

# Civil Society



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# SPREADING THE WELLNESS OF HERBS



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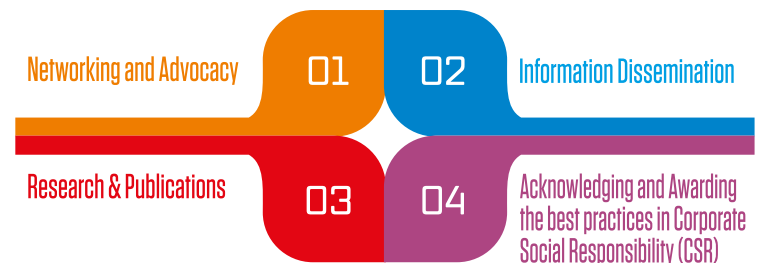
-Aditya Vikram Birla (1943 - 1995)  
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## ANNOUNCEMENT

### 2 Days Training Program on Result Based Program Management

Date: 23 and 24 August, 2018 | Venue: FICCI, Federation House, New Delhi

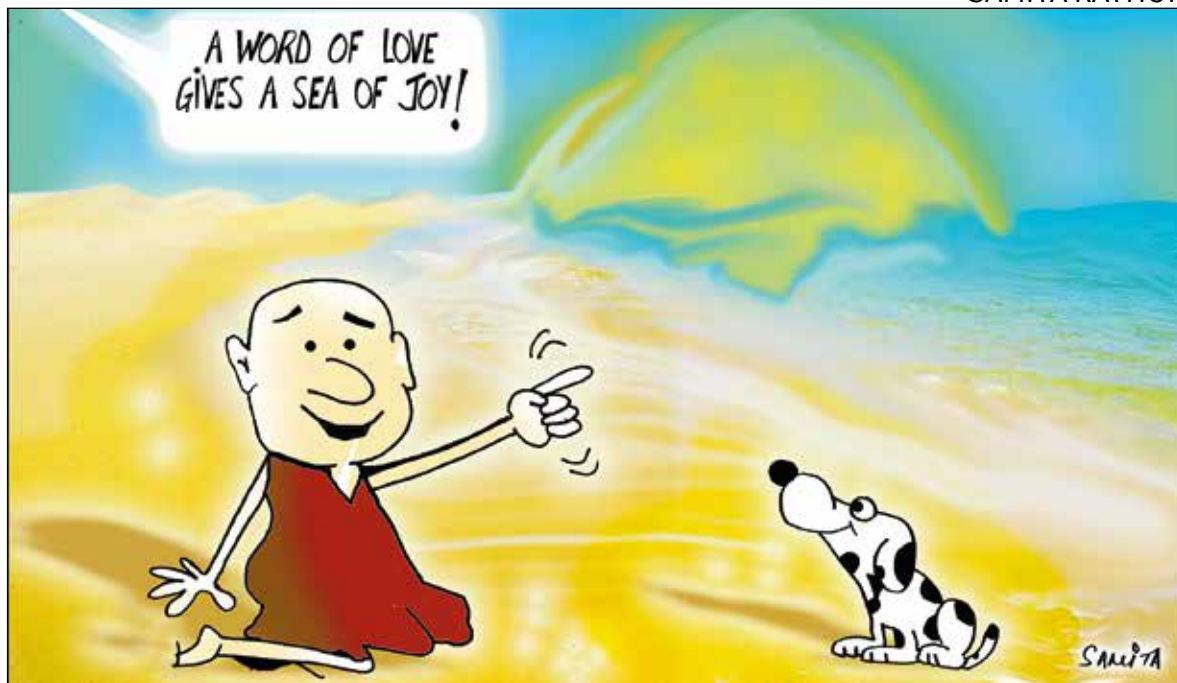
The training on Result based project management (RBM) is designed to address the growing demand for CSR managers who can use Results-based program management approaches to identify, assess, plan, implement and manage an ever burgeoning range of potential development programs and CSR projects. RBM provides a structured, logical model to manage an intervention while trying to ensure its relevance, efficiency, effectiveness, impact and other quality criteria. Few of the key results based management tools such as Monitoring and evaluation are increasingly being used to help ensure that resources are put to optimum use and that beneficiaries and stakeholders are assured of receiving the benefits that are committed to them.

At the end of 2 days training program, participants will have developed an understanding on the stages of project cycle, implementation of Results based management, Steps for conducting and designing monitoring etc.

To know more about the training programme and fee details, please visit [www.csrcfe.org](http://www.csrcfe.org) or email your specific query at [csrcfe@ficci.com](mailto:csrcfe@ficci.com)

## IN THE LIGHT

SAMITA RATHOR



models of solar cookers, solar lanterns and other solar equipment. Citizens can pay a small surcharge on income tax to fund research and development in renewable energy.

**Narendra M Apte**

### Idyllic farm

The Bible says whatever you sow, you will reap. Time and effort invested in working with the land will definitely bear fruit. Anthony Pacheco has proven that there is no such thing as bad land or poor soil. Even rocks can be made to bear fruit. Thanks for telling us his story.

**Brian Pinheiro**

Anthony Pacheco's efforts are laudatory. The need of the hour is to spread this knowledge to marginal farmers. How do we do this is the question.

**Abhay Kesarkar**

The story on Anthony Pacheco really took me by surprise. He has shown that great knowledge, hard work, passion and a positive attitude can do wonders for your life. I wish him more success in organic farming.

**Jose**

### Helpage survey

Your story, 'Elders under growing shadow of abuse,' reflects a worrying trend. Elderly people from the working class population are especially vulnerable since they don't have savings in the first place. They need pensions and free healthcare.

**Renuka Sen**

Letters should be sent to  
response@civilsocietyonline.com

## LETTERS



### Green funds

I read your interview with Naina Lal Kidwai, 'Look beyond bank for green funding.' She is absolutely correct. Of course, in the present situation, banks are chary of lending to any project. But, most small entrepreneurs, whether in solar energy or waste management, have always relied on international agencies for start-up funding. Banks turn them away because they prefer to look at traditional businesses instead of sunrise sectors.

**Shikha Mishra**

### Sun power

We have not fully explored the

possibility of using renewable sources of energy, particularly solar energy, in the commercial establishments in our cities and towns. My query is this: is it not possible to use solar cookers in millions of rural homes? I think if new energy-efficient models of solar cookers are devised and if solar cookers are made available at subsidised prices, millions of rural women will use these cookers.

Also, I believe it is possible to use solar cookers in hundreds of restaurants. That would really reduce pollution and save conventional energy. Massive research efforts, funded by the central government, are required to improve existing

### Maternal health

Thanks for the cover story, 'Lifeline in Araku'. The Piramal Foundation's health initiative is impressive. Undoubtedly the tribal community has the worst health indicators whether it is malnutrition, maternal mortality or infant survival. What Piramal Swasthya's model shows is that the government health system needs both infrastructure and human resources. The Ashas are obviously overburdened. Perhaps the private sector, as in this case, can step in and lend a helping hand.

**Srishti Dev Burman**

I don't know of any other company which has reduced maternal mortality to zero in a tribal region. Congratulations to the Piramal Foundation for this achievement.

**Shantha Sinha**

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# Civil Society

READ US. WE READ YOU.

## Improving rural incomes

**M**UCH is made of increasing the income of farmers when the broad solutions stare us in the face. Farmers should be able to get to markets on terms that help them and we have to stop seeing rural prosperity as something emanating from cultivation alone. Entrepreneurial and employment opportunities across a range of activities are needed — both to let farmers get a better deal and also to allow local businesses to come up. Writing off loans and minimum support prices are fine as band aid, but they don't add up to much in the long term. Robust solutions will depend on appropriate choice of crops, useful technologies, availability of finance and dependable interfaces with markets.

Our cover story this month shows how a small mobile milling device has transformed output and prosperity in a panchayat in Kerala. We also happened to interview R.S. Sodhi, the managing director of Amul, who told us how the federation of cooperatives in Gujarat has gone from strength to strength and brought change over generations in villages. These are lessons here which should be picked up and multiplied.

A few years ago we interviewed Dr M.S. Swaminathan on his famous report asking for, among other things, a national market for farm produce. He lamented the fact that his report had found little or no resonance in the government. It was adopted in bits and pieces when a bold and comprehensive approach some years ago would have done much to deliver a healthier rural sector today.

Jean Dreze, the economist and activist, stays close to the ground. He is also objective and not averse to new technologies. We turned to him for his views on the working of the Public Distribution System (PDS) in Jharkhand and the disturbing reports of deaths resulting from denial of rations because of glitches related to Aadhaar. Dreze says at least seven deaths can be linked to Aadhaar. Even one death should be too many. Deaths are indicative of a much larger problem with the centralised Aadhaar system of biometric identification.

Perhaps smart cards would work better. Or maybe as in the case of Chhattisgarh, the old PDS system with proper monitoring is the best to go with. A course correction is needed in Direct Benefit Transfers (DBTs) of one kind or the other. A single technological fix doesn't deliver the same result in different social circumstances. Governance needs to be efficient but to say that we are saving money through DBT even as people are going hungry and dying makes little sense.

Finally, we have a wonderful example of inclusion from Telangana. Social welfare schools run by the government there have been providing residential accommodation, healthy meals and a sound education to children from socially disadvantaged homes. But how do you change the mindset of the young and get them to look beyond servitude? Horse riding is one way of empowering them to think differently. So, riding now is a part of the education being imparted in these remarkable schools.

**Publisher**  
Umesh Anand

**Editor**  
Rita Anand

**News Network**  
Shree Padre, Saibal Chatterjee, Jehangir Rashid, Susheela Nair, Kavita Charanji

**Photography**  
Shrey Gupta

**Layout & Design**  
Virender Chauhan

**Cartoonist**  
Samita Rathor

**Write to Civil Society at:**  
A-16 (West Side), 1st Floor, South Extension Part 2, New Delhi -110049.  
Ph: 011-46033825, 9811787772  
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# ‘7 hunger deaths in Jharkhand were related to Aadhaar’

## Jean Dreze on faultlines in the government's delivery system

Civil Society News  
New Delhi

**I**N the past two years starvation deaths are being consistently reported from Jharkhand. Activists who went to investigate found that it was people who were very poor and not being given their rations who lost their lives. They just had no food — in a country where there is no shortage of food!

The major reason why people were not getting their rations was Aadhaar. It has been made mandatory by the central government for getting rations. The poor depend on inexpensive food from ration shops and they are being turned away because either their Aadhaar has not been linked to their ration card or their fingerprints do not match. Or connectivity is very poor.

And all this is not the fault of the people but the government. Similarly, a Direct Benefit Transfer (DBT) scheme of the government in Nagri block of Jharkhand has people asking for a return to the old system of ration cards. For the elderly, things are even worse. Pensions are now linked to Aadhaar. There are old people running back and forth to banks because pensions are delayed — in one case for two years — or even transferred into someone else's account. So they do not have money to buy food.

Right to Food campaigners protested outside Jharkhand Bhavan in Delhi on July 13 against such starvation deaths and lynching. They demanded delinking of Aadhaar from all public services, withdrawal of DBT, a grievance redressal system, and implementation of all the provisions of the National Food Security law.

In an interview with *Civil Society*, economist and activist Jean Dreze provides insight into these concerns and developments on the ground in Jharkhand.

**Is there any estimate of how many people have died of starvation in Jharkhand since the Aadhaar card began to be used for receiving rations?**

Starvation deaths are not easy to define and counting them would be

difficult even if we had all the relevant information. What we do know is that a dozen hunger-related deaths have been reported in Jharkhand since Santoshi Kumari, a young Ghasi girl, died of starvation last September. Most of them have been carefully investigated and I don't think there is any doubt that prolonged hunger played a part in most cases.

Out of 12 reported hunger deaths, at least seven were related in one way or another to Aadhaar. In Santoshi Kumari's case, for instance, the family's ration card had been cancelled for lack of linkage with Aadhaar. Other Aadhaar-related factors include pensions being discontinued or diverted due to faulty Aadhaar linkage, and biometric failures at the ration shop.

**The Union government did announce that Aadhaar authentication is not compulsory for securing rations. Another state minister said that any form of verification like a voter ID card would do. Why is the government's order not being followed by ration shop owners?**

The Union government has never retracted its policy of making Aadhaar compulsory in the public distribution system (PDS). The only qualification, under the Aadhaar Act, is that if you don't have Aadhaar then as long as you apply for enrolment you are entitled to an alternative means of



Jean Dreze: 'The Union government has never retracted its policy

identification in the interim. So, the bottom line is the same: no rations without Aadhaar, at least not beyond the deadline, which varies from state to state. In Jharkhand, the deadline is already over.

Aside from linkage of ration cards with Aadhaar, the Union government is trying hard to impose Aadhaar-based biometric authentication (ABBA) on the PDS. A few months ago, the food ministry did order the states to ensure that PDS cardholders who are unable to pass the biometric test receive rations using an exemption register. A recent verification of exemption registers in Ranchi district, however, found that none of the sample ration shops maintained such registers.

SHREY GUPTA

**Has Aadhaar actually ended up expanding the scope for corruption in the PDS? Where does the ration which is not given to the people go?** I don't think that Aadhaar necessarily leads to more corruption in the PDS, but it can certainly happen. It did happen in Jharkhand, at least initially. One reason is that when cardholders failed the biometric test, their rations were appropriated by the PDS dealer.

Closing stocks were meant to be adjusted against the next month's allocation, but that did not happen for a long time. Another possible reason is that biometric authentication leads to a large increase in distribution time, because of connectivity problems and so on. When dealers spend, say, two weeks



A Right to Food protest in Delhi



of making Aadhaar compulsory in the PDS'

**'In Jharkhand, a lot of the Aadhaar-related work, such as linking ration cards with Aadhaar, is palmed off to PDS dealers for lack of departmental staff. This puts people at the mercy of the local dealer. It reinforces the real root of corruption which is the imbalance of power between cardholders and dealers.'**

distributing rations instead of three days, they naturally want to get something for it. So they look for new ways to cheat.

**Has the government acted against ration owners who don't give rations due to non-authentication of Aadhaar? Is there any grievance redressal mechanism in the state which people can seek help from?**

I am not aware of any instance in Jharkhand of a dealer being penalised for failing to give rations to someone who is unable to pass the biometric test. I doubt very much that this ever happened.

Grievance redressal mechanisms tend to be very weak. In Jharkhand, a lot of the Aadhaar-related work, such as linking ration cards with Aadhaar, is palmed off to PDS dealers for lack of departmental staff. This puts people at the mercy of the local dealer. In other words, it reinforces the real root of corruption, which is the power imbalance between cardholders and dealers. Independent assistance facilities, such as the district grievance redressal

officer, are very difficult to reach for most people.

**Considering that malnutrition, especially among women and children, is extremely high in Jharkhand, is the state implementing any aspect of the food security law? Do ration shops give pulses and oil, for instance?**

By and large, Jharkhand is complying with the National Food Security Act (NFSA) as far as the PDS is concerned, except that many eligible persons are still excluded. The Act, however, does not prescribe distribution of pulses and oil. Some states do it of their own initiative, but not Jharkhand.

NFSA provisions relating to midday meals and the Integrated Child Development Services (ICDS) are also being implemented in Jharkhand. In fact, Jharkhand is now serving eggs in both schools and *anganwadis*, a real step forward in a state where child under-nutrition levels are so high.

Maternity entitlements, however, are being violated in Jharkhand and for that matter across the country. Under the Act, all pregnant women are

entitled to maternity benefits of ₹6,000 per child. After dilly-dallying for five years, the central government finally launched a national maternity benefit scheme this year, the Pradhan Mantri Matru Vandana Yojana (PMMVY). Under the PMMVY, however, maternity benefits are restricted to the first living child and reduced to ₹5,000 per child. This is a flagrant violation of the Act. Further, the application procedure is cumbersome, and of course, Aadhaar is compulsory.

**A survey done recently in Jharkhand showed that an overwhelming number of people in villages preferred the old system of ration cards. Should the old system be revived?**

That survey pertained to the so-called 'DBT for food subsidy' experiment in Nagri block. The Nagri experiment is even worse than Aadhaar-based biometric authentication. Instead of getting rice at ₹1 per kg at the ration shop, PDS cardholders in Nagri receive money in their bank account, so that they can buy rice at the ration shop at ₹32 per kg.

Many of them have to make three expensive and time-consuming trips to collect their rations: first to the bank, to check whether the money has arrived; then to the Pragma Kendra (business correspondent), to collect the cash; then to the ration shop. Biometric authentication applies at the Pragma Kendra and the ration shop. The transaction costs are huge and the entire system is a monumental mess. The survey, completed in February by student volunteers, showed that 97 percent of respondents were opposed to it and wanted the old system back.

The Jharkhand government, however, questioned the survey and decided to conduct its own social audit of the Nagri experiment. The findings were almost exactly the same, including the proportion of respondents who oppose the experiment — 97 percent again!

In addition, all but two gram sabhas in Nagri block passed resolutions opposing DBT and asking for a return to the old system of subsidised rice. A third set of evaluations, by Microsave, also came to the conclusion that the Nagri experiment should be discontinued. But this is yet to happen and meanwhile many families in Nagri continue to be deprived of their food rations, in violation of the law.

