



## Resignation drama

Mayawati is struggling to be politically relevant and retrieve the viability of the BSP

The resignation of Bahujan Samaj Party chief Mayawati from her Rajya Sabha seat on Tuesday provided the high drama in the opening days of Parliament's monsoon session. But it was easy to understand why she is giving up the little she has in Parliament in order to raise her political profile. In fact, as he joined other Opposition leaders to line up moral support for her, Rashtriya Janata Dal president Lalu Prasad inadvertently highlighted the position of weakness from which she is launching her fightback. He would help get her re-elected to the Rajya Sabha from Bihar, he said. The BSP, with just 19 seats in the 403-member Uttar Pradesh Assembly, does not have sufficient numbers to ensure the former U.P. Chief Minister's re-election, something she would have needed less than a year from now anyway. But Ms. Mayawati's fight is not for a seat in the House, it is for her very relevance. Successive elections have confirmed the squeeze. From being presumed to be both the prime ministerial candidate of the Third Front in 2009 and the beneficiary in 2017 of the cracks in the Samajwadi Party and the expected blowback of the Narendra Modi government's demonetisation exercise, she now finds herself to be little more than an aside.

Ms. Mayawati herself gave away her predicament by the choice of issue she sought extra time for on the floor of the House: denial of permission for a Dalit procession in Saharanpur on April 14, B.R. Ambedkar's birth anniversary. If on the one hand the BSP finds the BJP taking away large segments of the Dalit vote, the rise of forces like the Bhim Army in Saharanpur with a more fiery Dalit assertion threatens to leave her behind. The challenge for her is nothing less than crafting the next chapter in the BSP's evolution. The party had first tasted electoral success under Kanshi Ram's mentorship, with a call for an alliance of the oppressed, along caste, gender and religious lines, to transform society and politics so that they were not simply accommodated through symbolic handouts – but the world around them progressed rapidly for them to win their rightful political space. This aspiration was worked into his strategy of forcing political instability, so that every churn would give the BSP a shot at expanding its base. The next phase took place on Ms. Mayawati's watch when she crafted a bottom-up rainbow coalition of Dalits, Muslims and upper castes, and got a full majority in the 2007 State elections. With its skilful rewrite of the holding majoritarian narrative and its organisational aggression, the BJP has cherry-picked from that coalition. So much so that the BSP is in an existential struggle to hold on to its core base. More than any other party, the BSP has relied as much on its organisation as on its modernising message. She needs to refresh both.

## Target Tehran

The Trump administration's new sanctions on Iran threaten stability in West Asia

The U.S. administration's decision to slap sanctions on 18 Iranian individuals and entities on Tuesday, only a day after it certified to Congress that Tehran was compliant with the conditions of the nuclear deal, sums up its strategic resolve in taking on the Islamic Republic and the tactical dilemma it faces while doing so. It is no secret that President Donald Trump has been critical of the Iran nuclear deal, which ended the international sanctions on Tehran in return for curbing its nuclear programme. During the campaign, Mr. Trump had vowed to either kill or renegotiate the agreement. But as President, his options are limited with Iran remaining compliant with the terms of the agreement. More important, it is not a bilateral pact. The nuclear deal was reached among seven entities, including the U.S., Russia, Germany and Iran. Any unilateral move to withdraw from the agreement would hurt American interests as European countries are keen on expanding economic ties with Iran. This explains why a reluctant Mr. Trump has re-certified the deal twice since his inauguration in January. But on both occasions, he slapped additional sanctions on Iran over its ballistic missile programme and "support for terrorism", signalling that the Obama-era détente with Tehran was over. Administration officials are now saying Iran may be compliant with the terms but it is "unquestionably in default of the spirit" of the agreement.

This is an overstretched argument, given that all international monitors say Iran remains committed to the deal. The logical next step of the nuclear agreement should have been an overall improvement in relations between the West and Tehran. Barack Obama had set the stage for such a policy overhaul and Iranian President Hassan Rouhani had responded to it, but Mr. Trump, in six months, has taken Washington's Iran policy back to Republican neoconservatism. Besides sanctions, Mr. Trump has also endorsed the Saudi-led Sunni bloc's attempts to isolate Iran. His policy priorities are now clear. The administration will align with Saudi Arabia and Israel, continue to target Iran through sanctions and even try to undermine the nuclear deal in the long term. This is a dangerous turn of events since the historic moment of April 2, 2015, when the framework for the nuclear pact was announced. But this policy of containing Iran could backfire as Iran has already established itself as a rising regional power with substantial geopolitical clout. To stabilise Iraq, the U.S. needs Iran's help. And there won't be a long-lasting peace deal in Syria without Iran's participation and co-operation. If the U.S. is serious about working towards peace and stability in West Asia, it should reciprocate Iran's compliance with the nuclear deal, not punish it through additional sanctions. It should also act as a mediator between Saudi Arabia and Iran, instead of taking sides in a destabilising cold war in West Asia.

