

# Civil Society

## IDEAS FOR THE NEW DECADE

**ARUNA ROY | M.S. SWAMINATHAN  
VIJAY MAHAJAN | ARUN MAIRA  
DILEEP RANJEKAR  
CHANDRASEKHAR HARIHARAN  
DARSHAN SHANKAR | V. RAVICHANDAR  
VINAYAK CHATTERJEE  
ROB SINCLAIR & ANNUSKA PERKINS**



### **'TO SAVE THE GANGA THINK ECO-SYSTEMS'**

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management plan to  
curb river pollution

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# Civil Society

READ US. WE READ YOU.

## Our monk and other friends

AS the decade ends with scams and scandals leaving their scars on our key institutions, there is a need to look within and think ahead. The monk on the cover of this issue has been a companion for several years, appearing regularly in our cartoon on Page 5 and in our annual calendar. He has, in his funny way, inspired us to see the bigger picture. So have many individuals and groups across India, who, with their ideals and missions, live in the hope of building a modern, just and competitive country.

Some of them have, at our request for this special January issue, invested time and effort in writing about what they consider to be important ideas for the new decade. These are ideas they work with and have come to understand well.

Of course, India is complex and no such exercise can be complete. Much more could be said and done. But each of these ideas is a powerful one and should rank among the key drivers of our future growth. We offer in this issue a collection of insights into government schools, the social audit, eco-friendly construction, corporate accountability, financial inclusion, rural infrastructure, seeds and biodiversity – all areas that should define our competitiveness in the coming decade.

We in *Civil Society* magazine would also like it to be known that there is an India beyond the bad news. As we know it, this 'non-TRP India' is forward-looking and inclusive and grapples with problems that have implications for everyone.

It goes without saying that nothing is achievable without competent and insightful governance. And one way of arriving at better governance is through the churning of ideas and raising the bar for what people can aspire to. We have in the past decade seen a few of our politicians and bureaucrats evolve because of the pressure that has come from outside government. It is a process that needs to be allowed to gather momentum and not stifled.

Is there reason to be hopeful about the future? We would say there is. It will be a future where notions of size will change. It will be driven by new technologies, greater access, rising aspirations, impatience and also the vanishing of resources. It will be defined by accountability and delivery and it will fill spaces beyond caste and religion. Most importantly, it will be a future that will find the leaders it needs.

We wish our readers a happy, peaceful and prosperous 2011.

**Publisher**  
Umesh Anand

**Editor**  
Rita Anand

**Editorial Consultant**  
Saibal Chatterjee

**News Network**  
Shree Padre, Jehangir  
Rashid, Shreyasi Singh,  
Syed Basharat,  
Susheela Nair

**Photographer**  
Lakshman Anand

**Layout & Design**  
Virender Chauhan

**Cartoonist**  
Samita Rathor

**Write to Civil Society at:**  
E-2144 Palam Vihar, Gurgaon,  
Haryana 122017. Ph: 9811787772  
Printed and published by Umesh  
Anand from A 53 D, First Floor,  
Panchsheel Vihar, Malviya Nagar,

New Delhi-17. Printed at  
Thomson Press (India) Ltd,  
18/35 Delhi-Mathura Road,

**Postal Registration No.**  
DL(S)-01/3255/2009-11.  
Registered to post without  
pre-payment U(SE)-10/2009-11  
at New Delhi PSO  
Registered with the Registrar of  
Newspapers of India under RNI  
No.: DELENG/2003/11607  
Total no of pages: 40