**How has Chhattisgarh, which had a fairly sound PDS, handled Aadhaar?**

To the best of my knowledge, compulsory biometric authentication is yet to be introduced in Chhattisgarh. But the central government is determined to impose ABBA on the PDS across the country, and it is only a matter of time until Chhattisgarh caves in.

**Should Aadhaar by law be removed as a system of accessing rations? After all, it does not identify the beneficiary since fingerprint authentication often fails.**

In my view, ABBA does not serve any purpose in the PDS. It is particularly inappropriate in states like Jharkhand where connectivity is very poor. There are simpler and more reliable alternatives, such as smart cards. In fact, smart cards have been used with good effect in states like Himachal Pradesh and Tamil Nadu. There is no need for a law to remove ABBA from the PDS; the central government can do it any day. ■

# ‘Every year, if we earn more, we

## R.S. Sodhi on the Amul success story

SHREY GUPTA

Civil Society News  
New Delhi

AMUL is easily one of India’s most recognised and loved brands. Much of the following it enjoys is because of the consistent quality of its products. An equally important reason is that Amul is the outcome of a successful farmers’ cooperative in Gujarat. The money it makes serendipitously goes back to milk producers.

While the cooperative movement in India has generally been riddled with problems and failures, the Gujarat Cooperative Milk Marketing Federation (GCMMF) has shown how farmers can happily come together to go to market profitably.

The vision for Amul and the foundations of the organisation, headquartered at Anand, came from the legendary Dr Verghese Kurien. But Amul’s continuing success over the years is also a story waiting to be documented — particularly in the light of farmers in Maharashtra and Madhya Pradesh throwing their milk on roads to protest low prices. What does Amul do right that others can’t?

To find out, we spoke with R.S. Sodhi, the warm and unassuming managing director of GCMMF. Sodhi worked closely with Dr Kurien after graduating from the Institute of Rural Management (IRMA). Like his mentor did, Sodhi has stayed at Amul over the years and has seen the growth of the business and how it has primarily served the interests of farmers.

### What is the impact Amul has had in the villages where you have been working for so many years?

Forty years ago people were migrating to Surat or Mumbai to work in the diamond sector. There was no source of livelihood. Agriculture was totally rain-fed. Today just one district is earning ₹25 crore per day, and this money is gearing up its entire economy. The lady dairy farmer uses the money she earns to buy vegetables, household goods, pay school fees, or send money to her son or daughter studying elsewhere.

About three years ago I had attended a *sabha* of widows organised by a district union. Around 10,000 widows who were totally dependent on dairy-farming attended. One of them told me that when her husband passed away, her in-laws told her they couldn’t feed her. They didn’t have enough to feed themselves.

The lady had just one cow. She started giving that milk to the village cooperative society. From those earnings she bought another calf. Then she bought a buffalo. Not only did she get her children educated, she even sent one daughter abroad for studies and she now earns ₹24 lakh a year. She isn’t well-



R.S. Sodhi: ‘The farmer owns the entire value chain, not just processing and marketing’

educated at all and has no other assets or source of income.

### So you don’t see poverty in the areas where you work?

See, for dairy you don’t even need land. You need two hands and the will to work. You don’t need to worry about market linkages. Every village has a cooperative society. You just go there and give them the milk. Based on quality and quantity you will be paid. Your payment is assured. Milk isn’t like other agricultural commodities where production increases in winter and prices fall.

### You don’t have that kind of price fluctuation?

The price of dairy is steady and gradually increasing. The dairy farmer is giving milk to her own village cooperative society, to a dairy owned by her. The milk is converted into value-added products by Amul, India’s number one brand, and whatever value addition is done, the farmer gets the benefit. She owns the entire value chain, not just processing and marketing. She owns the cooperative — not the government or a private entrepreneur.

### How much do you pay the dairy farmer for milk?

Around 80 to 82 percent of the price of the milk we sell goes back to the farmer. The rest meets all our expenses, including transportation and margins. If you see our balance sheet — supposing it is ₹36,000 crore this year — by the end of the year our bottom line is nothing.

Every year if we are earning more, we raise the price of milk. Every farmer has a share in the cooperative irrespective of the milk produced. No farmer is interested in dividend.

So, whatever profits we make goes back to the farmer in the shape of price difference. If he gives more milk he gets more money. People are encouraged to produce more and participate more. We see farmers in distress in Maharashtra. They get ₹17 per litre for cow’s milk. In Gujarat, farmers are getting ₹30-31 per litre.

### That’s a huge price difference...

Because in Maharashtra the balance goes to the private entrepreneur, the dairy fellow. The entrepreneur will want to maximise his profit. I am the CEO of a cooperative. My business goal and my



# pay the farmer more'

board's is to buy my raw material at as high a price as possible and sell my finished product at a price that enables me to sell all my raw material.

We don't buy raw material based on the market. Rather we create the market based on our raw material. That's why we sell at a most reasonable price and we keep a minimum gross margin or EBITDA (earnings before interest, taxes, depreciation, and amortisation).

If I was the CEO of a private company or a multinational my objective would be to buy my raw material at the lowest price possible and sell at the highest price possible. My performance would be based on my maximum gross profit or EBITDA.

## In terms of pricing are you aggressive?

You see, branding is basically the tool we use for providing sustainable livelihoods. Our pricing is very clear — every Indian should be able to afford it. We believe in mass scale. No doubt our products, our brands, packaging, advertising is all premium. But our pricing is affordable.

The reason is simple. We want every consumer to buy Amul blindly. Dr Verghese Kurien, my mentor, used to tell us, in marketing you strive to create loyalty to your brand, trust, and then faith. Loyalty may be fluid. I might use Indigo today or Spice Jet tomorrow. But trust is created over time and the most difficult trait to create is faith. He would say, you must create unquestionable faith in the Amul brand.

## How much have prices risen for farmers over the years?

If you look at the last eight or nine years, we have increased prices by around 8 to 9 percent. In the last one or two years, price rise has been minimal, at just 4 to 5 percent because internationally prices are under stress. There is massive recession. That is why farmers in Maharashtra are getting ₹17 per litre when two years ago, they were getting ₹27 per litre for the same milk.

## Several international brands have tried to enter the Indian dairy market. Danone is an example. They have given up and gone. What is the lesson from this?

No international brand, be it Danone or Lactalis or Nestle, has come here for charity or for developing our rural society. They have come mainly for EBITDA. Amul and other cooperatives buy at the maximum price, sell at a reasonable rate and keep costing at a minimum. How can you compete in a market where the market leader operates with this philosophy? Also, we operate on a mass scale.

## Of the total earnings that you have what would your balance sheet be?

Last year at the GMMF (Gujarat Milk Marketing Federation) it was ₹29,000 crore. This year it will be around ₹35,000 crore. The Amul brand has a turnover of about ₹40,000 crore.

## What does it cost you to run your business?

If I sell milk at ₹1, the farmer will get 0.81-0.82

paise. For more value-added products like ice-cream where packaging is involved, it may be 0.50 paise, because of the 28 percent tax and our margins to distributors and retailers are high. Out of our total business 60 percent comes from milk.

## Can you tell us about the services Amul provides to farmers?

We provide veterinary services. We have 850 doctors who go every week to villages. We also have emergency veterinary services. The farmer just has to make a call and within two hours our mobile doctors will come and treat your animal. For breed improvement we provide artificial insemination services. Then we provide cattle feed. Each of our unions has a cattle feed factory. We are the largest producer of cattle feed in the country, which we sell to farmers at a no-profit no-loss basis.

## Many cooperatives in the agro sector have dissolved in disputes and politics. How come that has not happened with Amul? Do you have a dispute mechanism?

Wherever there are people there will be politics. Politics is part of a democratic society. We have 3.6

**'Branding is the tool we use for providing sustainable livelihoods. We believe in mass scale. Our brands, our packaging are all premium. But our pricing is affordable.'**

million members. I will not say there is no politics. It exists till the elections of the board. After that, decisions are taken based purely on business. I interact with the board. Amul is managed by professionals who have nothing to do with politics. There is no political interference.

Amul is India's number one brand, but let me tell you, in each state its respective cooperative is the number one brand. You go to Punjab, it is Verka. In Bihar, it is Sudha. In Rajasthan, it is Saras. In Karnataka, Nandini is doing very well.

They may not be able to mark a presence like we do because we are independent. In those cooperatives the state government has a say. It will appoint the managing director, most probably an IAS officer for maybe one, two, or three years. Their term is short so they may not be able to implement their ideas.

In Amul we have great continuity. I have been with Amul for 37 years. I worked with Dr Kurien. In 44 years I am only the third MD since 1973. The DNA of our organisation was formed by its founders. What I have learnt is that it is important to transmit this DNA, our value system, to the people who join.

## What is Amul's DNA?

Very simply, first, we are working for farmers. Second is integrity. Dr Kurien told me, never compromise on integrity. Then there is excellence in whatever you do, whether it is standards or technology or buildings or design.

I am often surprised when an organisation is built by pulling in people from different organisations. Imagine what its DNA will be, I think.

## How large is the strength of Amul?

We have a three-tiered structure. At village level, we have 18,000 cooperative societies. We have 18 district unions, each covering one or two regular districts. We have our processing facilities and our state cooperative federation at the apex. Where I work at the apex we have 1,000 people. The 18 district unions have about 15,000 people.

## You are also expanding outside Gujarat?

About 15 percent of the milk we process comes from UP, Maharashtra, Rajasthan, Punjab, Madhya Pradesh, West Bengal and, more recently, from Assam.

It's not nice to take milk from Gujarat for a processing plant in Kanpur or Lucknow. If I transport 200,000 litres of milk there, it will create a surplus in that region. So we source the milk locally. In Delhi about 60 percent of the milk we sell comes from around Delhi itself. We bring in the deficit. Outside Gujarat we have about 15 to 16 plants, and another eight to nine are leased plants.

## But the eastern region is not a milk-producing area.

No, that is a myth. Eight or nine years ago when we

went to Kolkata, we transported milk in railway tankers to the city. Then we started procuring locally and we were surprised. We got the best milk there from each village society, both in quantity and quality. Today, we sell about 900,000 litres of milk and it is bought from around Kolkata. Farmers in India want stable remunerative prices. This is what we realised. They need that assurance. In Assam we have just started procuring milk.

## What are the popular cow breeds? There has been this controversy over desi versus foreign cows.

We do have good indigenous breeds like Kankrej, Sahiwal, Gir. But for commercial purposes farmers prefer the Holstein Friesian because it gives double the quantity that local breeds give. So farmers will keep *desi* cows but for business it is the foreign cow.

## What is happening to the old cows?

God knows.

## What is it like to represent farmers? You could have headed any company.

When you work with a visionary like Dr Kurien for 30 years you get a different kind of high. In Amul you feel you are working for people who need you and really appreciate and respect you — the small farmer, the widowed lady, the landless people. When you see that smile on their faces, you feel along with your salary, you are earning blessings. Contrast that with working for a guy on Peddar Road who isn't really bothered about you! ■

# J&K readies for panchayat polls

**Jehangir Rashid**  
Srinagar

THE process of holding panchayat elections in Jammu and Kashmir has begun after a decision taken by the State Administrative Council (SAC) at a meeting chaired by Governor Narendra Nath Vohra on July 12.

The SAC has also approved the proposal for having sarpanches elected directly by people to Halqua Panchayats, the lowest tier at the village level, instead of from among panches.

Both decisions are being widely welcomed as steps to strengthen democracy at the grassroots. The last time panchayat elections were held was in 2011, but with the spectre of militancy looming over them the elected representatives soon became dysfunctional.

Under the J&K Panchayati Raj Act of 1989, the Halqua Panchayat is the lowest tier at the village level. The other two being the block and district levels. A Halqua Panchayat has 10 or 11 panches and a sarpanch.

The previous Bharatiya Janata Party (BJP) and Peoples Democratic Party (PDP) government failed to hold panchayat elections when they were due. Additionally, it dealt a blow to the local bodies by amending the J&K Panchayati Raj Act so that sarpanches would be elected from among panches.

Earlier, sarpanches were directly elected by the people and were also accountable to them. The SAC has restored that position.

The last panchayat elections in 2011 were enthusiastically received by the voters and those who were seeking to be elected. It was hoped that local self-governance at the village level would deal with innumerable quality of life issues and bring development.

But the panchayats were never adequately empowered legally nor given the administrative support they needed. On the contrary they became easy targets for militants who did not want good and effective governance to succeed at the grassroots. Left as they were to fend for themselves, 10 representatives were killed and many others were injured in attacks. Some 20 of them resigned in fear.

In Kashmir, the demand is for effective panchayats which are empowered to address the needs of people at their doorsteps. It is felt that the panchayats should be apolitical and entirely focused on delivering development.

The most important demand is that the provisions of the 73rd Amendment of the Constitution for local self-governance be implemented in J&K. At present it is the J&K Panchayati Raj Act of 1989, which prevails.

Welcoming the amendment, the All Jammu and Kashmir Panchayat Conference (AJKPC) described the step as historic, stating that it would strengthen democracy at the grassroots. The AJKPC, which is an organisation of former sarpanches and panches,

said that the step would encourage more young people to join the panchayats.

In a statement, the AJKPC chairman, Shafiq Mir, asked political parties not to politicise panchayats and to treat them as community institutions. "We are just a self-governing institution looking after local development issues and we have nothing to do with any kind of politics. As such all political groups should remain aloof from the panchayat elections and not poke their noses in this process," said Mir.

The AJKPC president, Anil Sharma, said that holding of elections would not serve any purpose until the 73rd Amendment of the Constitution was applied to J&K. He said the panchayats need to be empowered and that is possible only with the implementation of the 73rd Amendment.

"The governor can hold elections for panchayats since he has got the authority to do so. However, the elections need to be carried out in the true sense. We have been demanding the implementation of the 73rd Amendment in J&K for a long time now. It is important that the governor pays heed to our request if he is serious about empowering people at the village level," said Sharma.

The AJKPC president said that many people took the plunge into panchayat polls the last time in the hope that they would make a difference in local self-government, but were disappointed.

"Despite taking all the risks panchayat representatives were never empowered in J&K. This led to disillusionment among them and among the people. We don't want to be at the mercy of the politicians and the government," said Sharma.

"The previous state government virtually murdered democracy by ordering selection of sarpanches from panches instead of direct election of sarpanches. There is a need to fully empower three-tier self-government in the state," said Sharma.

The AJKPC president said that legislators should have a minimal role in the Block Development Council (BDC) and District Development Board (DDB). He said ministers and legislators should not chair the meetings of these entities so that panchayat representatives are free to do their job.

Those who fought panchayat polls in Kashmir in 2011 demanded that they should not be turned into sitting ducks by the government. They said that panchayats in Kashmir can be successful only when the system is strengthened by giving due powers to the panches and sarpanches.

"What is the point of fighting elections when the state government is not ready to empower us and allow us to work? It is better to sit at home rather than risk our lives by working against the diktats of militants. There is a fear psychosis among the people," said a group of former panchayat representatives this correspondent spoke to.

Militant organisations have already warned people against voting and standing for election. People are naturally apprehensive though they are also eager to have self-governance. ■

## Saddling up

**Civil Society News**  
Hyderabad

HOW do you get socially marginalised children to see themselves differently? One way is to put them on horses and teach them to ride. To be in the saddle is to be on top and in a position of control. It can be a transformative experience, which, in an instant, upturns old equations.

At the social welfare schools run by the government in Telangana, some 500 children have been learning horse riding from Captain Mehboob Arastu, a retired army officer who runs an academy for riding. From stroking a horse to mounting it and commanding it in full stride, the children get to know what it means to be in command.

It is a wholly new experience for them because the children come from Dalit and tribal families which are extremely poor and socially disadvantaged. At the social welfare schools run by the Telangana government, they are looked after in hostels and get a full education at government cost. A great many of them go on to acquire higher degrees and find jobs that take them out of poverty in one generation.



# for social horsepower

An important part of their education is to see themselves differently and enable them to seize opportunities that normally go to the privileged in society. Learning English, for instance, is one way of empowerment. Getting onto a horse, customarily reserved for the rich and powerful, is another.

“We made riding a reality for our children as we strongly believe the gap between being rich and poor is just an opportunity. With riding the idea is to promote leadership and problem-solving skills and thereby help young boys and girls enter the modern world as independent and confident individuals. And we deeply believe that a person who can tame the horse can tame any wild situation in life,” says Dr R.S. Praveen Kumar, who is secretary of the Telangana Social Welfare Residential Educational Institutions Society (TSWREIS) and the Telangana Tribal Welfare Residential Educational Society (TTWREIS).

Dr Kumar is an alumnus of the same social welfare schools he now heads. He was for 25 years a very successful police officer till he opted for this assignment in 2012. Coming back, he has made path-breaking efforts to help children deal with the problem of identity and show them that they can reach for the stars. He achieved this quite

literally when Malavath Poorna, a tribal girl, and Anand Kumar, a Dalit boy, scaled Everest in 2014.