# The big squeeze on civil society

The state must respect articulation of the politics of 'voice', and not just the politics of the 'vote'



NEERA CHANDHOKE

In May 2015, a host of civil society organisations wrote an open letter to the Prime Minister of India. The opening paragraph said: "We write to you, as members and as representatives of civil society organisations, and above all as Indian citizens, to express our deep concern on how civil society organisations and their donors are being labelled and targeted. Funds are frozen, intelligence reports are selectively released to paint NGOs in a poor light, and their activities are placed on a watch list. NGO projects have been shut down, donors are unable to support work, and there is an overall atmosphere of State coercion and intimidation in the space of civil society."

The letter continued: "Our work for the poor and the marginalised might involve questioning and protest decisions taken by the government, and this is our right. The government may not agree with what our policies are, from opposing nuclear power plants to campaigning to the right to food. Yet we expect the government to protect our democratic right to protest without being targeted as anti-national."

The open letter emphasised the violation of two democratic rights by the government: the right to freedom of expression including the right to protest, and the right to form associations.

### Democracy beyond elections

The issues raised by the letter have to be taken seriously. Civil society as the sphere of associational life forms the backbone of democracy. The right to participate in an activity we call politics is not, and can-



DEEPAK MARCHANDAN

not be, restricted to just elections. Elections are but the starting point of the democratic project. Citizens have the right to scrutinise the work of their representatives, publicise acts of omission and commission, such as infringement of civil liberties, appropriation of tribal land for purposes of accumulation, failure of governments to provide a reasonable standard of life for the citizens, and engage with leaders on the troubled issue of political conflicts. The right to engage with, interrogate and criticise representatives is an integral part of democracy. Without this right democracy becomes farcical, an empty term, a phantom concept, an illusion.

Democracy is ultimately about the rights of the people who vote representatives into power, to speak back to abuse of power. There has been too much emphasis on democracy as elections in India. The heat needs to be taken off elections. We need to be conscious of what happens between elections, given the opacity of government, given its awesome power over the lives and liberties of citizens, and given the propensity of every government to appropriate, accumulate and misuse power. This can be checked, provided we appreciate the competence of ordinary people to participate in political campaigns in civil society.

The focus on civil society dates back to the 1980s, when political scientists began to speak of a 'crisis of representation'. Citizens across the world had shifted from older and traditional forms of representation, such as political parties and trade unions, to 'newer' modes: social movements, informal citizen groups and non-governmental organisations.

### Rise of civil society

The worldwide shift to civil society was catalysed by the mobilisation of people against Stalinist states in Eastern and Central Europe in the 1970s and the 1980s. Citizens turned their back on unresponsive and authoritarian states and formed associations, such as reading clubs and soup kitchens, in a metaphorical space outside the state. This space they called civil society. The power of popular mobilisation was in full view in 1989, when some very powerful states fell like the proverbial house of cards before agitating but peaceful crowds assembled on the streets. And the term civil society came on everyone's lips, as a companion concept to democracy.

In India, by the late 1970s, the decline of all institutions gave rise to several mass-based political movements and grassroots activism. The anti-caste movement, the struggle for gender justice, the

movement for civil liberties, for a sound environment, and against mega development projects that have displaced thousands of poor tribals and hill dwellers, the movement against child labour, for the right to information, for shelter, for primary education, and for food security have mobilised in civil society. The fact that vital issues related to livelihoods, to the fulfilment of basic needs, and for justice were not taken up by political parties but by civil society organisations acted to propel hopes in civil society as an alternative to the non-performing state and an unresponsive party system.

For unlike the Scandinavian experience, in India trade unions are yoked to political parties and represent a minuscule percentage of the workforce. Unions have shown little interest either in the welfare of the unorganised sector which constitutes 94% of the working class, or in the welfare of peasants. And political parties tend to think of social rights as an electoral/populist ploy rather than a basic right of citizens. In the first decade of the 21st century, civil society organisations stepped in to represent the interests of the most deprived and the most marginalised in the country. Mobilisation proved effective, and the enactment of social rights followed a number of civil society campaigns, the filing of Public Interest Litigations in the Supreme Court, and the onset of a new phase of judicial activism.