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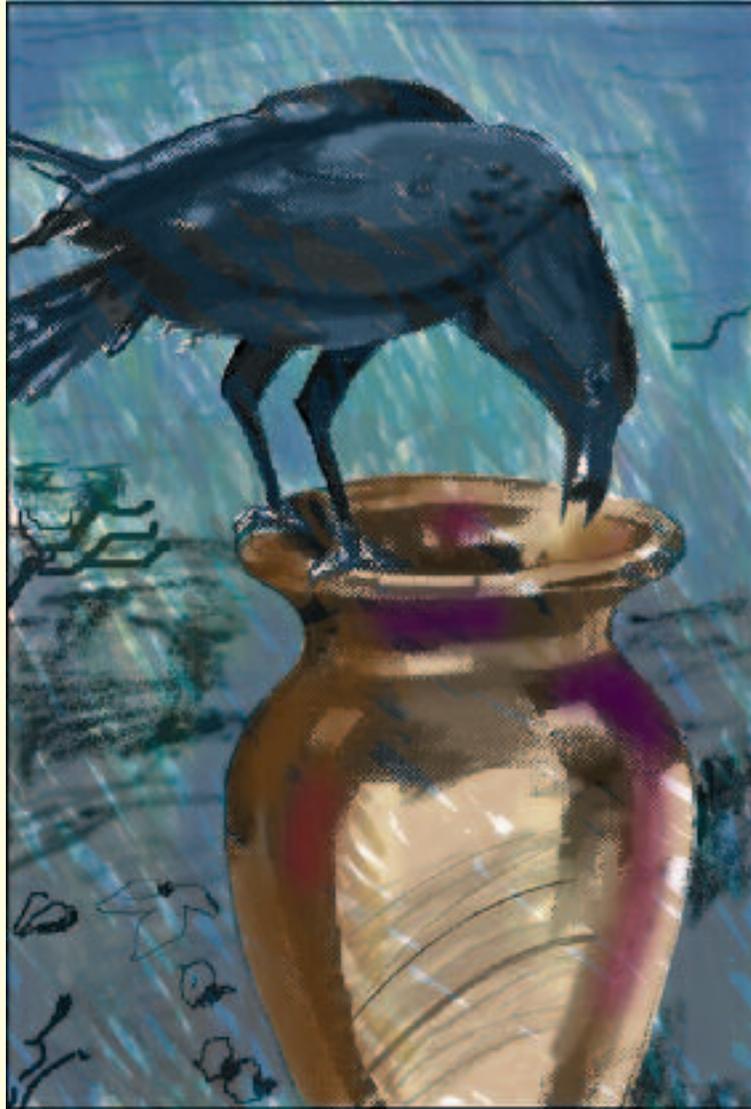
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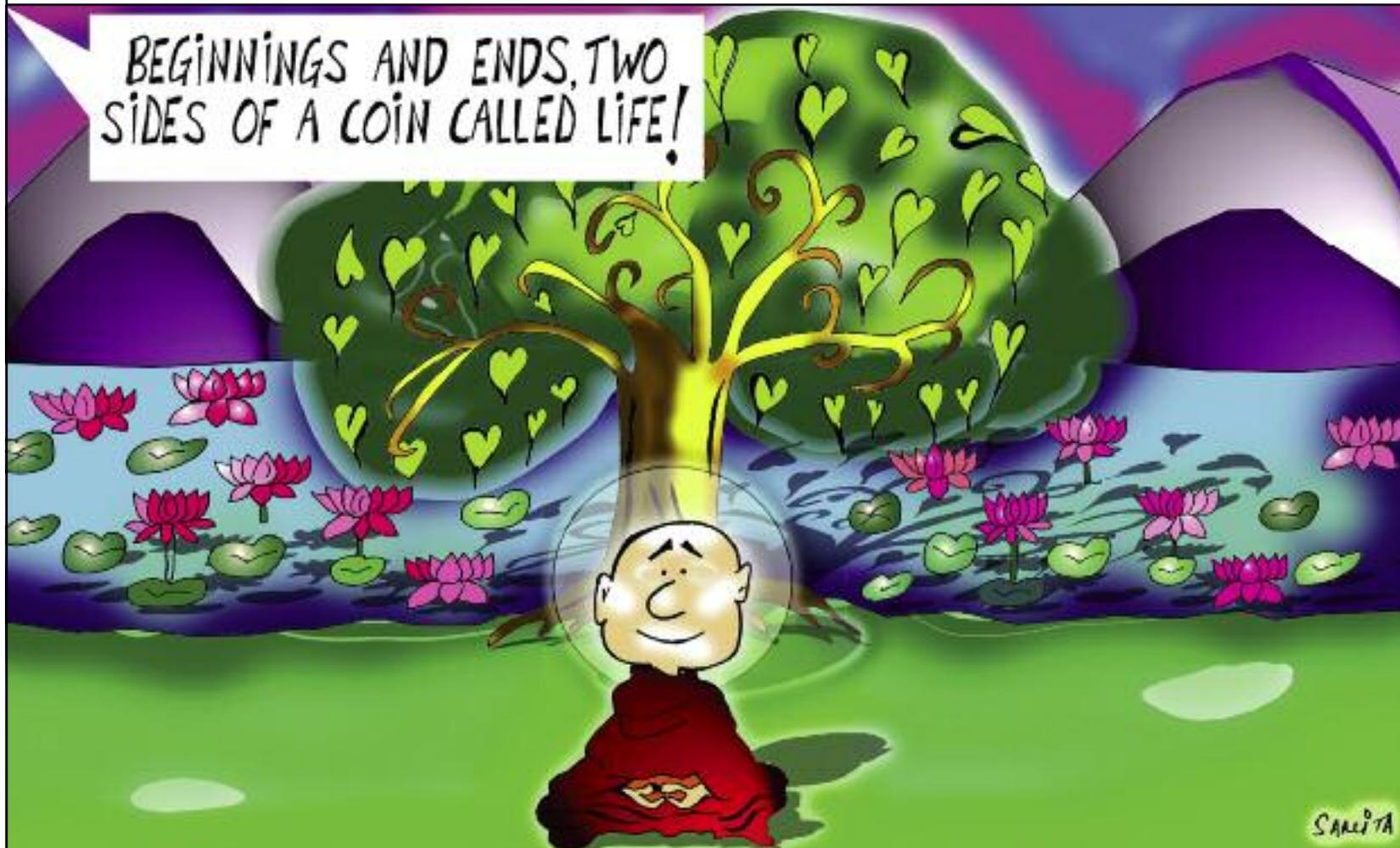