Dr Kumar brims with positive energy. He is a lean man with a shaven head and, though he is 52, looks 20 years younger. He says that is because he runs at least 30 km a week. But the real reason is probably his indomitable spirit and celebration of life.

Like the students he enthusiastically shepherds now, he emerged from a childhood in extreme poverty to get an education at these very same schools, became a police officer, and also studied at Harvard. Dr Kumar believes everyone can do it.

In the past four years, students have got admission to colleges in Delhi University, the IITs and NITs, the Azim Premji University and the Tata Institute of Social Sciences.

“As an emancipated person, I strongly believe that dreaming is very important for the most deprived sections of society and poor children must not kill their dreams no matter what their family and economic background,” says Dr Kumar.

“I saw my priority as creating an opportunity for children to realise their inherent capabilities. If not us, who? If not now, when? We launched an identity re-engineering mission by telling our students that they are not inferior to anyone and



nothing is beyond their reach. The students were introduced to a host of empowerment programmes with a view to freeing them from all sorts of inhibitions, inferiority complexes, negative stereotyping, and enslavement,” explains Dr Kumar. ■





The spic and span interiors include facilities like a shower, a diaper-changing station, hand-washing basins, sanitary napkins and drinking water

# THE RESTROOM BUS IS HERE

Civil Society News  
New Delhi

**I**N the sunrise sanitation sector, Ulka Sadalkar is a pioneer. She runs modern toilets in refurbished buses exclusively for women in Pune. The old buses would have ended up in landfill sites or at a scrap dealer's yard. But Sadalkar, and her business partner, Rajeev Kher, changed their destiny.

Ten of those buses now sport bright exteriors with solar panels on top. Inside, the bus has Indian-style toilets and western-style ones. There is a shower, a diaper-changing station, hand-washing basins with soap, sanitary napkins, drinking water, and a place to just sit.

Posters in Marathi urge women not to forget to wash their hands or flush the toilet after use. Each bus has an attendant who keeps the space scrupulously clean throughout the day and a technician to ensure everything works.

"We want to change the concept of public toilets in India. Generally, women use the toilet before they leave home because they know they won't find one in public spaces. Even if they do, it will be dirty and unusable," says Sadalkar.

The restroom buses, called Ti or Toilets for Her were launched in November 2017 by Sadalkar and Kher's company, Saraplast Pvt. Ltd. under a division of their business named 3S. "Ti in Marathi means 'her,'" says Sadalkar.

The Pune Municipal Corporation (PMC) and a pool of companies got together to help the fledgling enterprise take off.

Sadalkar is a production engineer who graduated from the Bharatiya Vidyapeeth College of Engineering in Pune. She worked in a steel forging unit linked to the auto sector when she met Kher,



Old buses are refurbished

an MBA from Symbiosis College. He had returned to Pune after working in the finance sector in Canada. They were both keen to do something for the country. Setting up clean toilets, they realised, was a much-needed public service and could also be a profit-making business.

In 2006 they launched Saraplast with two portable toilets imported by Kher from a German manufacturer. They approached banks for finance but were turned away. "It was such a new concept then," explains Sadalkar. Eventually, in 2008

Aavishkaar Venture Capital and responsAbility came to their rescue and their business got off the ground.

Initially, Saraplast provided portable toilets for migrant workers at construction sites and event management companies. Even today 80 percent of their portable toilets are for construction sites and they are kept very clean, says Sadalkar.

"We read about this concept of using old buses as restrooms for homeless people. We wanted to replicate the idea in Pune for women. The city is



densely populated. There isn't space to construct toilets. Buses wouldn't need much space and could be refurbished. Also, clean public toilets are integral to the Swachh Bharat movement and for Pune's Smart City initiative," says Sadalkar.

Sadalkar and Kher talked to Kunal Kumar, commissioner of the PMC, who was very enthusiastic about the idea. Pune is slated to become India's first Smart Sanitation City.

Kumar helped them get the old buses and mapped locations where they could be stationed. Water and sewage connections were identified and electricity connections provided since during the monsoons, solar power is not enough.

Companies in Pune such as Indus Towers, Builders Association and Firmenich pooled their CSR funds to support TI. "Without all this help, it would have been a nightmare," says Sadalkar. It costs ₹50,000 to ₹60,000 per month to run one restroom bus.

Three locations were given priority: recreational

**The buses have been located at parks and tourist spots, busy crossroads, areas close to slums. Some of the buses are used by 300 women every day, an indicator of the demand.**

spaces like parks and tourist spots, commuter areas such as busy crossroads, and community areas close to slums. Some of the buses are getting footfalls of 300 women per day, an indicator of how big the gap between supply and demand for public toilets is.

"And we haven't even advertised or branded our TIs," says Sadalkar.

"Women aren't used to finding such restrooms. There is this wow factor. Their reaction is, well, so the government finally cares for us," says Sadalkar. Women of all classes use the toilets, rich and poor, literate and illiterate.

Right now there is no charge for using the restrooms because Sadalkar says they wanted to build trust about public toilets among women and initiate behaviour change. But they are planning to transit to a pay-and-use model and Sadalkar has thought of several ideas.

There is space for advertising on the bus and for displaying videos inside, she points out. Every bus is being wifi-enabled. The TI can offer personal products for women. It can be a hub for information on women's illnesses. Perhaps a laundrette could be added or a market. Women can also sell products that they make. "It's all about women helping other women," says Sadalkar.

In 2018, the Toilet Board Coalition, consisting of a global group of companies keen to boost the sanitation economy, chose TI to be part of their Toilet Accelerator cohort. Under this programme, Toilet Accelerator works with new-age sanitation businesses to make them commercially viable and help them use toilet resources.

"We are working with Unilever, Kimberly-Clark, and Firmenich to refine our business model and prepare for scale. It's incredible how much we have learnt about marketing, branding, human resources, finance, and work styles from companies. We have regular webinars with them. Also, Transform underlined to us the importance of talking to our clients and initiating behaviour change," says Sadalkar.

Transform is a partnership between DFID and Unilever that helps small businesses who deliver services to low-income households.

Sanitation is a sector with the potential to create jobs and make a big social impact. The Toilet Coalition Board estimates the sanitation economy will be worth some \$62 billion by 2021 in India.

"We would like to expand and go to other cities. But we can't cater to all of India. Anybody can start a business like ours. It isn't a dirty business at all. You make money. And sanitation has its own glamour," says Sadalkar. ■

## Samita's World

by SAMITA RATHOR



SAGUN GAWADE



# Can citizen sentinels tame Goa's traffic?

Derek Almeida  
Panaji

THE Goa Traffic Cell has 600 police personnel and 400 Home Guards to clamp down on traffic offenders and tame unruly traffic. It has recently been given added muscle. Thanks to a sentinel scheme launched by Director-General of Police (DGP) Muktesh Chander, the traffic cell now has an additional 2,484 people on the lookout for violations on roads.

The scheme effectively turns citizens into traffic watchers. So, it will be tougher for traffic offenders to blithely zip away.

The demand for vehicles in Goa continues to grow despite the shutdown of the mining sector. As of April 30 last year the state had around 12.45 lakh vehicles. In 2017-18 alone, around 49,000 two-wheelers and 18,000 cars were added to the total figure. On an average, around 70,000 new vehicles debut on the roads every year.

This growing number of vehicles results in more accidents and places an enormous burden on the already stretched Goa Traffic Cell. In 2017, the state witnessed 6,419 accidents in which 315 people lost their lives and 296 suffered grievous injuries.

Under the sentinel scheme, any citizen can register to become a traffic sentinel. All they have to do is get themselves registered with the traffic cell, which is located at Altinho, Panaji, and thereafter start clicking pictures of traffic violations.

"The scheme is the brainchild of our DGP," said Deputy Superintendent of Police Dharmesh Angle. "He had seen its implementation in the national capital and with some modifications opted to introduce it in Goa. The scheme was presented to



Director-General of Police Muktesh Chander

Chief Minister Manohar Parrikar who gave his inputs and it was launched in November last year."

The launch was followed by a publicity campaign. A contact number was published in all newspapers and broadcast in television news bulletins. And it paid off. The state now has 2,484 sentinels who click and send pictures or video clips every day through WhatsApp, generating revenues between ₹10,000 and ₹16,000 per day for the traffic cell.

"A point system is built into the system and a sentinel can earn ₹1,000 for every 100 points scored by him," said Angle.

The scheme covers 10 traffic offences, each with a fixed number of points. For instance, a sentinel can earn 10 points if he sends a picture or a video clip of a vehicle moving against the flow of traffic. Similarly, triple-riding will earn a sentinel 10 points. For catching those jumping a red light, using a mobile while driving, and dangerous driving, sentinels are expected to send video clips only and each offence gets them 10 points.

Driving without a seat belt or riding without a helmet will give sentinels seven points for each offence while parking on the footpath or zebra crossing and driving with tinted glasses would bag three points each.

"All sentinels who participate in the programme can compete for a bumper prize at the end of the year which would have a bike or a car as the prize," said Angle.

The only two conditions placed on sentinels are that they should capture the number plate of the vehicle in the picture or a video clip and not use the scheme to target individuals. "The problem of targeting individuals becomes known to us only when people who come to pay the fines at either the Panaji or Margao office lodge a complaint," explained Angle. Plans are on to accept payment of fines online.

The department made two payments in December last year and January. In December, a sentinel who happened to be a student, earned ₹67,000 and in January another sentinel received a cheque of ₹1 lakh. "So far, the department has disbursed ₹3 lakh in the form of incentives to sentinels while the remaining ₹8 lakh, which is owed to them, is in process," said Angle.

The entire system is manned by a team headed by a police inspector who is assisted by nine constables. Their job is to scan every picture and video sent in by sentinels and decide which one constitutes a violation. The name and address of the vehicle owner is ascertained through the RTO website and a *challan* is dispatched to the police station and then delivered by hand.

The identity of sentinels is kept secret for fear of their being targeted by irate vehicle owners. There was an incident when the identity of a sentinel was revealed by the media and it resulted in an assault. Since then security has been tightened and till date there has been no leak, which speaks volumes for the integrity of the system.

Angle is all praise for the system which, he believes, rivals CCTVs, which are increasingly being used to monitor traffic. "The scheme is a success because it has citizens' participation at its core," he said. "This results in better traffic compliance because of the fear of being watched by sentinels who are not at a fixed spot."

Panaji experimented with the CCTV system and six cameras were installed some years ago by a private firm. However, the system came to a grinding halt following the failure of the government to sign an annual maintenance contract with the company.

Although there is no way of ascertaining the effect of the sentinel system on traffic management, Angle is positive that it is the way forward. "Now people feel they are stakeholders in making our roads safer."

The only stumbling block at the moment is the fact that payments have not been made to sentinels for the past six months; but the good news is that the scheme is still working and pictures and videos continue to pour in.

The quantum of revenue earned by the department through this scheme might still be a fraction of the ₹6.5 crore collected last year through fines for traffic violations, but it is here to stay and as it improves traffic discipline, Goa will have DGP Chander to thank for it. ■

# How BPL women got LPG

**Kavita Charanji**  
New Delhi

**A**BOUT 150 organisations across 26 countries turn to Social Cops, a data intelligence company in New Delhi, for data solutions. Their list of clients includes Singapore Zoo which wants to monitor a rare species; an NGO trying to find out whether its funds are being used to construct quality toilets; an Indian company grappling with sales management; and the Union ministry of rural development, tasked with monitoring 42 flagship schemes.

In fact, Social Cops was named Technology Pioneer 2018 by the World Economic Forum, sharing the limelight with 61 companies including Airbnb, Google, Mozilla and Twitter. “Our work helps build a world with smarter cities, happier citizens, better policies, and a brighter future,” reads their tagline.

Social Cops helps its clients to make quick decisions by collecting primary data, collating it with their data repository, merging data and, finally, making it easy to visualise data on an interactive dashboard. Dirty data is weeded out.

“Our goal is to build products that are as simple to use as WhatsApp for the entire data journey — from data collection to data visualisation, to using alternative data processes that can help decision-making,” says 26-year-old Prukalpa Sankar who, along with Varun Banka, founded Social Cops in 2013. The idea was to use data for tackling critical problems, whether in health, education or the environment.

Their work in helping to implement the Pradhan Mantri Ujjwala Yojana has aroused interest because of the scale involved and the speed with which it was done. The scheme was launched on May 1, 2016, and its aim was to provide free LPG (liquefied petroleum gas) connections to 50 million BPL (Below Poverty Line) women by 2019.

Social Cops partnered the ministry of petroleum and natural gas and three public sector oil companies, Indian Oil Corporation, Hindustan Petroleum (HPCL) and Bharat Petroleum (BPCL), to deliver the LPG connections. In 11 months, 20 million LPG connections were installed; the beneficiaries were happy and so is the ministry.

The LPG scheme is a massive exercise. It involves dealing with three oil companies in 13 states, 18,000 LPG distribution centres, 640 districts, and over 50,000 field mechanics. The data was mind-boggling and so were the bottlenecks. Delivery processes within government are slow-moving, hierarchical, inefficient and dogged by leakages.

The end result is that the real beneficiaries get left out.

Social Cops’ first objective was to find the best locations for 10,000 new LPG distribution centres. The location had to be such that the maximum number of BPL women, who needed clean cooking fuel, would be able to access the centres and get their LPG connections.

Their second objective was to track the thousands

population growth and so on. To make sense of this data, the company used its data transformation engine. Finally, this data was brought together on one common platform so that it could be visualised by government officials on a dashboard with state, district and village-level comparisons, geo-clustering and the 10 best locations for an LPG centre in every district.

To monitor applications for LPG connections, Social Cops put up a real-time interactive tracking dashboard which kept tabs on the applications received, accepted or rejected, and the number of women who finally got LPG connections at state, district and village levels.

SHREY GUPTA

The dashboard had green, yellow and red source codes that enabled Dharmendra Pradhan, minister of petroleum and natural gas, and senior officials to track developments on the ground, view bottlenecks and pull up district nodal officers whose performance was marked red, or commend others.

The dashboard, says Sankar, improved the delivery mechanism of the scheme. One day a chart on the dashboard showed the ministry that many applications for LPG connections were being rejected

by distributors. The Social Cops team analysed the data and found out that rejection rates were high because the women did not have bank accounts, a mandatory requirement for a new gas connection.

Pradhan asked why Jan Dhan Yojana camps could not be held in areas where the rejections occurred. So an order was passed to create convergence between Jan Dhan Yojana and the Ujjwala scheme. “This was such a simple thing that we were able to drive,” says Sankar.

The ministry and Social Cops also had to track whether the beneficiaries were actually getting the LPG connections and whether they were being installed safely.

So whenever a mechanic was sent to instal new connections, he was required to download the Collect app on his phone by the distribution centre to access the beneficiary’s data. He then had to take photographs of the beneficiary with the cylinder and provide evidence that the connections had been installed safely.

Sankar has an interesting story to tell about her field visit to a small district in Uttar Pradesh. “One of the women said that because of Ujjwala, for the first time she had her own identity, her own bank account and an LPG connection in her own name. It was the first time she felt empowered! When we looked at the data or numbers we never thought that this could happen. Small decisions at the national level can change so many things,” she says. ■



Prukalpa Sankar: ‘Our goal is to build products as simple as WhatsApp for the entire data journey’

**Social Cops’ work in helping to implement the Pradhan Mantri Ujjwala Yojana has aroused interest because of the scale and speed involved.**

of applications for LPG connections that poured in. Lastly, they had to ensure that new connections were installed efficiently and safely.

“We wanted to ensure, first of all, that the bureaucracy and cabinet minister sitting in Delhi had information at their fingertips on a daily basis, so that they knew what was happening on the ground,” says Sankar.

To begin with they got the 17,000 existing distributors of the three oil companies to download Social Cops’ Collect app and provide their geolocations. Social Cops also sifted through available data on sales, profitability and marketing from the internal data systems of the three oil companies.

Then Social Cops pulled out data from its own data repository. It mapped each of India’s 640,000 villages in terms of LPG penetration, income,

# Kharai camel is sinking

Tanushree Gangopadhyay  
Ahmedabad

GO to the Gulf of Kutch and see the famed Kharai camel before it's too late. There are just 2,000 of them left. The only breed of camel that swims, the Kharai camel can live in the desert and swim in the sea, a sight that is truly awesome.

"But only 2,000 Kharai camels now exist in all of Kutch district," confirms Bhikhabhai Vaghabhai

milk," says Bhikhabhai proudly. "Earlier, no one purchased camel milk. Amul buys 1,500 litres daily and some private dairies. The government has given Amul ₹3 crore for developing dairying of camel milk," he said.

In 2017 the National Bureau of Animal Genetics and Research (NBAGR) awarded the KUUMS the Breed Saviour Award which Bhikhabhai accepted gratefully in May 2018. Then the National Biodiversity Authority in Chennai awarded the KUMMS for conservation of the Kharai camel on

SAHJEEVAN TRUST



A herder with his Kharai camels grazing in the waters of the Gulf of Kutch

Rabari, president of the Kachch Uth Uchher Maldhari Sangathan (KUUMS) or Kutch Camel Breeders Association. "A decade ago we had about 10,000 such camels."