### On the back foot

Today, we see the marginalisation of civil society and the sidelining of a rights-based approach to social policy. The Bharatiya Janata Party-led government at the Centre has no use for civil society activism or the politics of dissent. The government, along with the front organisations of the religious right, is determined to take over the political space as well as civil society. The perspective bodes ill for the future

of democracy. From 2004 to 2014, civil society organisations came together to press upon the government the right of citizens to social goods. Once laws granting the right to information, to food, and to work had been passed, activists kept watch on acts of omission and commission, and issued citizen reports.

Today, social security plans are announced without corresponding mobilisation of, consultation with or intervention of civil society organisations. On the contrary, the government has come down heavily on organisations by blocking their bank accounts, by putting a stop to funding, and by casting aspersions on their ability to represent the people of India. In many instances, non-governmental organisations such as Greenpeace have been projected as being anti-national. The government has made determined efforts to shrink the space available to civil society.

The rather sharp reversal in the political fortunes of civil society compels us to recognise that civil society cannot be conceptualised independently of the state. A democratic state needs a democratic civil society. But a democratic civil society also needs a democratic state; a state that respects the politics of 'voice' as opposed to the politics of the 'vote'. If the government respects the voice of citizens through the grant of the right to freedom of expression and association, it should be enabling civil society to articulate aspirations, critically engage with the state, and issue social report cards. The promises of democracy can only be realised through collective action in civil society. If the state constrains civil society space, democracy is truncated, and citizens are seen only as voters. They are deprived of status.

Neera Chandhoke is a former Professor of Political Science at Delhi University

# BITs and pieces of trade with Israel

An India-Israel investment treaty would have to reconcile investment protection with the state's right to regulate



PRABHASH RANJAN

Many pundits in India continue to gaze at the India-Israel relationship through the lens of Palestine. However, some argue that it is critical to de-hyphenate India's relations with Israel and Palestine, a process that began in 1992 when New Delhi established diplomatic relations with Tel Aviv and which has gathered steam since then. Prime Minister Narendra Modi's visit to Israel earlier this month made this de-hyphenation blatant and conspicuous.

### Enormous trade potential

Growing trade and investment relations are a strong reason to study India-Israel relations on their own merit. Bilateral merchandise trade increased from \$200 million in 1992 to around \$4 billion in 2016, an increase of 2,000% in 25 years. Cumulative foreign direct investment (FDI) inflows from Israel, from April 2000 to March 2017, stood at \$122 million. While these are low, constituting only 0.04% of total FDI inflows to India, there is enormous

potential for Israeli investment in fields such as renewable energy and water management (drip irrigation and desalination). Defence production, which is at the heart of the 'Make in India' campaign, is another area with significant potential for Israeli investment, a move that will help India save billions of dollars it currently spends on importing weapons from Israel. Israel is the third largest supplier of arms to India after Russia and the U.S. Investment in defence production will also give a fillip to domestic manufacturing, reduce dependence on bureaucratic state-owned ordnance factories and bring in new technology – an example being the recently set up plant in Madhya Pradesh, between India's Punjab and Israel Weapon Industries, to manufacture small arms.

Boosting trade and investment ties found explicit mention in the India-Israel joint statement during Mr. Modi's visit. To encourage bilateral investments, Mr. Modi and his Israeli counterpart, Benjamin Netanyahu, also agreed to conduct negotiations on a bilateral investment treaty (BIT).

### Negotiating a BIT

Is an India-Israel BIT possible? In 1996, India and Israel signed a BIT. However, this was reportedly terminated by India when it unilaterally discontinued 58 BITs recently.



GETTY IMAGES/RETNA/PHOTO

For a new BIT to be negotiated, both sides will have to start afresh. However, there are challenges given the many fundamental differences Israel and India have on BITs, as outlined in their Model BITs of 2003 and 2016, respectively. The first is on the investor-state dispute settlement (ISDS) provision that allows foreign investors to bring claims against a host state for alleged treaty breaches at international arbitral forums. Foreign investors prefer international arbitration – which is faster and independent – over litigating in domestic courts. The Israeli model gives an investor the choice to submit any investment dispute with a state to international arbitration if not resolved within six months through negotiations. The Indian model imposes many procedural and jurisdictional restrictions on an investor's right to bring an ISDS claim. These include a foreign in-

vestor having to litigate in domestic courts for five years before pursuing a claim under international law. These requirements make it very difficult for a foreign investor to make efficient use of the ISDS provision.

