalcy is reassured when the "guest country" motivates the security consciousness of customers.

It is also reported that international social media influencers who arrived in the country this week are planning to collaborate on priority with Sri Lanka Tourism (SLT) to help it tide over this difficult time.

If the image of the country as resilient is not created, and tales of woe are the only messages we give out, it will not enhance our destination image. We can learn from other countries on how to rebound post-disaster.

The recent disaster has also shown the weaknesses of the Sri Lankan hotel industry's security systems. In some countries, including Sri Lanka, there are basic security measures that are missing in the hotels — overall scanning and entry point management, for instance.

The government and trade stakeholders in the private sector should give messages of resilience and reflect a resolve to overcome devastation, not only by rebuilding, but also through attitudinal change. The President, Prime Minister and the leader of the opposition attending mass with the cardinal of the Catholic church — it was televised because the churches were shut — was a starting point.

Think-tanks should also support the Indian industry in efforts to evolve a cohesive plan using a tourism disaster-management framework for sustainable outbound tourism. And this should be done in Sri Lanka too by the inbound tour and travel industry.

C R Sasikumar

Though Sri Lanka's tourism industry quickly resurrected after the tsunami, the April 2019 disaster is different. However, President Maithripala Sirisena has already pledged to restore the tourism industry and promised the appointment of a cabinet sub-committee to study how to promote tourism, including the provision of concessionary financial assistance.

In addition to all this, getting endorsements by celebrity figures in order to motivate tourists and organising a mega international event in Colombo should be undertaken. Already SLT has started this in Dubai. Further, it will address the Fifth UN World Tourism Organisation (UNWTO) World Forum on Gastronomy Tourism in San Sebastian in Spain; and, the Sri Lanka Conventions Bureau will represent the country at the IMEX in Frankfurt. The only tourism and travel fair will also be held in Sri Lanka during the first week of June. These will all be productive endeavours.

Looking at Indian events, it is satisfying to mention that SLT will participate in the travel fair in Kolkata, and, alongwith the High Commission, it will organise a MICE (Meeting, Incentive, Conference, and Events) event in Kolkata. In August, there will be a tourism road show in Delhi organised by SLT in association with the High Commission. A few more road shows will be held in selected metro cities in India. These are good opportunities for interaction for those in India.

Some must still be having fears and concerns about the Sri Lankan situation, and these should be reviewed. To address them, it is best to quote the chairman of SLT who said, "We cannot allow ourselves to become paralysed by fear". He continued: "We are working to regain the confidence of global travellers and operators by demonstrating that Sri Lanka's response to the incidents is effective, while reassuring future tourists that all appropriate steps are being taken by the Sri Lanka Government to prevent any future incidents and ensure the continued safety and security of tourists within the country."

It is necessary to convert the disaster into a business opportunity. Not only will it fulfill the target of 5,50,000 Indian visitors to Sri Lanka, it will also increase the profits of Indian companies too. Sri Lanka paid a big price on April 21, and has to strive to swiftly return to a better, more positive time with much dedication, cooperation, collaboration and large-hearted spirit. Let us go along together!

The writer is the high commissioner of Sri Lanka in India

The Kendrapara model

It provided informal placement networks to plumbers. Formal training institutes are now challenging such on-the-job teaching avenues

BIBEK DEBROY

THERE WAS A case in the Calcutta High Court in July 1947, an appeal actually. "One Dinesh Chandra Guha is alleged to have effected alteration in the water pipe of his house by persons who are not plumbers licensed by the municipality." Hence, Guha violated the provisions of municipal laws. "The learned magistrate trying the case has found that the alteration was effected by Dinesh Chandra Guha employing certain Ooriya mistries. The magistrate also found that the Ooriya mistries were not licensed plumbers." Plumbers from Odisha are not a new phenomenon, at least in Kolkata.

Migration studies for Kolkata, around the time of Independence, report Odia workers were employed in plumbing, gas and electrical works. There was a suggestion that Muslim plumbers emigrated to East Pakistan after Independence and the vacuum they left was filled by plumbers from Odisha. I can't figure out if this was statistically large. In any event, there have been plenty of Odia plumbers in Kolkata and there are plenty of Odia plumbers everywhere in India now. Every plumber you encounter seems to be from Odisha. Indeed, one can narrow down our search and say every plumber is from Kendrapara, narrow it down further and say every plumber is from Pattamundai.