The Kharai camel is starving to death even as the KUUMS haplessly tries to save it. The reasons are beyond their control.

Despite awards, rewards and recognition being heaped on the Kharai camel, the poor animal is on its way to extinction. In 2015, the camel was recognised as a breed, explains Ramesh Bhatti of Sahjeevan Trust, which has helped to organise the KUUMS and works diligently with them.

"The Breed Registration Committee of the Indian Council of Agricultural Research (ICAR) certified the Kharai breed on January 6, 2015, after KUUMS applied for it. The Kharai camel has been registered as the ninth distinct camel breed of India by the ICAR. The KUUMS, the Anand Agriculture University, and my trust put in a lot of hard work to gain this recognition for the Kharai camel," says Bhatt. The KUUMS is officially recognised as the owner of this unique breed.

Soon after, Vadodara's Federation of Group Industries awarded KUUMS for proficiency in marketing camel milk. "Maneka Gandhi herself bestowed on me the award for dairying of camel

**The mangrove belt on which the Kharai camels depend for food and water is being destroyed by industries, ports, jetties, power plants.**

National Biodiversity Day, May 22, this year. That too was humbly accepted.

But none of this has changed the suffering of the Kharai camel.

The Kharai breed is reared by the Rabaris and the Fakirani Jats, popularly known as Maldharis. Traditionally they rear milch animals like cows, goats, sheep and buffaloes. Rabaris live in the Bhachau and Mundra *tehsils* of Kutch. The Fakirani Jats reside in Bhachau, Mundra, Lakhpat, and Abdasa *tehsils* and the coastal districts of Gujarat.

The Kharai camels graze on saline plants like *kharijar* (*Salvdora persica*) and *lano* (*Suaeda*) and on mangroves in small islands called *bets* in the

creek of the Gulf of Kutch. Every day the camels swim more than three kilometres to reach their grazing areas.

"We do not build any permanent structures for the Kharai camels on the islands. During the three monsoon months, the camels swim to the *bets* in the mangroves to graze and quench their thirst. We leave them there. In summer and in winter they swim to the *bets* nearer the creek, where they stay for two or three days before returning to the mainland," explained Bhikhabhai. An adult male camel consumes 20 to 49 litres of water daily.

The problem is that the mangrove belt, which Kharai camels depend on for food and water, is being rapidly destroyed by industrialisation and encroachment. Power plants, jetties, ports are all swallowing the camels' grazing area. And where the forest department plants mangroves, it does not allow camels to graze there.

Bhikhabhai, like other Rabaris, despairs at the dwindling numbers of the Kharai camel. The Maldharis are running around looking for food for the Kharai camels.

"Our camels have no fodder left. The KUUMS approached the National Green Tribunal (NGT). It has restrained industries from ruining the coast but who is listening. A large number of Fakirani Jats moved southwards to Jamnagar, Bhavnagar, Vadodara and settled in Aliyabet in Bharuch."

Aliyabet in the delta of the Narmada river had good-quality grass for camels. But that, too, faces a water problem now. With a dam being built upstream, potable water is no longer available.

"So the Fakirani Jats returned to Kutch," says Bhikhabhai.

He himself lives in Jangi village and has 100 Kharai camels. "I can recall five generations having these camels. Rabaris additionally rear cows, buffaloes, goats and sheep close to their homes. However, my camels are looked after by Fakirani Jats who keep them in the mangroves of Bhachau and move them to the land after the monsoons."

In winter, the Kharai camels are taken to graze in the Banni grasslands. The camels adjust to the humid climate of the coast and the arid climate of the interior.

The Kharai camel is distinct from its relative, the Kachchi camel. The ears are woolly, slightly flattened at the tip and upright. They have small chests and medium-sized, gently padded feet that are well adapted for wet, sandy coastland. Their wool is smoother and finer than the Kachchi camels.

The Kharai camel also produces less milk than the Kachchi camel. Kharai milk has a higher fat content and is considered therapeutic.

Eighty-three-year-old Vadhubhai Andabhai Rabari says that when he was 45 he got pneumonia and was saved by Kharai camel milk. "The doctors gave up on me. But I survived by drinking this milk. Look how strong I am four decades later," he says.

Camels have limited access to veterinary services as they live in remote areas. On July 9, KUUMS held an inoculation programme in Bhuj. It was attended by 1,600 camels, said Bhikhabhai. ■





## Harvesting water. Harnessing futures.

In a perfect world, children lead happy, carefree childhoods. They spend their days learning in school, while their free time is spent at play with friends. However, for the children of Nuh in Haryana, this is but a distant dream. The culprit - a severe shortage of potable water.

While most of us cannot even begin to imagine how crippling this can be; the residents of Nuh suffer the consequences every day. Over-salinated water and a lack of safe and assured water supply has created a trail of chronic issues that impact the health and well being of school children. This lack of potable water has affected the attendance rate at schools, with children going back home to refill their water bottles. More often than not, they never make it back to school.

DCB Bank stepped in to support an innovative plan using rooftop rainwater harvesting and bio-sand filters in three schools, which resulted in a number of positive changes. Access to drinking water has led to a decrease in absenteeism from schools. Mid-day meals are also cooked using this water, ensuring the children are healthier and happier.

With the capacity to harvest 3,00,000 litres of potable water a year, Nuh now looks to a hopeful future. One where children are free to learn and lead a normal, happy and healthy childhood.

### DCB Bank Rooftop Rainwater Harvesting Project:

- Set up at 3 schools in Nuh, Haryana
- Four 25,000 litre tanks harvest 3,00,000 litres of rainwater a year
- Innovative, electricity-free bio-sand filter eliminates contaminants
- Nuh's children now have access to clean potable water, daily
- Over 1,000 futures positively impacted



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# DCB BANK

# MAYYIL DOES MINI MIRACLE WITH RICE

## Panchayat doubles output of paddy and starts firm

**Shree Padre**  
Kannur

**T**HE 18-km drive from Kannur town to Mayyil in Kerala ends in a diorama of paddy glistening in its fields. It is a wonderful sight and the verdant fields speak of local prosperity.

Not long ago, these same fields were fallow. Growing paddy was not remunerative so farmers looked elsewhere for an income. But even as the situation seemed hopeless, change arrived serendipitously in the past 18 months.

The Mayyil gram panchayat, worried about the steep decline in paddy farming, searched for answers. They found inspiration in P.K. Radhakrishnan, agriculture officer at the Mayyil Krishi Bhavan. He advised them to increase productivity, be open to mechanisation, ensure a good price and launch a farmer-producer company.

In August 2016 the Mayyil gram panchayat took the first step. It launched a Total Rice Campaign or Sampoorna Nettu Krishi to revive paddy farming.

A small local effort soon snowballed into a movement. Farmers, agricultural scientists, government agencies, politicians, youth, and women pitched in to make the Total Rice Farming programme a great success.

As the farmers began to think differently, a mini rice mill, which turns small quantities of paddy into rice, liberated them from the clutches of big mills. It allowed farmers to locally sell and consume the rice they grew.

Mayyil today has its own farmer-producer organisation (FPO) called the Mayyil Rice Producers' Company (MRPC), which brands, mills, and markets its own rice. The area under paddy has doubled from 300 hectares to 600 hectares — the highest in Kerala.

Nearly every farmer has a happy story to tell. Perhaps the funniest is of Krishnan Master, now in his early seventies. Master had gone abroad to live with his son for many years, leaving his field fallow. He returned to his village recently and could not believe his eyes! His field was miraculously dense with lush paddy, planted by the panchayat.

In fact, paddy productivity has increased a whopping 4.5 times. In 2016-17, Mayyil harvested 645 tonnes. In 2017-18, this increased to 3,000 tonnes.

A mini rice mill called Maruthi emerged as a real champion. Powered with a 3 HP motor, it can convert 120 kg of paddy into rice in an hour. Thirteen mini rice mills, including a mobile one, are now churning out various types of rice and another 50 mini mills are in the pipeline.

Maruthi's success has resulted in the closing down of two big rice mills. "We can offer them our mini rice mill, if they want," says T.K. Balakrishnan, managing director of the MRPC, in sympathy.

Mayyil is now a model in its own right. It is built around local farming, local milling, local consumption, and local sales. It ensures food security and an income for farmers.

**PADDY WOES:** Less than two years ago, the situation was vastly different. The Mayyil panchayat is in the lateritic zone of north Kerala. Spread over 33.08 sq. km, the panchayat consists of two villages, Mayyil and Kayaralam, with a population of 34,998. Around 6,000 families live here and one-third of them cultivate paddy on tiny fields from as little as 4,000 sq. ft to three acres. Land is



Kerala Agriculture Minister V.S. Sunil Kumar (centre) & James Mathew, MLA (right), transplanting

**Mayyil is a model in its own right. It is built around local farming, local milling, local consumption, local sales. It ensures food security and an income for farmers.**

also taken on lease.

Paddy cultivation was declining because of high production costs and low returns on rice. Transplanting paddy, which requires long hours of standing in slush, was mostly done by women over 60 years old. They would harvest 20 to 21 kg per day and be given 15 kg for their labour.

Rice farmers got a raw deal at every stage. After the paddy was harvested, Supplyco, a state government agency, would procure paddy at a fixed price of, say, ₹23.30 per kg. But the farmer had to go through complicated formalities to sell to the government and both procurement and payment were always inordinately delayed.

Since most farmers do not have storage facilities they were compelled to offload their paddy, before it got spoiled, to rice mills at a lower price. In Mayyil, they used to sell their paddy to beaten rice or *poha* mills, which would pay them a measly ₹17 per kg.

The paddy procured by the government was sent to big mills. The rice that was milled was sold to buyers in other states, it is alleged. These mills would then buy inferior rice, adulterate it with colour to make it look like red rice, and release it to state agencies. This inferior rice would be sold through ration shops and the Maveli and Neethi stores run by rural credit societies.

The sad irony of the situation was that the paddy farmer sold his superior rice to the government or rice mills for a low price and then bought adulterated rice at a higher rate!

MAYYIL KRISHI BHAVAN



paddy in Mayyil

After the Total Rice Farming programme was launched, six months were spent in creating awareness. “We have lost count of how many meetings we held. All I can say is that about 150 people from different walks of life did not get much rest in between,” says K.K. Ramachandran, MRPC’s chairman.

The MRPC was formed in June 2017. The company has 10 directors. Its major activity is procurement of paddy at a fair price, its conversion into rice, and marketing of the branded rice. In October 2017, MRPC began procuring paddy at ₹23 per kg and paying farmers on the spot.

“The panchayat had 300 hectares on which two crops of paddy used to be cultivated. The average production was 2,150 kg per hectare,” explains Radhakrishnan. “When we began our Total Rice Farming programme, 300 hectares, which had remained fallow for more than a decade, were also brought under cultivation. New farming techniques doubled crop yield to 4,320 kg. During the second crop, the yield trebled to 6,346 kg.”

SHREE PADRE



T.K. Balakrishnan

SHREE PADRE



P.K. Radhakrishnan

MAYYIL KRISHI BHAVAN

“So, from an estimated 645 tonnes, paddy yield rose four-fold to 3,000 tonnes. Mayyil panchayat’s 6,000 families would require 1,000 tonnes of rice or 1,500 tonnes of paddy for their own consumption. Now they have almost double. This means not only are the farmers food-sufficient, they also have an equal amount they can sell,” explains Radhakrishnan.

Ramachandran owns half an acre and takes another acre on rent. “We used to cultivate enough paddy for our own family in the past. But last year, we had a surplus of one tonne. I sold it to our company and earned ₹23,000,” he says.

Lakshmanan, 54, has a little less than an acre and takes another half an acre on rent. His family of five did not have any surplus to sell all these years. This time he sold 4,000 kg at ₹30 per kg to MRPC for producing seeds.

Balakrishnan explained that they ensured all the advice given by agricultural scientists was dutifully followed by each farmer. It was dedication, he said, that really helped them hike productivity to an amazing level.



The MRPC’s mobile rice milling unit goes from door-to-door

**ON-SITE TEAMWORK:** At the grassroots, paddy farmers are organised into 25 paddy farming committees or *padasekaras*. Each *padasekara* oversees 25 to 175 acres and strives to improve productivity with the help of the panchayat, the Krishi Vigyan Kendra, and the MRPC.

The Mullakkodi *padasekara* has 100 members and supervises 175 acres. “Till two or three years ago, we had only 100 acres, mostly on rent, for cultivation. We grow a local variety of rice called Vellariyan. Our fields used to yield only 600 to 700 kg of paddy per acre. After we began applying a traditional growth promoter prescribed in the *Vrukshayurveda*, our crop yield increased to about 1,200 kg per acre. Now more people are coming forward to cultivate fallow fields,” says Chandrasekharan, secretary of this *padasekara*.

Keezalam is a big *padasekara samithi* with 150 acres and an energetic secretary, U. Ravindran. Two years ago, just 50 acres in the first crop and 28 acres in the second crop were being cultivated. About 100 acres were lying fallow.

The *padasekara samithi* had about ₹1.5 lakh of subsidy money that arrived late and was slated to be disbursed to farmer-members. Ravindran convened a meeting and suggested using the money as capital to bring more fallow land under the plough. Everyone agreed. The committee went door-to-door, meeting landowners. It undertook the work of soil preparation and then the landowners took over.

Subsequently, committee members decided to use the profits from the first crop to bankroll the second crop. “In 2015-16 we cultivated only 78 acres. Last year, paddy cultivation increased to 290 acres,” says Ravindran.

**RAISING PADDY STATUS:** How did the Mayyil panchayat enthruse farmers and double the land under paddy cultivation? After all, it is well known in Kerala that paddy farming is not remunerative.

“We attach a lot of importance to agriculture,” says P. Balan, 74, president of Mayyil panchayat. “All the other panchayats give preference to road construction. They allocate only 40 percent or less for agriculture. We set aside 56 percent of our own funds for agriculture, probably the highest in the state.”

Inspired by this success, the committee used the next round of incentive money to buy a small building with four rooms for ₹6.2 lakh to be used as “the committee’s machinery storeroom, mini rice mill, and meeting place,” says Ravindran.

Many locals voluntarily joined this mission. At Bamnacheri, all 20 acres were lying fallow and the *padasekara* was inactive. Padmanabhan, 54, who does not even have farmland, motivated people to restart cultivation. The result was that 20 acres got cultivated in the first crop. A. Anoopkumar, 42, used his own money to persuade people to start farming. Around 20 acres were brought under paddy cultivation thanks to his efforts.

**BOOSTING YIELD:** At first, farmers relied on labour for cultivation. Mechanisation was not introduced. Yet, yields increased evenly. Radhakrishnan says that with perfect farming practices, 4,356 sq. ft can produce 300 kg of paddy, or a hectare 7.5 tonnes. “In my opinion there were five customised improvisations that brought about change,” he said.

First was the application of dolomite instead of lime to neutralise soil acidity. Dolomite has a more lasting effect than lime so it helps uptake of nutrients for a longer period. Second was tilling with a tractor instead of tillers. It resulted in deeper ploughing and more aeration. Third was quality seeds. For the first crop, seven paddy seed varieties were used. For the second crop, just two were permitted. “One variety for one *padasekara* facilitated simultaneous agricultural operations and kept pest and diseases at bay,” says Radhakrishnan.

The fourth improvisation was more spacing between plants and shallow planting through transplanters. This increased the number of tillers or grain-bearing branches. Tilling, in fact, was phenomenal in about eight to 10 paddy belts. During a post-harvest public meeting, Kerala’s agriculture minister, V.S. Sunil Kumar, as a token of the high yield, displayed a paddy plant with 86 tillers that had grown in Manthavayal U. Kumaran’s field. Though it had 86 tillers, the effective ones were 52.

The fifth innovation was in techniques for building healthy soil with nutrients and growth promoters, such as *haritha kashayam* from the *Vrukshayurveda*. No chemical insecticides were sprayed. Mayyil rice is poison free.

“The principle we advocated was: healthy soil, healthy plant and wealthy crop,” says Radhakrishnan.

The first crop yielded encouraging results. But a second crop seemed difficult. There was not much time to prepare the fields. Farmers and volunteers were tired and burdening them with another energetic mission mode task could prove counterproductive.

The only solution was mechanisation. But farmers were chary. They made excuses: the transplanter and combined harvester would not be able to get down to their fields, production would be seriously affected, the area was too vast, there were not enough machines available, anyway.

Radhakrishnan approached his old classmate, Dr A. Latha, head of the Agriculture Research Station of Kerala Agriculture University (KAU), Thrissur. She was an experienced scientist who knew how to use their Food Security Army to take up such assignments.

Recalls Dr Latha, “It was a big challenge for us. We organised 15 transplanters from Tamil Nadu. We were all set to complete the task in 10 days. But, last minute, the Tamil Nadu transplanter owners reneged on our agreement. After an intensive search, we finally found the machines we wanted. It took us 25 days, but things went off smoothly and the community even honoured us at the end!”

**MINI RICE MILLS:** However, higher productivity and an active farmer-producer company do not ensure farmers a higher income. The critical need is local milling. Otherwise, middlemen will lurk around. Mayyil’s search for a reliable rice mill ended when they discovered Maruthi, a mini rice mill manufactured by a Karnataka company that could be easily transported.