Second, Israel's model provides a broad asset-based definition of foreign investment that covers both FDI and portfolio investment. The Indian model of 2016 defines investment narrowly as an enterprise (with its assets) that has to possess certain characteristics of investment including the investment having 'significance for the development' – words not defined in the BIT – of the host country. Third, the Israeli model contains a broad most favoured nation (MFN) provision – a cornerstone of non-discrimination in international economic relations – which is missing in the Indian model. The absence of MFN, from Israel's perspective, would mean that its businesses would have no remedy under international law if India were to discriminate against it, say, by offering greater incentives to another defence manufacturer over an Israeli one.

Fourth, the Indian model excludes taxation altogether from the purview of the BIT. Thus, the foreign investor cannot bring an ISDS claim even if taxes imposed are confiscatory, discriminatory or un-

fair. However, in the Israeli model, taxation-related measures are recognised as an exception only to MFN and national treatment provisions. Foreign investors can still challenge taxation-related measures for violating other BIT provisions such as the fair and equitable treatment or expropriation. India's recent record in administering its taxation laws has made foreign investors jittery. The World Investment Report 2017 issued by the United Nations Conference on Trade and Development also points out that tax-related concerns are a deterrent for some foreign investors to invest in India. Thus, Israeli investors will not be comfortable if taxation is completely outside BIT's purview.

### In a nutshell

In sum, the Indian position on BITs is very pro-state, offering limited rights and protection to foreign investors. The Israeli position is the opposite. An India-Israel BIT looks difficult till both sides move away from their stated positions. Both sides should work towards having a BIT that reconciles investment protection with a state's right to regulate.

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## LETTERS TO THE EDITOR

Letters emailed to letters@thehindu.co.in must carry the full postal address and the full name or the name with initials.

### Ending scavenging

The basic reason why the despicable practice of manual scavenging still persists in India is because there is negligible or no support by society to eliminate this most inhuman of professions (Editorial - "Get real on Swachh", July 19). Our society is still deeply mired in propagating caste and religious prejudices; rather than take up the issue in isolation, we need to strike at the root cause – caste prejudice. Raja Ram Mohan Roy said that change should come from society itself. I wonder how this marginalised community will be able to attain some kind of social mobility even with reservation when there is a growing anti-reservation sentiment. We need to do something for them which is sustainable and helps them in achieving a social status on their own.

SANDEEP KUMAR MEENA, New Delhi

can think of, of an equivalent practice in the Victorian era, was when children were used as chimney sweeps. However, the practice was abolished while scavenging continues. The basic problem is a lack of education. There is also something called humanity which is missing in many parts of India.

C. SRUTHI, Chennai

### Calculated move?

It looks as if the resignation of BSP chief Mayawati from the Rajya Sabha is less about the urgency of Dalit issues being addressed in Parliament and more about the marginalisation of her party in the Hindi heartland ("Mayawati quits RS, says she was muzzled", July 19). Her calculations: resignation on live television will have a greater impact than a quiet retreat from a House where her term was, in any case, due to end in April 2018. With the BJP eyeing the Dalit vote bank and making efforts to woo

the community – the latest move being its choice of Dalit leader Ram Nath Kovind for the post of President – time seems to be running out for the BSP. Ms. Mayawati's brand of Dalit empowerment has become a thing of the past. In the name of Dalit memorials, she 'planted' her own statues. Instead of building leadership across the Dalit community, she projected herself as the sole leader.

K.S. JAYATHERTHA, Bengaluru

### Aadhaar woes

It is strange that the issue of privacy comes up when the Aadhaar programme is quite well-entrenched in many systems ("Aadhaar: 9-judge Bench to consider whether privacy is a basic right", July 19). I am a senior citizen and have been unable to get a new phone connection as my fingerprints are not recognised by the relevant device at many vendor points. When the matter was referred to the UIDAI, their prompt reply was to

upload the finger/palm prints again. I am sure many face this problem as there are crowds at the few Aadhaar-issuing centres. Glitches in the system should be addressed with alternatives instead of driving people to hardship. Senior citizens are especially inconvenienced.

