

Civil Society

Kodagu coffee stays in the family



How Care T Acres helps revive ailing plantations

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Skill training provides employment for rural youth.

After I graduated from college, I wanted to work and support my parents who get a meagre income as daily wage agriculture labourers. The only opportunity for employment in my village was working as a farm hand that was poorly paid seasonal work. Without any job prospects and income, I was depressed to be financially burdened on my family.

SST team helped me in finding a suitable job for my qualifications. They enrolled me in a 10 days youth development training program in soft skills. Once I completed the training, I got a job in a KFC restaurant in Mysore. Now I have a regular income of ₹ 7000 per month. This helps me to meet my need and also contribute to family income.

Mr. Chaluva Nayaka
Kembal village, Mysore district, Karnataka.

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Kodagu coffee stays in the family

There can be a future for troubled coffee estates. In Kodagu, Care T Acres, a company started by veteran planters, helps families revive ailing estates under a management agreement.

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Civil Society

READ US. WE READ YOU.

The Kodagu solution

KODAGU (or Coorg, as most of us know it) is famous for its coffee. If you've been there, you will also remember it for its wonderful people and cuisine. It is a beautiful part of the country and is awash in the natural beauty of the Western Ghats. But communities held together by intangible glue find themselves falling apart over time. People move on and traditions die. Young ones migrate in search of an education and don't come back. The coffee estates of Kodagu are an example of businesses that lose momentum for want of a new generation of owners.

It is in this context that Care T Acres, a company formed by veteran planters of Kodagu, is a noteworthy initiative that combines robust business practices with the power of emotion. The old-timers behind the company didn't want to see families selling out. They wanted the Kodagu identity to continue. It is interesting that many of the estates can, in fact, be revived and made profitable.

Areas like Kodagu in India could qualify for geographical indicator status, which changes their standing in a globalised world based on their unique biodiversity and cultural practices. They are all brands and helping them realise their potential should be a national objective for all the obvious reasons.

It surprises us not one bit that trains with water are rushing off to Latur. Or that people in Bundelkhand are migrating to cities. We have been covering water for years and in our view there is worse coming up. What worries us is that there is no attempt to learn from experience. Latur gets much more rain than Jaisalmer in Rajasthan. But there are villages in Jaisalmer that have enough water. The solution lies in collecting water where it falls. To understand our water problem a little better we spoke with Anupam Mishra of the Gandhi Peace Foundation. He is the country's foremost authority on traditional water harvesting systems and community efforts at conservation. There is really no alternative to treating water with respect and budgeting for its use in ways that are sustainable. A water strategy will have to account for rainfall, rivers, lakes, tanks and underground reserves as one hydrological cycle. Until such a vision takes shape, the shadow of shortages will only continue to lengthen.

New Delhi's odd-even scheme for rationing road space is back, but it is difficult to understand what purpose it really serves. It is not the answer to pollution and it doesn't do much for congestion. If the idea is to get people out of their cars and into buses, the odd-even scheme is not going to do it. A much more detailed and scientific approach is needed. There are challenges of urban design. For all the talk of putting more buses on roads it is not known where they will come from, be parked or what routes they will ply to be effective. The AAP government of Arvind Kejriwal doesn't seem interested in a broader consultation and in government expertise is lacking.

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The magazine does not undertake to respond to unsolicited contributions sent to the editor for publication.

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Printed and published by Umesh Anand on behalf of Rita Anand, owner of the title, from A-53 D, First Floor, Panchsheel Vihar, Malviya Nagar, New Delhi -110017. Printed at Samrat Offset Pvt. Ltd., B-88, Okhla Phase II, New Delhi - 110020.

Postal Registration No. DL(S)-01/3255/2015-17. Registered to post without pre-payment U(SE)-10/2015-17 at New Delhi PSO Registered with the Registrar of Newspapers of India under RNI No.: DELENG/2003/11607 Total no of pages: 36

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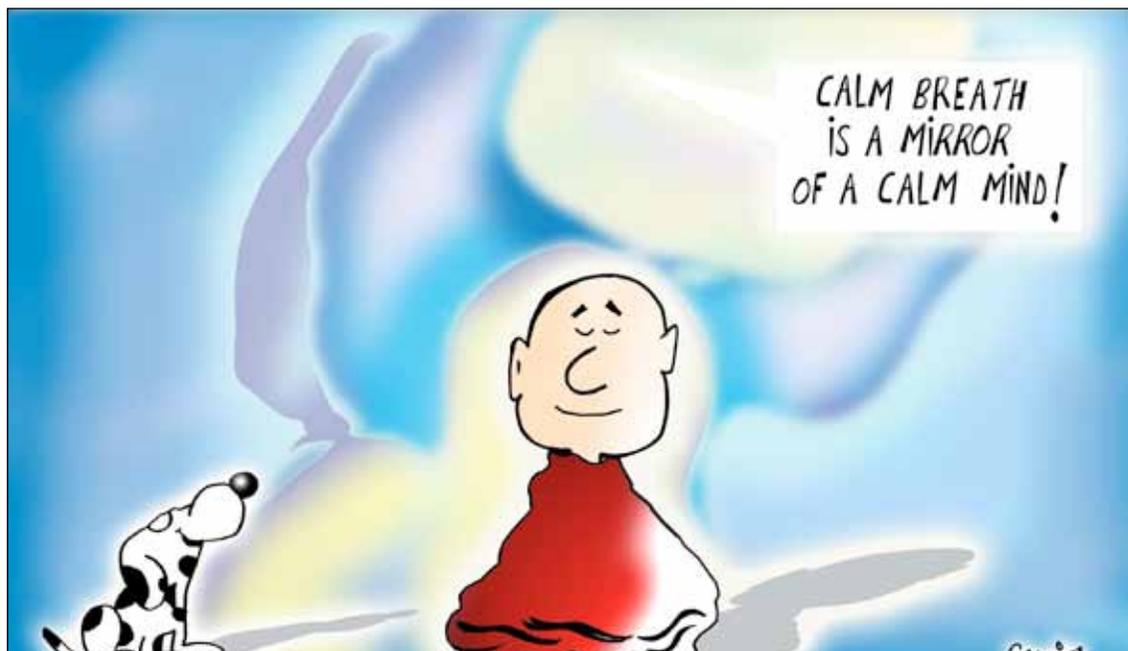
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Arohi-Himalaya Health initiative is a program for delivering better healthcare to mothers and children in Uttarakhand. Through our partnership with Arohi, a non-profit organization working with rural communities in the Himalayan region, we hope to promote health education and services for the poor.

IN THE LIGHT

SAMITA RATHOR



reforms. This would win them public support and make it easier for them to get pay parity.

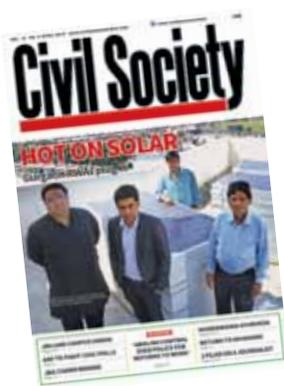
Ashish Khetan

Herbal rule

It is completely and utterly absurd that doctors of allopathic medicine are not permitted to prescribe herbal medicines. I agree with Philippe Haydon, CEO of Himalaya Herbal, that this order by the Supreme Court way back in the 1990s should be rescinded. Immediately. If a patient can get better on herbal medicine, why prescribe chemicals? These are all over-the-counter herbal medicines which an ordinary person can buy without a prescription. But not an allopathic doctor. Besides, this order is hampering the growth of India's herbal medicine industry. Let's nurture our homegrown industries instead of constantly chasing FDI in a stagnating global economy.

Ritu

LETTERS



Solar power

I read your cover story, 'Hot on Solar', with great interest. Finally, this sector is becoming mainstream in India thanks to solar PV panels getting cheaper. The diesel generator business is likely to collapse. Housing societies and large commercial establishments would much rather go for solar power than for diesel which is expensive and polluting. All we need now are dedicated, eco-friendly storage systems for solar energy.

Francis Patrick

Congratulations to Bestech Park View Residency for being the first colony in Gurgaon to opt for solar energy. Far-sighted resident welfare associations and citizen groups can do a lot to change the environment of a city and influence policy. To some extent, the Aravali hills have been saved only due to activism by citizens.

Shanti Sen

I think it is the RESCOs who will play a key role in growing the solar sector in India. It is the entrepreneur who comes up with ideas on how to sell and market his or her product. Innovative financing solutions, cheaper and newer technology, and an enabling policy will drive the solar sector. In the coming years we will have solar units on our rooftops and electric cars on the streets.

Dilip Hiro

The solar sector in India has really come a long way – from solar lanterns to RESCOs. Today we get a range of well-designed inexpensive solar products for our homes. Soon, every rooftop will have solar panels in Haryana, Rajasthan and Gujarat.

Shekhar Singh

Police reforms

The interview with Prakash Singh on police reforms was interesting. We need people's support for police reforms. The problem is that most of us think this cannot happen. So, as Singh suggests, we could begin by appealing to the political establishment to improve the living and working conditions of the police. It would improve services provided to the elite, after all.

Shehla Das

Currently, the police are a bit lower down in the pecking order. Their pay scales are not very good. But their reputation is also not very good. I agree with Prakash Singh that they could begin by doing some internal

Smart cities

I liked V. Ravichandrar's piece, 'Every city can be smart.' True. He should also tell us what to do about our municipalities and agencies that provide services. Most municipalities are dens of corruption. Which cities and towns in India have spruced up these agencies and institutions? And how did these small revolutions happen? Please tell us.

Shikha Munshi

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‘The monsoon has the last laugh. It gives us rain, we don’t capture it’

Anupam Mishra on the need to set a deadline to end drought

Civil Society News
New Delhi

TWO headlines on water have competed for mind space. The first was on a train carrying water to Latur, which has gone completely dry. The second was on an upcoming bountiful monsoon, which has already sent the stock market soaring in anticipation of rural demand.

As India swings between these extremes, we spoke to Anupam Mishra, India’s most respected thinker and researcher on water, on where water policies have failed. How is it that Latur runs dry when desert communities that receive much less rain than Latur manage so well?

Mishra has spent long years studying social traditions and ancient water systems. He is the author of a revolutionary book on community water harvesting. Excerpts from an interview:

We lurch from drought to flood. We have had two years of scarce rain and now we are told the monsoon will be bountiful. How should we manage our water so that we are drought-proof and flood-proof?

Drought does not come alone. It arrives after a drought of thoughts and ideas. But, sadly, we don’t see this. Nature has given us the monsoon. Even today those in positions of power think development is the panacea that will reduce our dependence on the monsoon. We have been listening to such talk since the days of the Bhakra Nangal Dam. Today, Punjab and Haryana won’t share water via a canal even though the BJP is in power at the centre and in the two states. So, thinking that this year we will have a good monsoon and all our problems will be resolved is like burying your head in sand.

The monsoon experience isn’t like going to a Mother Dairy booth. You insert one token you get a certain quantity of milk. You put in two, you get more.

It’s only when the rain falls that we know how much precipitation has taken place. That’s why since time immemorial our society, from Kashmir to Kanyakumari, designed a range of water

harvesting systems to capture rain whether it was copious or scarce. This has been our tradition.

You could even say that we over-designed such systems. Perhaps, in those days, people estimated that 20 inches of rain would fall. Or maybe 35 inches. The system was designed to capture the extra 15 inches and not let rain run off into drains. So regardless of how much rain fell it was all carefully collected.

Drought would strike in those days too. There were floods as well. But the ability of an intransigent monsoon to cause devastation was blunted. People could continue to lead normal lives.

Every year districts in Maharashtra are in the news for being the worst-affected by drought. Why have no lessons been learnt?

For the first time the question being raised is: should we hold IPL matches in Mumbai when the state is reeling under a drought? It is a practical question.

We have 48 stadiums where international cricket matches can be played apart from the Wankhede Stadium in Mumbai. Is there a single stadium that has a water harvesting system? Around 50,000 people can sit in a stadium. We can harvest at least 50 million to 500 million litres of water.

One minor drought in the state has bowled out the IPL. Every stadium should instal a water harvesting system so that it has surplus water which can water the pitch and supply water to Latur, if needed.

Instead, trains loaded with water are being sent to Latur. Around 12-15 years ago, water was sent by ship to coastal areas of Gujarat. So, for Vibrant Gujarat or Vibrant India — since the same leadership now rules from Delhi with the same model — just one more feat is left: to send water by air in just two hours. We could also send water by Bullet train. That would be the apex of development in India!

The monsoon has the last laugh for it bestows us rain for four months. We don’t capture it. We let the rain flow into the ocean instead.

Last night, I spoke to my friend, Chhattar Singh, in Jaisalmer. He laughed at the idea of trains loaded



Anupam Mishra: ‘Politics in our country has sunk so low it can only

with water making their way to Latur.

He wanted to tell me about the last two years of rainfall in Jaisalmer. In 2014, they got 11 mm of rain and in 2015 they received 51 mm. He said in 10 villages where they had revived old water systems none suffered a scarcity of drinking water, fodder or foodgrain.

Can’t the chief ministers of Maharashtra, Uttar Pradesh, Madhya Pradesh, Karnataka or Andhra take their chartered flights to these villages? And understand the strength of this wisdom?

I mean, much more rain falls in Latur than in Jaisalmer. I agree it’s not the Konkan but nature hasn’t deprived Latur of rain entirely. Maybe Latur’s population is more than Jaisalmer’s. But not a single tanker has gone to these villages in the desert that receive such scarce rain, for two years.

How did the villages in Jaisalmer district become drought-proof?

Jaisalmer has an unusual geography. Thousands of years ago, nature created gypsum in stretches and patches under its sand. Gypsum halts moisture and doesn’t let it evaporate. It also prevents sweet water from mixing with saline water below.

Jaisalmer’s villages have *beris*, *kuans* and *talaabs* with this gypsum belt. The sandy soil above blocks the sun and prevents evaporation. The sand feels warm if you touch it. But a few inches below you will find moisture blocked by the layer of gypsum.

LAKSHMAN ANAND



'sink our water tables further down'

'Nature has given us the monsoon. Even today those in positions of power think development is the panacea that will reduce our dependence on the monsoon. We have been listening to such talk since the days of the Bhakra Nangal Dam.'

You have explained the science to us. But what about the village community's role?

Their success and strength lie in their tradition. They know how to care for their tanks and catchments. Catchment areas are kept clean and free from garbage, cow dung and animal droppings. They take great care to ensure that their drinking water isn't contaminated. They say with immense pride, please come and see.

And such a tradition isn't just practised only in Jaisalmer, which is in a desert. Just five hours from Delhi is a village called Latoria which receives just 22 inches of rain. At one time three of their tanks were lying broken and it affected their lives. They decided to repair them.

That year they received 35 inches of rain, more than what they normally receive. The tanks filled to

the brim. Latoria had wisely made provision for excess rain. Neighbouring villages were flooded with water. But not Latoria.

In years to come, the area would witness drought. A mere six inches or eight inches of rain would fall. Tankers, fodder and foodgrain had to be sent to villagers near Latoria.

But Latoria's people said they didn't need any of this. They have 103 wells and every year they say, please come and see. We have enough water in our wells and we have groundwater too. There is synergy between groundwater and surface water. If surface water dries up, you can tap groundwater.

In Latur, in Marathwada, we have used technology to completely squeeze out groundwater.

In Mumbai we see a 22-metre cricket pitch but we don't see thousands of hectares of sugarcane in

Marathwada. We don't see 125 sugar mills.

In Latoria they took a decision not to grow crops that demanded a lot of water. The community decides wisely. But if society stops making decisions, and then faces drought and then thinks it will learn from Rajasthan, it's not going to happen. You can't copy what the villages of Rajasthan did. You have to first change the way you think.

There are places where water harvesting is just a charade. NGOs put up a board saying they have done it. All that they are doing is self-promotion. In villages in Jaisalmer they don't put up a board announcing that they have carried out water harvesting.

So it is part of their lifestyle?

It is their way of life, their culture, their tradition, and a responsibility that they pass on to their children. In Haryana and Punjab they grow paddy today. It was never their traditional crop. These states have the highest number of agricultural universities. What do those vice-chancellors do? What do they research? Why don't they tell the government that we will not be able to undertake paddy cultivation beyond another five years because we will run out of water by then?