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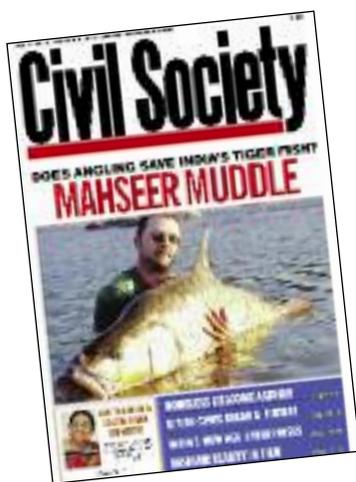
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## IN THE LIGHT

by SAMITA RATHOR



## LETTERS



### Mahseer muddle

I read your article on the mahseer online. Must say, it is very well researched and very well written and provides a balanced view of all the stake holders.

Thanks for writing about this.

**Tiger G Ramesh**

Mahseer Muddle was a great story. No doubt circumventing the mah-

seer requires a lot of skill, planning and practice.

**Steve**

The debate over whether to angle the mahseer or not is reflective of the larger debate on wildlife. The ecological footprint of humans needs to be much smaller around our forests. Animals just have a little bit of space left for themselves. In the old days when we had bigger forests we could accommodate more people. They also lived in harmony with animals. But today forests have been opened up for industrial activity. Let us keep some areas, like our national parks and sanctuaries, only for our remaining helpless animals. Let them live in peace.

**Gayatri Singh**

The health of wildlife depends on the health of our forests. India needs to increase its natural forest cover many times over. Then animals can thrive. We should also secure our national parks and sanctuaries. Don't permit too much tourism.

**Ashish**

### UID

Your story on the homeless getting Aadhar numbers made good read-

ing. It is a positive sign that the poor are finally getting an identity and alongside, benefits. But, I feel, a legal architecture of security and protection of human rights must be built into the UID programme. Otherwise it is vulnerable to abuse.

**Gautam Srikrishna**

### Trilce

With reference to Rakesh Agarwal's story, 'Trilce is Bhondsi's saviour' in your online edition I would like to point out that Bhondsi is Haryana's richest gram panchayat. I was born and brought up there. Every family has a person serving in the army. It is not a poor place.

**dinesh.takshila@gmail.com**

*Rakesh Agrawal replies:*

I went myself to Bhondsi and I was surprised to find it so ramshackle. People who are poor are mostly migrants. The gram panchayat may be rich but there is a lack of good schools and basic infrastructure which was very visible to me.

### CSR diktat

V Ravichandar's rejoinder to me gets personal. It is healthy to agree to disagree and to do so respectfully.

Nobody can deny there are misplaced priorities and planning processes which do not tackle urgent issues on the ground. I too work in the urban rights space and have an interface with the private sector as well. At the same time I have not lost sight of issues concerning the homeless, the most marginalized people in our cities.

Companies and their CSR must get out of the 'what is in it for me?' syndrome to 'what is in it for us all as a country'. Companies corner a large chunk of resources. If voluntarism worked we would have had more than 50 companies reporting on the GRI (Global Reporting Initiative). Compare that with the fact that more than 500 NGOs adhere to the transparency domain.

All is not well which is why the Prime Minister had to spell out a social charter and the Ministry of Corporate Affairs had to come out with CSR guidelines for industry. There are checks and balances in the system to ensure that transparency can be brought about such as RTI, and corporate liability cannot be excused.

**Amita Joseph**

**This debate is now closed.**

**Editor**

LAKSHMAN ANAND



Kavita Srivastava

# Food activists demand universal PDS

**Civil Society News**  
New Delhi

ONCE again right to food activists took their place on the footpath at Jantar Mantar unfurling banners and adjusting microphones. They have been following closely the journey of the Food Security Bill from the National Advisory Council (NAC) to a C Rangarajan Committee which is now poring over its 'implications' for the nation.

But the activists are unhappy with the Bill. They say it will not bring about food security for the poor. This is not exactly what they had campaigned for.

Kavita Srivastava, right to food activist, repeatedly emphasized that the campaign had asked for a universal Public Distribution System (PDS). But the NAC Bill has divided people into priority and general categories. Those Below the Poverty Line (BPL) and those in the Antyodaya category have been placed into the priority category. They will now get 35 kg of wheat/rice at ₹3 per kg. The Above Poverty Line ration card holders will be in the general group.

The activists point out that it has always been impossible for the state to identify the poor, a major reason for endemic poverty and starvation. The impoverished invariably get left out. In Bihar and Jharkhand as per NSS data, 80 per cent of poor rural households did not have a BPL card in 2005. So to ensure all citizens have access to basic food, it is important for food entitlements to be universal.

Another important criticism is the allocation

for cities. The urban area's quota of 28 per cent for the priority category is an under estimation. Cities have more poor people than that because of high rates of distress migration.