“The mini rice mill is the most crucial technological intervention in the whole story,” says Radhakrishnan. Maruthi has become the icon of the Mayyil rice movement. A total of 429 machines are now humming away across the state. So impressed was MRPC that it became Maruthi’s distributor for Kerala.

V.S. Sunil Kumar, the agriculture minister, has ensured that farmer groups get 100 percent subsidy for this mini rice mill. They only have to pay the tax of ₹2,000. In the past nine months, MRPC has sold 645 mini mills across Kerala.

Thirteen mini mills are operating in the Mayyil panchayat area. Two are run by women under a women’s empowerment programme. Thanks to Maruthi, many Mayyil families can now consume the rice that they grow in their fields.

Last September, Vijesh, a small farmer from Mullakkodi *padasekhara*, was the first to begin operating the mini rice mill in his backyard. Neighbouring



P. Balan, president of Mayyil panchayat.

An awareness programme on better

**Mayyil’s search for a reliable rice mill ended when they discovered Maruthi, a mini rice mill made by a Karnataka company that could be easily transported. ‘The mini rice mill is the crucial technological intervention in the whole story,’ says Radhakrishnan.**

farmers with parboiled rice and farmers from a 10-km radius bring paddy to his house for milling. His sister-in-law, Nisha, handles the milling operation smoothly.

Vijesh processes paddy for the MRPC for which he is paid ₹9 per kg. He parboils the paddy, dries it and mills it. The MRPC has designed a low-cost parboiling unit made with a 200-litre barrel which costs ₹10,000. In the past seven months, Vijesh has processed five tonnes of paddy for the MRPC and milled six tonnes for the villagers.

K.P. Vinod, a progressive farmer, runs another milling unit at Kandakai. In the past four months, he has milled one tonne of paddy for his neighbours. About 30 families, in a radius of two km, bring paddy to him for milling. His wife, Padma, mills the rice.

Vinod has processed nine tonnes of paddy for MRPC. “I have earned Rs 16,000 processing paddy part time. We spent less than ₹2,000 on electricity. In thick paddy areas, a small family can easily earn a living by running this mini mill full time,” says Vinod. The mini mill, with a few adjustments, can churn out semi-polished rice and polished white rice. Unpolished rice, which retains the bran, can also be made but this version is not very popular.

The MRPC has also been running a mobile rice milling unit mounted on a Tata Ace owned by Jignesh Chappadi, a graduate. Chappadi does his rounds five days a week. If the quantity of paddy to be milled is small, customers have to bring it to his vehicle, parked at a central location. “I mill anything from 300 to 450 kg a day,” he says.

Twice a week, Jignesh’s assignment is to deliver rice to MRPC’s customers. His mini truck then sports a signboard, Ari Vandi or Rice Vehicle. “Qualitatively, our rice is superior. It is free of insecticide and adulteration. After calculating production costs and a decent margin for farmers, our company’s policy is to pay ₹30 for a kg of paddy to farmers. But currently we are paying ₹23,” says Ramachandran.

Since December 2017, MRPC has been selling rice from their Mayyil office

MAYYIL KRISHI BHAVAN



farming practices

SHREE PADRE



K.P. Vinod with his paddy crop

and two retail outlets in nearby cities.

The MRPC has procured 48 tonnes of paddy till now. It has sold 24 tonnes of rice milled by nine mini rice mills. The MRPC sells this milled rice locally through three outlets. Average monthly sales are about six tonnes per month. The MRPC also takes part in exhibitions and delivers rice in bulk to far-off customers.

The company is branding their rice as Mayyil Rice. They will soon be selling one, five, 10, and 20 kg of rice packaged neatly in cotton bags. Last year, MRPC's turnover was almost ₹3 crore. A few farmers from various *padasekaras* sell unpackaged rice for ₹50 per kg directly to buyers from their home.

Mayyil Rice is priced between ₹60 and ₹70 per kg, depending on the variety. There is no dearth of customers. Most buyers are from the middle class and from areas outside the Mayyil panchayat. Poor families who go to the Maveli and Neeti stores buy a cheaper variety for ₹30 a kg. In the open market, ordinary polished chemical-laden rice costs ₹45-50 per kg.

Balakrishnan, managing director of MRPC, is planning to set up a three-tiered network of 50 mini rice mills before the onset of the monsoon. Each *padasekara* will have 25 mini rice mills for their own use. They can sell their surplus rice on their own or they can hand it over to the MRPC.

Another 15 mills will be provided to farmer-entrepreneurs. They can mill their own rice and for other farmers as well. Here, too, farmers can sell rice on their own or to the MRPC. Ten mills will be retained by the MRPC to process the paddy they procure and market it.

The company plans to open 10 kiosks in different towns of Kannur district in the next few months. The kiosk has been designed but construction is yet to begin.

“Once all these mills start operating, every home will have a mill within a kilometre,” says Balakrishnan.

Farmers are invariably short of space for post-harvesting operations. Luckily for MRPC, there were two facilities they could use without spending money — a poly house and a government building owned by the zilla panchayat. The poly house had been built by cluster farmers for plant propagation. Fortuitously, during the paddy drying period, plant production does not take place. The new government building was lying idle and the company took it on rent. It now houses MRPC's new milling machines and paddy.

But there are issues, too. Mini mill owners need space to dry paddy close to their household milling units. Also, the MRPC is concerned that the Total Rice Farming movement will lose momentum, if there is no consistent follow-up.

Radhakrishnan is optimistic. “The MRPC is different from other FPOs. Mostly, its objective is to keep the middleman at bay by linking producers with consumers. Unlike other FPOs, MRPC provides good seeds, technical advice, and machinery support to *padasekara samithis*. It resolves problems that arise. This ‘seed-to-market’ strategy improves the quality of produce and changes the lives of its members.”

**CONVERGENCE AND RESULTS:** “Mayyil's historic results in paddy cultivation last year aren't just due to 18 months of work,” explains Balakrishnan. “In fact, we have been regularly experimenting in a few *padasekaras* and assessing outcomes. One lesson we learnt is that soil treatment is more vital than just treating plants,” recalls Balakrishnan. The MRPC appointed 10 experts to ensure all farmers got access to such information.

The media, too, helped by spreading news of the Mayyil rice movement, encouraging more farmers to get back to the soil. “Landowners are saying they won't give their fields on rent next year, an indication that they want to return to farming,” says Balakrishnan. Anil Kumar Odesha, a local photographer, is filming a documentary on Mayyil's efforts.

The local MLA, James Mathew, helped organise video conferencing so that paddy farmers could interact with agriculture experts. The Mayyil panchayat has 33 public libraries, popular with locals. Four such video conferences were held at 17 libraries.

The Krishi Vijnan Kendra in Kannur got seriously involved. Dr P. Jayaraj, programme coordinator, and his colleagues created awareness among farmers. “We studied all the drawbacks in farming practices and suggested corrective measures. That, by itself, brought in miraculous results.”

The miraculous result can be also gauged by the drop in chaff. “Farmers used to get 60 to 62 percent of rice. Thirty percent was chaff. But this time chaff is only three to four percent, and farmers got 70 to 75 percent of rice,” says Vinod. The reason, explains Radhakrishnan, is that nitrogen from manure was reduced.

The Food Security Army also played a big role. “They arrived from Thrissur, got down to work with no hesitation and happily carried out farming operations. Farmers here were most impressed,” says Jayaraj.

Another offshoot of intensive paddy cultivation was an increase in water availability. “To grow paddy, we had water standing on about 1,500 acres for six months,” says V.O. Prabhakaran, a panchayat member. “This season our rivers and rivulets have ample water. The major reason is resumption of paddy farming on a large area.”

For the Total Rice Farming movement, Mayyil panchayat received ₹2.3 crore. The three panchayati raj institutions gave ₹1,11,00,456. The agriculture department and its agencies contributed ₹1.19 crore. Mechanisation of farm operations worked out to ₹80 lakh. About ₹26.6 lakh of MGNREGA funds were used for building bunds and drainage systems connected to paddy farms.

Kerala's agriculture minister participated in replanting and harvesting of paddy and the inauguration of the first mini mill. “We have distributed more than 400 such mills with full subsidy. Forty-seven local brands of rice are now in the pipeline in Kerala. We are encouraging small farmer groups to decentralise rice marketing and ensure quality rice for consumers.”

There are many lessons that the farming community can learn from the Mayyil experience. A farmer-producers' company is important. So is increasing productivity. Farmers need to embrace mechanisation. And appropriate technology is critical — the mini rice mill has done wonders for paddy farmers. ■

Contacts: T.K. Balakrishnan, MD, Mayyil Rice Producers' Company. Phone: 94961 229244; Email: mayyilrice@gmail.com  
P.K. Radhakrishnan, Agriculture Officer, Mayyil. Phone: 94474 87712; Email: babyrk.pk@gmail.com

# BUSINESS

ENTERPRISE | CSR | ICT | GREEN TECH



Chetan Maini, Latika Pai, Muni Pulipalyam, Chad Fowler and A. Sampathkumaran in front of the Sun Mobility Quick Interchange Station in Bengaluru

## EVs get a smart network

### Sun Mobility partners Microsoft

**Civil Society News**  
New Delhi

**W**HAT will I do if the battery runs out and there isn't someplace nearby where I can get an easy recharge? Just about anywhere in the world, this is the concern someone planning to buy an electric vehicle has.

Cars that run on petrol and diesel are served by a vast infrastructure built over many decades to support the internal combustion engine. You can find a petrol pump, spares, and a mechanic just about anywhere.

But plan a switch to an electric vehicle and you get the sense that you are going to be stranded on the frontiers of a technology. The life and durability, size and weight of a battery have improved, as has

the design of vehicles. Yet, it is early days and the charging stations and other service paraphernalia that build consumer confidence are lacking.

To fill this gap and prepare for a major shift in India to electric transport by 2030, Sun Mobility, founded by Uday Khemka and Chetan Maini, has begun working on providing the infrastructure that a large number of electric vehicles, public and private, will need.

Most recently it has partnered Microsoft for technology that will connect Sun Mobility's smart batteries and Quick Interchange Stations using a mobile phone application. What this will add up to is an intelligent system through which it will be possible to know when a battery is running out and where it can be conveniently swapped.

Combining the cloud, Internet of Things and

Artificial Intelligence (AI), Sun Mobility expects to access a stream of data which will allow efficient investments in infrastructure and an optimum use of energy. It holds out the promise of ending the uncertainties and isolation of running an electric vehicle in a world dominated by combustion engines.

If Sun Mobility can get these complex ideas successfully into practice, it will be the originator of a transformational transportation architecture that will change mobility as we know it in India, making it cleaner and less chaotic. Additionally, the experience here would equip it to enter other markets elsewhere in the world.

Khemka belongs to the family that promotes the Sun Group with wide-ranging interests in businesses in India, Russia, and other emerging markets. Maini

is the creator of the Reva, India's iconic electric car, which proved to be much ahead of its time and could not be marketed successfully for want of government support and adequate infrastructure. He finally sold out to Mahindra.

Announcing the tie-up with Microsoft in Bengaluru, Khemka said: "In an era when the future of mobility is electric, powered with renewable energy and driven by AI, we are excited to partner with Microsoft."

Chad Fowler of Microsoft said: "After working with Sun Mobility as part of the ScaleUp programme, we are excited about the immense potential that the organisation will be able to drive, using Microsoft's Azure-based solutions in the sustainable energy industry. Together we enable both efficient and safe transportation for our planet."

Maini said: "Sun Mobility's Smart Network enables us to plan and optimise our energy infrastructure investments. We are using the latest technologies to improve the availability and performance of our batteries and interchange stations. Better utilisation of assets helps us to offer energy services to our users in a cost-effective and efficient manner."

**KEY CHALLENGES:** Speaking to *Civil Society* earlier, Maini referred to four key challenges that came in the way of there being more electric vehicles on the road. The first was that the vehicle cost structure had to change. Electric vehicles cost more than their internal combustion engine counterparts, mainly because of the cost of the battery.

Secondly, the limited range of electric vehicles made people worry. Third was the six to eight hours taken to recharge a battery — refuelling a petrol or diesel car is easily done in minutes. Fourth was the lack of infrastructure.

"We formed Sun Mobility with the idea that unless you address these imbalances this transformation is not going to happen. If you want that kind of sustainable growth, separate the battery from the vehicle and the price of electric vehicles becomes similar to other vehicles," said Maini.

"If you can get the cost of energy to be lower than that of petrol or diesel and you can refuel in a couple of minutes, then you won't have anxiety over range anymore. You can do that by swapping the battery. Sun Mobility is going to own the battery. We will put up battery-swap stations. So people will pay only for what they use, when they use it. Separating the battery from the car gives them a cost advantage and range," he explained.

"You don't need a battery to last you the whole day. You can come after a few hours and swap the battery again. By doing this and reducing the battery size you also reduce vehicle costs. The hot temperature in India has an impact on the life of the battery. By charging it perfectly you extend the life of the battery," said Maini.

Sun Mobility's effort would be to make the process of getting a fresh charge no more difficult than refuelling at a petrol station. An e-rickshaw driver, for instance, would stop at a station, take out



A charging point at NITI Aayog's office: The government's renewable energy target has come as a boost

**'We are using the latest technologies to improve the availability and performance of our batteries and interchange stations. Better utilisation of assets helps us to offer energy services to our users in a cost-effective and efficient manner.'**

his battery and put in a fully charged one and drive away. An electric bus, on the other hand, would have larger and heavier batteries and the swapping would have to be done by a robotic arm. Getting in and out should take no more than a few minutes.

"To start off we will be focusing on three-wheelers and buses. We think the larger impact in society is going to be in transportation modes that drive a lot and pollute a lot. It also makes business sense," said Maini. "Over time we will go to cars, two-wheelers and other forms of transportation. So the core proposition is to address the four challenges and give the customer something that is faster, cheaper and more convenient than what he or she is using today."

The collaboration with Microsoft will give Sun Mobility and its customers the information they need on battery performance in real time. It will also give electric vehicle users the comfort of being on a supportive network and having quick access to battery-swap stations.

Sun Mobility also has a collaboration with Ashok Leyland under which it will provide the energy solutions for its electric buses, which are expected to be purchased in thousands by cities like Delhi which are burdened by pollution. The kind of infrastructure that Sun Mobility can provide is needed for buses to have a healthy turnaround time and be cost-effective.

The market for electric vehicles has emerged from the converging of concerns over energy, climate change, pollution, and mobility. People in Indian cities are tired of long commutes and worried about their health being compromised by emissions.

There is a new willingness to share vehicles and take rides together. The government's target of 300 KW of renewable energy has come as a boost.

With all this happening at the same time, the moment for the clean car or bus or rickshaw has arrived and presents a serious business opportunity. With the government deciding to place large orders for electric cars for its own use and cities buying buses, demand has been stimulated. It will encourage investments in the manufacture of vehicles and manufacturers of components too will come up.

Maini believes that the opportunity for India and Indian companies goes much beyond the creation of a robust domestic market. By learning from many complex local challenges, he thinks India can become a significant exporter of electric vehicles and components and related services. This could happen in much the same way as it did with IT and small cars.

"There's no reason why that can't happen. In 10 years some Tata electric company could globally have valuations as big as the largest companies in the world. It doesn't need hundreds of years. Companies have created this kind of wealth in 10 years," says Maini.

Almost two decades ago, Maini's own Reva car was a frontrunner that found appreciation in London and other cities of Europe even as governments in India did little for it. With Sun Mobility it seems the moment is right. Its battery-swap stations and other solutions, it seems, are just what cities in India and the rest of the world are waiting for. ■

# There is money in honey

**Derek Almeida**  
Panaji

WHEN Suprajit Raikar started biking into Goa's countryside with his friends, he was struck by the hardships unemployed youth deep in the interiors faced. He started Desi Motorcycle Diaries, a club of two-wheeler travellers, who biked into villages to extend a helping hand.

Raikar, whose initial ambition was to join the Indian Army, has a Masters of Computer Application (MCA) degree. But he turned his back on a comfortable job in the IT sector and instead made the welfare of farmers his core mission.

He now runs Raika & Co which sells raw and processed honey through Amazon.com.

This year Raikar was bestowed the Rural Entrepreneur Award 2018 by the Goa Entrepreneurs Mentoring Service and Business Network International.

"I started my company in September 2016, at my residence in Benaulim which is a few km from Margao, to market and sell honey produced in bee-boxes by farmers in the interior talukas," says Raikar, sitting among boxes of packaged products waiting to be picked up by Amazon for delivery to other parts of the country.

In the past two years or so, he has created a network of over 100 farmers who keep bee-boxes as an alternate source of income.

It did not all start with honey. After completing his MCA, Raikar went to Bengaluru, the IT capital of the country, but returned for reasons that only a Goan might understand. "I just missed my fish-curry rice," he says with an embarrassed giggle. He worked at N.E. Technologies in Verna, but his soul was restless.

It was at this time that he started visiting interior areas with members of his motorcycle club. "When we went to these places we got to know their problems and electricity was one of them," he says.