The traditional food of Punjab was *makki ki roti* and *sarson ka saag*. Today, it is wheat and rice and both are not of good quality. A sack of wheat will be invariably branded as wheat from Madhya Pradesh to emphasise its quality. Why don't they write that it is from Punjab or Haryana? If you are using so much water, grow better quality wheat and rice.

Many regions in India have turned water scarce. What should we do to make them water rich?

Politics in India has sunk so low it can only sink our water tables further. Politicians seem to compete with each other in reaching new lows. The politics of today cannot raise water levels. Sure, in an emergency situation you need to send water by train. Send it by plane, by all means. But ask yourself, next year how many gallons of water can be collected from the monsoon when it arrives?

Maybe the monsoon will fail. But there will be some rain. We should start with Marathwada and ensure that from 2017 these regions never ever experience such drought again. This should be the last photo-op of drought in Latur.

Urbanisation is increasing at a rapid rate swallowing traditional modes of water harvesting, tanks, lakes and wells. Instead, we are depending on extracting water from rural India. Look at Dwarka in New Delhi.

Absolutely and where are the tankers drawing their water from? From villages. For how long will rural India supply urban India with water. If we can build stadiums, a Metro station and shopping malls in Dwarka, then why can't we plan and build four large tanks? There will be rain in Dwarka and there will be flooding too. Gurgaon floods so much.

The definition of a smart city should be that the city's management of water is very smart. Instead of depleting villages of water, cities can load up on rainwater and take what they need every day.

Whether it is Chennai or Mumbai, our cities will lurch from flood to drought. People are condemned to suffer because they are not changing their ways.

Continued on page 8

Continued from page 7

The politics of this country is not changing either. And then we want water harvesting to be a success? It won't happen. In Jaisalmer and Latoria people show immense courage.

What about globally? Water harvesting is a part of modern infrastructure as well.

It is so globally. Frankfurt airport installed water-harvesting systems around 15 years ago on 10 of its runways. They did not do it out of moral compulsion. The municipality told the airport that its water needs were huge and that it would have to pay the highest cess.

Frankfurt airport did not have the money to pay. Somebody suggested rainwater harvesting. Today they don't need to ask the municipality for water.

So why can't Jaipur, Jodhpur, Delhi and Mumbai do it? The T-3 terminal in Delhi Airport was built in 2010. The arrival segment has been waterlogged four times since. We broke up 10 tanks to make this terminal. So can we make up the loss of 10 tanks by designing water harvesting structures? If we don't then the monsoon will arrive and say I will drown your airport.

Chennai airport drowned for seven days. The monsoon warned its citizens, 'my strength isn't limited to drowning bus stops, I can drown your airport too.'

Apart from Latur there is an industrial township called Dewas near Indore. Twenty years ago, they witnessed a devastating drought. Indore used to receive a pipeline of water from the Narmada. It was decided that a train ferrying water would travel to Dewas from Indore to provide relief to its citizens. The water used to be emptied from the train and with booster pumps the municipality would supply Dewas with water.

The railways said that it cost them ₹16 lakh to carry water to Dewas every day. Who was going to pay, they inquired. Why should only the MP government pay, said its citizens. After all various industries, central government employees and so on were also beneficiaries of this water. The municipality was broke.

So it was decided to construct a pipeline from Indore to Dewas. How many cities will the Narmada supply water to? How much will you store in the Sardar Sarovar Dam? How many cities will draw water from the Ganga?

The UPA government allotted 1,100 acres for an IIT in Jodhpur. Among the team of architects shortlisted to build the new IIT was a person who asked the municipality how much water it could supply the new IIT. The municipality retorted that it could just about supply water to the citizens of Jodhpur.

For the first time, a group of architects decided to build 30 tanks for the new IIT. They decided not to grow extensive lawns. Instead they opted for agriculture to add greenery to the campus.

But what about the other IITs? Smriti Irani has started Unnat Bharat in the IITs, a programme by which the IITs are supposed to adopt villages and develop them. I was invited to speak at a meeting at IIT Delhi.

I told them, forget villages and adopt yourself. You suffer from a shortage of water. Of what use is technology and degrees when one drought in Latur overwhelms us? ■

Civil Society News

New Delhi

IN April, residents of the National Capital Region (NCR) usually brace themselves for the onset of summer and dust storms that accompany the change of season. This year they also readied for a second round of odd-even — a regulation for rationing road space by which cars with odd and even numbers would be allowed out on alternate days in New Delhi from 15 April to 30 April.

The first time this was done was in January with the aim of curbing runaway winter air pollution. It was enforced again in April with fanfare and an expensive advertising blitz which splashed pictures of Chief Minister Arvind Kejriwal, his deputy, Manish Sisodia, and transport minister Gopal Rai all over New Delhi.

However, for all the high-decibel activity, no one was quite certain what results would accrue from another round of odd-even. Studies show that the first round in January had at best a negligible impact on air pollution. Except in patches, it didn't do much to speed up traffic and unclog roads either.

The AAP government, however, claimed it had done a survey in which residents had supported odd-even and wanted it back. The second round was by popular demand, the government claimed, though not much about the survey is public.

Transportation and urban experts say the use of odd and even number plates to ration road space does little to promote sustainable urban travel in a city. It can at best be a short-term, emergency measure. In New Delhi a long-term solution is needed. The challenge is to get more people to use public transport. To achieve this serious efforts are needed in design and infrastructure together with disincentives for the use of personal transport. A lot of learning has taken place across the globe. There are experts who could be consulted.

With so much already known, it seemed odd that the AAP government chose a second round of odd-even to sort out New Delhi's problems of congestion and bad air. One view in political circles was that odd-even had more to do with Punjab than New Delhi. With an eye on the impending Punjab Assembly elections, Kejriwal wanted to be seen as a Chief Minister who could take decisions and see them through. AAP hopes to be the alternative voters in Punjab will choose over the Congress and the Akali Dal.

"It is very strange that with so much data and competence available, the government chooses to be intuition-based in its decision-making," says Geetam Tiwari, Director of TRIPP at the Indian Institute of Technology (IIT) in New Delhi.

Tiwari's team at TRIPP, which stands for Transportation Research and Injury Prevention Programme, studied the first odd-even in January and didn't find any significant gains to report.

How odd is AAP govt



Posters on buses promoting AAP's odd-even scheme

As far as air pollution in New Delhi goes, automobiles account for 20 per cent of it. The rest comes from dust, a thermal plant, generators, farm fires in neighbouring states and so on. Taking cars off the road can't, therefore, make a huge difference. Moreover, exceptions to the odd-even rule allow two-wheelers, three-wheelers and cars driven by women to run. In the absence of robust monitoring by the transport department it is not uncommon to see vehicles emitting clouds of noxious smoke at street-level.

This time, Kejriwal said, the odd-even rule was meant to reduce not only pollution but also congestion. The first few days of its implementation didn't seem to indicate much success. There was bumper-to-bumper traffic during rush hours just like there always is.

New Delhi clearly needs a better public transport system with integrated mobility that gets people out of their personal vehicles. It is a promise that AAP made at election time specifically saying it would put more buses on the road. But a year-and-a-half later there seems to be little real progress on the buses front.

There has been talk of adding 1,000 buses, but no serious work seems to have been done to make

choice of odd-even?

PICTURES BY AJIT KRISHNA



All this requires work by planners and designers who have the sophistication to assess New Delhi's requirements and put workable systems in place. At present such expertise does not exist in the government's transportation department. The Delhi Development Authority (DDA) has been providing broad masterplans, but it hasn't addressed the challenges of integrated mobility. DTC is wholly into fire-fighting to get its buses on the road each day as it deals with 10 to 15 per cent breakdowns in its fleet. DIMTS (Delhi Integrated Multi-Modal Transit System) has expertise, but then it is primarily a regulator for the corporatised fleet of Orange buses, ensuring that they adhere to certain standards of maintenance, cleanliness, regularity and safety.

In the absence of a well-researched strategy, the AAP government has been given to knee-jerk reactions. Lack of success with the first bus rapid transit (BRT) system started by the Sheila Dikshit government prompted AAP to abolish BRTs. It decided to put all buses into a lane on the left of the road, instead of in the centre of the road as envisaged by the BRT.

But while making these changes, the AAP government hasn't provided for slow-moving traffic, non-motorised traffic, pedestrians, vehicles turning left and so on.

"Many of the solutions that date back to the 1980s and haven't been found to be workable are being revived," laments Tiwari. She was part of the team that designed the discredited BRT and believes that such complex projects deserve better support in their implementation and that there should be learning from failures.

Effective urban design is about getting into detail, changing perceptions and making people more comfortable as they go about their daily lives. The sense now is that bus travel is challenging and even dangerous. Connections aren't good enough and high-floor buses are tough to access. Road design has to change so that commuters, especially women, feel at ease at street level.

It is also a fact that 70 per cent of personal trips in New Delhi are accounted for by public and non-motorised transport. As incomes rise the challenge will be to keep these commuters from getting into personal motorised transport.

Air-conditioned, low-floor and semi-low-floor buses are needed to improve the status of public transport. But who will manufacture them unless large orders running into thousands with planned replacements are assured.

The AAP government needs to come to terms with this array of complex issues. Instead, it is planning to give out licences to individuals to run buses in the way the Blue Lines and Red Lines were run some years ago. The buses will be of the high-floor variety. Individual licences will allow the government to duck its responsibility to provide depot space and ensure standards. It would have been much better to build on the experience of the orange buses run as clusters with accountable, corporatised management.

So, as New Delhi continues to be weighed down by pollution and congestion, the question in most people's minds is how odd is the AAP government's choice of odd-even. ■



Geetam Tiwari

Experts are unanimous that odd-even isn't a solution. Solving Delhi's transportation problems will require effective design to make integrated mobility possible.

this possible. Adding a large number of buses without careful planning may in itself be a trigger for further chaos because it would lead to a situation in which road space would be further reduced. The new buses would, after all, be competing with the existing vehicles.

At present there are 3,500 buses run by the Delhi Transport Corporation (DTC). Another 1,600 Orange buses are run under a cluster model through corporatised ownership. Additionally there are contract buses, which are privately booked by office-goers and schools.

For additional buses to come on the road, parking space at depots has to first be provided. Second, routes have to be designed so that the running of the buses results in the reduction of personal transport. Third, traffic flows have to be modulated so that there isn't a bunching of buses, as happens now. Fourth, different modes such as the Metro, buses and feeder buses, and three-wheelers are integrated so that commuters can make connections with ease. Pavements and cycle lanes are needed so that people can get to stops and cross roads in safety.

PICTURES BY AJIT KRISHNA



The last dog census was carried out six years ago

DELHI GETS READY FOR DOG COUNT

Abida Khan
New Delhi

EVERY Indian city has a growing population of stray dogs. In fact it's hard to find a street or a *galli* without a stray dog loitering in it. Some dogs are friendly, but there are also those who are aggressive and roam around in packs.

Municipalities don't have the money or the expertise to deal with the problem. Initiatives taken by them have ended up being clumsy and brutal and predictably run into opposition from animal rights activists.

Municipalities that have tried to partner voluntary organisations have found these arrangements dissolving in failure for one reason or the other.

Also, the Prevention of Cruelty to Animals Act, a humane law, protects stray dogs, requiring municipalities to show a level of sophistication and sensitivity that they don't have.

The result is a situation that has slipped out of control. Roughly 36 per cent of the world's rabies deaths occur in India each year and many of these are children. From January to October 2015, 77,294 cases of dog bite were reported by 35 government hospitals in Delhi alone.

Last year, a six-year-old boy was mauled to death by four dogs when he tripped and fell on them in Delhi's Jamia Nagar area. The incident sparked nationwide outrage over the rising number of aggressive street dogs and the incompetence of civic bodies in dealing with this issue.

The Supreme Court, taking cognisance of the matter in March, directed the states and local civic bodies to take steps to sterilise and vaccinate nuisance-causing stray dogs under the provisions of the Prevention of Cruelty to Animals Act.

All eyes are now on a dog census the North Delhi

Municipal Corporation has decided to carry out in the six zones under its jurisdiction in partnership with the Institute of Urban Sciences and Design, which will provide scientific and technical expertise.

A dog census across Delhi six years ago identified 562,000 stray dogs. That was when the municipality was one body. Now there are three different municipalities for north, south and east Delhi.

"We are committed to ensuring the safety of citizens. We will limit the rampant population of dangerous stray dogs. Following the Supreme Court's order and in the light of recent attacks, we have decided to assess and record the exact number of stray dogs within the zones under our jurisdiction," explains Mohan Bhardwaj, chairman of the standing committee of the north corporation.

Once the number of stray dogs is known, a thorough sterilisation drive will be carried out. In two zones of the north corporation, City and Sadar Paharganj, *safai karamcharis* or sanitation workers will count the number of strays. In four other zones, the municipality will float tenders to enlist private parties.

Rishi Dev, founder of the Institute of Urban Sciences and Design, explains that mass killing, selective killing, mass sterilisation and adoption are not the correct methods for controlling the dog population. He is not advocating any of these methods.

Dev and his team have been researching the issue of urban wildlife for over 15-16 years. He has filed numerous RTIs to glean information and written a book, *The Ekistics of Animal and Human Conflict* on urban wildlife management.

"The overall population of dogs is never the issue. What is important is the density of population and distribution of the population of dogs," says Dev.

"We have proved through approved scientific

research that primitive methods will just end up increasing the problem. Despite decades of blind killing or birth control, the population of stray dogs is perpetually the same or increasing," he explains.

In fact such methods trigger a higher survival rate. The dogs begin reproducing faster at shorter intervals.

"A proper, comprehensive and reliable survey can solve the issue of overpopulation and rabies within months. We, along with the MCD team, can draw out a quick, efficient and thorough methodology to carry out a census," said Dev.

He explains that the census the north corporation is undertaking isn't just about counting dogs. "It is about understanding how dogs perceive our cities," he said. "The focus should be on all the variables that encourage strays to inhabit a given area."

Waste management, increasing awareness and



Geeta Seshamani, co-founder of Friendicoes with injured dogs

involvement of resident welfare associations (RWAs), identifying zones with 'dense' populations of dogs and, most importantly, disintegrating packs of dogs are some of the important steps suggested by Dev to limit the population of stray dogs.

However, NGOs and animal rights activists remain sceptical. They say municipalities don't have the commitment and infrastructure to administer the entire process effectively.

They point out that sterilisation operations are carried out hastily and end up physically harming the dog. Improper operations have resulted in excessive internal bleeding, infections and untimely deaths of hapless stray dogs.

They also say that the municipalities lacked trained veterinary doctors, staff, equipment and medical supplies. They are short of money. Besides their knowledge of street dog behaviour is very poor.

"The civic bodies have outsourced their responsibilities to NGOs and private parties as they themselves are financially inept and have no skill or scientific knowledge of handling these issues," says Sonya Ghosh, member of Delhi State Advisory Board for Animal Welfare.

But S.C. Sharma, veterinary director of the north corporation refutes Ghosh's allegations. He says the corporation is opening three new sterilisation centres at Rohini, Timarpur and Shradhanand Marg, as well as increasing public awareness drives on rabies prevention.

The Animal Welfare Board of India pegs the cost of sterilising one dog at ₹770. Geeta Seshamani, co-founder of Friendicoes, says it costs them ₹ 1,200 because they have to deworm the dog and treat it for infections before operating on it.

Robin Singh, founder of Badmash Peepal, a non-profit, runs an animal shelter and oversees a dog sterilisation programme in Delhi through a network of volunteers, dogcatchers, civic bodies and residents. He says it costs them as much as ₹2,000 to sterilise one stray dog, despite the vet, Dr Vijay, doing the surgery free of cost.