Pattamundai is a tehsil (a revenue block) and also an urban local body/municipality. The population of the notified area committee (for our purposes, synonymous with the town) of Pattamundai was 36,528 in 2011 Census. Pattamundai tehsil, with 155 villages, had a population of 219,063. There are figures floating around, which suggest that 100,000 plumbers from Odisha work in different parts of India, not including those who work abroad, such as in the Middle East. It seems implausible that all of them are from Pattamundai. Indeed, they are not. They are mostly from Kendrapara, but also from tehsils like Aul (population of 139,628 in 2011), Rajkanika (population of 140,807) and Rajnagar (population of 163,450). There was a 2015 out-migration study for Odisha and for Kendrapara district, it gave an out-migration rate (defined as percentage of households who had a migrant) of 47 per cent, and an absolute figure of 143,782. True, all these migrants were not plumbers. But the study also said they were generally skilled workers in construction, especially plumbers and masons. Therefore, the 100,000 figure is believable. Why are there so many plumbers from Kendrapara? This is usually ascribed to the State Institute of Plumbing Technology (SIPT) in Pattamundai. But that's at best a partial answer. The institute was established in 2010 and plumbers from Odisha predate this institute.

"You reach a customer's place and he tells you that the sink in his bathroom is draining water at a very slow rate, but the tub and toilet are draining normally. Which of the following will you check first to diagnose this problem? (A) I will check if the main drain or the sewer line is blocked causing the water from sink to drain slowly; (B) I will check if the faucet of the bathroom sink is leaking; (C) I will check if the underground piping near the bathroom sink is leaking; (D) I will check if the drain pipe connected to the bathroom sink is clogged." This is from a test of "aspiring minds" administered in 2015 to 3,000 plumbers who had already gone through four to eight weeks of training. Only 43.6 per cent of the trained plumbers got the answer right. This question is more about analytical skills, less about plumbing skills. The "aspiring minds" study concluded 80 per cent of the candidates possessed knowledge of basic plumbing skills, but 55 to 66 per cent couldn't handle real-life plumbing problems. At least, these candidates went through some training. The Indian Plumbing Skill Council (IPSC) tells us that 90 per cent of Indian plumbers don't have formal training. Typically, one joins as a helper. With self-learning and on the job training, one graduates and becomes a plumber and perhaps even a supervisor or foreman. We shouldn't be surprised. This is true of most skill acquisition.

IPSC's estimate is 70 per cent of the plumbers come from Kendrapara and there are 800,000 plumbers. If both numbers are correct (I suspect they aren't), you get 560,000 plumbers from Kendrapara, not 100,000. Lack of formal training doesn't mean plumbers lack skills. (Out of eight hundred thousand, 352,000 are estimated to possess informal and uncertified skills.) It does mean those skills lack requisite quality and certification. This was the Kendrapara model. However, let's also not forget the Kendrapara model also provided access to placement networks, even though those were informal too. That's the reason it worked. Kendrapara and SIPT now have competition, with specific plumbing training institutions in Gurugram, Vijayawada, Bengaluru and Manesar and training labs and training programmes in several places. But that should be fine. First, even with a given number of plumbers, one needs more formalised training and placement, with different gradations in level of training. Second, for a variety of reasons, demand for plumbers is bound to increase. Apparently, we will have 1,200,000 certified plumbers by 2022, courtesy IPSC and National Skill Development Corporation (NSDC).

I did a random search on salaries of graduates and plumbers in Kolkata. Such small sample searches are always unreliable, but nonetheless indicative. An ordinary graduate earns Rs 10,000 per month. A plumber earns Rs 20,000 per month. There is thus the broader issue about whether the educational system delivers marketable skills. But partly, this also seems to be an international phenomenon. For instance, I find the average salary of a graduate in London is £27,000, while that of a plumber is £34,885.

The writer is chairman, Economic Advisory Council to the PM. Views are personal

Green is cool

A new plan for cooling technologies is in sync with environmental challenges

C K MISHRA

THE RISING GLOBAL need for cooling amenities and the associated environmental and economic concerns have been matters of extensive study and debate recently. India — as the fastest growing and rapidly urbanising economy — is projected to have the strongest growth in cooling demand worldwide. While India's soaring demand in this sector is in line with the country's developmental needs, it does portend significant environmental, social and economic concerns.