The club used a blog and through crowd-funding gathered money to buy solar lamps and distribute them to students in areas where electricity supply was either erratic or had not reached.

Around this time, Raikar started padekar.com, a website to link coconut pluckers (*padekar* in Konkani) and plantation owners. "It was a huge challenge and I brought them on board by promising accident insurance and prompt online payments," says Raikar. In a short while, he and the club succeeded in creating a network of 25 coconut pluckers and started getting orders from large plantation owners.

But finances eventually dried up and in 2016 Raikar went back to the IT sector. But his heart was not in it. This restlessness eventually led him to set up Raika & Co.

"In 2012 the state government introduced a bee species known as *apis mellifera*, which could produce 24 kg of honey a year. However, the experiment failed because the species was native to the cooler climates of Europe and North India," says Raikar.

He went to the Central Bee Research Institute in Pune to ascertain which bees were native to Goa. Raikar discovered that *apis cerana indica* was more suited to the state, but that this species produced

The company packages raw and filtered honey and sells them under the brand name of Sahayadri. In the old days tribals used to source honey from the wild and extract it by driving away the bees with fire. This usually destroyed the honeycomb.

Bee-boxes do the same job scientifically. "The queen bee still has to be sourced from the wild," says Raikar. The honeycombs are taken out periodically and placed in a centrifuge to extract the honey. Once the honeycomb gets too old it is melted down to make beeswax candles. Each honeycomb has around 3,000 hexagonal cells.

Each box produces six to seven kg of honey per year, but this could go up to 18-20 kg in the interiors

SAGUN GAWADE where more flowers are available.

"Honey production is dependent on flower production. In the Western Ghats this process starts in February and ends in June when the monsoons start," Raikar explains. Bee-boxes are moved to coastal areas when flowering in mangroves takes place between June and August. "I use a network of friends and acquaintances to help farmers relocate boxes whenever possible."

Since bees consume honey, about 25 percent has to be left in the honeycomb to help them survive the monsoon months and, at times, sugar syrup is fed during this period.

"It takes around 10 million flowers to produce 100 gm of honey," says Raikar, explaining how flowering is important to the process and the flavour of the honey. "Honey produced in Benaulim, which is populated by coconut trees, will naturally have a coconut flavour, while the *jambul* tinge is prevalent in

honey produced in the interiors. Honey that is sourced from Karnataka could have a sunflower edge to it."

Flavour plays an important role in pricing as well. Batches of honey are sent to a Pune laboratory to determine the flavour. Soapnut flavour is the costliest and could sell for up to ₹4,000 a kg whereas multiflora honey could sell for ₹900.

As we chatted about the business at his residence in Benaulim, an Amazon team arrived to collect the packaged boxes. He showed us a bee-box which was empty, thanks to panchayat workers who had fogged the place to kill mosquitoes and ended up driving away all the bees.

Despite the pressures of running a business, Raikar has not forgotten his social commitments. "Ten percent of profits are diverted towards procuring solar lanterns which are distributed to students in the interiors," he says. ■



Suprajit Raikar with a honeycomb laden with honey

**'It takes around 10 million flowers to produce 100 gm of honey. Honey from Benaulim, which has coconut trees, will have a coconut flavour,' says Raikar.**

only six or seven kg of honey in a year. Together with the Krishi Vigyan Kendra, Raikar started training sessions for farmers and students. Raika & Co supplied the bee-boxes and the farmers sold raw honey to the company even though they were free to sell to a buyer of their choice.

As we talked Raikar bolted to his refrigerator and returned with a frozen comb laden with honey. "Take a piece and chew on it. Suck the honey and spit out the wax," he urged. The raw honey was delicious and tangy. Raikar explained that the presence of raw pollen determined the taste of the honey.

Apart from marketing and sales, his effort is directed at creating sustainable income for tribals located in the interiors. "These tribals migrate to the coast in search of jobs and my aim is to create a sustainable economic model which works for them," he says.



# INSIGHTS

OPINION | ANALYSIS | RESEARCH | IDEAS

## The language of politics



**DELHI  
DARBAR**

**SANJAYA BARU**

**T**HAT she could speak in Hindi, even if with a heavy Italian accent, endeared Sonia Gandhi to millions of Indians. One of the factors that enabled former Prime Minister P.V. Narasimha Rao to acquire and retain the leadership of the Congress party after 1991, securing support even from many opposition party leaders, was his mastery of Hindi and Urdu — Hindustani, so to speak. Not having made much of an impression in his brief tenure as PM, Karnataka leader H.D. Deve Gowda is reportedly learning Hindi to prepare himself for a second innings in New Delhi. Even though he did not know how to read and write in Hindi, former Prime Minister Manmohan Singh overcame that political handicap by reading his Hindustani speeches in either Urdu or Gurmukhi script.

Hindi/Hindustani is the language of national politics in India. However, at the state level fluency in the language of that state is key to political relevance. If all politics is mediated and articulated through one's mother tongue, English language political analysis and reporting are at best a distraction. The movers and shakers of Indian politics operate in the vernacular. Our so-called 'public intellectuals' who hold forth in English in the media have a limited cache.

Thus the disconnect between English language media and political discourse, on the one hand, and politics on the ground. Even so-called social media has limited reach if its language remains English. A proper political appreciation of this phenomenon is quite recent. Even during PM Atal Bihari Vajpayee's time the government of the day paid undue attention to the English media. Of course, Vajpayee enjoyed enormous popularity in the Hindi media and the Bharatiya Janata Party (BJP) was not yet paying serious political attention to non-Hindi speaking states, as it is doing now.

Taking note of the changing language of Indian politics the Manmohan Singh government paid a little more attention to the non-English, non-metro media. As Media Advisor to the PM, I was witness

to amusing situations when English language editors based in New Delhi were horrified to find themselves treated on a par with the editor of a *Daily Thanthi*, a *Lokmat* or a *Bartaman*. Narendra Modi and his aides have extended this logic to virtually ignore English language media and focus all attention on Indian language media.

While the BJP is coming to terms with the role of language in politics it is as yet unable to liberate itself from its Hindi mindset. The party's inability to make inroads into southern India stands testimony to this. Apart from articulating its views in the language of the people, the BJP also needs leaders from non-Hindi regions with a wider national appeal for the party to make a dent in non-Hindi



Manmohan Singh read his Hindustani speeches in either Urdu or Gurmukhi script

**The movers and shakers of Indian politics operate in the vernacular. Our so-called 'public intellectuals' who hold forth in English in the media have a limited cache.**

areas — just the way Modi was able to reach out to a Gujarati audience and firmly embed them within the BJP's core base.

Following Modi's Gujarat strategy, the party's regional leaders in Maharashtra, West Bengal, Odisha and the southern states will have to find the language in which they can establish an emotional connect between their constituents and the national party. In Maharashtra, for example, the BJP's outreach remains constrained by the active presence of the Shiv Sena and leaders like Sharad Pawar who continue to occupy the imagination of the Marathi mind. While the BJP may have partly overcome the caste barrier in politics by appealing to a larger religious identity, language remains an issue that its essentially Hindi core has to deal with.

Consider the experience of the Congress party. Its decline over the past quarter-century mirrors the decline of regional leadership within the party. The assumption that the party can continue to ride on the historic pan-Indian appeal of the Nehru-Gandhi family is now outdated and needs a rethink. All the Congress men and women who have regional appeal are now outside the Congress — Mamata Banerjee, Sharad Pawar, Y.S. Jagan and such like.

To take the argument forward, political leaders with a regional base remain constrained by their language if they cannot appeal to voters beyond their linguistic base. Thus, none of Tamil Nadu's hugely popular leaders were ever able to make an impact outside their state. The Telugu Desam's popular founder leader, N.T. Rama Rao, tried to appeal to voters in neighbouring Odisha and Tamil Nadu without any success.

What of the Muslim voter in India? It is often imagined that there is in fact a pan-Indian Muslim vote defined purely by religious affiliation. The leader of Hyderabad's Majlis-e-Ittehadul Muslimeen (MIM), Asaduddin Owaisi, has been trying to extend his constituency beyond the confines of the Old Hyderabad state, contesting elections in Uttar Pradesh and Maharashtra, but with little success. Neither Islam nor Urdu are adequate basis for creating a vote bank. Owaisi was told in Uttar Pradesh that he is not a 'son of the soil'. In Kerala, the Muslim voter still speaks Malayalam, though that may be changing. While his regional identity may be limiting Owaisi's political reach, the fact that he can speak in Urdu to a pan-Indian Muslim audience means he has the potential to become a pan-Indian Muslim leader.

**Tailpiece:** A few months back I found myself at a business event in Chennai with Defence Minister Nirmala Sitharaman. The subject of her near hour-long speech was India's new defence procurement policy. The large auditorium where the meeting was hosted by the Defence Research and Development Organisation (DRDO) was packed to capacity. Sitharaman's topic was not such that it would invite an emotional response from the audience. But her speech did. She spoke in Tamil, without a pause, without an error, without slipping into English, explaining in great detail such boring stuff as who gets to produce what and where in defence manufacturing. Yet, she got thunderous applause at the end of the speech. The Chennai audience was delighted that she spoke to them in Tamil. ■

Sanjaya Baru is a writer based in New Delhi

# The story of toilets and schools



## BACK TO SCHOOL

DILEEP RANJEKAR

**A**FTER landing at Jodhpur airport, I proceeded directly to the 'Event with Teachers from 15 schools in the Cluster' with my colleagues in the district. By the time we left the venue of the event, it was 7 pm. The journey to the district headquarters was around three hours. In the car, several issues were being discussed. Prominent among them was that of toilets in schools.

One of my female colleagues pointed out the acute difficulties they face while travelling in the interiors. Neither schools, nor fuel pumps were equipped with usable toilets. And where they existed, they were either dirty or lacked water connections. Some of our women colleagues contracted serious urinary tract infections to the extent that one of them had to be admitted to the ICU. It was a miracle that they still travelled to remote areas.

As a result, they had to resort to drinking very little water (again, a health hazard in desert areas) or innovative methods like use of PeeBuddy — a portable female urination device that makes urinating in public toilets easier for women by saving them from urinary tract infections.

The local administration has been making several claims of having constructed thousands of toilets in rural areas, including in schools. Our general experience was that while in some schools toilets were available, they were almost unusable due to lack of water or lack of civic sense about usage.

The next day, I visited a four-year-old government 'Model School' located near the district headquarters. For those who are unfamiliar with the concept of a Model School, it is seen as similar to the Jawahar Navodaya School system, except that the Model School is not a residential school. The school, meant for students of Classes 5 to 12, is expected to be fully equipped with CBSE curriculum, libraries, laboratory, computer labs and smart boards that are wi-fi enabled. In fact, the school is also a centre for receiving and broadcasting training programmes for teachers and other education functionaries.

From a distance, it looked very impressive, akin to a large college. The school had the right teacher-pupil ratio, a wonderful reception area and large rooms for the principal as well as the staff.

Impressive slogans were all over the walls. The principal, an energetic and well-meaning person, was proudly taking us around the building. The large rooms of the chemistry and physics laboratories had no equipment and wore an empty look.

The principal apologetically stated that they were waiting for the necessary equipment — which meant that there had been no activity in these labs for the past four years. The same was true of the computer lab. The only room that had some interesting equipment had it because it was donated by a large corporate house under their CSR programme. However, the students were not allowed to use this room for fear that the equipment would be damaged.

Probably the most shocking thing was the state of the boys' toilets which I entered. Apart from the

her helplessness about the state of affairs and gave a long account of various efforts made with the panchayat and other authorities to get a water connection.

A year ago, in another school about 30 km from Dehradun, it was a real pleasure to engage with the principal of the school on educational issues that she was dealing with innovatively. She was also proud to show us two new toilets that were constructed from the budget under the Swachh Bharat programme.

When I asked her why they were locked and not being used by students, I saw mixed expressions on her face, the most prominent being that of helplessness. She said there was no budget to draw the water pipeline from the nearest water centre and hence there was no water.

When the Azim Premji Foundation began its work in 2001, the government itself had reported that almost 80 percent of schools did not have functional toilets and close to 60 percent of schools did not have satisfactory drinking water facilities. The Sarva Shiksha Abhiyan brought in significant changes and infrastructure-related improvement, including toilet construction.

The common thread in the above stories from the ground, across four different states, are: (a) a significant number of schools, even today, do not have functional toilets; (b) many toilets do not have water connections and hence are almost unusable; (c) schools have not been empowered to make the toilets functional or to maintain them; (d) a culture of using toilets appropriately and maintaining

them well does not exist; and (e) wherever problems persist, the schools are helpless since they have neither resources nor authority to achieve working toilets.

It required the prime minister to announce a Swachh Bharat Yojana after nearly 67 years of Independence. Many educated urban people even made fun of this announcement as well as the programme, without realising the importance of what it could do to our nation, considering the pathetic ground reality.

Significant budgets have been allocated and the PMO is making an attempt to monitor progress. We need to keep in mind that it is not possible for one prime minister or one office (however high that office may be) to implement and monitor the programme, unless bureaucrats and officials at all levels make a concerted attempt to implement the intent of the programme.

Like in many other cases, we have no dearth of announcements; the real issue is meticulous, timely, and quality implementation! ■

*Dileep Ranjekar is CEO of the Azim Premji Foundation*



strong stench, what was appalling was that the doors of the only lavatory had broken right in the centre as well as from the hinges, rendering it completely unusable. While the school building was merely four years old, it was already showing signs of needing serious repairs and painting. I could see the helplessness on the face of the principal. He was neither able to influence the powers-that-be to supply necessary equipment to the science and computer labs for the past three years, nor did he have the budget to carry out the repairs that were so essential to run the school.

A week later, I was in a school in Karnataka, again, in a very small village near the block headquarters. While having a very useful discussion with the principal and the teacher, I wanted to visit the washroom and was guided to the toilet meant for teachers and disabled students. I could not use the toilet since it was full of dirt and had no water. I returned to the principal's room and, at an appropriate opportunity, raised the issue of the absence of a toilet for the 100-odd children in that otherwise beautiful school. The principal expressed

# Urban governance is a failure



**CITY  
LIFE**

**V. RAVICHANDAR**

**I**N 1992, the Constitution of India underwent two seminal amendments — the 73rd Amendment for rural areas and the 74th Amendment for urban areas. Twenty-five years later, it is apparent that while the 73rd Amendment for Panchayati Raj has worked quite well, the 74th Amendment for city governance as the third tier of our government system has failed miserably. One wishes that Bhure Lal, then secretary, rural development, and the late K.C. Sivaramakrishnan, then secretary, urban development, had exchanged notes and aligned themselves on the best way forward for third-tier governance.

Today, it is safe to conclude that when it comes to urban areas, the third tier of urban governance is emasculated and is a vassal of the state government, leading to the declining quality of life in our cities and towns.

“Implement the 74th Amendment” is often a rallying cry for civic activists with an emphasis on two bodies — the Metropolitan Planning Committee (MPC) and Ward Committees — for citizens’ participation as a quickfix for our urban woes. Unless carefully crafted and truly representative, these bodies do not necessarily foster true democratic local government. Civil society’s demand to have ward committees with their nominees will end up making them representative of elite interests, excluding other sections of society. The MPC has not worked effectively anywhere in India barring limited success in Kolkata. In Bengaluru, it is a token body under the chief minister, which is used as a convenient tool to bypass court strictures of due process not being followed.

As per the 74th Constitutional Amendment Act (CAA), a new third tier of government at the municipal level emerged within the previously two-tiered federal system of the centre and the states. Aimed at enabling urban local bodies to perform as vibrant democratic units of self-governance, a series of important functions were entrusted to municipalities.

However, the functions listed under the 12th Schedule, under which the state government is expected to devolve to local government, do not cover civic subjects such as transport, housing and so on. More importantly, it is not mandatory for the state government to empower the third tier. Unfortunately, the 74th CAA also allowed exceptions for industrial townships, which is used by the state to keep local governments weak.

To manage these concerns and functions, Article 243ZE in the 74th CAA provides for the setting up of a Metropolitan Planning Committee. While state legislatures may decide on the jurisdiction,

composition, and seat filling of the MPC, not less than two-thirds of the members shall be elected by and from the elected members of the municipalities and chairpersons of the panchayats in the metropolitan area in proportion to the ratio between the population of the municipalities and of the panchayats in that area. Due to legacy governance and administration issues as well as political considerations, it has been difficult to implement the MPC across states, as stated earlier.

The first and relatively more successful MPC was constituted in Kolkata in 2001 with a term of five years. Over time, five sectoral committees were set up to deal with aspects such as infrastructure, transportation, education, health, employment, and environment. These sectoral committees were considered reasonably productive, while the MPC



meetings themselves were prone to more grievance redressal than planning for the future. The Mumbai Metropolitan Planning Committee was to be set up as per the Metropolitan Planning Committee (MPC) Act, 1999, but did not move beyond a few meetings that were again largely grievance redressal-oriented.

Other states such as Andhra Pradesh and Gujarat have enacted enabling legislation though not much follow-up action has been taken by their respective metropolitan cities. Cities in Kerala, Nagpur and Pune, too, have set up MPCs. Most MPCs, however, have been non-starters. Interestingly, a new draft law is underway in Maharashtra, where a Metropolitan Region Development Authority at the state level headed by the chief minister will come in to blur the boundaries of municipal and city limits, tightening the role of the state in various cities other than Mumbai.