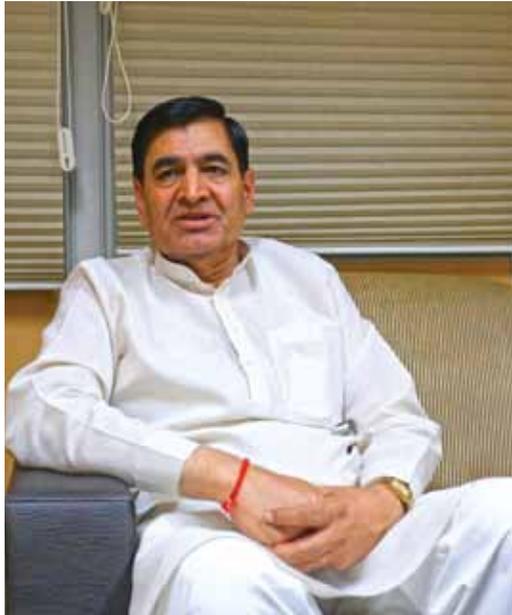
“We need a decentralised and localised approach to sterilise dogs. The infrastructure required is neither available nor accessible,” he says.

Some argue that dog overpopulation will continue to be a problem until the proportion of breeding females is less than 20 per cent. Sterilisation of female dogs is seen as more cost-effective since one male dog can impregnate multiple females. Male dogs are more territorial, and prevent new dogs from entering their area.

“The need of the hour is to first and foremost sensitise residents towards strays, increase public awareness on rabies and increase adoption drives,” says Seshamani.

“People see stray dogs as a nuisance and just want NGOs to take them away. Such attitudes need to be changed. RWAs should sensitise residents into adopting more and more dogs,” she says.

The effort and resources that NGOs and animal rights activists invest in fostering and protecting stray dogs is indeed remarkable. However, one cannot ignore the risks that rabid and aggressive dogs pose to public health, especially children from poor families.



Mohan Bhardwaj, chairman of the standing committee

‘The overall population of dogs is never the issue. What is important is the density of population and distribution of the population of dogs,’ says Rishi Dev who is helping the municipality.



Rishi Dev at his institute

“We would like MCD to set an example to the world that municipalities are self-sufficient bodies who need to be strengthened in their capacity and scope in order to resolve problems which are deeper and need more comprehensive planning at local levels than opinionated problem solving approaches,” says Dev.

Stray dogs face high mortality, starvation, disease and abuse and cause 99 percent of cases of rabies transmission worldwide (WHO 2004). Other social problems associated with stray dogs include road accidents, fighting and aggressive packs, noise, fecal contamination, spread of waste and uncontrolled breeding.

Most countries have adopted capture and kill policies, mass sterilisation and permanent migration of stray dogs to tackle the problem.

Animal rights activists and NGOs advise against such methods citing hazardous impacts on ecology and natural cohabitation. They advocate sterilisation, vaccination, habitat control and responsible pet ownership.

“Developed countries tend to have stricter regulations on dog licensing, vaccination, and

animal welfare. It's also more difficult for the population of stray dogs to grow since they need sources of food and shelter, which are usually from open garbage pits and abandoned lots and buildings,” says Dev.

Ghosh says hardly any of the municipality's centres follow the Animal Birth Control (Dog) Rules, 2001, enacted under the Prevention of Cruelty to Animals Act, that outline scientifically proven methods to reduce the stray dog population.

“The municipalities are incompetent, financially inept and focused more on a complaint-based approach rather than a preventive approach,” says Ghosh, who is also the founder of Citizens for the Welfare and Protection of Animals, an NGO.

“We, as a society, have wasted decades in killing and exterminating dogs. All we need is patience and dedication for at least two to three decades to effectively carry out the Animal Birth Control Programme and the problem of stray dogs can be fixed permanently. Under the programme, our approach is to cover at least 70 per cent of a given area and sterilise 80-90 per cent of female dogs within that area,” says Seshamani. ■

Radio Kisan's betel victory

Biswajit Padhi
Bhubaneswar

BASANTI Bhoi cultivates two gardens of betel leaves all by herself at Dhanahara village in Odisha. A year or two ago, a woman farming betel leaves would have been unthinkable. An age-old tradition barred women from entering betel enclosures. But today women in the district can grow betel leaves and work as labour in a betel garden.

It is a social revolution brought about by Radio Kisan, a community radio station. This year the station won two prizes: for promotion of local culture and for its path-breaking campaign, 'This is my right,' which broke social taboos that barred women from working in betel fields.

The Ministry of Information and Broadcasting gives these awards every year in three categories to honour the work of community radio across the country. Radio Kisan has now received an award from the ministry three years in a row.

Pradipta Kumar Dutta, founder of Radio Kisan, and his team are jubilant. They are stationed at Athantara in Puri district, around 23 km from Bhubaneswar. Radio Kisan has a licence to broadcast programmes in a radius of 15 km. The radio station is promoted by AID (Association for Integrated Development), an NGO that works mostly in the field of agriculture but tackles social issues as well.

"We have brought about long-lasting change," says a beaming Dutta. "Our effort has been most satisfying."

Farmers here grow black gram and paddy, but their main cash crop is the betel leaf. Input costs are high but so are the returns. Farmers say they earn between ₹12,000 and ₹15,000 a month by cultivating 60 vines of the betel leaf. They harvest more leaves in the monsoon when the leaf is at its crunchy best, but the price declines. Betel farmers earn more in summer when good quality leaves are scarce.

In 2015, Biranchi Bhoi, Basanti's husband and a betel leaf farmer in Dhanahara village, approached Dutta at Radio Kisan. Bhoi had a problem. He couldn't work in his betel leaf field because he had broken his leg in an accident. His son was studying for an MBA degree and Bhoi did not want to disrupt his studies. His wife offered to chip in but Bhoi couldn't enlist her help. "Betel leaf enclosures are considered sacred," he says. "Social custom bars women from entering."

Since betel leaves are eaten raw, pesticides are not used for cultivation. So a pest attack or disease can ruin a farmer because input costs are high and betel is a sensitive crop. Since women menstruate, they are regarded as impure and capable of spreading disease. This is why village communities do not allow women to enter betel leaf enclosures.

Dutta got in touch with Dr K.B. Mahapatra, an agricultural scientist with the Department of Mycology and Plant Pathology in the Orissa University of Agriculture and Technology, Bhubaneswar. He asked why pests attacked betel leaves. Dr Mahapatra said menstruating women



Basanti Bhoi in her betel enclosure



Radio Kisan's modest office

Betel leaf enclosures were considered sacred and social custom barred women from entering them.

had absolutely nothing to do with pest attacks. In fact, what mattered was the personal hygiene of workers who entered betel enclosures.

Radio Kisan ran a series of broadcasts with Dr Mahapatra telling farmers convincingly that women weren't responsible for pest attacks on betel leaves. They also advised farmers on how to keep betel fields clean so that pest attacks would not occur. A specific protocol on hygiene for betel workers was drawn up.

"Dutta *babu* and his team educated us about the procedures to be adopted before entering betel enclosures. They also convinced the men to allow us to work on our betel fields," says Basanti, standing in her luxuriant betel garden. "The income is helping us pay for our son's education, after my husband became an invalid."

Her house is half-constructed and she says they

will complete it after her son graduates. "We work in the betel gardens but we don't go there when we are menstruating," says Basanti.

Radio Kisan's campaign has had another spin-off. Betel leaf cultivation is now providing a livelihood to scores of women who work as agricultural labour.

"In fact, no commercial radio would have dared to challenge a social issue based on age-old beliefs," says Sanjay Biswal, a lecturer in anthropology.

This year Radio Kisan's programme on Guapur, a predominantly Hindu village where the *samadhi* of a Sufi saint is worshipped by Muslims and Hindus, won them the prize for promoting local culture.

In 2014 too Radio Kisan was awarded in the local culture category. Dutta and his team had featured a series on local folk songs and music with 'Palla, Das Kathia and Dhuduki.' These forms used to be very popular and when the radio broadcast it, the locals loved it.

In 2015 Radio Kisan was honoured for its work with farmers whose crops had been devastated by floods. In July 2014, the Dhanua river breached its banks and flooded Balipatna and Baliana blocks. But one part of the block wasn't flooded.

"We knew if paddy was replanted immediately it would give the farmers a harvest," says Prashant Dutta, agricultural coordinator of Radio Kisan.

AID had already organised several Farmer Clubs. The radio asked them to motivate farmers in the area that had not been overrun by water to share surplus paddy saplings with the flood-affected farmers. They appealed to listeners through their radio programme, *Ame Apanka Sathire* (We are with you) to sell or donate their saplings.

Radio Kisan mapped the affected farmers and their sapling requirements. AID's field staff cross-checked the information through field visits and by phone. Eighty-six farmers registered to share their saplings and two said they would donate them. The farmers affected by the flood were able to sow paddy and got a harvest that season.

Radio Kisan demonstrates how information and an activist media can be a powerful agent of change. ■

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A needless arrest

Bharat Dogra
New Delhi

THE recent arrest of Dr Saibal Jana in Bastar district of Chhattisgarh has shocked activists and healthcare professionals in India and abroad.

Dr Jana, who was subsequently released on bail, is widely recognised for his dedicated service to workers, peasants and the poor. His medical skills have saved the lives of a large number of economically deprived patients. As a pioneering doctor who has devoted most of his working life to the Shaheed Hospital founded by workers themselves, Dr Jana has invaluable experience in providing healthcare to the poor.

Dr Jana was arrested in a very old case for helping workers and their unions in various ways. Arbitrary cases were being filed at that time against workers and their supporters as part of repressive measures to curb trade union activities in Durg district and neighbouring areas in Chhattisgarh.

The case should have been dropped long ago, especially in view of Dr Jana's deep involvement in Shaheed Hospital. Yet, he was arrested and allegedly handcuffed.

Apart from the crucial issue of assault on the liberty and dignity of an eminent doctor, there is also the question of the enormous difficulties and risks to which his numerous patients were needlessly exposed.

The history of Shaheed Hospital goes back to the early 1980s when the iron ore miners of Dalli Rajhara (in Durg district, then a part of Madhya Pradesh) were trying to take forward several constructive initiatives after successfully battling extreme forms of exploitation. Under the inspiring leadership of the heroic trade union leader, Shankar Guha Niyogi, the founder of the Chhattisgarh Mukti Morcha, the workers were determined to fulfil his dream of constructing their own hospital in memory of the martyrs of their struggle.

With donations from their meagre earnings and by contributing voluntary labour, they constructed the hospital and later added several services in it. Various sections of the hospital were developed and equipment purchased as and when the workers' donations came in. Over the years, this hospital emerged as a shining example of the generosity and large heartedness of the poorest and of the great commitment of the doctors, nurses, medical, paramedical and other personnel who joined hands in this remarkable endeavour by the working class.

Perhaps it is this aspect of the hospital's heritage and commitment which is disliked by certain powerful interests. ■



The revived Jakkur Lake in Bengaluru

Life after death for

S. Vishwanath
Bengaluru

IT is a sizzling hot day, unusual for Bengaluru. Students of the Srishti Institute for Art, Design and Technology, as part of a design charrette, walk on the banks of a lake. Its shimmering sheet of water and cool breeze comes as a pleasant surprise.

For many students, this is their first exposure to the city's lakes. Hopefully they will use their skills to improve the condition of lakes and draw the attention of the community to a very important local ecological asset.

This full lake is, however, not unusual in this northern part of Bengaluru. The Yelahanka Lake with a water surface area of 150 hectares too is full. Downstream of Jakkur lake is Rachenahalli which also has a good amount of water in its 50-hectare basin. Puttenahalli is a flourishing wetland with a large population of birds.

In a city where the dominating news has been froth, foam and fire in Bellandur, one of its major lakes, the existence of cleaner lakes for whose preservation citizen groups are active is omitted from the headlines. Yet, in the case of many of Bengaluru's lakes, this has been happening for some years.

The 'tanks', as these man-made structures were called, have a hoary history. Built primarily for irrigation, they became part of the small town's life. In 1895, Bengaluru, now a city, started to receive water from the Hessarghatta reservoir on the Arkavathy river and these tanks gradually started

to become dissociated from the drinking water needs of the city. Agriculture continued to flourish in the command areas of many of the tanks on the periphery but a fast-expanding metropolis voraciously devoured *atchkut* or cultivated areas and, in many cases, the tank in these areas too.

In 1985 a committee was appointed by the state to look into the affairs of the tanks and their preservation. The Lakshman Rau Committee identified 262 tanks in the city and the surrounding green belt and laid out a plan for their protection at individual lake level, depending on status. However, not much action followed the report.

It took an NGO, the Environment Support Group, to file a Public Interest Litigation and then follow it up vigorously to wrest a landmark decision from the Karnataka High Court ruling against privatisation of the lakes, and ensuring their preservation. This was the Justice N.K. Patil Report.

Jakkur lake has become a symbol for what a city can do to manage its water-bodies in a fast urbanising environment. The principle called Integrated Urban Water Management is in practice here. A 10-million-litres-per-day capacity sewage treatment plant (STP) set up by the Bangalore Water Supply and Sewerage Board (BWSSB) is located just upstream of the lake. The treated water flows into a constructed wetland brimming with plants and birds, and then to the lake.

The wetland acts as a polishing pond, reducing nitrates, phosphates and heavy metals in the treated water. This cleaner water now enters the lake where algae further clean it. Fish are being bred and



A traditional water structure

track around it and a park, and erect lamp posts.

Yelahanka lake, further upstream, was also developed and filled up last year after several years. Rachenahalli lake has seen citizen action and cleaning up is underway.

Kaikondrahalli lake on Sarjapur Road, Puttenhalli lake in South Bengaluru and Malathalli lake in West Bengaluru are some other lakes which have been rejuvenated by citizens and government coming together.

Despite all this work, the problems have not

responsible and accountable for the catchment and the lakes is striking. The Lake Development Authority created in 2002 proved toothless. Its newly reimagined avatar, the Tank Development Authority, is yet to start functioning effectively and it remains to be seen as to how it will deal with lake encroachments and sewage inflow.

The model for lake rejuvenation in Bengaluru is becoming clearer by the day. The lake boundaries need to be identified and fenced. A buffer zone needs to be established. Sewage entering the lake must be diverted or treated in a decentralised STP meeting the standards for release into surface water-bodies. The water should pass through a constructed wetland before entering the lake. Separate arrangements must be made for idol immersion during festivals. Last, the lake should be treated as a common resource and not given into private hands.

Bharat Electronics Limited (BEL) is coming forward with a plan to build a 10-million-litres-per-day STP and help resuscitate the dying 50-hectare Doddabommasandra lake in the north of the city by filling it with treated waste water. Infosys, Wipro and Biocon are also reportedly coming forward with the same model of waste-water treatment plants, wetlands and lake rejuvenation.

In such joint action by citizen groups, institutions and the government lies the key to the preservation of the remaining lakes of Bengaluru — once famously called 'city of a thousand lakes'. ■

Bengaluru's lakes

harvested in the lake and pelicans, painted stork and cormorants frequently visit it.

The lake itself is constantly full and overflows into a downstream lake called Rachenahalli. A small group of citizens formed the Jalaposhan trust to take care of Jakkur lake and have signed an MoU with the Bruhat Bengaluru Mahanagara Palike (BBMP).

Upstream of Jakkur, Allallasandra lake was a mess of debris and solid waste until a group called YUVA (Youth United for Voluntary Action) worked with the BBMP to clean it up, fence it, create a jogging

ended. Untreated sewage continues to enter the lakes, mainly through storm water drains, and sometimes results in fish deaths. Garbage also enters through the storm water drains and sometimes directly. The major storm water drains linking the lakes, called *rajakaluveys*, have been encroached upon and are yet to be cleaned of debris and sewage. While capital expenditure comes easily to the state, expenditure for maintenance is very low or non-existent. Coordination by the various institutions responsible for the lake is a big challenge.

The inability of the state to design an institution

Samita's World

by SAMITA RATHOR



Bhim Yatra demands freedom from filth

Abida Khan
New Delhi

HUNDREDS gathered at the Jantar Mantar here on 13 April, chanting one slogan in unison: “Stop Killing Us!” Men, women and children, mostly belonging to the Dalit community, narrated harrowing tales of having to work with human excrement.

They had undertaken a 30,000 km Bhim Yatra across 500 districts, organised by the Safai Karamchari Andolan to raise awareness and mobilise support to end manual scavenging. The protesters marched from Dibrugarh in Assam to Kanyakumari in Tamil Nadu to Jammu and Kashmir and finally arrived in Delhi on the 125th birth anniversary of Dr B.R. Ambedkar.