The government's launch of the India Cooling Action Plan (ICAP) on March 8 is a bold response to addressing India's future cooling needs while neutralising its impacts. ICAP most visibly is about enhancing access to cooling amenities, optimising demand and efficient cooling practices and technologies. However, there is far more to it than meets the eye. At its core, ICAP is about improving the quality of life and productivity of the people of India, and achieving many of the Sustainable Development Goals (SDGs) — thus accelerating the country's growth trajectory.

There is ample evidence to correlate access to cooling amenities and technologies with human health and productivity, and in extreme cases, even survival. It is closely tied to achieving several of the Sustainable Development Goals (SDGs). That being said, India has one of the lowest access to such technologies and amenities across the world, far below the global average. The ICAP addresses the dilemma of how to meet the country's growing social need in this respect without posing major economic and environmental consequences. Conceived against the backdrop of the Paris Climate Change Agreement and the Kigali Amendment, the ICAP for the first time harmonises separate policy streams: Energy consumption and refrigerant use.

This landmark policy document demonstrates unprecedented inter-ministerial and cross-sectoral collaboration in laying out actionable pathways and goals to achieve 25-40 per cent reduction in cooling energy requirements and 25-30 per cent reduction in refrigerant demand — as compared to business as usual — over the next 20 years. As meaningful as these goals are to proactively and effectively manage India's future cooling needs, what makes the ICAP even more momentous is the significant co-benefits — above the energy and emissions reduction — that are inherent in the pathways recommended by the ICAP for the cooling sectors.

Within the cold chain sector, ICAP proposes development of an integrated cold chain infrastructure with the appropriate market linkages, supported by adequate training and up-skilling of farmers and professionals. The co-benefits include economic well-being of farmers and reducing food losses thus strengthening food security and alleviating hunger-related issues.

Driving skill-building of the services sector through training and certification is an important target identified by the plan. This will address rampant operational inefficiencies and leakage of refrigerants — a significant source of GHG emissions. It also presents an opportunity for providing increased employment, better livelihoods, and safer working practices for the HVAC (heating, ventilation and air conditioning) sector.

ICAP's emphasis on an innovative R&D ecosystem aims to drive the nation towards better utilisation of public-funded R&D efforts that solve pressing issues related to the environment — and quality of life. The plan also positions India's cooling challenge as an opportunity for the nation to demonstrate leadership in areas related to innovation. It also supports the Make in India campaign through indigenous production of cooling equipment and refrigerants.

The benefits of ICAP could impact several SDGs — good health and well-being, decent work and economic growth, sustainable cities and communities, reduced inequalities, affordable and clean energy, responsible consumption and production, and climate action. The onus is now on the various stakeholders to work collaboratively, with the right policy and market levers, to lead the country towards a cooling transformation that exemplifies sustainable and responsible cooling for all.

For instance, in the space cooling sector, which represents a dominant share of India's current and future cooling needs, the underlying thrust is to enable thermal comfort and well-being for all citizens by providing affordable and reliable cooling options, maintaining reliable electricity grids, and enhancing climate resilience of buildings and homes. The thrust is on ensuring that the vulnerable populations, particularly children and the elderly, are not exposed to undue heat stresses. To maximise the cooling load reduction and possible benefits for this sector, ICAP proposes an approach that first reduces the cooling energy demand through climate appropriate and energy efficient building design, then serves the demand through energy efficient appliances and finally, controls and optimises the demand through demand-side and user adaptation strategies, such as adaptive thermal comfort. The plan lays special emphasis on enabling thermal comfort for the economically-weaker sections through climate-appropriate designs of affordable housing, and low-cost interventions to achieve better thermal insulation (such as cool roofs). The benefits of the proposed actions extend to enhancing nationwide productivity, reducing heat-islands in urban areas, mitigating peak-load impacts and reducing the stress on the power systems — much of this would also free up capital for other developmental priorities.