R. ARAVAMUDHAN, Chennai

### Cyprus reunification

The Editorial (July 10), "Divided island", on the reunification of Cyprus, attempts to shed light on the outcome of the latest round of peace talks on Cyprus, divided since 1974 when Turkish troops invaded, and subsequently occupied, a third of the island in gross disregard of international law and in clear violation of the UN Charter as well as relevant UNSC resolutions. Nonetheless, a number of references and assumptions are misleading. For example, the references to the "Greek Cypriot", Republic of Cyprus,

"Turkish Cypriot state" and "Northern Cyprus" are unfortunate. The recent state visit to India by the President of the Republic of Cyprus, Mr. Anastasiades, was enlightening enough in so far as India's principled position on Cyprus is concerned. The essence of the problem is not adequately reflected in the Editorial; that is, Turkey's objective is not a truly independent Republic of Cyprus, "in control of its affairs", without interference from third countries. Turkey's objective is to control Cyprus, hence its insistence "on an indefinite Turkish military presence on the island." This was the reason

### CORRECTIONS & CLARIFICATIONS:

In "Get real on Swachh" (Editorial, July 19, 2017), the last sentence in the first paragraph should have read: "This is incongruous, ..., and the Swachh Bharat Abhiyan ..., to which the public was contributing a cess."

The graphic, "Doubling down on renewables" (Data Point, OpEd page, July 17, 2017), erroneously said that China nearly tripled its renewable energy capacity in the last decade. Actually, it was nearly four times.

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# Think beyond loan waivers

Strengthening the repayment capacity of farmers by improving and stabilising their income is the only way to keep them out of distress



RAMESH CHAND  
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Valuing the produce: A farmer carrying his harvested paddy on a buffalo cart in Mayong village in Morigaon district, Assam. ■ RITU RAJ KONWAR

Indian agriculture is characterised by low scale and low productivity. About 85% of the operational landholdings in the country are below 5 acres and 67% farm households survive on an average landholding of one acre. More than half of the area under cultivation does not have access to irrigation. Agriculture income generated at average size of landholding is not adequate to meet farmers' needs.

The problem is exacerbated by weather and market risks. According to the latest National Sample Survey on Situation Assessment Survey of Agricultural Households (NSS-SAS), 13.9% farm households experienced negative return from crop production during 2012-13. Non-farm income comprised 40% of the income of farm households, but access to non-farm sources of income is highly skewed as about 40% of farm households reported zero income from such sources.

## Increasing debt burden

Modern agriculture requires investment in farm machinery and use of purchased inputs like seed, fertiliser, agri-chemicals, diesel and hired labour. Most often, savings generated from unremunerative crop enterprise are inadequate for such investments. Rising expenses on health, education, social ceremonies and non-food items put additional financial demand on farm families. Consequently, majority of the farmers have to take loans from institutional or non-institutional sources or both. The share of institutional loans disbursed during a year to agriculture and allied sectors has risen from 8.9% of the value of output in 2000-01 to 31.4% in 2015-16.

The amount of short-term institutional loans for agriculture exceeds the total cost of inputs including hired labour at an all-India level and in many States. This indicates that a part of crop loans is likely spent on non-agricultural purposes. A more worrisome fact out of NSS surveys on Investment and Debt (NSS-I&D) is that the loans taken by cultivators from non-institutional sources,

which involve high interest rate, is rising faster than from institutional sources. These indicators point to a worrying development – much of the growth in household demand in rural India has been debt-ridden and not supported by growth in income.

Recently a few States like Uttar Pradesh, Maharashtra, Punjab and Karnataka have responded to farm distress by rolling out farm loan waiver schemes as a measure of immediate relief to those farmers who qualify certain criteria. The demand for such measures is spreading to other States too.

The ultimate goal of farm loan waiver is to lessen the debt burden of distressed and vulnerable farmers and help them qualify for fresh loans. The success of the loan waiver relies on the extent to which the benefits reach the needy farmers. Loan waivers suffer from several drawbacks in this respect. First, it covers only a tiny fraction of farmers. According to 2012-13 NSS-SAS, 48% of the agricultural households did not have any outstanding loan.

Further, out of the indebted agricultural households, about 39% borrowed only from non-institutional sources. The farmers investing from their own savings and those borrowing from non-institutional sources are equally vulnerable to weather and market risks. But all such households are outside the purview of loan waiver.

Second, it provides only a partial relief to the indebted farmers as about half of the institutional borrowing of a cultivator is for non-farm purposes. Third, in many cases, one household has multiple loans either from different sources or in the name of different family members, which

entitles it to multiple loan waiving. Fourth, loan waiving excludes agricultural labourers who are even weaker than cultivators in bearing the consequences of economic distress. Fifth, it severely erodes the credit culture, with dire long-run consequences to the banking business. Sixth, the scheme is prone to serious exclusion and inclusion errors, as evidenced by the Comptroller and Auditor General's (CAG) findings in the Agricultural Debt Waiver and Debt Relief Scheme, 2008.