Women, mainly involved in cleaning of dry latrines in individual households, stood at the podium and vowed to go hungry rather than touch the basket used for carrying excreta anymore. They promised their children a better life by continuing their struggle until this inhuman practice was eliminated. Journalists, activists and political leaders joined in solidarity.

Over 1,200 people have succumbed to poisonous gases within sewer pits between March 2014 and March 2016.

A law passed in 1993, the Manual Scavenging Prohibition Law, prohibits “the employment of manual scavengers and construction of dry latrines”.

However, this law was never implemented and no convictions were made during the 20 years it was in force. In 2013 the UPA government passed a more stringent law: the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act. The new law entitles sanitation workers to skill training, cash assistance of ₹40,000 along with a stipend and loans for income-generating activities for rehabilitation of scavenger families.

But Bezwada Wilson, the national convener and founder of the Safai Karamchari Andolan, feels that nothing has changed for the manual scavenging community and individuals are still dying cleaning sewers at an alarming rate.

Wilson was born in Karnataka’s Kolar gold fields, but the only local product he and fellow Dalits handled for decades was human excreta. He said



Participants of the Bhim Yatra rally at Jantar Mantar, New Delhi



Bezwada Wilson speaking at the rally

that when he was first introduced to the work, he wanted to cry out of helplessness.

“I have not started this as a movement alone. From our childhood years we have all witnessed scavengers or *jamadaars* cleaning toilets and sewage pits. The problem lies in the lack of discussion on the issue in the public domain,” explains Wilson.

Recalling his early years, he said, “We used to tease each other over the size of the buckets and crack jokes about the employers to express the inner resentment and anger.” He began waging a war against this dehumanising practice by founding the Safai Karamchari Andolan (SKA) in 1995.

SKA has spread across states and districts and was instrumental in eradicating manual scavenging in 139 districts by 2009. “We started mobilising people, collecting data on sewage deaths, gathering individual stories and case studies as part of our movement. Till date, I cannot clearly map how our journey gained national recognition and the support it has today,” adds Wilson with a glimmer of hope in his eyes.

After countless petitions and media reports, the government passed the 2013 law prohibiting the practice. The law, in contrast to the previous law, amended and included key definitions and sectors that were excluded earlier. The new law also prohibits public defecation and unsanitary latrines, open drains and sewage pits.

Wilson explained that the patriarchal system

within the Dalit community enforces manual scavenging as a hereditary practice. “In certain states, Dalit women are given the status of *jagirdars* (a feudal term for landowners) who pass on the bucket of shit to their daughters-in-law as heritage. It is extremely distressing to see Dalit families conditioned to believe that these rituals must continue,” said Wilson.

Municipal corporations figure at the heart of the manual scavenging problem. Questions are often raised over their lack of commitment in implementing the law and eradicating manual scavenging.

Wilson said that the whole sanitation system in India is caste-based. People, regardless of their religion, never question the involvement of another human in cleaning excrement. They assume, as historically enforced, that the job is designated to certain communities and classes.

“Municipalities also do not think along the lines of planning and innovating garbage or sewage management services. Rather, they think about employing people to clean the garbage bins and sewage pits because of the conditioning of the age-old caste system,” said Wilson.

“No municipality has a long-term plan for waste management. They make big claims but we haven’t heard or seen any political leader draw up a plan for mechanising toilets and waste disposal. Ask any municipal commissioner about managing a sewage pit or mechanising waste disposal and they will have no answer. It is distressing to note that civic bodies are unaware and insensitive towards the environment and sanitation.”

The SFA has been visiting district magistrates across states and urging them to implement the law prohibiting manual scavenging. Councillors and mayors of municipalities should have taken this task upon themselves, but it is the *karamcharis* who are making them aware of the Act in the first place.

Wilson looked determined to strengthen the movement and is motivated by the growing support the SKA is getting from NGOs, journalists, activists and politicians. ■



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KODAGU COFFEE STAYS IN THE FAMILY WITH A LITTLE HELP FROM FRIENDS

How Care T Acres helps revive ailing estates

Shree Padre
Bengaluru

IN 2007, Greenhills Estate, a coffee plantation in Kodagu, fell on hard times. Its owner, A.T. Chengapa, had taken ill two years earlier and couldn't manage his affairs. Grappling with a financial crisis, he sold 25 acres to pay off his debts. But he still owed the banks Rs 40 lakh. Meanwhile, his plantation continued to decline.

Chengapa had two daughters. The younger one, Dalia, 35, resigned from her job at American Express and returned home to revive the family business.

"I had no clue about how to run an estate. Since Dad was ill, everything was in bad shape," recalls Dalia. "I really didn't know what to do. Many friends and relatives offered advice. But what we needed was practical help."

Their heritage bungalow was in a shambles. The plantation workers had all left. The yield of coffee beans had declined drastically. And the estate had very few irrigation facilities.

Dalia approached Care T Acres, a company in Madikeri that manages sick estates. After a visit, the company agreed to take over the 75-acre estate. In 2007, a memorandum of understanding was signed.

The company developed infrastructure. It built a tank and a pumping system. It invested Rs 20 lakh, generated from the estate itself, in the first two or three years.

"The results were amazing after just one year," recalls Dalia.

The yield of coffee beans has now risen from 250 kg to 800 kg per acre. Income from pepper climbed from ₹2 lakh to ₹37 lakh last year.

"Once Care T Acres intervened, all our troubles were over," says Dalia. "It still seems like a miracle to me. We never dreamed that a sustainable income was possible from coffee and pepper. We refurbished our palatial bungalow with the money and we can now keep it as a hereditary memory."

Chengapa passed away in 2015 but his sick coffee estate is in good health.

Kodagu is Karnataka's smallest district but is well known for its coffee. It is recognised across the world. But many of its estates are turning sick. One reason is absentee owners. About 25 per cent of the estates are managed long-distance.

Another reason is that the planters who know how to manage estates are growing old and can no longer cope. The younger generation lacks experience and isn't as closely linked to the estates and the coffee business as their parents were. Many have been away for their education and though they would like to retain their family estates, they don't know how to keep them profitable. The result is that they end up selling out.

Care T Acres has revived over 20 sick estates. The



Left to right: Mohan Machiah, Bose Mandanna, Ajit Appachu, Ram

company's promoters say their mission is to provide a service. Relieved estate-owners put it differently: "It's a Godsend."

Once Care T Acres takes over, it shoulders all responsibilities. It undertakes cultivation, harvesting and pruning. It builds infrastructure such as tanks, buys machinery, lays pipes for irrigation, upgrades labour lines, pulping units and drying yards. It even markets coffee.

The company deducts its remuneration or share of profits, as the case might be, and transfers the rest to the estate owner. For running the business, there is a joint bank account and every transaction is transparent. The estate owner can carry out checks anytime. Detailed monthly accounts are furnished and the processes are farmer-friendly.

Polibetta Estate was in a similar condition to Greenhills. Five years ago, its 32 acres yielded just nine tonnes of coffee beans. In four years, after Care T Acres took over, production rose to around 30 tonnes. Trees were pruned and weeds cleared. The estate's 15-year-old coffee plants were manured and irrigated and they revived.

THE BEGINNING

The idea of starting such a company struck Arun Biddappa, a Kodagu planter who traded in coffee in Bengaluru, one day while chatting with Bose Mandanna. The latter was his partner in Karnataka Coffee Brokers and a philanthropic planter. Biddappa stressed the need for a professional

PICTURES BY SHREE PADRE



Bopiah, Mahesh Kumar, K.M. Appaiah, N.K. Chinnappa and K.M. Cariappa

service to manage estates like his. Mandanna roped in N.K. Chinnappa, an experienced and skilful manager who had resigned from Tata Coffee, and the three discussed the idea.

They brought in partners like K.M. Cariappa, B. Ram Bopaiiah, K.M. Appaiah, N.P. Machaya and K. Ajit Appachu. The concept crystallised into Care T Acres on 15 July 1999. Each promoter invested Rs 1 lakh and a little time and goodwill. The company was named Care T Acres — caretakers with the capacity for managing many, many acres.

Biddappa was the company's first client. Seeing it shaping up well, he wanted to be part of it. Unfortunately, he passed away in 2006. His wife, Aruna Biddappa, who lives in Mysore, inherited his estate and Care T Acres continues to manage it. "I have two daughters who are studying. We are not in a position to run the estate. Care T Acres are doing this job very well," she says.

Palani Estate's story is similar. Lalitha Nanjappa, 76, has two daughters. She lost her husband in 2008 and the estate was in dire straits. The irrigation infrastructure existed only in name. The 52-acre estate yielded a paltry 200 bags of coffee beans.

In 2008 the estate was handed over to Care T Acres. A tank was dug for ₹5 lakh. Pipelines and machinery worth

₹10 lakh were bought. Coffee production has increased to 1,350 bags. A drying yard costing ₹7 lakh is being built. Labour lines have been renovated. A raking-cum-spraying multipurpose machine has also been bought.

"Care T Acres is dedicated and disciplined. Its labour management is excellent. None can fool them," says Nanjappa. "My only request to them is to continue their wonderful work."

BLUEPRINT

Care T Acres takes over only sick estates. Currently, the company is managing around 600 acres of coffee estates belonging to 18 planters. Estates below 30 acres aren't taken up because they aren't financially viable for both sides.

When the company receives a collaboration request from a coffee estate owner, it conducts a discreet inquiry. Is the owner a team player? If the answer is yes, the company visits the estate.

"We prefer not to take over estates in areas that receive very heavy rainfall like Madikeri and Bhagamandala. Achieving good production there is just a dream," says K.M. Appaiah.

But if the planter is insistent, Care T Acres makes it clear that production won't be much. Coffee and pepper grow



well only in the traditional coffee-growing belt. These are the two main crops in which Care T Acres has expertise. The company points out that without good yield it can't insulate the estates from financial problems and make them sustainable.

Care T Acres enters into a five-year understanding with the estate owner. It is renewable by mutual consent. "We have easy exit options too," says Chinnappa, who is 63. "Either side can prematurely terminate the understanding by paying a particular sum."

The company draws up a long-term plan to make the estate self-supporting, sustainable and professional. If the client's family members take back the estate and follow the company's plan, they will earn reasonable profits without much difficulty.

"Our first priority is to clear the estate's bank loans. We put in our own funds to do this once a memorandum of understanding is signed. We don't want the estate owner to take the hasty decision of selling a portion of the estate to meet the expenses of new development works. We also need to get the land documents back from the bank," explains Chinnappa.

The Robusta variety of coffee beans is more popular here than Arabica because the latter requires more labour and is prone to stem borer menace. Rain is crucial. Since rainfall can vary, irrigation becomes all-important. Estates are vast and most don't have complete irrigation coverage.

An old adage is popular here: "If you are lucky you will get coffee beans by the tonne. Otherwise you will get a tin." So if there is timely rain, you will harvest coffee in tonnes. Else, you will turn bankrupt.

So the company's first priority is to cover the entire estate with an irrigation network. On Paka Estate, a big abandoned tank is being desilted. On Benlomond estate, the owner, Antony Tharakan, has bought a small piece of land from a neighbour to expand his water tank, which will be done next year.

"When a coffee estate doesn't have enough water for irrigation, we always suggest investing in tanks," says Chinnappa.

He also stresses the importance of pruning coffee plants. "It is equal to giving them a dose of manure because you are cutting off unproductive branches. Proper pruning and timely manure in the first year makes production shoot up."

The first three years are spent in pruning, shade regulation and developing adequate irrigation facilities. Then Care T Acres switches to upgrading processes such as renovation of labour lines, construction of a drying yard, desilting of tanks, developing a pulping unit and so on.

On estates that have been mismanaged for years, pilferage is rampant. "We do the job of policing, too, though it is unpleasant," says Chinnappa.

Until the estate begins making profits, the company works on a fixed remuneration which depends on the estate's area, production capacity, the development works to be done and so on.

After the estate has been restored to health and starts making a profit, Care T Acres switches to a profit-sharing mode. Seventy per cent goes to the owner of the estate and 30 per cent to the company. The turnaround usually takes about three years. "But this depends on how far conditions have deteriorated," says Chinnappa.

Antony Tharakan's Benlomond estate, for instance, still runs on remuneration six years after Care T Acres took it over. The coffee plants on the 160 acre estate are very old and need to be replaced by younger ones. "You are running an old-age home," remarked the Care T Acres team after the first inspection.

Seventy-five acres have already been replanted. The company wisely replanted the rest in phases so that the family would have some income. Pepper vines have been planted as shade trees. "In another five years, this will be one of the best maintained estates in this belt," predicts Mandanna.

The company doesn't compromise in building infrastructure at considerable cost. It is this investment that ensures a steady rise in production in the coming years. Neither does the company borrow from banks. Instead, it ploughs back the initial profits from the estate.

"Unless this is done, the estate can't graduate into becoming a very good income-generating proposition," says Chinnappa. The estate is given an unbelievable facelift in a short span of time. As production goes up, post-harvest processing facilities, starting from the drying yard, have to be upgraded.

PEPPER BIDDING

To ensure their clients get the best prices for pepper, Care T Acres has introduced a unique bidding system. Traders are asked to bid for the year's crop contract in advance. They pay a deposit beforehand. The traders visit the estates before the bidding process and make an estimate of the prevailing crop. About 30 to 40 traders take part in the bidding process. They write their bidding amounts on slips of paper and hand them over to a Care T Acres representative.

Deliberations are conducted in front of all the traders and estate owners so that the bidding process is transparent. The highest bidder gets to harvest the pepper crop on the estate whose bid he



Antony Tharakan at his tank



Cleaning pepper berries

has won. "Since there are about 10 traders competing, the proceeds are higher than what planters used to get earlier," explains Chinnappa. Every September, the accounts get audited and the estate owner gets his or her share of the proceeds.

By then, the coffee has also been marketed. "We generally make an interim payment to the estate owner months before the coffee is sold because we can't keep their money in a fixed deposit," says Chinnappa.

"India's average production of coffee is 950 kg per hectare of Robusta. Kodagu's average is higher," explains Mandanna. "We are happy to say that we get an average of 1,900 kg per hectare, due to the agronomic changes that we make. This is double the country's average."

The company's outstanding capability is that its cost of production is very low. "All credit to Harrisons Malayalam where I worked for 15 years. I learnt to be frugal to the core when I worked there,"

recalls Chinnappa.

"See, we are partners in the company and we are all individual coffee planters too," says Ajit Appachu. "We are not able to keep cultivation expenses on our own estates as low as on estates, managed by our company." Having a client means taking special care.

DRIVING FORCE

The company is, in many ways, a one-man show. It is Chinnappa who is at the forefront of handling operations. "But I work with inputs and full backing from all my partners," he says. "This gives me strength, especially when we face setbacks."

He admits he is getting on in years and can't handle the pressure as easily. Every year the company takes over one or two new estates but the older estate owners don't want their estates back so his burden keeps increasing.

If the company spots a capable family member, it

It's hard to catch up with Nadikeriyanda Kuttappa Chinnappa. At 63, he runs 300 km a month. When he goes on one of his routine visits to coffee estates, his partners at Care T Acres prefer to stay away. The reason is that he alights from his car and begins to run.

It's not easy to catch up with him. A workaholic, he has no time or interest in 'non-estate' matters. His 15 years spent at Harrisons Malayalam, India's most diversified agri-business company, converted him into a hardnosed manager of estates. Three years at Tata Coffee helped him understand the coffee business. In 1997, he resigned from Tata Coffee.

He went on to work as a general manager for a rubber company in Calicut. The company was running losses but Chinnappa turned it around in a year. "What I did is something an honest officer with an eagle eye can do. I just plugged all leaks," he says. That was his first success in reviving a sick establishment.

It seems to have become an addiction. Turning around a neglected coffee estate gives him an intense sense of achievement.

Long-distance man

"My talent lies in transforming run-down estates into very profitable ones. I take it as a challenge," he says, smiling. "An average estate should, after implementing all crisis management steps, bring in an income of ₹1 lakh from coffee and pepper against an expenditure of ₹40,000 as per prevailing rates. I'm 99 per cent confident of achieving this."

He says absentee landlords are exploited. But just implementing the right agronomic steps and plugging leaks saves sick coffee estates.