Decentralisation was meant to move beyond the city scale down to the ward scale where ward committees are required to be set up across one or more wards depending on the population and is enabled by the 74th CAA under Article 243S. This was to enable public participation at the neighbourhood level while ensuring accountability of the ward councillor. But while MPCs have at least been constituted on paper in many cities, the ward

committees have seen negligible implementation. Wherever constituted, they are filled with cronies of the councillor. In Karnataka, where a citizen participation law was enacted, the councillor has veto powers over the ward committee. In such a situation, citizens are understandably wary of participating in local decisions which can be easily overruled.

While the 73rd CAA created three different levels of rural self-government with panchayats at village, intermediate, and district level, the 74th Constitutional Amendment does not have a similar multi-tiered governance framework. Although the 74th Amendment provides for the formation of ward committees at the local level and district and metropolitan planning committees above the level of the municipality, these are not distinct tiers of

local government. It is ironic that while rural areas with low population are provided with three distinct levels of local government, in India’s mega-cities, power is centralised in just one body, the Municipal Corporation. This is one of the fundamental weaknesses of the 74th Amendment.

As Indian cities struggle to meet even basic needs in the era of Smart City programmes sold as a panacea for our woes, we must revisit the existing governance and administrative power structures in urban India. There is serious need for reform with differential approaches for megacities, mid-sized cities with a population of one to three million, growing cities with 300,00 to one million population, and smaller towns. Our end solutions can take various shapes based on specific requirements but at its heart must be the political empowerment of the third tier of local city government and accountability.

We will be living in a fool’s paradise if we believe that just demanding the implementation of the 74th CAA will fix the bulk of our urban problems. It has lacunae that need to be addressed in keeping with the times, using principles of democratic accountability and strengthening of administrative structures. ■

*V. Ravichandar is a self-described civic evangelist*

# Rising tide of mob lynching



**HERE  
& NOW**

**SUBIR ROY**

**F**IRST it was Muslims accused of killing cows, then it was Dalits accused of killing cows or having the temerity to ride a horse. Now, it is suspected child abductors. The rule of the BJP has seen a rising tide of public hysteria and lynching (close to 30 killed in two months up to early June), fuelled by WhatsApp messages spreading at the speed of light.

Researchers and academics will, in good time, definitively determine why lynching turned into public madness, and what should have been speedily done so that things did not go to the extent they did. But some answers must be sought simply to make sense of what has happened and find out wherein lie quick remedies.

First, the beginning. Muslims, mostly cattle traders, have been pulled out of vehicles and beaten to death on the suspicion that the cows were for slaughter. In one case, a Muslim family was attacked and a person killed on the suspicion of the meat in the fridge being beef, which forensic tests later determined was not the case. Worse, trucks of cattle traders, even with the requisite permits, have been attacked and the traders injured.

This kind of mob action then targeted Dalits in the possession of carcasses when it was they alone who do the job of extracting value out of carcasses — a job considered too dirty and lowly by upper castes. After four Dalits skinning a dead animal in Una in Gujarat were publicly thrashed on the suspicion of having killed cows, Dalits as a protest stopped doing the job and subsequently 80 carcasses had to be buried.

After the attack on Muslims and Dalits, the focus turned to impoverished and vulnerable people, appearing to act suspiciously and, the ultimate proof, engaging pleasantly with a child. Such people have been beaten mercilessly to death by mobs. The incident that shook the country was of five migrants getting off a bus at a village fair in Dhule district of

Maharashtra in order to beg being lynched after being seen talking to a child.

In virtually all cases of lynching of so-called kidnapers, what has got a community worked up is stuff circulating on WhatsApp proclaiming: Beware, child kidnapers are on the prowl. Fake and doctored communications circulated at lightning speed because people are unthinkingly forwarding what they received. The ultimate is a purported video of child lifting which was created by splicing footage from a video created in Pakistan by a communications agency. They did it to spread awareness of the need to prevent child trafficking and most of the actors in it were members of the

If the government had come down heavily on people taking the law into their own hands right when this phenomenon gathered momentum, then probably lynching would not have taken on such proportions. But, in the case of one of the early incidents, the prime minister made a reference to it only obliquely and that too after a week of the incident. In another instance, the Rajasthan chief minister described as merely 'unfortunate' the case of a social activist being killed when he protested against pictures being taken of Muslim women defecating in the open.

Perhaps the most serious official support, by default if you like, is Union Minister Jayant Sinha

receiving in his home seven found guilty of lynching and sentenced for life, released on bail when they went on appeal. The media is now full of photographs of him with these convicted people wearing garlands.

The minister defended himself by saying that he believed they were innocent and proclaimed himself to be a supporter of the due process of law. Sinha, whose CV mentions he has been to Harvard and the University of Pennsylvania, could not distinguish between a sentence being set aside on going on appeal (which was) and a verdict convicting someone being set aside (which was not).

Why Sinha did this can be gauged from the fact that there seems to have been competition between groups within the BJP in Jharkhand to take credit for obtaining bail for the convicted. Today, with elections approaching, there are those in the ruling establishment who believe it is important for them to be on the side of cow vigilantes even if they may have engaged in lynching, never mind the need to uphold the rule of law.

The official reaction so far has been the central government asking the state governments to get a grip on this and the ministry concerned issuing a stern warning in good officialese to WhatsApp to take steps against the circulation of fake news. That's what we have at the time of writing.

What we do not have is the prime minister immediately calling an emergency meeting of chief ministers to work out a joint strategy to stop this murderous hysteria. What we also do not have is WhatsApp being blocked temporarily because it has turned out to be lethal. This, when the Internet is blocked repeatedly in Kashmir when security action is taking place. ■



**After the attack on Muslims and Dalits, the focus turned to impoverished and vulnerable people, appearing to act suspiciously and, the ultimate proof, engaging pleasantly with a child.**

agency itself.

In another instance a Tripura minister, holding no less a portfolio than education, visited the family of a boy who had died and claimed that his kidneys had been removed. The chief minister subsequently informed the state assembly that the boy's kidneys were intact.

So why has this happened? At the root is people's tendency to believe whatever they see or read on social media, particularly if what is conveyed is evidenced by video footage. The second is the increasing boldness with which people take the law into their own hands and beat up people on suspicion, sometimes killing them in the process.

# LIVING

BOOKS | ECO-TOURISM | FILM | THEATRE | AYURVEDA

SUSHEELA NAIR



A vintage Ford, the first mass produced car

## Old cars like never before

Coimbatore museum is a tribute to G.D. Naidu

SUSHEELA NAIR

**Susheela Nair**  
Bengaluru

A visit to the 20,000 sq. ft. Gedee Car Museum in Coimbatore was an enlightening experience as I was unfamiliar with the history of automobiles. As I walked down the hallway, I was blitzed with posters and pictures of the evolution of the wheel and the automobile industry.

What makes this museum interesting is the wealth of information available about cars, designers, engineers, manufacturers and the descriptive details of each of the vehicles on display. For automobile junkies, it can be overwhelming to gaze at the 60-odd cars on display highlighting the technological transformation in the automobile industry — from the engine and shaft, to body construction, seating, and tyres — with due credit

*Continued on page 30*



A Volkswagen Beetle strategically placed at the entrance

Continued from page 29

to the inventors. Eight special cars were the benevolent donation of vintage car enthusiasts and auto aficionados who wanted to share their pricey possessions with the general public.

The museum is a tribute to G.D. Naidu, an eminent industrialist, ardent automobile fan, educationist and philanthropist, by his son, G.D. Gopal, managing trustee of the museum. G.D. Gopal continued his father's hobby by not just supplementing the collection, but maintaining most of the cars in motorable condition.

While going around the museum, I learnt everything about automobiles and carriages, including facts such as how the Sumerians



A replica of the Benz Patent Motorwagen, the world's first motor car

reinvented the wheel in 3200 BCE and how the Egyptians introduced spoke wheels in 2500 BCE. We are also told about how King Tutankhamen, pharaoh of Egypt, 'rode at great speed over the desert dunes on a Formula 1 like chariot.' There are pictures showcasing steam engines and electric cars that were in vogue in Victorian England!

The collection has been categorised into a few sections. The Unique Car section has five cars that revolutionised and influenced automotive technology. Among the array, I found the Benz Motorwagen, known for being the world's first three-wheeled automobile propelled by an internal combustion, single-cylinder, four-stroke engine powered by gasoline and the first-ever automobile patented by Germany's Karl Benz; the Ford T (first mass-produced car in the early 1890s); Hitler's people's car, the Volkswagen Beetle (first rear-engine car); and the Morris Mini, considered a forerunner of modern cars, thanks to its front-wheel drive layout.

The cars are further classified according to their country of origin such as British, German, Japanese, French, Spanish and American. Other impressive vehicles on display include the Rolls-Royce 20, American classics like the Dodge Victory Six (first car to have an all-steel body), and the Cadillac limousine, with self-adjustment brakes and an integrated on-board microprocessor system (also the official car of the US president).

It was interesting to learn how Porsche's design of the Volkswagen drastically reduced the cost of the car to that of a motorcycle. It is said that the Fuehrer loved this car and urged his people to buy it as an

investment. It was called 'the car at the price of a motorcycle' and used to cost around ₹850 in those days. Also on display is the Austin 7, nicknamed the Baby Austin, one of the most popular cars produced for the British market. Another impressive display is the Citroen 2CV. It was designed to carry two French peasant farmers and a basket of eggs through a ploughed field.

Don't miss the 1921 Rudge Multi 500 cc motorcycle that was owned by Naidu. There are black-and-white photos of Naidu taking classes, holding workshops and shaking hands with other automobile tycoons. There are also racing cars once driven by world champions.

Each car has a tale to tell and is linked to world history. For instance, the Bubble Cars of the 1950s and 1960s, designed as cheap transport for the locals, became popular in post-war Europe when fuel prices shot up due to the 1956 Suez crisis. This car can seat only the driver and a passenger. There are no doors on the side and the windshield of the car doubles as the exit.

The association of cars with Hollywood stars is equally fascinating. For instance, the Love Bug has been featured in at least six movies! We also had a peek at the Toyota Sera, a two-door, four-seater coupe, notable for its butterfly doors which tilt up and forward when opened. The Toyota Sera, too, has extensively featured in television serials and movies in several countries, including in the Tamil film, *Padayappa*, starring Rajinikanth; it is the actor's favourite car.

The museum also has a royal connection in the Hispano Suiza H6B, the only one in the country that once belonged to the Maharaja of Mysore. A poster on display throws light on imported cars owned by Indian royalty featuring Maharaja Jai Singh of Alwar. The story goes that he was shooed away when he visited the Rolls-Royce showroom in London dressed in casuals. To avenge this insult, Jai Singh purchased six Rolls-Royce cars and deployed them in the municipal department for carrying around the city's garbage! In response, Rolls-Royce tendered an apology and presented the king with six new cars in exchange for the six garbage cars.

Another interesting piece of info is a snippet titled 'Doing a Mysore.' Rolls-Royce was so accustomed to the idea of the Maharaja of Mysore, Krishna Raja Wodeyar IV, ordering seven cars in batches that they coined the phrase 'Doing a Mysore' — to indicate delivery of a bulk order.

The museum has a workshop for vintage car restoration and refurbishing. While returning I pondered all these great innovations. Interestingly, these cars were made by individuals without formal or higher education or any great infrastructure. But it was their passion which propelled them to achieve their goals. ■

#### FACT FILE

**Gedee Car Museum**

**Address:** 734 Avinashi Road, Race Course Road, Coimbatore.

**Tel:** 0422 2222548.

**Open:** Tuesday to Saturday from 9 am to 5 pm.

# The special

Saibal Chatterjee

New Delhi

**R**AINBOW Jelly, a strikingly original Bengali film which released earlier this year, ends with a text card that reads: "Not all fairy tales are false". That statement sums up better than anything else the spirit and substance of the poignant story that precedes it. A little cinematic gem written, animated and directed by Soukarya Ghosal, the film probes the mind of an orphaned special child with empathy, warmth and a sense of affirmation.

*Rainbow Jelly*, which celebrates the purity of a disadvantaged child's innocent dreams in the face of adversity, is especially noteworthy for its lead actor, Mahabrata Basu, a real-life special child. He delivers a profoundly moving performance in the pivotal role of Ghoton, a 12-year-old boy who lives in a sprawling old Kolkata house with an abusive maternal uncle, Gandariya (stage and screen veteran Kaushik Sen playing a character whose name is derived from the Bengali word for rhinoceros).

"He is as shameless as a rhino," Ghoton says explaining the genesis of his uncle's name to the middle-aged Anadi (Shankarlal Mukherjee), the neighbourhood tea stall owner who is the only person besides the next-door schoolgirl, Poppins (debutante Anumegha Banerjee), who has any time to spare for the friendless boy. Anadi plays protector. Poppins, daughter of a working couple and left in the care of a housemaid, is his soulmate.

Ghoton is given to believe by his crafty uncle that he will inherit a hidden treasure when he turns 18. But given the severe mistreatment he faces from his lisping uncle, Ghoton retreats into his own universe of dreams where he imagines himself as a "little prince". When he isn't cooking, cleaning or running errands, he draws images of his deceased mother and communicates with her photograph. But nothing gets him more excited than an aeroplane in the sky. He races up to the terrace to watch the aircraft in the belief that it is a vehicle of happy tidings. It is his equivalent of wishing upon a star.

Mahabrata conveys a gamut of emotions and delivers his lines like a pro — a triumph both for him and the director of the film. However, like the actor himself, who had to deal with severe challenges during the shoot, *Rainbow Jelly* had to surmount heavy odds to find its footing in a market predisposed against films shorn of glitz, glamour and other superficial inducements. But word of mouth helped the small, independent release gather momentum in the city's multiplexes. The rest — positive reviews, audience support and an extended theatrical run — was no less than a minor miracle.

When he was just three days old, Ghosal reveals, Mahabrata contracted severe septicemia. Of the 13 newborns in the maternity ward that day, he was the sole survivor. It left him with impaired speech and limited motor skills. The manner in which the boy tides over these shortcomings on the screen borders on the unbelievable, adding a layer to *Rainbow Jelly* that would have been unthinkable without his remarkably charming presence.

# taste of Rainbow Jelly dreams



Mahabrata Basu, who plays the role of Ghoton, is a real-life special child

Indeed, *Rainbow Jelly* has magic written all over it. A modern urban fairy tale, it is a composite of elements of a food fantasy, inspirations from Bengali children's literature — the film is dedicated to writer Leela Majumdar, the author of *Podi Pishir Bormi Baksho* (*Aunt Podi's Magic Box*) — and recollections of Ghosal's own growing-up years.

The film is predicated on the hitherto unexplored theory of the connection between the tastebuds and human emotions, which is brought in by the advent of the mysterious Pori Pishi (literally, fairy aunt) and her small chest containing seven potions for seven tastes — sweet, sour, salty, spicy, pungent, astringent and bitter — all with specific mood-changing qualities.

What was it that drew Ghosal to the story that he narrates in *Rainbow Jelly*? “I was a failure in school,” he replies. “Nobody expected me to do much in life. I struggled with numbers and always got confused by street directions. I still do.” *Rainbow Jelly* celebrates a boy's victory over his inadequacies and misfortunes with the help of a fertile imagination that keeps him from losing his bearings. Redemption at the end of a rough road is inevitably sweet and life-affirming: that, in essence, is the takeaway from *Rainbow Jelly*.

This is Ghosal's third film after the Radhika Apte-starrer *Pendulum* (2014) and *Load Shedding* (2015). It is, for obvious reasons, by far his most challenging project to date. “It took an intense three-month workshop to prepare Mahabrata for the role,” says the writer-director who also uses his skills as an illustrator to introduce

animation passages into the film to highlight the young protagonist's vibrant dreamscape.

“He is an extremely tenacious boy,” says Ghosal. He points out that Mahabrata took active part in the film's pre-release promotional activities. On one occasion, when a journalist asked him what he wanted to become when he grew up, his reply was terse: “Let me grow up first. How can I tell you now?”



Soukarya Ghosal directing Mahabrata

**Ghoton's life is a deep and dark tunnel that is frequently lit up by bright shafts of life. The question the film asks is: is it possible for us to alter our fate?**

However, Mahabrata's mother wasn't sure the boy could pull off the role. Says Ghosal: “She asked me if he would have a lot of dialogues to deliver in the film. I told her that barring a handful of scenes, *Rainbow Jelly* would hinge entirely on Mahabrata. The boy is not used to mugging up lines for he has never taken an examination, she warned me.”

But once Mahabrata was on board, his mother took it upon herself to prepare him for the assignment. “She read out the dialogues to Mahabrata until the boy was able to commit them to memory purely through *sruti* (hearing),” says Ghosal.

That, however, wasn't the end of the preparatory exercise. The special child now had to be trained to express appropriate emotions to go with the lines he would speak before the camera. At the end of the workshop, Mahabrata was ready to go. But Ghosal still needed to hold up emojis indicating the required expressions (sad, happy and so on) in order to guide Mahabrata through the scenes when the camera rolled.