According to the CAG report, 13.46% of the accounts which were actually eligible for the benefits under the scheme were not considered by the lending institutes while preparing the list of eligible farmers. On the other hand, in 8.5% of the cases, the beneficiaries were not eligible for either debt waiver or debt relief but were granted the benefits. Further, 34.28% of the beneficiaries were not issued debt relief certificates which would have entitled them to fresh loans. Beside these errors in implementation, the loan waiver as a concept excludes most of the farm households in dire need of relief and includes some who do not deserve such relief on economic grounds.

Apart from above drawbacks, such schemes have serious implications for other developmental expenditure, having a much larger multiplier effect on the economy. For instance, loan waiver may cost Uttar Pradesh at least ₹36,000 crore, which is 4.4 times the State's capital expenditure of ₹8,191 crore (Budget estimate) in agriculture, including irrigation and flood management, in 2016-17. A similar amount spent on improvement of agriculture infrastructure and

other developmental activities would create a base for future growth and development of the sector.

It appears that loan waiving can provide a short-term relief to a limited section of farmers; it has a meagre chance of bringing farmers out of the vicious cycle of indebtedness. There is no concrete evidence on reduction in agrarian distress following the first spell of all-India farm loan waiver in 2008. In the longer run, strengthening the repayment capacity of the farmers by improving and stabilising their income is the only way to keep them out of distress.

## Sustainable solutions

For providing immediate relief to the needy farmers, a more inclusive alternative approach is to identify the vulnerable farmers' based on certain criteria and give an equal amount as financial relief to the vulnerable and distressed families. For instance, in Uttar Pradesh 23.2% (41.87 lakh) agricultural households (180.49 lakh) are estimated to have income below poverty line. With ₹36,000 crore, each of these households can be given ₹85,980. This looks to be a more inclusive approach and provides farmers flexibility to spend this money.

In our view, the sustainable solution to indebtedness and agrarian distress is to raise income from agricultural activities and enhance access to non-farm sources of income. The low scale of farms necessitates that some cultivators move from agriculture to non-farm jobs. Improved technology, expansion of irrigation coverage, and crop diversification towards high-value crops are appropriate measures for raising productivity and farmers' income. All these require more public funding and support and there is a danger of these getting adversely affected by resources diverted towards loan waiver. Another major source of increase in farmers' income is remunerative prices for farm produce. This requires removal of old regulations and restrictions on agriculture to enable creation of a liberalised environment for investment, trading and marketing. Agrarian distress and farmers' income will be addressed much better if States undertake and sincerely implement long-pending reforms in the agriculture sector with urgency.

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# Conserving water, the ancient way

Tamil Nadu's temple inscriptions provide some handy drought-management advice



PRADEEP CHAKRAVARTHY

Can droughts experienced centuries ago teach us ways to handle the present ones? They can if we care to look in the right place – for instance, the walls of temples in Tamil Nadu. Temples today are primarily religious monuments, occasionally visited for their art and architecture. However, in the past, their walls served as record-keepers. Inscriptions on Tamil Nadu's temples record administrative and social decisions from a time when they were a seat of authority for the local community.

Inscriptions connected to irrigation in Tamil Nadu concern two broad zones, the Cauvery delta and the Tamirabarani delta. The Cauvery delta was more fertile and larger – with more tributaries – but the number of drought-related inscriptions here are more in number than the Tamirabarani delta. About 1,000 years ago, during the zenith of the Chola power, irrigation in the Cauvery delta was through the many tributaries of the river and smaller canals.

## Reverence for the resource

The Tamirabarani region was much more water-starved and gives us astonishing data on what we need to do. Inscriptions from 700-1,000 years ago, connected to water conservation in temples at places like Manarkovil, Cheranamahadevi, Tirukurungudi, Kovilpatti, and Pudukkottai, attest to a few aspects.

Temple inscriptions were always documents connected with the sale, transfer and maintenance of irrigated lands. Today, we consider water to be a right. However, in the older traditions, it was a representation of god that residents were duty-bound to protect and conserve. Further, the respect for water transcended the public sphere and was part of individual homes as well. As recently as the 1970s, I remember older women drawing water from the wells pouring the first pot back into them.