Chinnappa visits each estate at least once a fortnight. "Newer ones require a visit almost twice a week. I never count the visits." Every weekly statement of accounts that comes to his office in



N.K. Chinnappa

Madikeri is scrutinised by him.

Kodagu has perhaps 100,000 hectares of coffee. Around 60 to 70 per cent of this area lies in the traditional coffee belt. Both coffee and pepper grow very well here. "Generally, we don't take estates in an area where we can grow only Arabica or only Robusta and no pepper at all," he explains.

Vietnam, Brazil and some African countries produce more coffee than India. "But only we farmers in Kodagu have this great advantage of

growing pepper along with coffee. If coffee prices are a bit low, pepper makes it up. So, in terms of total revenue generated per unit area, we are ahead. This is a great boon. Pepper acts as a crutch for farmers when coffee prices fall," he explains.

When planting coffee, Care T Acres invariably



Branch pruning is very important

‘We are happy to say that we get an average of 1,900 kg per hectare, due to the agronomic changes that we make. This is double the country’s average.’

suggests the owner take back the estate once the management agreement lapses. “This way, we can help someone else. But this taking back is not happening,” says Chinnappa.

The company has been flexible and large-hearted with owners. Mandanna cites an example. Three years after they took over a coffee estate, profits had risen. The company was entitled to take a share and not just remuneration. The young lady who managed the estate was getting married and said her family required money. She asked the company

plants pepper vines. “Robusta requires only 40 per cent shade. Arabica requires higher shade. More pepper means more shade for the coffee plants. In fact, higher pepper production is at the cost of coffee. But we don’t want to keep all the eggs in one basket.”

Why do the finances of coffee estates go so wrong? “Because family and estate expenditure are clubbed together,” he explains. If the family faces some unforeseen expenditure, it draws upon money earmarked for the estate. The mix-up and resultant confusion results in the estate not getting the investment it needs and production begins to fall.

Many planters say Robusta is a biennial crop. Chinnappa has a different opinion. “Pruning exhausted branches induces new shoots. The more you cut a branch, you more you induce more shoots. This post-pruning flush has to be regulated in 90 to 120 days after pruning. If you don’t do this, you will have a big crop that year and a poor one the following year. In Robusta, we generally notice the big decline in the fifth year after an average crop for four years.”

to agree to taking a remuneration that year too. The company agreed though it meant forfeiting a considerable profit.

Care T Acres has also, on more than one occasion, volunteered to pay off bank debts of indebted coffee estate owners with its own funds. “We pledged our fixed deposits to the bank and took a loan. The client was asked to pay a small percentage of the interest,” says Chinnappa.

The company is now getting enquiries from distant coffee-growing areas like Chikmagalur and Sakleshpur. “This is physically and mentally a demanding job. If we take up more assignments than we can handle there will be dilution,” explains Chinnappa. It is becoming difficult for the company to recruit efficient field staff. People prefer to work as watchmen for tourist resorts mushrooming all over Kodagu, he says.

GEN NEXT

Chinnappa handles administration, marketing, field supervision and more. If these divisions were handled by other people, he feels, the company could double the number of clients. He is keen that younger people take over.

His only son, Cariappa, has an MBA degree from the Melbourne Business School. He is a coffee trader in Nairobi, but he has worked with his father for a few years. Chances are that he will return and join Care T Acres.

“I worked with my father for two years. I know the positive impact Care T Acres has had on Kodagu’s coffee farming community. I believe my father has the drive to continue for a number of years. In the near future, I would like to concentrate on building a successful career in coffee trading. When my father decides to step back, we will sit down and discuss the company’s future,” Cariappa said over the phone.

Mandanna is hopeful. “Unless the returns from farming are good we won’t be able to attract our youngsters back to the soil. Now prices are good. I know of many youngsters with good jobs in the city, some from the US, who have returned to farming. In the past few years, I have come across at least 24 cases in Kodagu alone. This has become a trend in Chikmagalur and Sakleshpur too,” he says.

STUDY TOURS

Using the profits of the company, the partners of Care T Acres and their families go on a coffee study tour every year. So far they have visited Vietnam, Kenya, Chikmagalur and Pattiveeranpatti in Tamil Nadu. These tours have exposed them to new technologies that can be adopted back home.

“To succeed in farming, innovation is necessary. In Kodagu, some planters have started litchi, apiary and avocado cultivation. Newer cultivation methods are being tried out,” says Mandanna.

“Our Chikmagalur study trip inspired two of my partners, K.M. Cariappa and his brother, K.M. Appaiah, to start drip irrigation. In Chikmagalur there are planters who have doubled their crop yields with this method. Dynamic farmers have started direct export of coffee to countries like South Korea. Each successful innovation can motivate our youngsters to return to farming,” he adds.

Appaiah uprooted 20 acres of his old estate and raised a new coffee plantation on it, incorporating drip irrigation and fertigation. Over the past two seasons, for the first time in Kodagu, this portion of his estate has water nine months of the year. He is also experimenting with another innovative method called agobiada, which involves bending the tip of the young coffee plant to induce multiple stems. Four stems are allowed to go up and sprout berries. Both these innovations were borrowed from Chikmagalur and have doubled the coffee crop there.

Asked to appraise Care T Acres’ work, Chinnappa’s face lights up. “We have ensured that many coffee estates were not sold. We have restored the health of sick coffee estates and helped many Kodagu families lead comfortable lives.” ■

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‘Upgrade regulators, design pragmatic contracts’

Rajiv Lall looks back on infra, ahead to Bharat Banking

Civil Society News
Mumbai

ECONOMIC growth needs to empower the poor for its impact to be lasting and meaningful. Infrastructure and financial inclusion are important to make this happen. But even two decades after reforms, India continues to struggle to give people access to the facilities and opportunities by which they can transform their lives.

Rajiv Lall spoke to *Civil Society* on what has been going wrong with infrastructure policy and the huge possibilities that beckon by way of financial inclusion.

Lall straddles both spheres with ease. He is the Founder MD and CEO of the recently launched IDFC Bank, which has many innovations planned under its Bharat Banking division. Previously he was Executive Chairman of the Infrastructure Development Finance Company (IDFC).

Has the infrastructure problem in India grown simpler or more complicated over the years?

Infrastructure is a basic need in our country. The position of the government, starting from late 1990s, was that there was not enough fiscal space to allow government to actually build public infrastructure. There was growing pressure to find ways to get the private sector to participate and contribute in infrastructure building. It was done out of a fiscal necessity.

However, the entire process escalated at such a pace that it overran our institutional capabilities. I refer to institutional capability as the ability of the government to design and implement any intelligently crafted participation schemes, or to enforce and undertake the right contracts with little or no room for manipulation. I don't think the government had the regulatory capacity or the administration to enforce contracts. Neither did we have any dispute resolution mechanism.

There are two other important factors that emerged. One is the absorptive capacity of the banking system in a managerial sense. Two is the tendency of the government to not be respectful of contractual agreements or promises and the lack of a legal framework. For example: there were situations in which banks, in good faith, invested in certain power projects that had received environmental approvals which were later



Rajiv Lall

overturned or compensations weren't adjudicated properly and so on.

There are several examples of promoters themselves anticipating risks and manipulating the system to extract money. There are also numerous cases of incompetence among bankers.

Where has this experience left us today?

We have to now take two steps back before we can take a leap forward. These problems have pushed back the momentum of private participation in infrastructure building by at least five to six years. We hope to learn the right lessons as we strengthen bankruptcy laws, invest in a dispute resolution mechanism and regulate banks so that concerns can be adjudicated properly.

What roadmap should we set for the future?

We need to look at a couple of aspects in this regard. Primarily, we need to significantly upgrade the quality of our regulators. It can't be just a bunch of retired bureaucrats working to please former employers. Hence, we need to invest in honest and accountable human resources and give them the air

cover to act autonomously.

Secondly, we need to seriously tighten up discipline within the banking sector such that the design of project finance is more professional than it has been over the past decade. So we've got to invest in expertise.

Thirdly, government needs to invest in creating a new generation of designed contracts that have greater flexibility and pragmatism. They also need to seriously reflect on the bidding process. Not just fairer contracts, competence within the government is also essential. They need expertise in order to design fairer contracts.

Getting past these hurdles will take time. I think in the interim the country still needs infrastructure and I've been advocating (rather, shouting from the rooftop to those willing to listen) that our main public-private-partnership (PPP) model needs to be overturned. Previously we were inviting private parties to take on the riskiest sectors in infrastructure, that is, green field asset creation.

This model is not sustainable and it needs to be restructured. We should use the strength of public sector entities such as NTPC to build infrastructure within the government or government-controlled entities to ensure fair participation and organisation. Private parties should be invited after the projects become operational.

In doing so, two aspects can be negotiated with. The maximum risk will be carried by the entity that is best equipped to deal with that risk given that the green field risk, like land and other such resources, is handled by the government.

Secondly, it will invite the interest of a different kind of private participant who has the professional expertise to run these risks, while automatically deterring fraudulent participants. For example, there are many private funding organisations that are looking for low but predictable returns and such a system can attract these participants.

Can you elaborate one example where what you are saying can be applied?

NTPC is sitting on 40 per cent of the power generated in the country. Instead of disinvesting from NTPC, why can't NTPC sell some of the power projects that it currently owns and operates to private parties? NTPC can make significant profits out of it. Those profits can be recycled then to build a new set of assets, which can be sold again. You don't need resources to set up assets by selling

NTPC shares in the market. That is very silly. But when I raise these concerns, they tell me 'No, no. How can you sell national assets.'

Given the complex nature of infrastructure, where should the government be looking for talent to strengthen what it has?

They don't have any dearth of talent for actually creating infrastructure assets. NTPC is a good example of good infrastructural work. They build very powerful and sophisticated power plants. They can do it if they put their mind to it. The same for Coal India, which was floundering three years ago and is now producing more than 500 million tonnes of coal.

So, this fear that people have that there is no capacity in the public sector, I don't think is uniformly true at all. Centres of excellence in the private sector can be used to act as catalysts for crowding in private capital in a different way.

How much of a problem have environmental clearances been?

Environmental regulations should be implemented without fear or favour and both quickly and predictably. But we have created procedural complexities, in terms of clearances and so on. The question of involving the public comes into the project because the government has lost its mojo to take discretionary measures to ensure public good. It is not very complicated to assess whether a particular forest needs protection or not.

My simple point is that if we had the self-confidence to administer the good of the nation such issues would not arise.

One would imagine it's the same thing with land acquisition...

Absolutely! Land acquisition happens routinely everywhere in the world. There are many examples of private parties addressing the issue of land acquisition themselves very adequately.

Coming to IDFC Bank, you've got Bharat Banking. So is there a Bharat bank and an India bank? Shouldn't it all be about Bharat?

You're not technically correct. Bharat Banking is a division of IDFC Bank, which is, inter alia, going to be a very important division of the bank. Bharat Banking is going to be an integral part of the mass retail banking sector under IDFC Bank. The journey for IDFC is to traverse completely from one end of the spectrum.

There's a very interesting comparison between Bandhan Bank and us. Bandhan started with millions of customers and hundreds of branches or whatever and a ₹5,000 crore or ₹6,000 crore balance sheet. We started with 300 customers and a ₹75,000 crore balance sheet.

And the basis on which we acquired a banking licence is that we are not going to serve just 300 customers. We aim to take banking to a place it has not ventured before, that is in the public interest as well as in the interest of the banking industry and IDFC Bank. We intend to become a mass retail

bank in the next five years.

Today, my balance sheet may be ₹75,000 crore, but even if it grows at a system rate of 15 odd per cent, we will double the balance sheet in five years. What is important is that while being 95 per cent corporate right now, in the next five years this balance sheet will have to be 60 per cent small retail. And that is what we are building systematically.

How small will small be?

We have, in our first six months, set up about 45 branches, of which 32 branches are in rural Madhya Pradesh. We are doing what can be equivalent to community banking, like giving ₹20,000 loans to women in joint liability groups and we are doing this through new, innovative and cost-saving technology. It's not rocket science.

We are riding a lot on the public infrastructure in



The new-look, no-frills IDFC Bank

telecom. We've just added a few hand-held devices and other such devices that allow us to deliver service at the doorstep of the community. And we are building an ecosystem around the community that radically improves the access of the community to banking services.

Today we have very few ATMs across the country and most of them are located in urban areas, mainly because it is impossible to recover the capital expenditure on an ATM in rural areas. The first convenience a person wants in the rural area is the ability to withdraw cash without having to walk miles to a bank branch and stand in queues to get a cheque encashed.

We want to solve the accessibility problem through micro ATMs. So, it's community banking which is driven out of a hub-branch but enriched with an eco-system of micro ATMs that provide access to our customers.

What exactly is a micro ATM?

A micro ATM is nothing but a biometrically authenticated device that allows the machine to generate receipts, mini bank statements, authenticate identity and, most importantly, the operator of the machine should be able to deal with the customer's cash requirements.

So, once the machine authenticates a person's identity, the operator hands over the required cash to the customer?

Correct. This machine costs only a few thousand rupees compared to an ATM that costs several lakhs of rupees. And you're using the cash management of a *kirana* storeowner, to whom we've assigned the micro ATM, to serve as an extension of our bank branch.

So, I can have a light branch infrastructure with a relatively thick outreach at relatively low cost to serve the community according to their convenience.

There has been a lot of talk recently about zero bank accounts and of how Aadhar and the Jan Dhan Yojana can lead to financial inclusion.

Yes. They are talking about democratisation of credit.

For a banker like you, who's approaching the concept of zero bank accounts with an innovative architecture for services, how has it been working?

Our bet is that the bank account will not be zero. Now it is zero because people have to travel miles to withdraw money and to avoid all the hassle they avoid leaving money in the account.

So would you also say that this is a more friendly approach to banking?

Of course it is less intimidating and much more convenient. It is a distributed architecture in many ways that makes this feasible.

What's your feedback over how people respond to new technology?

It's just amazing. People adapt to it very quickly.

So, the people don't have a problem with trusting this kind of new structure with their money?

No. For example, the *kirana* storeowner is somebody they would know. I am not expecting women we are lending to flock to the *kirana* store and give them their money for safekeeping. It'll take us a while to get there. But what she might be willing to do is not withdraw the entire money loaned to her in one go. So, out of the entire loan, the woman may withdraw only a marginal amount the first time and later withdraw in instalments according to her needs.

What is the kind of lending that you're planning to do? What kind of a challenge is it to start out on this kind of venture?

It is a managerial challenge because you have to put the talent pool together. There is no dearth of people with that kind of talent.

For us, in this journey to becoming a mass retail bank, the challenge is not the demand for the types of services we want to deliver. The larger challenge is only going to be execution. If we can execute this efficiently, effectively and continually then I have no doubt that we will get all the business we need.

So, has the bank been an exciting project for you on a personal level?

Well mostly in life, excitement comes only with challenge. So, I have excitement and challenge in equal measure, which is why I am in the bank. ■

Solar firm readies for place in the sun

Civil Society News
New Delhi

ON the phone from Hyderabad, Vivek Subramanian is every bit an entrepreneur in full flow. We talk post-lunch, in time carved out between innumerable meetings, but once we are connected he is all there, awash in enthusiasm, numbers, ideas and insights. They all come tumbling out.

The solar power sector in India has begun booming in the past year. It has made start-up guys like Subramanian breathless with excitement – both because they were the visionaries who foresaw this day and because, now that it is happening, the opportunities are so massive that there is no time to be lost.

In 2010, Subramanian and his two friends, Vikas Saluguti and Saif Dhorajiwala, pooled ₹1 crore and set up Fourth Partner Energy. They were engineers with management degrees who had been involved in structuring investments and providing consultation.

It has taken a while, but this financial year Fourth Partner Energy expects its turnover to be Rs 100 crore. It was Rs 50 crore last year and the goal is that the company should keep growing with such leaps and become India's leading RESCO (Renewable Energy Supply Company).

The scale has changed with the central government setting a target of 40GW for solar power by 2020 from 0.5 GW today. These aren't just targets on paper. There is a lot of action too which gives companies like Fourth Partner Energy the sense that they are on a roll like never before.