According to some estimates, 40 per cent of Delhi's population lives in slums. In Mumbai, malnutrition among children in slums is very high.

Also, the entitlement of 35 kg of food grain for priority households and 20 kg for the general group is too little. It will last an average family only for 10 to 15 days. And the Bill guarantees only cereal. It does not give assurances for supply of oil and pulses. Female anaemia and malnutrition is high in India so the basket of food needs to be widened to provide nutrition to people.

The activists say they want an assured expansion of the Integrated Child Development Scheme (ICDS) with quality food for children. One health activist pointed out that the obsession of some states with serving vegetarian food is misplaced. Dalits and Adivasis do eat non-vegetarian food and giving every child an egg was a good idea. The food to be served under the ICDS must be carefully worked out.

There should also be crèches and universal maternity entitlements. The activists want old age pensions and a bigger Antyodaya scheme.

The right to food movement is opposed to privatization of ration shops, cash transfers and the UID. They have also taken up the rights of farmers. The movement wants the government to boost food production, increase procurement and give farmers good prices.

# Ragpickers,

**Civil Society News**  
New Delhi

RAGPICKERS have stepped up their campaign to prevent private companies from taking over garbage collection under a waste-to-energy project in New Delhi.

A public meeting held at the Constitution Club on 10 December, expressed concern over an estimated 250,000 ragpickers losing their traditional means of earning a livelihood.

The meeting was also attended by a representative of residents of Sukhdev Vihar, a neighbourhood in the Okhla area, where a plant will use 2,000 tonnes of garbage daily to produce 16 MW of power.

Sukhdev Vihar residents are worried that incineration of garbage at the plant will lead to the emission of harmful gasses and endanger their health. The residents are already in court against this plant and a medical waste incinerator set up earlier in the area.

The meeting was organised by the All-India Kabadi Mazdoor Mahasangh and the Toxics Watch Alliance. It was supported by other NGOs such as Toxics Links and Hazards Centre. The former member secretary of the Central Pollution Control Board (CPCB), B. Sengupta, was present and questioned the choice of location for the plant.

Delhi is said to generate between 6,000 and 8,000 tonnes of garbage daily. Traditionally, ragpickers have collected the garbage and sifted the recyclables before the garbage is taken to landfill sites.

But the Delhi government now wants companies to do this job and take over from ragpickers. It also wants to solve its problem of finding landfill sites by incinerating garbage to generate electricity.

The Okhla plant is one of the three it expects to set up. The others are at Timarpur and Ghazipur.

The Okhla plant has been given to Jindal Ecopolis, an infrastructure company, in a public-private partnership aimed at earning carbon credits.

Work on the project was inaugurated with much fanfare by Chief Minister Sheila Dikshit. Accompanying her were her son, Sandeep Dikshit, MP, and Chief Secretary Rakesh Mehta.

But critics say that despite all the interest shown at the top, the Delhi government seems to have got its facts horribly wrong. Far being a progressive measure, incineration of garbage is frowned on internationally.

Plants such as these are highly polluting. They have been junked all over the world for being a hazard to public health.

There are a few key criticisms of projects which seek to produce energy from waste.

Firstly, the incineration of wastes results in the release of particulate matter, heavy metals and gases like dioxins and furans which are known to be cancer-causing. Checking these emissions is possible but extremely costly.

Secondly, Indian garbage lacks the calorific content required for producing electricity.

Thirdly, incinerators distort waste management because they depend on a minimum guaranteed flow of

# residents trash Delhi garbage plan



LAKSHMAN ANAND

Shashi Bhushan Pandit of the All India Kabadi Mazdoor Mahasangh speaking at the meeting



**Sukhdev Vihar is barely 200 metres from the plant and residents are worried about toxic emissions and how their lives will be affected when 2,000 tonnes of garbage begin arriving there every day.**

waste. Modern urban management systems on the contrary aspire to reduction of waste, recycling, composting and distributed disposal.

Fourthly, they take away the traditional livelihoods of ragpickers who play an important role in separating waste. The ragpickers have nothing to fall back on.

Gopal Krishna of Toxics Watch Alliance says past efforts at generating electricity from waste have ended in dismal failure.

A plant set up at Timarpur in 1990 never functioned. Another plant in Chandigarh couldn't produce electricity because of the quality of the garbage. Instead it produces pellets which it supplies to furnaces.

Says Krishna: "Gandhamguda village in Ranga Reddy district of Andhra Pradesh had the same

technology. While the incinerator was in operation, the village was covered by a heavy shroud of dark smoke. Local doctors started detecting problems not found before – skin rashes, asthma, respiratory problems and stillbirths."

Krishna argues that waste to energy projects are a violation of international environmental norms. Under the Kyoto Protocol waste incineration is a greenhouse gas emitter.

Anil Mishra of the Sukhdev Vihar Residents' Welfare Association says that the Jindal Ecopolis plant has been cleared without a proper public hearing.

Sukhdev Vihar is barely 200 metres from the plant and the residents are worried about emissions and how their lives will be affected when 2,000 tonnes of garbage begin arriving there every

day.