In the Pandya empire, water conservation was a completely local affair. The entire community, through the elected temple *mahasabha*, managed it. This meant that there was constant supervision, ownership and responsibility. All systems and processes were sustained through an emotional connection with the resource.

Water from the Tamirabarani and the Vagai rivers was taken through channels into

formations like *eris* (small lakes) and *per-eris* (bigger lakes). Channels created square parcels of lands called *sadirams* and they were subdivided into smaller *padagams* of land, all of which had numbers. There were as many as 20-24 *padagams* in a *sadiram*. They were taxed differently based on how fertile they were – a system far more complex and farmer-friendly than today!

## Care for the local terrain

Every tank had multiple weirs, always built in consonance with the local terrain, to drain out excess water. Using these, farmers irrigated the fields. There were complex calculations on allocation by turns (*murai*) and hours of supply (*nir naligai*). The interests of the boatmen in the lower estuaries and ports were also taken care of so that there was enough water there to permit them to bring boats up the river. The upper reaches had a higher number of large tanks which fed water into the smaller ones, tanks and ponds before it finally drained into the sea. As a result, during floods, the limits were rarely breached, and during droughts, each tank had water.

Maintenance of the tanks through desilting and enlargement and building and maintaining of new canals was a continuous process. More than a hundred inscriptions across the region deal exclusively with this. Fishing rights for the lakes helped defray maintenance costs. Revenues were high enough for the excess profits to be deployed in building larger halls in temples that could be used for public functions.

In Srivilliputhur, every able-bodied man was expected to participate in such operations. Some inscriptions show that maintenance was a local responsibility and not that of the king. In fact, many capital-intensive projects were funded by the dancing women of temples.

Many inscriptions also talk of reclaimed lands and tax concessions provided following natural disasters and how, after a disaster, the community quickly acted together to set the system right.

True, the inscriptions don't paint a utopian world. They talk about disputes related to water sharing and taxes; deaths that happened during desilting; and fights over excess water for more rounds of crops. However, these disputes were quickly resolved and in a way that the river or tank was respected.

Today, we may have advanced in technology but we could pick some best practices from long ago.

Pradeep Chakravarthy, who is based in Chennai, runs a heritage tour company and does management consulting

## SINGLE FILE

# Plastic realities

We need to urgently and drastically cut the use of plastics

SAMIR NAZARETH



Plastics had their origin in cellulose derivatives. The first synthetic plastic was called bakelite and was derived from fossil fuels. During the Second World War, large-scale production of plastic was directed towards the war effort. However, with the declaration of peace, there was a need to do something about the installed capacity. And so, in 1946, Tupperware company came into being.

At present, the use of plastic has become so ubiquitous that even birds, animals and fish have unwittingly made it part of their diet. Disposed plastic degrades slowly, its chemicals getting leached into surroundings. Further, it breaks down into smaller components over time, entering our food chain and landing up on our plates.

According to a 2014 report of the United Nations Environment Programme (UNEP), "the overall natural capital cost of plastic use in the consumer goods sector each year is \$75 billion". This will only go up with the rising consumerism and the increasing use of plastic. According to a recent article in *The Guardian*, a million plastic bottles are bought across the world every minute.

However, plastic bottles are not the only problem. There are smaller forms of plastic, no greater in size than 5 mm, called microbeads, first patented in 1972 for use in cleansers. In the 1990s, they began to replace natural material like ground almonds, oatmeal and sea salt in the area of cosmetics. Many cosmetics and toiletry products – ranging from facewashes to toothpastes – use it today. Their abrasive nature lends itself to use in industries such as petroleum, textiles, printing and automobile. An article in the journal *Marine Pollution Bulletin* states that the microbeads are used as exfoliants and that, in a 150-ml bottle, there will be anywhere between 1,37,000 and 28,00,000 microparticles.

The Bureau of Indian Standards (BIS) has recently classified the non-biodegradable microbeads as unsafe for use in consumer products through a draft notification titled, "Classification for cosmetic raw materials and adjuncts, Part 2: List of raw materials generally not recognised as safe for use in cosmetics."

Countries such as the U.S., Canada and the Netherlands have already put in place regulations to stop the use of microbeads in personal-care products. The sooner India adopts such regulations, the better.

The use of plastic in our daily life should be reduced even as their recycling is increased. This has to involve everyone, from the manufacturer to the user to the waste collector and the recycling authority. We as a society need to create an ecosystem that reduces the use of plastic and prevents its escape into the external environment.