GOVT ON THE BALL

"It is very impressive how the Union Ministry of Power is tracking all the developments at the state level and the project level. It is exciting the kind of meetings we attend. We haven't seen so much interest taken by the government to make things happen before," says Subramanian.

In Fourth Partner Energy, they set out to build from bottom up a firm with engineering capabilities in a space that they believed would be hugely valuable. It was their business vision that the future lay in distributed power or rooftop solar panels meeting the needs of customers.

Twelve years ago solar was a proven source of clean energy, but the economics hadn't fallen into place. In comparison to grid tariffs, captive power from photovoltaic cells was expensive. Also, governments in India hadn't done much to help solar along, though there was a lot of talk.

But Fourth Partner Energy had reasons to believe that solar power would be the choice of the future. India was power-deficient and demand was growing. Transmission and distribution losses were tough to curb. Green concerns over clean power were also

rising. Significant advantages lay in a distributed model. Since there is no shortage of sunshine in India, solar power would be an obvious choice.

"In 2010, the price of power from solar was about three times what it is today," says Subramanian. "We sort of had a view that these prices would come down."

GRID PARITY ARRIVES

"What we have been waiting for is grid parity – the price of solar power being less than power from the grid. That is happening depending on which state you look at. Maharashtra, of course, is at the highest end of the tariff scale. But in states like Haryana, Delhi, Telangana, Andhra Pradesh and Tamil Nadu the price of solar power is cheaper than the grid."

This comparison is only on the basis of grid rates. There are other calculations. In the Northeast states, for instance, the price of grid power is low. But availability is poor. The grid cost should therefore include diesel generation, which is expensive.

Industrial and commercial India is driving the growth of solar power because the grid tariffs they pay are higher than those of domestic users. This makes solar cheaper by comparison for commercial users. The domestic consumer market is yet to mature except in the case of condominiums and group housing entities where scale is possible. (See *Civil Society* April cover story.)

"Our business is primarily industrial and commercially focussed. Because of the grid tariff they pay one is able to price solar cheaper. We were waiting for this to happen and it has come about in the past 12 months," says Subramanian.

"We are in a position to go to a CEO and say 'You are doing a disservice to your shareholder if you don't instal a solar system on your roof. This is the value on the table,'" says Subramanian.

FINANCING OPTIONS

"Financing options are available and a company could do it without putting up capital. So where is the question of not wanting to adopt a cheaper source of power? Forget the clean and green aspect. It is cheaper and on your rooftop and in your control."

But while the B to B in solar is doing well, the B to C, which means catering to the individual household, has not taken off. It is expected to in the next couple of years as the prices of solar assets come down and domestic tariffs continue to rise.

Subramanian believes that there is enough business to be done with commercial and industrial customers for the solar power market to continue to grow at 70 to 80 per cent for the next five to seven years — with the next wave coming on the back of domestic consumers.

Fourth Partner Energy has essentially been an engineering company. But, as the solar market evolves, it has had to develop capabilities to provide



Vivek Subramanian and Saif Dhorajiwala financing options alongside engineering and supply side solutions — like a mini General Electric.

FIRST BIG PROJECT

Their first big ticket project, as a RESCO, was to instal a 105 KW solar plant for Salzer, an electronics company in Tamil Nadu. They went on to light up the Raj Bhawan in Hyderabad with a 10 KW solar power project. "We got repeat orders and now the Raj Bhawan has an installed capacity of around 150 KW," says Brajesh Sinha, who heads Fourth Partner Energy's North India operations.

The company now has to hire MBAs and CAs who can structure financial arrangements, draw up contracts, and put in place debt. It also needs marketing people who will be able to reach out.

A solar power generating facility can either be owned by the user, which means making a capital investment and using the power free thereafter except for the maintenance costs. Or Fourth Partner Energy can invest in the facility and thereafter charge for the power on a unit basis. In the past 12 months it has raised ₹50 crore by way of investment in solar assets.

It is also possible to generate revenue by feeding surplus solar power back into the grid.

Making all these options work for different commercial users and large domestic users is the kind of challenge a company in the solar power business now faces.

In 2010, Fourth Partner Energy found its first customer in a tiny and quaint resort off Sohna Road in Gurgaon.

Those were early days when bankers had no time for Fourth Partner Energy. Now the three founders and a growing team (the fourth partner) are all set for their place in the sun. ■

INSIGHTS

OPINION | ANALYSIS | RESEARCH | IDEAS

Schools with just one teacher



DILEEP RANJEKAR

BACK TO SCHOOL

ONE of the states in our country has a district that has 44 per cent of schools with a single teacher.

When I first heard about it I couldn't believe it – but the statistics published by the government confirmed it. Since we work with government functionaries fairly closely, I asked one of the Block Education Officers how he managed such a large proportion of single-teacher schools. He laughed it off and told me, “Leave aside the single-teacher schools, sir, I have 127 schools in my block that have no teachers.” I was astounded. “How do you manage?” was my obvious query. He explained, “Through internal adjustment.” I quickly realised that he was managing through informal transfers — which meant there were actually more schools with single teachers because he had drawn from the multiple-teacher schools.

What is the genesis of this problem of poor teacher-pupil ratio in our country?

Around 2000, the government took a decision that was prudent in the context of the situation prevailing then. It decided that if children were not coming to school, it must take the school to where they lived. Thus, a lower primary school was opened within a kilometre of every habitation and a higher primary school within three kilometres. In fact, many states followed an approach of opening a school in any habitation that had more than 20 children of school-going age. It was the need of the hour, given the fact that India had close to 59 million out-of-school children. Subsequently, for several reasons including concerted enrolment drives by many state governments and widescale realisation by parents that education is probably the only passport for their children's future, unprecedented gross enrolment rates were achieved that went beyond 100 per cent for some time. That the dropout rates also persisted is another story.

However, the pace of appointing teachers did not match the rate of enrolment of children. There are states that did not appoint a single teacher for more than five years together. No state government has so far officially offered any plausible explanation for not appointing teachers. There could be multiple reasons — some of which could be:

- Unavailability of adequate budgets, and consequent unwillingness of the government to create a long-term liability.

- Political decision to not recruit teachers for several reasons.
- Inadequate understanding of the ground-level situation by both bureaucrats and politicians.
- Low priority accorded to ensuring adequate teacher-pupil ratio.
- Falling birth rates — which indicate lower future enrolment of children.
- Not understanding how the situation will unfold once the backlog of out-of-school children is tackled.
- Not understanding the impact of exodus of children from government to private schools — some government schools had to be closed down due to lack of pupils.
- Inability to rationalise the distribution of teachers between urban/semi-urban areas with better access as opposed to schools situated in remote areas —

this includes unwillingness of a large number of teachers to be located in remote schools and exertion of political pressure for teacher postings.

As a result, we have over 100,000 schools with lone teachers. The percentage of single-teacher schools varies from state to state and district to district. At the national level, this has led to over 75 per cent of schools having a multigrade situation with one teacher being compelled to teach students in several grades in the same classroom. The situation becomes aggravated when there is also a shortage of classrooms despite provision of large budgets in the period 2000-2010.

The concept of multigrade teaching is not new to the world. It exists in varying degree even in developed countries like the US, UK and Canada, and in China and other countries. However, the big difference is that multigrade teaching-learning



We have over 100,000 schools with lone teachers. The percentage of single-teacher schools varies from state to state and district to district.

practices are an integral part of the teacher education in these countries and they often use it strategically to their advantage. In India, multigrade teaching-learning is not an important part of our pre-service teacher education. Some states like Karnataka attempted to develop teachers to deal with multigrade teaching-learning through programmes such as Nali Kali but it could neither be sustained nor scaled.

The serious issue of inadequate teacher-pupil ratio is not reflected in either national or state statistics. In fact, one would find the teacher-pupil ratio theoretically satisfactory. However, the statistics are completely deceptive and do not tell

Continued on page 26

No land, no forest for tribals

BHARAT DOGRA

PROTECTION of the land rights of tribal communities has been widely accepted as highly desirable. Several government reports have also backed this demand. Yet, the pressure of some powerful interests has been so strong that in many cases the oft-repeated commitment to protect tribal land rights has been frequently violated at the grassroots.

In a widely quoted paper, "Review of land reforms during 1950-95", Sukumar Das, a senior official, has written, "Land legislation to protect the tribal people has failed to achieve its basic objective. In fact, more than 50 per cent of the total land allotted by the government has already been alienated. The state governments taken together have so far allotted 0.47 million hectares of vested land to 0.42 million tribal households, whereas 0.31 million hectares of tribal land has been alienated from 0.24 million tribal households of India."

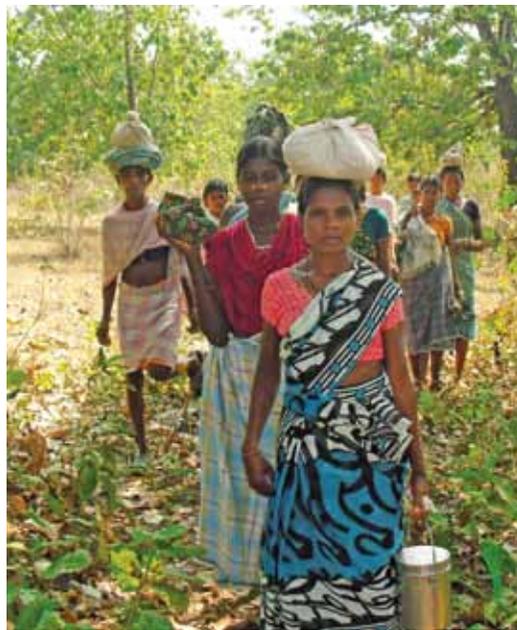
Despite the tribals bearing the biggest share of the burden of many-sided displacements and the high level of alienation of tribals from their land, there was a flicker of new hope when the Scheduled Tribes and Traditional Forest Dwellers Forest Rights Act (called the Forest Rights Act or simply FRA for short) was passed in December 2006.

This Act hoped to correct the 'historical injustice' that had been done to tribals and forest dwelling communities. The background to this injustice was that in colonial times vast areas were arbitrarily declared as forest department land without any consideration for the rights of the people obtaining their livelihoods from forests. These people were then called encroachers and subjected to all kinds of repression including imprisonment, assault and extortion of bribes.

The stated aim of the FRA was to correct this injustice by devising a procedure for regularising the land holdings cultivated by tribals. The procedure provided for by the law was that tribals and other traditional forest-dwellers would submit their claims, which would be examined and, if found accurate, would lead to conferment of legal

entitlements on them. It was widely believed that the overwhelming majority of claims would be accepted and the situation of tribals/forest-dwellers would be much improved by receiving entitlements.

But the real picture emerging from the implementation of the FRA so far is very different. First, the number of rejected claims is very high. Those whose claims are rejected are often not even informed. Second, a significant number of deserving allottees have been simply left out as they could not submit their claims in time. Last, even in the case of those whose claims were accepted, only a small part of the land being cultivated was given



legal sanction; hence, even in these cases the livelihood situation may actually be eroded. So the FRA, as it is being implemented at present, instead of correcting the historical injustice may actually be accentuating it.

An immediate review of the implementation is required. More specifically, the high rate of claim rejections should be brought down, the tendency to reduce the quantity of land in most cases should be checked and those who could not present their claims properly should be helped to do so.

Due to lack of understanding, some traditional

farming systems of certain tribal communities have been discouraged by the authorities or even banned. This has a very disruptive impact on the livelihoods of these communities. Efforts should be made to obtain a better understanding of these systems which have been praised by scholars as being based on a sound understanding of use of land and other resources for sustainability and in tune with local conditions.

In addition, it is becoming increasingly important to shield tribal land rights from the highly destructive impact of some projects which threaten to suddenly displace thousands of farmer households without even examining possible alternatives.

Ekta Parishad, an organisation which has been involved in several peaceful struggles to protect tribal land rights in various parts of the country, has repeatedly stated that such problems have been steadily increasing.

Its coordinator, P.V. Rajagopal, says, "The assault of big mining and other projects for catering to a global market increased to such an extent that in our work area small farmers, especially tribal farmers, appeared to be increasingly threatened by the possibility of losing their land. The issue now was not just demanding land for the landless but also protecting the land rights of those who always had some land. We felt that the scope of our work should expand."

Rajagopal adds, "What alarms and distresses me most is the 'triangle of violence' in which innocent tribal communities are caught due to forces and circumstances beyond their control. Firstly, some mining and industrial giants come to plunder their resources which threatens their entire life and livelihood pattern. Secondly, there is the mobilisation of violent resistance in the form of Naxalite and Maoist groups. Thirdly, there is the violence of the paramilitary forces or other agencies of the State. In the middle of this triangle of violence the sufferings of millions of innocent people have reached intolerable levels. Some of them, while talking to us, said that they felt like they were sitting on their funeral pyres.

Clearly, work needs to be taken up urgently to protect the land rights of tribal households and tribal communities from this many-sided threat. ■

Continued from page 26

the real story. It is like saying the average depth of the river is three feet and setting out to cross it. What is important is to analyse the cluster and school-level teacher-pupil ratio. That tells the real story.

It is unfathomable as to why the states tolerate the existence of single-teacher schools despite their stated commitment that every school will have at least two teachers and despite clear legal provision by the Right to Education Act for maintaining a prescribed ratio. In a single-teacher school, the day the teacher is absent for any reason, the children are left to themselves.

The teacher-pupil ratio is not merely a technical issue of showing a certain ratio on paper. It has major ramifications on the quality of education in

the classroom. It is the single major enabler in practising several tenets espoused by our National Curriculum Framework — such as the centrality of the child in the process of learning, providing individual attention to the child, continuous and comprehensive assessment of children and so on. If we don't provide this all-important input in the education process, any talk of improving the quality of education is useless.

If providing the required number of teachers for every school has become physically (due to the remoteness of schools) and economically unviable, we must seriously review the earlier approach of providing a school in every habitation within one or three kilometres or providing a school where 20 or more school-going children live. We must think up

and implement innovative solutions like consolidation of several smaller schools into a large, fully equipped school that meets all requirements of quality education. We already have a few sample schools, like the Navodaya Schools that meet various infrastructural and educational requirements and are clearly performing better. There are other government schools that have the appropriate teacher-pupil ratio — which has forced several private schools in a radius of 20 km to close down.

Probably the biggest enhancer for 'Brand Government Schools' would be to have one classroom per grade and one teacher per classroom. ■

Dileep Ranjekar is CEO of the Azim Premji Foundation.

TMC losing moral ground



SUBIR ROY

HERE & NOW

UNTIL a month before the extended poll process began in West Bengal, electioneering was on a distinctly low key. Most of the media coverage focused on campaigning by the chief minister and leader of the Trinamool Congress, Mamata Banerjee, who exuded confidence while doing what seemed like a mechanical job. Few doubted that the ruling party would be returned with a comfortable majority.

Then, around mid-March, the sting operation by news portal Narada broke — a 23-minute video depicting 11 Trinamool leaders accepting money from a journalist posing as a representative of a fictitious firm in return for promising to look after the firm's interests. This stirred up things considerably, not the least because the Trinamool Congress failed to categorically assert that the video was fake. For good measure, a second video surfaced closer to polling — depicting something similar.

Soon the phrase 'Saradha to Narada' became common currency, underlining the fact that the party which a couple of years ago was embroiled in the Saradha chit fund scam, was riddled with corruption. As the campaigning progressed, it also became clear that the opportunistic electoral alliance between the erstwhile arch enemies, the Congress and the Left Front, might not be making waves but was holding.

The final proof that the mood had turned came when, around a week before the first round of polling began in early April, Banerjee's campaigning tone changed. She became defensive, taking personal responsibility and asking for forgiveness for any 'mistakes' that might have been committed.

There is still little doubt in the popular mind that the Trinamool will win but the sheen has disappeared. Along with this there has crept in a shadow of doubt whose burden is — well, you never know.

The grain of doubt has in part resulted from what the opinion polls, whose results were released before the first phase of polling began and whose field work was done before the import of the Narada expose had sunk in, had to say. Again, all predicted

a Trinamool victory but the devil was in the figures for the share of the popular vote that the leading parties were likely to garner.