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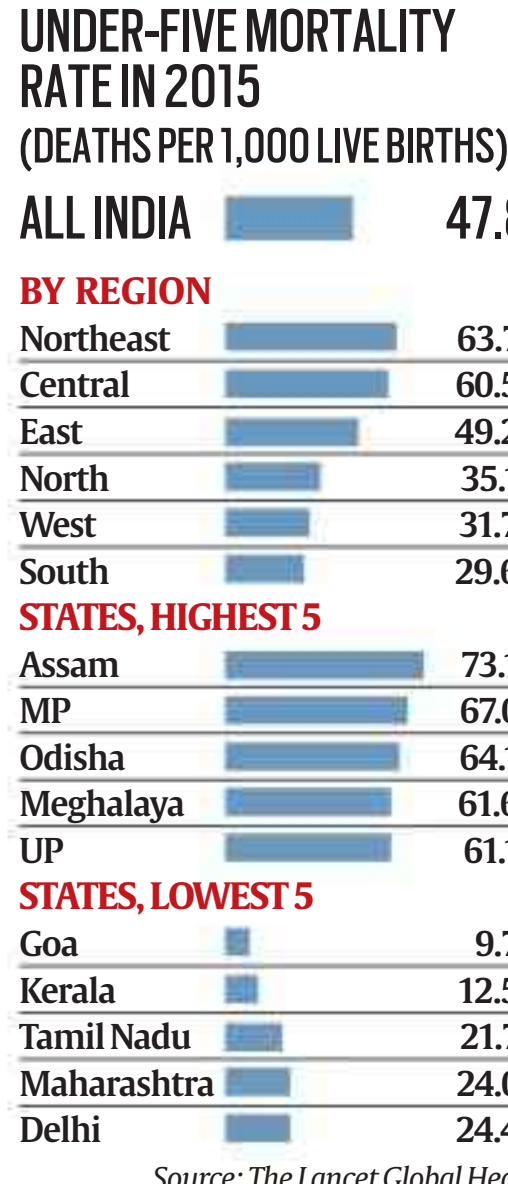
TELLING NUMBERS

Under-5 mortality in India: study flags disparity among states

A NEW study in *The Lancet Global Health* has flagged the deaths among children under five in India, which was higher than in any other country in 2015. Researchers at the Johns Hopkins Bloomberg School of Public Health also found large disparities in the child mortality rate between richer and poorer states.

While India reduced annual mortality among children under five from 2.5 million in 2000 (90.5 per 1,000 live births) to 1.2 million in 2015 (out of 2.5 million live births, or 47.8 per 1,000), it was still the highest in the world. Among the states, the highest mortality rate, in Assam at 73.1 per 1,000, was more than seven times that in Goa's 9.7. Among the regions, the mortality rate ranged from a low of 29.7 per 1,000 (South) to 63.8 (Northeast).

The United Nations Millennium Development Goals (MDG) set in 2000 was to reduce the under-five mortality rate in 2015 to one-third of the 1990 figure. For India, that would have meant reducing the under-five mortality rate to 39 deaths per 1,000 live births.

The analysis found that although most under-five deaths were due to preterm complications, preventable infectious diseases featured prominently as causes of death in higher-mortality states. "India can accelerate its reduction of under-five mortality rates by scaling up vaccine coverage and improving childbirth and neonatal care, especially in states where mortality rates remain high," said study author Li Liu.

UNDER-FIVE MORTALITY RATE IN 2015
(DEATHS PER 1,000 LIVE BIRTHS)

ALL INDIA	47.81
BY REGION	
Northeast	63.76
Central	60.55
East	49.25
North	35.15
West	31.79
South	29.68
STATES, HIGHEST 5	
Assam	73.12
MP	67.07
Odisha	64.13
Meghalaya	61.68
UP	61.15
STATES, LOWEST 5	
Goa	9.72
Kerala	12.50
Tamil Nadu	21.71
Maharashtra	24.07
Delhi	24.46

Source: The Lancet Global Health

THIS WORD MEANS

VOYNICH MANUSCRIPT

An illustrated codex, written in an extinct language in 15th century, purchased in 1912, deciphered in 2019

IN 1912, Wilfrid Voynich, a Polish-Samogitian book dealer, purchased a manuscript whose contents would go on to mystify cryptographers, linguistics scholars and computer programmes for more than a century. The Voynich Manuscript, as it came to be known, was dated to the 15th century (1404-38), is written on vellum (240 pages intact, others missing) with text and illustrations, and has been with Yale University's Beinecke Rare Book and Manuscript Library since 1969.

The manuscript has finally been decoded. Gerard Cheshire, a researcher at the University of Bristol, took two weeks using a combination of lateral thinking and ingenuity, to identify the language and writing system. Reporting his findings in the journal *Romance Studies*, Cheshire called it the only known example of proto-Romance language. "The language used was ubiquitous in the Mediterranean during the Mediaeval period, but it was seldom written in official

A page from the Voynich Manuscript. *Wikipedia*

or important documents because Latin was the language of royalty, church and government. As a result, proto-Romance was lost from the record, until now," Cheshire was quoted as saying.