Samir Nazareth is the author of '1400 Bananas, 76 Towns & 1 Million People'



## CONCEPTUAL

### Money illusion

ECONOMICS

The notion that people care more about the nominal value of money rather than its real value. According to this idea, workers, for instance, would be impressed if their wages double in a year even if the real value of their money were to drop by more than half during the same period. The concept, credited to British economist John Maynard Keynes, has been heavily criticised for its assumption that people are naïve. The theory of rational expectations, which among other things states that people learn from experience and can reset their earlier beliefs, was a response to the idea of money illusion.

## MORE ON THE WEB

When Madras State was renamed 'Tamil Nadu' <http://bit.ly/MadrasToTN>

## FAQ

### A raging market

The present bull run is due to the inflow of big capital

PRASHANTH PERUMAL

**Why is the stock market doing so well?** The BSE Sensex and the NSE Nifty are at record high levels, gaining well over 20% this year. The Indian economy's high growth rate has been touted as the major reason behind the rally. The belief is that high economic growth should lead to higher earnings, thus supporting higher stock prices. But other stock markets across the globe have experienced equally impressive gains. So the present bull run could be better explained by the flow of huge capital into the stock market.

**How is liquidity affecting the market?** Central banks around the globe have been on a money-printing spree since the crisis of 2007-08, which has distorted the prices of financial securities. New money pouring into the capital markets has bid up the prices of various securities, including bonds and stocks. In such an environ-

ment, risk-averse investors unwilling to pay a high price have been priced out of the market. At the same time, risk-seeking investors who are ready to pay through their nose have remained in the market.

**Is the market overpriced at current levels?** Corporate earnings and interest rates determine the price of stocks in the long run. Prices fall if they are out of touch with either of these fundamentals. On the earnings front, the Sensex's price-to-earnings ratio based on trailing earnings is close to 23, higher than its historical average of around 18.

Given that earnings growth has been flat in recent years, it may be premature to justify current prices based even on future earnings growth. On the front of interest rates, low rates have been the only reason justifying current stock prices, but whether they can stay low forever is the big question.

**What are the riskiest stocks?** Mid-cap and small-cap stocks have seen a greater percentage increase in their prices, thanks to investors aggressively pricing in future earnings growth. If future earnings fail to keep up with expectations, already factored into their prices, we could see a sharp fall in their prices.

There is significant risk involved here as many of these companies lack a strong track record of sustainable earnings, which increases the chances of an earnings surprise in the future.

**Is a serious crash imminent?** It is hard to predict the market's next move. Corporate earnings have failed to recover sufficiently to keep up with rising prices, so that is one major risk. A rise in interest rates is another risk, as when central banks stop pouring money into the market, it could affect stock prices adversely.

## FROM THE HINDU ARCHIVES

FIFTY YEARS AGO JULY 20, 1967

### 36 Congressmen cross floor in M.P.

The Chief Minister of Madhya Pradesh, Mr. D.P. Mishra told Pressmen here [Bhopal] to-day [July 19] that he would advise the Governor to dissolve the legislature and hold mid-term elections in Madhya Pradesh. He made this announcement soon after 36 Congressmen had crossed the floor in the State Legislative Assembly and joined the Opposition. Mr. B. Verma, one of those who defected, announced the list of the 36 members while the House began discussion on the demand on Education Department after lunch hour to-day [July 19]. Two of the 36 members later contradicted that they had defected from the Congress ranks. Talking to newsmen the Chief Minister said that he would have to assess the impact of the defections and find out whether the signatures of the defectors were "genuine".

A HUNDRED YEARS AGO JULY 20, 1917

### Alleged murder.

News of a sensational murder of a European spread through the town [Palghat] early on Tuesday morning. It would appear that one Charles Alexander, formerly employed as a Guard in the South Indian Railway Company and now according to a statement he had made before Sub-Collector, Mr. Percy Macqueen, I.C.S., a fireman on board a Casting Steamer arrived in Palghat on Monday morning by mail train. He represented to the Sub Collector in the noon that he had missed his steamer at Madras and was now on his way to join the vessel at the Mangalore Port. The story on the face of it seemed improbable, but having been stranded penniless, the Sub-Collector gave him under the Vagrant Act some money for his food and arranged for his ticket to Mangalore by the train leaving Palghat that night.

## DATA POINT

### Agricultural component of NPAs

In the last three years, while banks' gross non-performing assets (NPAs) have been increasing, the share of NPAs linked to agriculture and allied activities has steadily declined