In *Rainbow Jelly*, Ghosal draws upon the stories that Bengali children grow up with to create his 'classic' narrative palette: a hateful, gluttonous uncle who stops short of being an unassailable monster, a fairy aunt (played by Sreelekha Mitra) who represents the young hero's faith in magic and directs the boy towards the possibility of miracles in the

here and now, and a taste-recording robot that is right out of the world of Satyajit Ray's fictional scientist, Professor Shonku. The story achieves a confluence between reality and fantasy that lends the film a melancholic yet uplifting and heartwarming, quality.

The machine is Ghoton's only surviving link with his dead father, the secrets of whose work on taste theory are locked inside it and protected by a password that Uncle Gandariya is desperate to get his hands on. Pori Pishi, with her box of magical potions, helps the boy manipulate his uncle with the unusual dishes that she secretly rustles up.

Ghoton's life is a deep and dark tunnel that is frequently lit up by bright shafts of light. The question that the film asks is: is it possible for us to alter our fate? Says Ghosal: “We all think that magic will happen but it never actually does. But we do not abandon hope.” If Ghoton's incredible adventures convey the power of positivity, does the success of a film like *Rainbow Jelly* point to better days for cinema that has both heart and craft? Soukarya Ghosal believes it does. ■

## RANDOM SHELF HELP

A quick selection from the many books that turn up for review

**R**ASHMI Saksena upturns the notion that women recoil from violence and are silent spectators of conflict. In fact, women play a key role in each and every insurgency in India. They go through rigorous training, kill with cold precision, and ambush seasoned soldiers. Or they carry out quieter tasks like collecting intelligence and acting as couriers.



*She Goes to War: Women Militants of India*  
Rashmi Saksena  
Speaking Tiger  
₹499

What makes the exploits of the women even more surprising is that they are from conservative families, mostly in villages. Yet they opt for a life of great danger. The decision is entirely theirs, observes Saksena.

She tracks 16 former women militants in Kashmir, Chhattisgarh, Nagaland, Assam, and Manipur and listens to their stories with sympathy. It could not have been easy identifying the women, and trudging through hostile terrain to meet them. Nor was there any certainty that they would talk. There was hesitancy and suspicion and she was sized up before the women spoke freely. The outcome is a book that is engrossing.

The first chapter, 'Warriors in Burqa,' profiles women in Kashmir who joined militancy. Here, their role is subservient to men, a quiet affair, and they finally end up as social activists. Saksena profiles Ruhi, who crossed the border to Occupied Kashmir to receive arms training; Nighat, who falls in love with a militant; Anjum, who became a courier picking up money for terrorist outfits; and Khalida, who died mysteriously. After the death of Burhan Wani, schoolgirls became stone-pelters. In the absence of role models, militants posing with guns become attractive heroes to young women.

In the second chapter, 'Bangles and Bayonets,' Saksena travels to Bastar in Chhattisgarh, the heart of the Maoist insurgency. Here, in contrast to Kashmir, women are on equal terms with men, and are, writes Saksena, 'unflinching killers.' The female foot soldiers of the Maoist insurgency are tribal and from very poor homes. There is no social ostracism in becoming a Naxal or eventually surrendering and, ironically, joining the police.

Recruitment, with Maoist philosophy conveyed

through song and theatre, looks attractive. There is camaraderie and power in holding a gun. But the biggest issue in tribal India is forest rights.

Women leave mostly because they fall in love and then want to raise a family. Saksena talks to Bhima, motivator in the Naxal Education Wing in Bastar district, Tulsi, a commander in the local guerrilla squad, and Kamla, deputy commander of a deadly all-woman ambush team.

There are chapters on the northeast, which has a mosaic of insurgency groups. In 'Love and Rebellion,' Saksena profiles women who joined the Naga resistance. Their fight is for a separate state. The women are educated, deeply committed to their cause, and on equal terms with the men. Surrender is not respected.

Saksena meets Avuli Chishi Swu, a former member of the NSCN (IM) (Nationalist Socialist Council of Nagalim — Isak Muivah) steering committee who undertook a tortuous journey to China in 1974 for arms training and weaponry, and Theimila, who worked as an accountant for the Khaplang faction of the NSCN.

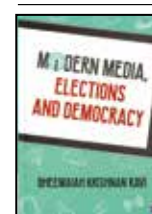
In 'Flames of the Forest,' Saksena talks to women who joined the dreaded United Liberation Front of Asom (ULFA). ULFA looks for educated women who can be couriers, gather intelligence, and extort money. She meets a former schoolteacher and a female militant of the Bodo separatist movement.

India's boldest peaceful protest has been by women in Manipur. In July 2004, a group of women marched naked to the headquarters of the Assam Rifles in Imphal to demonstrate against the rape of a 32-year-old woman.

Manipur has about 17 insurgent groups at loggerheads with each other and with the Indian State. Saksena talks to Purnima, who used to extort money for a militant outfit and is now a faith healer. There is real anger in the northeast against AFSPA. But insurgencies in the region are also a confusing mix of identity, autonomy, underdevelopment and plain business. ■

**T**HE media plays a critical role during elections. Its duty is to provide reliable and unbiased information so that people can vote intelligently. The book takes a global perspective on how media

covers elections in democracies across the world, the constraints it faces, and international laws that protect journalists. There is an extensive chapter on India as well and some comparisons with the US and UK. On the whole the author believes coverage of elections by Indian journalists is pretty good. However, in recent years, poll coverage has been sullied by the phenomena of fake news, paid news, and opinion polls going awry. The book does not address recent trends like increased global interference in elections, the Cambridge Analytica scandal being an example. But it is a useful text on the media. ■



*Modern Media, Elections and Democracy*  
Bheemaiiah Krishnan Ravi  
SAGE Publications  
₹795

**T**HE tiny mosquito spreads malaria, dengue, and chikungunya. A new disease it has added to its fearful portfolio is the Zika virus, which surfaced in



*The Secret Life of Zika Virus*  
Kalpish Ratna  
Speaking Tiger  
₹299

June 2017 in Ahmedabad and created panic. The virus is deadly for pregnant women since it causes the foetus' brain to shrink, a condition called microcephaly. Kalpish Ratna writes an excellent, readable biography of the mosquito and its links with Zika, combining history with science, research, literature and dark humour. The book explains why the mosquito became the Zika's vector and why mosquitoes, specifically the female *Aedes aegypti*, became a vampire.

The mosquito's wispy anatomy is a lethal delivery mechanism for Zika. But mosquitoes in the wild did not bite people. Ratna describes why mosquitoes made us their livestock. Much of it has to do with environment destruction. Trees and iron-rich algae were their preferred hosts. But the destruction of forests and desertification made the *Aedes aegypti* homeless and hungry so it turned to humans. The Zika virus, incidentally, gets its name from the Zika forest in Uganda. ■

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**Civil Society**



# Ujjivan and the rest

By Ratna Vishwanathan

**T**HE story of Ujjivan, one of the largest Microfinance Institutions (MFIs) and its transformation into a Small Finance Bank (SFB) takes us deep into the microfinance business and the vision of Samit Ghosh, Ujjivan's founder.

Ujjivan's journey is not unknown, but Subir Roy's considerable experience as a journalist is evident in his careful chronological documentation of the 13-year journey of Ujjivan, peppered with facts and figures.

For those interested in the microfinance ecosystem the book also chronicles the larger story of the 'for profit' microfinance entities in India.

The extensive introduction and overview is a must-read for anyone wanting to understand the journey of Non-Banking Finance Companies (NBFCs).

They came to be known as NBFC-MFIs after they specifically focused on microfinance post the recommendations of the Malegam Committee Report on reforms in the sector. They operated within a stringent regulatory framework after the 2010 Andhra Pradesh microfinance crisis. The slightly extended overview provides a chapter-wise summary as a prelude to what follows.

The microfinance sector over the past decade has grown quite rapidly despite having had to withstand various crises at regular intervals. The entities that have weathered these storms well are those that planned growth in a robust and steady manner, putting the client at the heart of the business.

The book brings out in great detail how Samit Ghosh's previous career as a banker helped create and drive the business model of Ujjivan. While he was inspired by the Grameen model, he realised that there was a large urban poor segment that needed basic access to finance. The business model started out by providing access to finance to low-income households across the country in urban geographies.

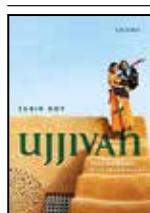
At the heart of the organisation lies the client-centric development of Ujjivan. But while keeping the business sharply focused on clients, Ghosh took equal care to ensure employee growth and welfare. In an era where attrition rates are high, Ujjivan has managed to have an 86 percent retention rate.

Ujjivan's well-planned growth trajectory and its strategy of spreading business evenly across geographies helped it to overcome several crises over the years, the most recent one being of demonetisation. There are interesting snippets such



A meeting of a Self-Help Group in Andhra Pradesh

**What really makes the book an important read for those interested in the microfinance ecosystem is that it also chronicles the larger story of the 'for profit' microfinance entities in India.**



*Ujjivan: Transforming with Technology*  
Subir Roy  
Oxford University Press  
₹550

as how the entity came about as the result of a moment of epiphany between Ghosh and his deceased father. Ghosh's vision of setting up the Parinaam Foundation to enhance the skills of the population at the bottom of the pyramid to provide them with access to finance speaks much about his vision.

What set Ujjivan apart from its peers was Ghosh's approach of decentralised governance with a team of highly skilled people who drove the development agenda of the organisation. The entity has worked with investors on an aligned vision. When it was on its way to an IPO just prior to its transformation into a Small Finance Bank (SFB), Ghosh was very candid in letting investors know that as they were undergoing a change of model, initially profits would dip.

It is this candid approach and the development focused orientation of Ujjivan which has driven its success. Much before the SFBs were envisioned by a forward-thinking governor of the RBI, Ujjivan had already started using technology to leverage business and bring down costs to provide low-cost service delivery to borrowers. This marriage of social benefit with technology, sound human resource practices and a client-centric business focus has gone forward to inform Ujjivan Small Finance Bank.

The book chronicles important milestones in the MFI story right up to demonetisation, which really hit the MFI industry hard. As the business was predominantly cash-driven, pulling cash out of the economy and not allowing NBFC-MFIs to accept old notes impacted the sector greatly. The unforeseen disruption by local politicians and low-level political aspirants was something that took the industry by surprise. But it also brought home the fact that there was a need to interact closely with borrowers. Ujjivan scored on this account and weathered the storm well.

The facts about the industry as a whole, and Ujjivan in particular, have been carefully researched. Experts and stakeholders have been consulted to provide insights into a sector which has been endlessly striving to be seen as a vehicle of financial inclusion due to its 'feet on street' model of doorstep banking services to the poor.

Where the book falters is possibly on capturing the passion that drives Samit Ghosh. Having said that, the meticulous research that has gone into the book is a tribute to Roy's experience as a journalist of long standing. It is a good read and a treasure house of information on Ujjivan definitely, but also on the sector as a whole. ■

*Ratna Vishwanathan is CEO of Sustainable India Finance Facility*



**AYURVEDA  
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Dr SRIKANTH

## Curb bad breath

**B**AD breath not only undermines a person's confidence, it can also place him or her in an awkward situation. Many people across the world suffer from this problem which can cause them embarrassment. Most of the time bad breath is a temporary symptom which settles on its own depending on the cause. But, at times, it might need some professional assistance!

Although poor dental hygiene is the prime cause of halitosis, as bad breath is technically called, it might also be indicative of digestive disorders such as acid reflux, peptic ulcers, indigestion and chronic constipation.

Bad breath usually occurs due to the accumulation of bacteria in the oral cavity, and bacterial activity on food debris, the coating of the tongue, plaque and gum diseases.

Other common causes include dry mouth, gum disorders, tooth decay, certain respiratory conditions like chronic sinusitis/bronchitis which might force the patient to breathe through the mouth and consumption of certain foods like onion, garlic and eggs. Smoking, alcohol consumption and tobacco chewing are other well-known causes of bad breath.

**PREVENTION:** The first thing for preventing bad breath is to brush your teeth properly at least twice a day. And always remember to also clean your tongue. It is not enough to just brush.

It also helps to rinse your mouth thoroughly after every meal, especially after eating or drinking milk products, fish or meat. Drink enough water to prevent excessive dryness of mouth.

Eating fruits like apple, pear, papaya, pineapple and vegetables like carrot, celery and mint helps to cleanse the mouth and teeth.

Avoid alcohol, smoking and consumption of caffeine products. Also avoid mouth freshening mints and mouthwashes that contain alcohol. These can actually make things worse. They only temporarily mask the odour and tend to dry the mouth, creating a more favourable environment for bacteria.

Eat as soon as you begin to feel hungry. Follow a regular physical exercise regimen. This ensures proper digestion and will be useful if bad breath is due to poor digestion.

Having taken care of your system, get your teeth periodically cleaned by a dentist at least once every six months.

**HOME REMEDIES:** There are also effective herbal home remedies for bad breath.

Water works as the perfect natural mouthwash. Keep sipping water throughout the day - it will help keep your mouth clean and odour-free as it removes trapped food particles and bacteria. Swish a small amount of water around your mouth for at least 20 seconds to keep your mouth naturally fresh.

Oil pulling is a natural treatment for bad breath that works wonders. Rinse one tablespoon of coconut oil or sesame oil in your mouth for around 5 to 10 minutes.

Cardamom seeds are well-known mouth fresheners and give your mouth a natural essence. Other popular spices that are useful in combating bad breath include clove (laung), cinnamon

(dalchini), fennel (saunf) and cumin seeds (jeera). Chewing any of them after meals is very helpful.

Gargling or brushing with baking soda is also an effective remedy.

Gargling with a decoction of yashtimadhu (licorice/mulethi/glycyrrhiza glabra), triphala or haridra (turmeric powder/curcuma longa) reduces bacterial load in the oral cavity and, thereby, bad breath.

All these simple remedies help in containing bad breath that has its origins in the oral cavity. But other causes must be addressed independently.

**MEDICATION:** In stubborn cases, the following medicaments would be beneficial:

- ❑ Irimedadi taila (Kottakkal) — 10 ml can be used for oil-pulling for about 5 minutes, twice daily.
- ❑ Khadiradi vati (Zandu)/Srikara Amodini pills (BV Pandit) — 1 or 2 pills to be chewed.
- ❑ Medicated mouthwashes like HiOra (Himalaya) — 15 ml to be rinsed thoroughly for 30 seconds and expelled, twice daily will reduce bad breath.
- ❑ In case of swollen and bleeding gums — HiOra GA (Himalaya) or G32 mouth paint (Alarsin) to be used to gently massage the affected area of the gums about 3 to 4 times a day.

If digestive disorders like indigestion or constipation are the cause for bad breath, they must be treated first. Frequent colds, chronic sinusitis, coughs and other respiratory conditions could be causing bad breath. These should be addressed on priority. ■

*Dr Srikanth is a postgraduate in Ayurveda and has been a consulting physician for the past 17 years. He is currently National Manager, Scientific Services at The Himalaya Drug Company*

## PRODUCTS

### Special soaps

PROJECT Swavalamban's guiding philosophy is 'Be a light unto yourself,' an inspiring Buddhist saying which urges you to harness your inner strength. The project reaches out to rural women in Haryana and skills them so that they become confident and rely on themselves.

The women have been taught how to make face wash and soaps from charcoal, neem, rose, sandalwood, shea butter, orange and coffee. Also on sale are soft yoga mats, rugs, embroidered tablecloths and a variety of healthy snacks.

Project Swavalamban is an initiative by the Ramanujan Foundation, a non-profit in Faridabad. Started in 2013 by Dr Rajeev Mohan Kukreja and his wife, Sujata Tripathi, the foundation also runs a Divyang Rehabilitation and Skill Development Centre in Palwal and Nuh districts which provides therapy, training and education to children with special needs. The centre identifies special children in villages. It has a bus which picks up and drops the children.

The centre has a section for mentally retarded children and another for the hearing impaired. The classrooms are equipped with furniture, toys and teaching aids. The children learn how to use computers, tailoring and skill development programmes under the Pradhan Mantri Kaushal Vikas Yojana and the Deen Dayal Upadhyaya Grameen Kaushalaya Yojana.



The Ramanujan Foundation has a store in Gurugram where products made by the women are sold. You can buy online as well. ■

**Contact:** Project Swavalamban, Ramanujan Divyang Rehabilitation and Skill Development Centre, 72 Delhi-Mathura Road, Mitrol, PO Aurangabad, Palwal-121105; Phone: 9991035383, Email: info@ramanujanfoundation.org; Gurugram: G-127 Sushant Shopping Arcade, Sushant Lok-1, Gurugram-122002, Haryana.

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Tata Steel is teaching marginal farmers of Jharkhand and Odisha modern climate-resilient agriculture. The Company has introduced a water-intensive system for rice cultivation. The farmers are kept informed through the Green College Kolabera, a joint initiative of Tata Steel and German non-profit organisation Welthungerhilfe. They also learn about modern agrarian practices from scientists at Vaarta.



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