The text uses an extinct language. Its alphabet is a combination of unfamiliar and more familiar symbols. It includes no dedicated punctuation marks, although some letters have symbol variants to indicate punctuation or phonetic accents. All of the letters are in lower case and there are no double consonants. It includes diphthong, triphthongs, quadriphthongs and even quintiphthongs for the abbreviation of phonetic components. It also includes some words and abbreviations in Latin. Cheshire found the manuscript was compiled by Dominican nuns as a source of reference for Maria of Castile, Queen of Aragon — an autonomous community in Spain. The next step is to use this knowledge to translate the entire manuscript and compile a lexicon.

Source: University of Bristol & PTI

Understanding Pak's IMF bailout

Even as Pakistan continues its brinkmanship with India, its sliding economy has required the International Monetary Fund to bail it out for the 13th time in 3 decades. How dire is its financial state, how did it get here?

P VAIDYANATHAN IYER
NEW DELHI, MAY 15

ON SUNDAY, the International Monetary Fund (IMF) agreed in principle to support Pakistan with a loan of $6 billion, to be disbursed over 39 months. The agreement was reached at the end of two weeks of discussion and dialogue between Pakistani officials and an IMF mission that was in Islamabad from April 29 to May 11. The disbursements will commence after formal approval by the Fund's management and its Executive Board.

What is the political context of Pakistan's bailout deal with the Fund?

This is the IMF's 13th bailout package for Pakistan in the last three decades. While Pakistan's economy typically witnesses a boom-bust cycle, over the last 10 years, its need for financial support from the IMF has coincided with the completion of a particular government's term.

The backsliding of Pakistan's economy over the past year has been swift, but it has not surprised many. A sharp depreciation in the Pakistani rupee and high fiscal deficits have resulted in higher inflation, which acts like a tax on the common man, and hurts the poor the most. Foreign exchange reserves have remained low — below $10 billion for all weeks except three since the Pakistan Tehreek-e-Insaf won the elections, and Imran Khan was sworn in as Prime Minister on August 18, 2018.

IMF loans almost always come with tough conditions, and it will be difficult for Khan to sell the bailout politically. Khan has expressed himself against seeking financial support from the Fund in the past, and in the run-up to last year's elections, he criticised the bailouts accepted by governments led by the Pakistan People's Party and the Pakistan Muslim League (N).

In September 2013, within three months of being elected, the Nawaz Sharif government accepted a $6.6 billion loan from the Fund, to be disbursed over three years. Earlier, within a year of the PPP's Yousaf Raza Gillani taking charge as the Prime Minister in March 2008, the IMF extended a $7.6 billion loan to Pakistan, to be disbursed over 23 months.

Despite the reservations he has had in the past, Imran Khan had little choice but to negotiate with the IMF.

Despite initial reservations, Pakistan's Prime Minister Imran Khan (*left, in Islamabad in April 2019*) has been forced to seek help from the IMF to overcome his country's grave economic crisis. (*Above*) China's President Xi Jinping and Saudi Crown Prince Mohammed bin Salman, Pakistan's friends, have extended financial support. *The New York Times*

And what are the economic conditions in which Pakistan entered into negotiations with the Fund?

The size of Pakistan's economy is $313 billion, and it has averaged a growth of about 3.5% annually over the last 12 years. After growing at a healthy 5.2% in FY 2018 (July 1, 2017 to June 30, 2018), Pakistan's real GDP growth is estimated to sharply power down to 3.4% in FY 2019, according to the World Bank. In 2019-20, the Bank expects the economy to slow further to 2.7%.

Inflation has more than doubled since the last year; it ruled at 8.8% in April this year ahead of Ramzan. In the last financial year, average Consumer Price Inflation was 3.9%.

The country also stares at a twin deficit problem, with both its fiscal and current account deficits set to worsen in FY 2019. From 6.6% of GDP in FY 2018, the fiscal deficit, or excess of government expenditure over its revenues, may breach the 7% of GDP mark in FY 2019. The current account deficit, or excess of spending on imports over exports, is expected to remain high at 5.5% of GDP in this fiscal, albeit slightly lower than 6.1% of GDP in FY 2018.

The Pakistani rupee has been devalued multiple times since December 2017, and has lost almost 35% in the last 18 months.

So, how urgent was this bailout for Pakistan?