Sukhdev Vihar is already battling to have a medical waste incinerator at the same location removed. The residents have gone to court with professional opinions from across the world against such incinerators being operated so close to homes.

Shahid Hasan, a resident who has been handling the legal initiative, says: "It is amazing that even as we are in court over the medical incinerator with all the scientific evidence against such plants, the government has chosen to locate another plant just here."

The Jindal Ecopolis website says the plant will generate 16 MW and serve 600,000 homes.

But not everyone is ready to buy that claim. Not only is the quality of garbage not suitable for power generation, 16 MW is a mere fraction of Delhi's power demand. Weighed against the risk of pollution and the energy lost by incinerating recyclables, the plant is more of a burden than an asset.

For the ragpickers the question is of their survival from day to day. In the absence of government support they negotiate their way out of difficult situations. Many of them buy peace by making small daily payments in kerb deals with representatives of the companies which have the contracts for lifting garbage.

Shashi Bhushan Pandit of the All-India Kabadi Mazdoor Mahasangh says in certain areas like Civil Lines where there are several hospitals and other institutions,

the ragpickers have been chased away by the contractors.

In other areas where the contractors were collecting the garbage in small vehicles and selling it locally instead of transporting it away in trucks, the ragpickers' union stopped middlemen from buying the garbage. The result is that it doesn't get cleared.

Bhushan says the CPCB's manual for handling solid wastes emphasises the role of the informal sector, particularly ragpickers. The manual cites the examples of Ludhiana and Pune where ragpickers have been treated as partners by local governments.

In Delhi, however, an atmosphere of suspicion and confrontation prevails. Ragpickers feel they are being pushed out of the city and residents complain they are not being heard on projects like the Okhla incinerators which seriously impact their health.

# Anti-dam stir gets a boost

**Rakesh Agrawal**  
New Delhi

**A**FTER sitting morosely for three days on the footpath at Jantar Mantar in Delhi, the Renuka Dam Sangharsh Samiti burst into celebration. News reached them that Jairam Ramesh Union Minister for Environment and Forests, had indeed cancelled the Renuka dam, which was slated to come up on the Giri river in Sirmaur district of Himachal Pradesh.

"This is the result of our long struggle," says Guman Singh, coordinator, Himalaya Niti Abhiyan, a collective forum under whose banner the samiti had fought. "We began protesting against the dam in 2006, holding *dharnas* and rallies in our villages. We got in touch with local officials and those in Delhi asking them to cancel the project. It would have submerged 1,630 hectares of prime agricultural land and drowned 37 of our villages."

The expanding city of Delhi in its search for water had set its sights on the bountiful Giri river. Plans were drawn up to build a dam 148 m high with a storage capacity of 542 million cubic meters of water at a cost of ₹3,700 crore. Delhi would have then got 275 million gallons of water a day from the Giri. The dam was to generate 40 MW of power. Plan in place, the government-run Himachal Pradesh Power Corporation Limited (HPPCL) had begun acquiring fields and forests with alacrity.

But the villagers put up a spirited fight and won. They came all the way to Delhi to take part in Sangharsh, a protest called by the National Alliance for People's Movement (NAPM) from 22 to 26 November against the Union government's proposed amendment to the Land Acquisition Act and its Rehabilitation and Resettlement Bill.

The focal point of the five-day protest appeared to be dams and forests. About 1,000 people arrived from the northeast alone to protest against the myriad dams being built there. There were also forest-dwellers from Madhya Pradesh agitating for implementation of the Forest Rights Act.

Medha Patkar, leader of the NAPM, questioned the need for huge dams and denounced the absence of participatory processes in development planning. "We demand prior informed consent of gram sabhas in rural areas and basti sabhas in urban areas as a pre-requisite for land acquisition," she said. The NAPM demanded a moratorium on all infrastructure projects till a humane policy for land acquisition, rehabilitation

and resettlement is put in place.

When Patkar met Environment Minister Jairam Ramesh with NAPM's demands, the minister confirmed cancellation of the Renuka Dam Project.

On 31 August Ramesh's ministry had rejected the proposal. Its communication said: "The recommendations of the forest advisory committee were placed for approval before the ministry which has declined to accept (them) as the proposal involves high-density forest and requires the felling of a very large number of trees."

Around 775 hectares of forest land were being



Members of the Renuka Dam Sangharsh Samiti and the Himalaya Niti Abhiyan

diverted for constructing the dam. As many as 150,000 trees including 49 hectares of the Renuka Wildlife Sanctuary with subtropical deciduous forests would have been axed.

Activists pointed out going ahead with the dam would have been a gross violation of the Forest Rights Act, 2006, as forest land would have been diverted without settling the forest rights of forest dependent people. Villagers were also concerned about the impact of the dam on the nearby Renuka Lake, a religious symbol and a Ramsar site.