According to one poll, the Trinamool had actually improved its share compared to the 2014 parliamentary elections that swept Narendra Modi to power, from 39 to 45 per cent. But even then it was running neck and neck with the Congress-Left Front alliance, which was seen as garnering 44 per cent of the popular vote. What was also dramatic was the fall in the popular vote share of the BJP, down by a massive more than 10 percentage points to around six from the high of 16.8 it had scored riding on the Modi bandwagon.

The import of this was that whichever of the two



Mamata Banerjee

(Trinamool and Congress-Left Front) emerged ahead by a percentage point or two would score a decisive victory in terms of seats won as a result of the poll having become a straight contest with the total marginalisation of the BJP. In this the Trinamool was still ahead but how sure could one be, with the polling agency qualifying that its numbers had a 5 per cent margin of error?

The focus on pervasive corruption in the body politic of West Bengal became glaring when a senior member of the party, Sabyasachi Dutta, Mayor of the Bidhannagar municipality and the Trinamool Assembly candidate for New Town Rajarhat — both covering the poshest new area of the city which also houses its hub — admitted in a sting operation conducted by Times Now the existence of 'syndicates'.

These are groups of young men who have farmed out large tracts of the state among themselves for supplying building materials for any construction work in their respective areas. Any individual or firm undertaking construction has no option but to buy building materials from them with price being dictated and no guarantee of quality. This has become an institutionalised form of rent-seeking with the blessings of the ruling party.

The existence of such an arrangement is significant in itself but what makes things worse is a senior leader not only admitting to its existence but also being quite unashamed about it and the party's top leadership not contradicting him. In a subsequent interview, Dutta reiterated what he had said with no qualms. "They (syndicate members) love me and I love them. I will always stand by unemployed youths. Is there anything wrong in unemployed youths honestly being self-employed?"

He added that around 20,000 young men in his constituency were engaged in this and "they know if they work for their MLA for a day, their MLA will be with them for the next five years". The groups were registered as cooperatives and maintained

accounts with nationalised banks. "They are supplying building materials with knowledge of the concerned government department. If they are operating illegally, why weren't their bank accounts seized?"

How strongly middle-class people feel about the current state of affairs in West Bengal can be gauged from the fact that a retired Chief Secretary of the state, Ardhendu Sen, has travelled from his home in Gurgaon to Kolkata to campaign for a most unusual candidate. This is none other than Ambikesh Mahapatra, the Jadavpur University professor who was arrested for circulating a cartoon featuring Banerjee.

Mahapatra is the convener of *Akranta Amra* (We, The Assaulted), a group of individuals who are "victims of human rights violations" under the present regime. He is contesting as an Independent candidate, supported by the Congress-Left Front combine, from the Behala East constituency in Kolkata against Trinamool leader Sovan Chatterjee who is also the Mayor of Kolkata. Chatterjee happens to be one of the Trinamool leaders seen taking cash in the Narada sting video!

Sen explains his reason for canvassing: "I thought the time had come. The situation in the state is very bad. I want people to think deeply and carefully before casting their votes." He affirms he is not entering politics and no one approached him to take this unusual step.

Despite the negative mood among the urban middle class, ordinary people across the state still appear to support the Trinamool. One reason is that they are no worse-off — and may be actually slightly better-off — than they were in the last days of Left Front rule. That period was marked by food riots in pockets. The Trinamool government, on the other hand, is making available highly subsidised rice in previously Maoist-affected areas like Jangalmahal. It is a well-known fact that those with nothing at all feel better when they get a little something. ■

Perils of quick approvals



KANCHI KOHLI

FINE PRINT

IT was with great pride that the Union ministry of environment's achievement to reduce the time taken for environmental approvals was reported in business papers. The claim states that the ministry, for the past 20 months, has considerably reduced the time taken for approvals following environment impact assessments and those for the use of forest land. This has been coupled with other reported statements that the ministry will approve industrial, infrastructure and mining projects within 100 days!

For more than a decade, two regulatory procedures housed in the environment ministry have been at the heart of the narrative which pits environmental protection against economic growth targets. These are what are popularly known as 'environment clearance' (EC) and 'forest clearance' (FC). The EC is preceded by a 'comprehensive' Environment Impact Assessment (EIA) based on a detailed Terms of Reference (ToR). This document goes through a public consultation and appraisal phase before the approval is granted. The latter, i.e. FC, is necessary only in those instances where there is use of forest land. A procedure can allow a user agency to use forest land for non-forest use such as industry, mining or even plantations.

What is important to understand is that in either of these cases, the grant of permission is not guaranteed. Both these processes require close scrutiny of a factual baseline, prediction of impacts and possibilities of mitigating impacts. While, in the case of the EC, public participation is a must, the FC has no such provision. But, in either case, the expert committees and the ministry, which has the power to review applications, can reject a proposal based entirely on environmental parameters. When project authorities do a shoddy job of presenting the facts required, deliberately misleading the affected people during public hearings, more information is sought, fresh studies are commissioned, all of which adds up to delay.

It is in this light that one needs to once again review the claims of the

ministry. A news report in *The Economic Times* on 2 April stated that the ministry had claimed that the average time taken for an EC had reduced from 599 days to 192. In the case of the FC, it has reduced from 430 days to 170. Online submission of applications, delegated powers to Regional Offices for forest diversion approvals, standardised ToRs are the various reasons cited for this new and improved efficiency.

But no one is questioning the quality of the impact assessments, the cost-benefit analysis for forest loss, the quality of baselines used by EIA consultants, and the conduct of both the public consultation as well as approval granting. Did the ministry ask why several of these approvals end up being challenged either on the streets or in courts? The averages might go in favour of many approvals not being contested but that might just be due to lack of knowledge or wherewithal to engage with tedious processes. And that is neither a sign of acceptance of these decisions nor of lack of will to question them.

The strength of these regulatory procedures is collection of on-ground data as well as seasonal data. This can take up time. Field verification of the number of trees that will be cut, or the water sources which will be contaminated, the range of livelihoods

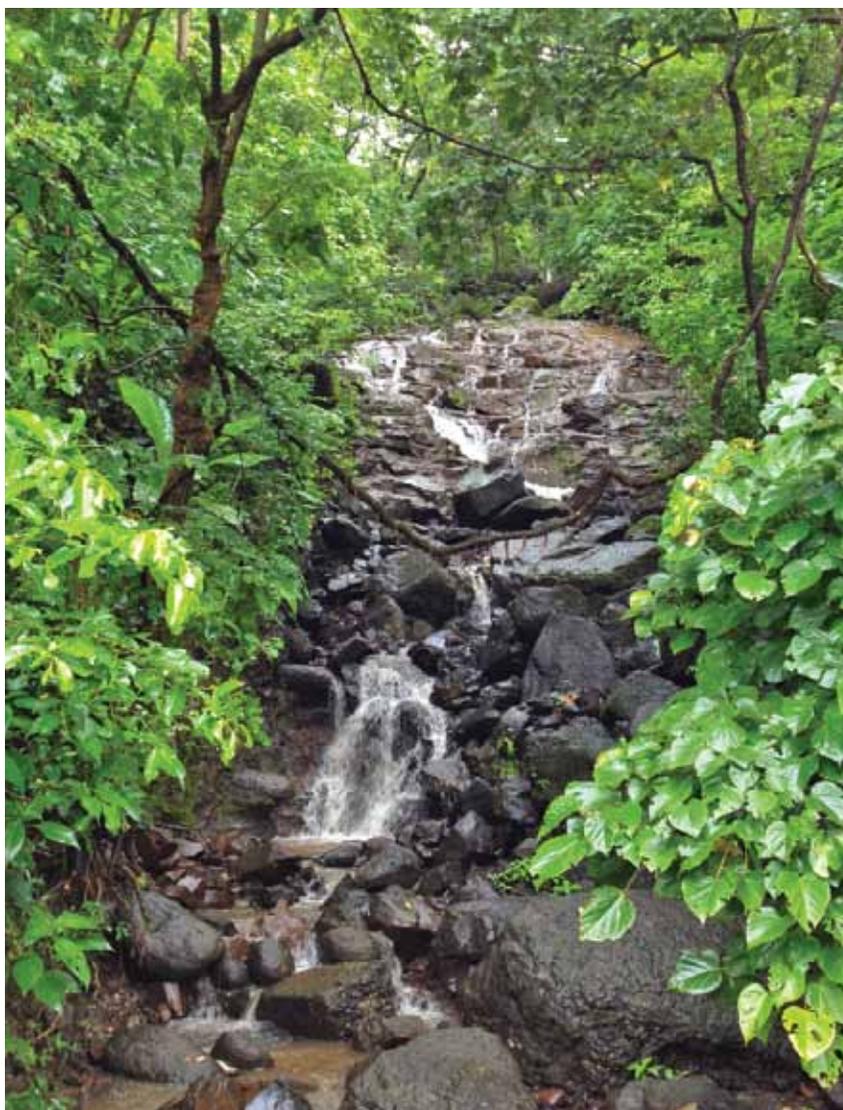
that will be lost, requires detailed scrutiny. There are standard compromises. There are recorded instances of forest surveys being done aerially or important local occupations like pottery or shellfish collection being completely ignored while reporting livelihood dependency.

Then there are instances of related procedures like determination and vesting of forest rights being summarily kept aside. The FC process is also now linked to the 2006 Forest Rights Act, and no diversion is possible until the process of rights recognition is complete and the approval of the gram sabha (village council) obtained. This cannot be done in a hurry and requires decades of land and forest access records to be both verified and recorded. Since the ministry has set its target days, a detailed review of claims is often replaced by an assurance by the district collector that there are no claims to be 'settled' or they will be seen to in the near future. The option of 'no diversion' is nowhere in the picture.

The reduction of time taken for environmental approvals was an electoral promise of the present NDA government, and no stone is being left unturned to fulfil it. It is not that the previous UPA government acquitted itself better. In February 2014, the new environment minister was reported to have cleared files worth ₹19,000 crore. At the same time, reporters had meticulously pointed out that it was not really the environment and forest approvals that were causing delays. A general economic slowdown, financing, coal pricing and land acquisition were the key reasons amongst many others that projects, even when speedily approved, were unable to take off.

At the core of this 'speedy clearance' issue is concern for the environment and people's livelihoods. Digitising application processes cannot replace the need to understand site specificity of impacts. Even if mitigation measures are to be proposed, it simply cannot be done in a hurry. There will be dire consequences, as happened in the case of a thermal power plant in southern India where water ingress into farmland led to a violent local conflict. It happened because an inter-tidal wetland had not been accurately appraised during impact assessment. Both the people and the authorities were caught unawares.

A common road sign along Indian highways, 'Speed thrills but kills', aptly describes the folly we might be committing regarding protecting our environment and people's homes and livelihoods. ■



Clearances should not be done in a hurry

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Partition and its fallout

Goutam Ghosh's film links present with past

Saibal Chatterjee
New Delhi

THE profoundly moving story that unfolds in veteran Bengali director Goutam Ghose's latest film *Shankhachil* is set in the present, but the disruption unleashed by the Radcliffe Line drawn in 1947 looms large over the narrative.

The film's protagonist, played with consummate skill and empathy by Bengali cinema superstar Prosenjit Chatterjee, is a middle-aged schoolteacher in a small, idyllic hamlet on the banks of a river that separates West Bengal and Bangladesh.

With the wounds of Partition still festering in his heart and mind, this victim of history labours to impress upon his young Bangladeshi pupils the primacy of linguistic and cultural affiliations.

Language has no religion, he asserts, even as he is constantly haunted by questions of identity in violently fractious times. No wonder *Shankhachil* (the title alludes to a kite breed), which was theatrically released on both sides of the border on Bengali New Year's Day, is a film that evokes "the memory of Ritwik Ghatak".

Says Ghose: "Ritwik Ghatak captured the pathos of Partition through a slew of characters in films like *Subarnarekha*, *Megha Dhaka Tara* and *Komal Gandhar*. *Shankhachil* seeks to explore that legacy in a contemporary context."

Shankhachil has bagged this year's National Award for the best Bengali film alongside a crop of prize-winners predominantly from glitzy, glamour-laden commercial Hindi cinema.

Shankhachil is Ghosh's third Indo-Bangladeshi co-production after *Padma Nadir Majhi* (1992) and *Moner Manush* (2010). The latter film, too, had Prosenjit in the lead role of Lalan Fakir, a Baul poet and mystic of 19th century Bengal who took on the religious orthodoxy of his time.

The film has a mixed cast, with Kolkata's Deepankar Dey, Arindam Sil and Ushoshie Chakraborty and Dhaka's Kusum Sikder, Mamanur



A still from *Shankhachil*



Goutam Ghosh

Rashid and child actress Shajbati in important roles.

While Bangladesh's Habibur Rahman Khan has backed all the three Indo-Bangla films that Ghose has directed, Prosenjit is one of the co-producers of *Shankhachil*, which, in crucial ways, takes the spirit of *Moner Manush* forward with its celebration of the cultural markers — language, poetry, music — that unite the two nations.

The director is, however, quick to point out that 68 years isn't a long time in historical terms and, therefore, "the memories of the division of Bengal

haven't gone away and neither are they likely to do so anytime soon".

That reality plays out in the life of Muntasir Chowdhury Badal, father of a 12-year-old girl with a congenital heart condition. He bears the cross of the cataclysmic event that split the subcontinent forever, while fighting in a quiet and dignified way to clear "the dust of history" that clouds people's minds.

In one telling scene, he pulls out an old grimy, roach-infested metal trunk from a loft and finds a handwritten inland letter that brings memories of the dark days of the Partition rushing back.

Badal's worldview has obviously been shaped by the way his grandfather and father had to flee their home on the Indian side of undivided Bengal. He is scarred but not overly bitter.

"Badal is an embodiment of not one but many Bengalis," says Prosenjit. "He holds in himself a wide range of emotions — fear, doubt, anger. For me, it was a bit like playing several characters in one go."

Shankhachil is indeed a multi-layered film that alludes to the rising tide of religious fanaticism gripping the world today as well as to the crises related to distress migration across the Indo-

Bangladesh border while depicting the emotional trauma of a family struggling to ensure that their pre-teen daughter gets the medical treatment that can save her life.

“Although *Shankhachil* tells the story of one family, it is a universally topical film given the times we live in,” says Ghose.

Badal and his wife Laila (Kusum Sikder) are compelled to undertake an illegal trip across the border, first to Taki and then to Kolkata, for their daughter’s treatment.

For the girl’s sake, Badal and Laila, much to their discomfort, have to assume a Hindu identity and acquire fake voter ID cards.

The river that separates the two sovereign nations is also, ironically, the channel that links them

“The *shankhachil* is free and can fly anywhere without hindrance,” says Ghose. “Boundaries are only for humans, not animals and birds. A tiger census on the two sides of the Sunderbans is never fully successful because the big cats move back and forth between India and Bangladesh at will.”

The other principal allegory that Ghose employs in *Shankhachil* is represented by the story of the little girl, Rupsha, played by Bangladeshi debutante Shajbati. She symbolises the purity and innocence of childhood. “Borders mean little to her,” says Ghose, “but she cannot surmount the barriers erected by history.”