After coming to power, Khan has reached out to Saudi Arabia, the United Arab Emirates (UAE), and China for help. Riyadh pledged $3 billion in balance of payments support in October last year, and the UAE supported Pakistan with another $3 billion in December. In February this year, China extended $3.5 billion in loans and grants to bolster Pakistan's forex reserves.

But all this has not helped in addressing the problem, which requires medium-term

structural overhaul. For the week ended May 3, 2019, the net forex reserves with the State Bank of Pakistan, the country's central bank, were $8.98 billion, more than a billion dollars less than the $10.23 billion available with it on August 17, 2018 — the day before Khan became PM.

These forex reserves are enough to finance only about two months of imports. Pakistan's imports in FY 2019 were $56 billion. Low forex reserves dent the confidence that the world has in a country's ability to meet its external obligations.

What kind of conditions has the IMF put on Pakistan?

The bailout conditions that the Fund imposes are part of difficult structural reforms required to put an economy on a sustained growth path. As the IMF management proceeds with formally approving Pakistan's bailout, it will closely watch for signals to rein in the deficit in the budget for the next year.

"The forthcoming budget for FY2019/20 is a first critical step in the authorities' fiscal strategy," the IMF said in a statement issued May 12 after reaching an agreement to extend the $6 billion loan to Pakistan. Broadly, the IMF will expect the government to expand the tax base, do away with exemptions, and curtail special treatments, given that just about a million people out of the 208 million in Pakistan pay taxes. It will call for spending cuts and levying of user charges in the energy sector, and reducing subsidies.

The IMF will also expect Pakistan to let the rupee 'float' — that is, allow its value to be market-determined — and the State Bank of Pakistan to further increase policy rates to bring inflation under control.

Is all of this expected to work?

Pakistan's record in sticking to agreements with the IMF is not encouraging. It has often failed to meet conditions such as curtailing spending and selling government stake in state-owned enterprises. IMF data suggest that Pakistan did not withdraw the entire amount originally agreed upon in the earlier bailouts. The last bailout of $6.6 billion in 2013 was, however, fully received by 2016. Pakistan needs to take bold steps to fix its economy and, as it moves in that direction, ensure that its poor do not suffer from the austerity measures that are put in place.

Babies with low birth weight: trends in world, India

ANURADHA MASCARENHAS
PUNE, MAY 15

IN THE largest such international study, researchers from the London School of Hygiene and Tropical Medicine (LSHTM), UNICEF and the World Health Organization (WHO) have found that one in every seven babies was born with low birth weight in 2015. The study was published online Wednesday in *The Lancet Global Health*.

Data were collated from over 281 million births between 2000 and 2015. In 2015, 20.5 million babies (14.6%) were found to have been born with low birth weight — less than 2.5 kg. While the prevalence in 2015 was lower than the 17.5% (22.9 million babies with low birth weight) in 2000, over 90% of the low-weight babies in 2015 were born in low- and middle-income countries.

Takeaways for India

The researchers said they were unable to arrive at national estimates for India because only partial data were available. Lead author Hannah Blencowe, from LSHTM, told *The Indian Express* that the national estimate and time trend for India is not reported. The

SOME PROGRESS, BUT MILES TO GO

14.6%
Prevalence of low birth weight babies worldwide in 2015

17.1%
Prevalence worldwide in 2000

26.4%
Prevalence of low birth weight in South Asia in 2015

32.3%
Prevalence in South Asia in 2000; researchers believe India contributed significantly to reduction

National Family Health Survey (2005-06) was included in the analysis but for the latest NFHS (2015-16), only data for a single year met the inclusion criteria and these partial data were used.

"Every newborn must be weighed, yet

worldwide, we don't have a record for the birth weight of nearly one-third of all newborns," said co-author Julia Krasevec, from UNICEF. India is among 47 countries (including 40 low- and middle-income countries that account for almost a quarter of all births worldwide) which had insufficient data.

The authors noted, however, that the estimated prevalence of low birth weight in South Asia has decreased from 32.3% in 2000 to 26.4% in 2015. They are optimistic that India, in view of its large population, will have made an important contribution to this decline. India has made progress in improving newborn care by building 834 newborn care units in the last decade, LSHTM officials said.

In 2011, The Indian Statistical Institute had reported that nearly 20% of newborns have low birth weight in India. At the Union Ministry of Health and Family Welfare, officials said the prevalence of low birth weight was between 15% and 20%.