"The authorities did not even bother to take an approval from our gram sabhas for the dam," said Surendra Sharma, an agitator. As per guidelines issued by the MoEF in 2009, a 'no-objection' certificate from gram sabhas of project-affected villages is necessary before diverting forestlands.

The minister appeared sensitive to the issue. "As much as 775 hectares of good quality forest land is a very steep price to pay," agreed Ramesh. He said Delhi's water system had distribution losses of over 45 per cent and under-pricing of water contributed to wasteful habits.

"Delhi must learn to use tougher options that are available," said the minister. "The city simply cannot be a parasite on the rest of the country." He thereby negated the approval of the Environment Appraisals Committee of MoEF that

had agreed in principle in December 2008 to the construction of the Renuka Dam.

The Delhi Jal Board, which looks after the capital's water supply and drainage, insists that the dam is needed. "This dam would have been an assured supply of water for Delhi. Each year with the increase in population the demand for water is growing. The Delhi Jal Board can only manage water, cut down distribution losses and reinforce water conservation. But it does need more water apart from its own groundwater reserves to meet the growing demand," an official said.

LAKSHMAN ANAND

The Himachal Hydro-power Corporation is also miffed. It is not taking no for an answer. The corporation is drawing up a fresh application for diversion of forestland claiming fewer trees will be cut.

The success of the agitation against the Renuka dam has boosted the hopes of other anti-dam agitators. Protesters in Arunachal Pradesh and Assam and on the other side of the Himalayas in Uttarakhand, say they are inspired. "We'll go back to our villages and fight. We'll take the people into confidence and defeat the plans of the dam building companies," says Vijay Taram of the Forum for Siang Dialogue which is

opposing the Upper Siang Hydroelectricity Project in Arunachal Pradesh. "This project will displace people, destroy biodiversity and ruin our water ecology."

In Assam, the Him Niti Abhiyan, a collective of several groups, is protesting against the 200 MW Langpi Dehangi Dam that will affect more than 100 villages in the two districts of North Cachar and Golahat.

"Big dams threaten our existence. We must put a stop to them," says Palitralenat Dalmany of Komotapurgaon village in Golahat district. "We want a sustainable policy for the Himalayas."

In Uttarakhand, there is concern that dams will do lasting damage to rivers by drastically reducing their flow. "Around 558 hydro-electricity power projects in Uttarakhand are underway," says Vimal Bhai, convener of Matu Jan Sangathan, an informal group. "Most of these projects are tunnel based. They will convert our perennial rivers into underground water streams. Around 5,000 villages with 220,000 people will lose their homes and livelihoods."

Here too significant victories have been won. The government, bowing to pressure, has cancelled all hydro-electricity projects between Uttarkashi and Gangotri. In the hill state of Sikkim too dams have been cancelled by the Union government.

# 'Think eco-systems to save the Ganga'

Civil Society News  
Kolkata

**F**EW government engineers have risked their careers to stand up for what is ecologically right as Dr Dhruvajyoti Ghosh has done. For two decades, while employed by the West Bengal government, he worked to save the wetlands and sewage-fed fisheries on the eastern fringes of Kolkata. In the process he angered politicians and developers, but the remarkable wetlands that survive today owe their existence to Dr Ghosh's tireless scientific crusade and the international recognition that it brought.

Dr Ghosh is Regional Vice Chair, Commission on Ecosystem Management, IUCN. He spends much of his time in rural Bengal working with communities on promoting sustainable practices. In this interview he calls for a new community-based approach to saving the Ganga from the huge load of chemicals that it carries because of the run-off from agricultural fields.

Dr Ghosh's solution is decentralised landscape management, which is distinct from the Ganga Action Plan's emphasis on treatment plants and collection of waste at single points.

## Exactly how serious is the problem of agricultural pollution in the Ganga?

It is serious. If we do not act now the situation will lead to one of the worst assaults on the lives of humans, plants and the animal kingdom and adversely affect climate uncertainties. That the matter brooks no delay is what we learn from a global report of an International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) released in 2008.

Fifty-eight countries and 400 experts participated in this mega project which was initiated in 2002 by the World Bank and Food and Agricultural Organisation. The United Nations Environmental Programme opened the first plenary meeting in 2004. The report mentions that 'emphasis on increasing yields and productivity of agriculture has in some cases had negative consequences on environmental sustainability'. The report has recorded the impact of pesticide pollution globally.

A major emphasis has been to say no to the 'business-as-usual' approach to managing agriculture. Interestingly, the Indian media has more or less avoided discussing this historical report perhaps not to disturb the remarkably peaceful world of the agro-chemical industry.

## You have suggested landscape management. Could you explain?

I think mere technological solutions cannot reduce pollution, be it from a point source or from a non-point source. It is essential to take the participation

of the community and their knowledge system into account. It is time that planners appreciated the paradigm shift in development strategies.

My suggestion to take up a Landscape Management Action Plan is partly based on the findings of the global report on IAASTD. It says that many of the challenges facing agriculture currently and in future will require more innovative and integrated applications of existing knowledge, science and technology (formal, traditional and community-based), as well as new approaches for agricultural and natural resource management.