Rupsha (which is also the name of a river in southwestern Bangladesh) is one with nature and loves all living creatures. She releases fish bought by

A stepwell of great beauty by a queen

Susheela Nair
Ahmedabad

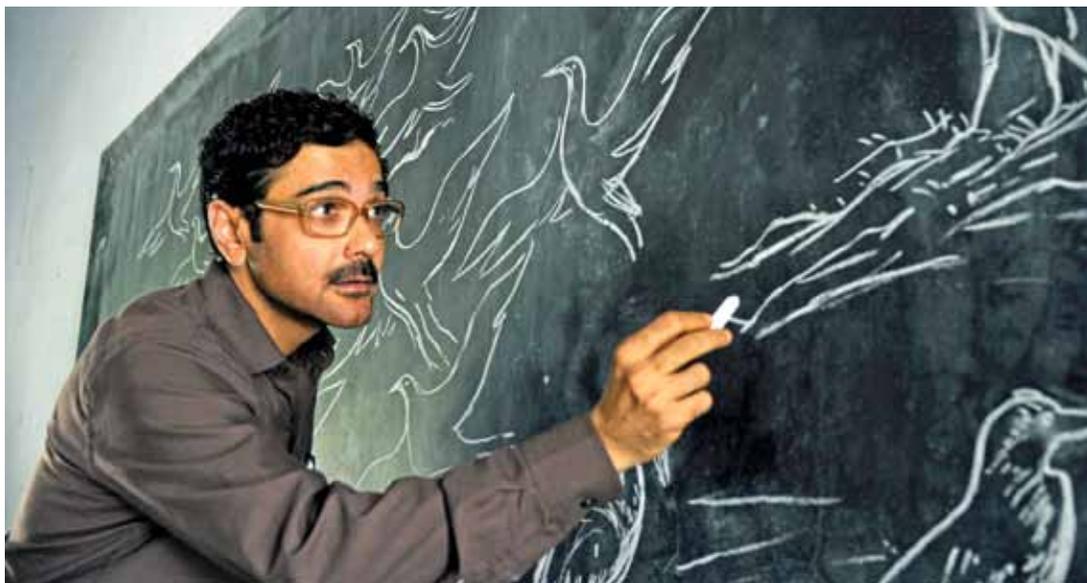
AFTER a 125-km drive from Ahmedabad, an amazing sight awaited us at the village of Patan. What makes Rani-ki-Vav or the Queen’s stepwell, a UNESCO World Heritage Site, so unique is that it was constructed by a queen as a memorial during the 11th century. The richly sculpted monument is considered a masterpiece dedicated by Udayamati to her deceased husband, Bhimdev, son of Mularaja, the founder of the Solanki dynasty.

Designed as an inverted temple, highlighting the sanctity of water, this distinctive form of subterranean water resource and storage system was constructed in the Maru-Gurjara architectural style, reflecting mastery of this complex technique and great beauty of detail and proportion. As we stepped into it we were bowled over by the striking beauty of the stepped corridor compartmented at regular intervals with pillared multi-storied pavilions, sculptural panels and figurative motifs of superb artistic quality. As we went down the seven levels of stairs, we saw more than 500 principal sculptures and over 1,000 minor ones combining religious, mythological and secular imagery.

The majority of sculptures are devoted to the gods of the Hindu pantheon — Vishnu, Shiva and their various aspects — who appear with or without their consorts. The central level’s theme is the *Dasavatars* (10 incarnations) of Vishnu and as you reach the water level, you will see a carving of Vishnu reclining on 1,000 snakeheads. Some of the intricate patterns on the walls are reminiscent of Patola textile designs. In some levels we found special friezes and platforms marked out for the kings. These usually had the best natural air-conditioning, from a combination of cleverly built ducts and condensation from the well water.

Everywhere, we found small inviting platforms and ledges, probably for resting and gossiping. The well consists of a shaft 10 m in diameter and 30 m deep. The lowest level of the well is now blocked by stones and silt but in the old days it was used as an escape route to neighbouring villages.

Rani-ki-Vav is one of the most famous legacies of the ancient capital city and considered to be the queen among the stepwells of India. These *vavs* in ancient times were not only used for socialising and collecting water, they also had great spiritual importance. While returning, I marvelled at the



Prosenjit Chatterjee plays the role of a schoolteacher

Ghosh underscores the emotional impact of the Partition through the metaphor of the *shankhachil*.

inextricably to each other.

Boat trips up and down the river — a recurring visual motif in *Shankhachil* — reflect the porousness of the 4096-km border between India and Bangladesh, which has more than 100 river crossing points.

Rivers have of course played a key role in many of Ghose’s films — notably *Paar*, *Antarjali Jatra*, *Padma Nadir Majhi* and *Moner Manush*. In *Shankhachil*, the river is a constant presence and an emblem as much of eternity as adversity.

Ghose also underscores the emotional impact of the Partition through the metaphor of the *shankhachil*. The rare bird that has a permanent place in Bengali verse and music thanks to an elegiac, nostalgia-drenched poem by Jibanananda Das — ‘*Aabaar ashobi phire Dhansiritir tirey*’ (I will return to the banks of this river) — and a timeless song by the iconic people’s music exponent Hemanga Biswas.

her father into the river, abhors eating the meat that her mother cooks and is thrilled to bits when a dead tree near her home sprouts leaves.

Like the girl, the drying tree that shows renewed signs of life denotes that hope is not all lost. Says Ghose: “Bengal and Bangladesh have been trying to reconnect with each other for years using their common cultural and linguistic heritage but politics does often get in the way of that effort.”

Rupsha strikes up a rapport with a Border Security Force jawan from Rajasthan (played by Mumbai actor Nakul Vaid), who, like Tagore’s *Kabuliwallah*, sees a reflection of his own daughter in the Bangladeshi girl whose language he can barely understand.

The director uses the word “brutal” to describe the Partition. “It is inaccurate to call this a Partition of India; it was only a Partition of Punjab and Bengal and both the states continue to pay the price for the line that was brutally drawn through them,” he says.

Shankhachil has an eclectic musical track, with the songs and poems of Rabindranath Tagore, Kazi Nazrul Islam, Sunil Gangopadhyay, Annada Shankar Ray, Rajanikanta Sen and Mukunda Das providing a philosophical underpinning to the film.

Ghose also uses a number that Tagore composed in 1905 when he was requested to come up with a song about that year’s Partition of Bengal. He had sung ‘*Aamaai bolona gaahite gaan*’ (Do not ask me to sing) in response.

The mournful mood that hangs over *Shankhachil* pretty much mirrors much of what Tagore would have felt 110 years ago. The scar persists. ■



The Surya Kund in the Sun Temple

skill, devotion, and philanthropy of the creators and the immense effort taken to build a water conservation structure in a drought-prone state.

I stumbled upon Modhera, another architectural legacy of Solanki rule in Patan. Set along the backdrop of River Pushpavati rests the famed Sun Temple of Modhera. Encompassing three different yet axially-aligned and integrated constituents, the architecture of the temple is brilliant. The temple was plundered by Mahmud Ghazni yet the architectural grandeur did not wane.

Erected on a high platform, the temple appears majestic with its grand structure. Though the spires are missing, the *toranas* (archways) that lead to the main halls eclipse the absence of spires. The exterior walls are engraved with intricate carvings, boasting the mastery of art in those times. Every inch of the structure is covered with sculptural patterns of gods, goddesses, birds, beasts and flowers. The Sun Temple is divided into three parts, namely, Surya Kund, Sabha Mandap and Guda Mandap.

The deep, symmetrical stepped tank, the Surya Kund, named after Lord Surya (the Sun God) is simply breathtaking. Not less than 108 shrines mark the steps of this tank, including the shrines dedicated to Lord Ganesha, Lord Shiva, Sheetala Mata and many others. The Surya Kund itself is graced by a variety of small shrines — placed



The Rani-ki-Vav is an architectural masterpiece

between the numerous pyramid steps. Intricate stone carvings of Hindu deities such as Vishnu and Shiva are enshrined between the steps at the corners of the Surya Kund.

Steps in front of this tank lead up to the Sabha Mandap, an octagonal hall. At the top of the steps are remnants of a huge arch or *toran* that lead to the main hall, the Sabha Mandap. Every pillar, and also the toran, is intricately carved. Literally, Sabha Mandap refers to an assembly hall where religious gatherings and conferences were conducted. This hall is open on all four sides and has 52 delicately carved pillars denoting 52 weeks in a year. The intricate carvings depict scenes from the *Ramayana*

SUSHEELA NAIR

and *Mahabharata* and from the life of Lord Krishna.

Beyond the Sabha Mandap is the main temple or the Guda Mandap, supported by a lotus-base plinth. This hall once housed the idol of the Sun God. The hall was constructed in such a way that the idol received the first rays of the sun during the equinoxes. However, the idol was plundered by Mahmud Ghazni. The walls represent the Sun God in his 12 different facets, one for each month. The carved walls also depict aspects of human life like the vicious circle of birth and death. The exterior walls of the temple are replete with carvings — including 12 postures of Aditya or the Sun God. Like many other temples in India, the walls depict divine lives as well as those of ordinary people, and include a good deal of erotic sculptures. We

culminated our trip with a visit to the on-site museum which has on display numerous sculptures and other stone work. ■

FACT FILE

The vav is open for visitors from 8 am to 6 pm.

Distance from Ahmedabad to Patan is 125 km and to Modhera is 101 km. Patan is well-connected by road and rail. The nearest railhead for Modhera is Mehsana. The nearest airport is Ahmedabad. As good accommodation options are limited, it is ideal to cover the two places in a day's trip from Ahmedabad.

What to shop for: Patola saris

JNU celebrates street theatre

Abida Khan
New Delhi

PROTESTERS became performers on 12 April, National Street Theatre Day, at Jawaharlal Nehru University's (JNU) iconic 'Freedom Square'. Instead of slogans there was singing, dancing, chanting and clapping as three plays by youthful street theatre troupes unfolded.

Equipped with drums, flutes, harmoniums and dafliis, the performers encircled the Administrative Block of the university to call out to students and faculty and get them to join in.

National Street Theatre Day is also the birth anniversary of Safdar Hashmi, the slain theatre artiste and CPI(M) member. Every year the Safdar Hashmi Memorial Trust or SAHMAT recalls this brave hero and pays tribute to the undying spirit of street theatre.

Noted photographer Ram Rahman and theatre personality M.K. Raina briefly described the genesis of SAHMAT and the culture of protest that it has facilitated over the years to the audience.

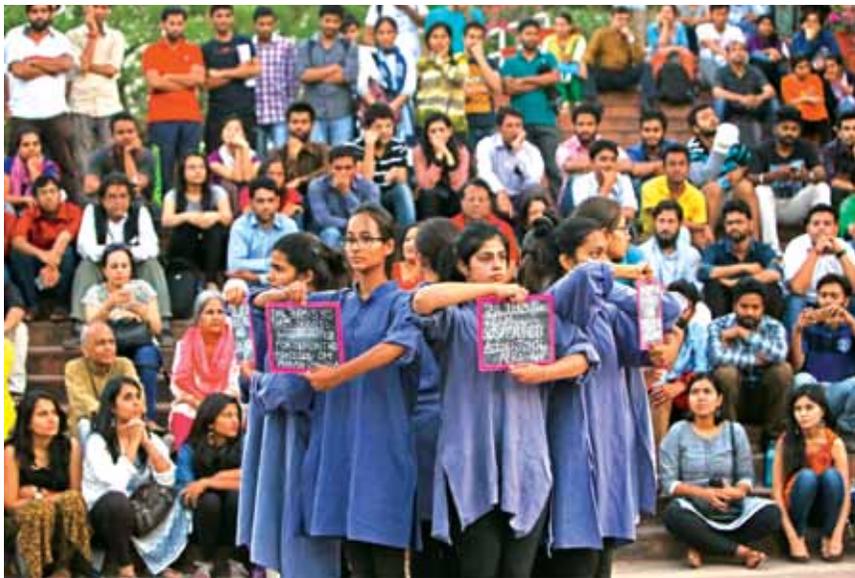
"Twenty-eight years ago, Safdar was murdered in Jhandapur while performing a street play called *Halla Bol*. SAHMAT was formed right after that assassination," said Rahman, as he set up the mike for the upcoming performances.

"SAHMAT is a group of artistes, actors and writers who do not formally associate with any political party. We have been linked to the CPI(M) because Safdar himself was a part of it. But we function independently. We observed the first National Street Theatre Day in April 1989 after Safdar's death."

Using JNU as the venue highlighted the significance of the day against the backdrop of the ongoing protests by students and activists across the country. According to Rahman, every year SAHMAT designs standard posters with a space for local groups to highlight their programmes. "The posters have always been themed on a cultural or political issue. This year, for the first time, we designed a poster with a poem by Rohith Vemula instead of the standard space," he says.

Raina explained, "Street theatre is rapidly emerging as a distinct form of protest. Many artistes are associating with street theatre and experimenting with language and other tools to convey political, social and cultural injustices. It has become a weapon and a platform for people's movements."

The performers, all women dressed in blue, began enacting the play, named *Justice abhi far hai*. They belonged to Lakshya, the theatre society of Kamla



The first play was *Justice abhi far hai*



Theatre group Bigul staged *Peerun* by Saadat Hasan Manto

Nehru College. The play was staged as a 'game' that hinted at the rampant corruption within the judicial and political systems of our country. It quickly transformed into an outright critique of the judicial system that turns a blind eye upon political and high-profile cases and delays or dilutes petitions by ordinary people.

There were references to cases like the Jessica Lal case that showed the incompetence of the judicial system in penalising the guilty. The performing women positioned themselves as a rotating circle, holding placards with names of victims and the absconding perpetrators of atrocities.

They sang in unison against the injustice and indifference of the authorities to acknowledging the rampant corruption and the perpetual exploitation of the downtrodden. As the performers raised critical questions through melodious rhymes, the audience started chanting and clapping.

The play was written and directed by the performers themselves, who say they have staged it at various universities. The performance ended but the ensemble, comprising musicians, maintained the mood of the play.

The second performance had actors in khaki shorts, from Ankur, the theatre society of SGTB Khalsa College. *Street 2016* was a sharp satire on the

PICTURES BY AJIT KRISHNA



Street 2016, the second play

ignorance, hypocrisy and fanaticism of right-wing groups dominating the current political scenario.

Four metal cages, each with a performer, were assembled to form a square platform. It represented a corporate organisation named 'Hindustan Limited' that worked to enforce right-wing patriotism in citizens. The chairman of the company stood atop the caged platform, highlighting the atrocities resulting from power.

The play was laden with puns and snide comments about the victimisation of students and their political and sociological ideologies by the State in the name of patriotism.

The final performance was by an independent theatre group, Bigul, formed in 2007 and comprising college students. They have staged a dozen plays highlighting their concern for society. *Peerun*, by Saadat Hasan Manto, revolved around Manto's life in a Bombay *chawl*.

His roommate, Brij Mohan, falls in love with *Peerun*, a Parsi girl. Their romance takes an unusual turn with Brij coming up with a strange theory that he loses his job every time he meets *Peerun* and blaming her for his unsuccessful career.

The play kept the audience riveted with its one-liners and puns. The cast comprised young and old actors, with narrator Sanjay (Manto in the play) stealing the limelight with his performance.

The dramatised details of life in a *chawl*, discussions about a water bottle and day-to-day fights over the use of a single bathroom provided the audience scope to internalise the play as a real-life event. The portrayal of *Peerun*, particularly, invoked mixed emotions.

The three performances conveyed emotions, information and art in a manner no lecture or speech could achieve. Each play, uniquely themed, was a critique of the existent discrimination and injustice. ■



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Leadership with Trust



Pretty bags

DILEEP Bhagat and his wife, Rekha, make a range of intricately embroidered bags and purses in all shapes and sizes. The embroidery varies from bag to bag but it is very distinctly Gujarati. Dileep Bhai says his wife is from Gujarat and he is from Delhi. He fell in love with her and then he went to Gujarat to meet her family. There he fell in love again: this time with Kutchi embroidery.

Dileep Bhai learnt how to embroider and became skilful at wielding the needle. He set up a workshop in Delhi with his wife and he now employs four artisans. "An artisan can work from anywhere," he says. "I just need my tools. I can do Kutchi embroidery, patchwork, appliqué work, mirror work and so on."

His purses are ideal for an evening out and can match any outfit, be it a sari or a dress. Most purses are beautifully embroidered with thread.

There are pretty ones done with brocade and beads too. Prices are very reasonable. ■

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Healthy honey

Sanjay Kumar is a post-graduate in sociology but to earn a living he learnt bee-keeping at the Rajendra Agricultural University in Samastipur, Bihar, which, he says, is the oldest agricultural university in India. Kumar initially invested just ₹15,000 and started an apiary.

He now produces his own honey branded as Pusa Honey. "It is absolutely pure and excellent for your health," he says. Pusa Honey now sells in Bihar, Jharkhand and Delhi. Kumar says he can't expand his honey business any further because quality would suffer. "I have to travel with my bees to different states to catch the flowering season. Bee-keeping requires a lot of personal oversight," he explains.

So Kumar has kept his honey-making business small and instead expanded into selling other products. He markets salted soya nuts, flax seeds, amla candy and litchi juice.

"The Pusa Institute in Delhi has the technology to produce a range of agri-products. They offer a variety of courses. You can learn from them and become an entrepreneur straightaway," he says. ■



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