Rest of world

In high-income countries in Europe, North America, and Australia and New Zealand, there has been virtually no progress in reducing low birthweight rates since 2000, according to the analysis. However, prevalence is low

in most of these countries. One of the lowest rates of low birth weight in 2015 was estimated in Sweden (2.4%). This compares to around 7% in some high-income countries including the USA (8%), the UK (7%), Australia (6.5%), and New Zealand (5.7%).

The regions making the fastest progress are those with the highest numbers of low birth weight babies, Southern Asia and Sub-Saharan Africa, with a yearly decline in low birth weight prevalence of 1.4% and 1.1%, respectively, between 2000 and 2015.

The study cautions that the annual decline will need to more than double to meet the global target of a 30% reduction between 2012 and 2025 - including in high-income countries.. The authors have also called for immediate action to tackle underlying causes of low birth weight to ensure clinical care for small babies and for all babies to be weighed at birth.

"Our estimates indicate that national governments are doing too little to reduce low birth weight. We have seen very little change over 15 years, even in high-income settings where low birth weight is often due to prematurity as a result of high maternal age, smoking, caesarean sections not medically indicated and fertility treatments that increase the risk of multiple births," said Blencowe.

The push for, and the pushback against, facial recognition technology

NANDAGOPAL RAJAN
NEW DELHI, MAY 15

SAN FRANCISCO has become the first major American city to block the use of facial recognition software by police, taking a stand on a fraught question involving a tradeoff between using a breakthrough technology in crimefighting, and bowing to concerns expressed by civil liberties groups about its potential for abuse by state agencies.

So, what is facial recognition?

Facial recognition is a biometric technology that uses distinctive features on the face to identify and distinguish an individual. From the first cameras that could recognise faces in the mid-1960s up to now, facial recognition has evolved in many ways — from looking at 3D contours of a face to recognising skin patterns. With machine learning, the technology has become capable of sorting out types of faces.

Even affordable smartphones are now

able to identify faces as male and female, and even mark an age. Face ID, Apple's facial recognition system, can be used to unlock the latest iPhones and iPads, and for other functions.

The technology is extensively used to offer access to secure environments or devices. CCTV cameras in public places, plugged into powerful computers, can pick out faces and match them against a database, or just pick out certain types of faces. As camera capabilities have improved, facial recognition has become possible in low light, and even from long distances.

Facebook has for years used the technology to help users tag faces on the photos they upload. This, however, also means that the social network is sitting on a face recognition database with maybe a billion verified faces. Companies such as Yoti, GBG, and AgeID have been selling this technology to verify identities, ages, and remote presence of individuals.

Why are some people uneasy with this?

A facial recognition demonstration during the Consumer Electronics Show in Las Vegas in January 2019.
Joe Buglewicz/The New York Times

Over the past decade, as urban spaces all over the world have come to be covered extensively by surveillance cameras, avenues have opened up for the misuse or abuse of facial recognition technologies. China, which has possibly the most extensive network of CCTV cameras in the world, has reportedly been using facial recognition to pick out wanted individuals from crowds at airports and railways station.

There have also been reports of China using facial recognition technology to racially profile its citizens — sorting faces into categories of Han Chinese and Uyghur Muslim. The Uyghurs, a Turkic people living in China's western Xinjiang Autonomous Region, have been restive under Beijing's rule, and the Chinese state has responded with an oppressive system of surveillance, arrests and detentions. Given the fact that the technology continues to have a not-insignificant error rate, punitive state action based on such profiling could lead to grave miscarriages of justice.

Police authorities in many countries, including the United States, have been using facial recognition technology to identify crime suspects on the fly. The suspect in the mass shooting in the Capital Gazette newsroom in Annapolis, Maryland, in June 2018, that left five people dead, was identified using this technology. US Customs and Border Protection uses facial recognition in many airports and seaports.

The unease around the use of facial recognition stems from concerns over the loss of privacy, and fears that the state may be unwilling or incapable of protecting this fundamental right of citizens. Civil liberties advocacies have warned that the identification of people without their knowledge and consent stands in the way of their ability to act and move about freely. *The New York Times* reported that bans similar to San Francisco's are being considered in Oakland, California, and in Somerville, Massachusetts, and that a Bill has been introduced in the US Congress seeking to bar users of commercial face recognition technology from collecting and sharing data for identifying or tracking consumers without their consent.

Where does India stand with regard to this technology?

The San Francisco decision comes as