A Landscape Management Action Plan advocates an ecosystem approach. It is adaptive and puts faith in the self-organisation capability of the community. In recent times, the most important landscape based initiative is the collaborative initiative of UNESCO, UNEP and the Ministry of Environment, Japan, which has been termed the

**'Many of the challenges facing agriculture will require more innovative and integrated applications of existing knowledge, science and technology'.**

'Satoyama Initiative'. The objective of this landscape programme aims to benefit biodiversity conservation and human well-being.

A similar initiative in India by the Ministry of Environment within the fold of the Ganga Action Plan (GAP) will be very desirable. Within the Ganga Basin the primary problem is the loss and damage to human life due to agricultural pollution. Loss of biodiversity, which is definitely taking place can be attended to as soon as the application of agrochemicals is sufficiently reduced. Therefore within the Ganga basin, a Landscape Management and Action Plan will have a focus on reducing agricultural pollution.

## Would farmers be interested?

I do not know about states other than West Bengal. In West Bengal, where I have been visiting villages for more than a decade on this issue, I find only recently farmers are searching for alternatives. The euphoria of chemical agriculture is gradually disappearing.

## Who will implement such a plan?

Ideally, the villagers or more pointedly farmers will implement the plan. If farmers apply fertilizers



**Dr Dhruvajyoti Ghosh**

and pesticides improperly, it will be for them to do it properly. At this point they will need profound knowledge support. They will have to be persuasively oriented to appreciate and adopt a different kind of agriculture (which their forefathers knew much better) with gradually diminishing dose of agrochemicals. From 'far from organic' agriculture, they will move towards 'nearly organic' practice.

This country has sufficient demonstration of good practices to ensure sustainability in agriculture. What we now need is the willingness to change. Here again, it would be best if this willingness comes from the farmers. If not, the farmers' inability to visualise the forest behind the trees will have to be explained to them. This is the interface where the lead has to come from the Ministry of Environment and Forests (MoEF).

## Who will train the farmers?

Successful models of good agricultural practices will act as tutorial eco-systems for the farmers. These tutorial eco-systems will not only train them with best practices but also help them to calculate the long-term economics of growing low-pesticide low-fertilizer practices using sufficient organic manures.

Young agricultural scientists are showing keen interest in rationalising agriculture using an ecosystem approach. I have visited such privately owned agricultural farms which enjoy the knowledge support of young scientists where no fertilizer and pesticides are added. They do not however enjoy sufficient establishment support and this is where the change has to come. The MoEF can allocate funds to set up large numbers of such tutorial ecosystems and training arrangements to promote an ecosystem approach to agriculture and rural landuse management.

## Would you expect GAP to fund this project?

Industrial pollution is reduced by MoEF. So is municipal pollution. By the same coin agricultural pollution or for that matter non-point source pollution can also be reduced by the MoEF under the Ganga Action Plan to start with.

# Kisan Yatra with organic message

Civil Society News  
New Delhi

**A**FTER travelling through 20 states the Kisan Swaraj Yatra ended its journey at Rajghat in New Delhi on 11 December. Farmers and activists invoked Mahatma Gandhi's gram swaraj ideal and took a pledge to protect the food and seed sovereignty of India. Then they crossed the road and held a meeting at Gandhi Darshan. That long forgotten slogan of the 1960s: *Jai Jawan, Jai Kisan*, rent the air.

The Kisan Swaraj Yatra began from Sabarmati Ashram in Gujarat on 2 October last year. Organised by the Alliance for Sustainable and Holistic Agriculture (ASHA), a forum of 400 farmer and activist groups, the yatris visited 100 districts to create awareness about 'self-reliant' agriculture and warn against pro-corporate policies which harm the interests of farmers.

The yatris ended up talking to 25,000 people. "Eighty per cent of them were farmers, small, marginal and big," says Kavita Kuruganti, co-convenor of ASHA. "We also spoke to agricultural scientists, political representatives and urban consumers. The problems most farmers face are roughly land-grab, lack of water and land degradation. Their livelihood security is under severe threat."

Speaker after speaker condemned chemical farming, genetically modified seeds, the Krishi Vigyan Kendras and the government's pro-industry policies. *Jal, jangal, Jameen, beej hamari hain*, shouted the protestors.

Twenty-seven exemplary farmers were honoured (see box). There was high praise for Enabhavi in Andhra Pradesh, the first village in India to have taken to organic farming. Enabhavi inspired Andhra Pradesh's Community Managed Sustainable Agriculture policy under which 2.9 million hectares were converted to organic methods, the world's largest state-supported ecological farming project.

There was a buzz of excitement as Kuruganti told the gathering that their delegation had just met Sonia Gandhi. "She told us the government will do its best to reduce the



The Kisan Swaraj Yatra meeting at Gandhi Darshan

suffering of farmers and examine our proposals for a Kisan Swaraj policy. We have been asked to make a presentation before the National Advisory Council." A sea of turbans, *pugdhis* and *topis* nodded in approval.

"Nearly 40 per cent of farmers want to give up agriculture. That's a quarter of a billion people. Where is the government going to find jobs for them?" asks Bharat Mansatta, an organic farmer-activist.

The alliance is asking the government for a pro-farmer policy based on economic sustainability, ecological sustainability and people's control over agricultural resources so that farmers can produce non-toxic, diverse, nutritious food for all. Activists cite Andhra Pradesh as proof that ecological farming can reduce costs and boost yields.

The alliance is saying the government's policies are ruining farmers, agricultural workers and tenant farmers. The government is obsessed with procuring maximum food at the cheapest price with only the consumer and industry in mind.

As a result farmers' incomes have stagnated. Their average income is just ₹1,650 per month but their expense is ₹2,150 per month – so they are spending more than they are earning to just survive. The



Kavita Kuruganti

alliance wants the government to assess progress in agriculture by measuring the growth rate in the net income of farm families. They are asking for a Farmers' Income Commission to keep close tabs on farmers' incomes every year.

Pricing policies, says the alliance, do not factor in real costs of production like family labour, water, composting, own seed etc. High inflation adds to the living costs of the farmer. But to curb inflation the government lowers agricultural prices. A flood of cheap food is imported thanks to India being a member of WTO. So the farmer is reduced to penury. The Minimum Support Price should give farmers a 50 per cent profit or else the government

should pay them directly, say the activists.

"We don't want free bullock carts and agricultural implements from the government. I know my needs best. Ask them to give us cash," says Kishore Kurke, a farmer from Akola district in Vidarbha.

Most government subsidies are for inputs or for the Public Distribution System. So the government spends vast amounts financing chemical fertilizers but doesn't support farmers who diligently do organic farming, improving their soil and seeds.

Access to inexpensive credit for small farmers has been declining. Public sector banks have to give 18 per cent credit to agriculture. But industry and food processing corner the bulk of this money. Between 1990 and 2006, small agricultural loans went down 75 per cent. Activists say the number of rural banks have declined. So farmers are turning to moneylenders and micro-finance institutions whose rates of interest are higher.

Farmers say they are at the mercy of the government and industry. Seeds, their most valuable resource, are controlled by companies like Monsanto. Valuable germplasm are being handed over by research institutes to companies. And the compa-

PICTURES BY LAKSHMAN ANAND

# arrives in Delhi

## ROLL OF HONOUR

The following farmers were honoured at the Kisan Swaraj rally:

### Enabhavi Village

Andhra Pradesh

This village pioneered organic farming in India and has inspired a state programme under which 2.9 million hectares switched to organic.

### G Nagaratnam Naidu Andhra Pradesh

Naidu is an expert in growing rice with the System of Rice Intensification method. He has demonstrated this method to scientists from the International Rice Research Institute.

### Subhash Sharma Maharashtra

An ardent proponent of organic farming, Sharma's unique pest control method includes trees and birds. He shares benefits from his farm with his workers.

### Dadaji Khobragade

Maharashtra

Khobragade is a small farmer who invented the HMT rice variety. It has spread far and wide.

### Vasant and Karuna Futane

Maharashtra

They led the organic movement in Maharashtra. Vasant and Karuna are experts in organic rain-fed farming. They have trained hundreds of farmers.

### Rishikesh Biramane

Maharashtra

A young farmer from Satara, he has mobilized the youth to take up farming.

### Bharat Sharma

Maharashtra

Sharma is from Akola district. He has helped 450 farmers to switch to organic agriculture.

### Shalutai Bhonde Maharashtra

Bhonde is from Washim district.

She leads a campaign to recognize women as farmers

### Ratnakar Sahoo

Orissa

He may be 76 but he goes from village to village campaigning against genetically modified seeds.

### Ishwara Dehuri

Orissa

Dehuri leads the Aadim Chasi Ekata Manch, a farmers' group. Through street plays and folk songs they motivate farmers to turn organic.

### Prakash Raghuvanshi

Uttar Pradesh

Prakash has perfected seed selection and propagation of traditional seeds. His varieties of wheat are more popular with farmers than those of the government's agricultural departments.

### Sharadamma

Karnataka

On just one acre, Sharadamma grows 80 varieties of fruit, medicinal plants, coffee, vanilla using green manure and water from the rain gods.

### Bore Gowda

Karnataka

He grows 26 varieties of paddy on his small farm for 'the people of India.'

### Amarjit Sharma

Punjab

He is a role model for Punjab's farmers, inspiring them to switch to organic.

nies charge what they like. There is no regulation in the Seeds Bill of pricing or royalties. Farmers say they are not interested in GM seeds. They want traditional seeds.

"I can only preserve seeds for my own small farm. The Krishi Vigyan Kendras and every village should have a seed bank. But government scientists never ask us about our needs," said Gajanand, a farmer from Akola district in Vidarbha.

Farmers want much more investment in storage and processing units. Food security should include

crops apart from wheat and rice. And procurement should be directly from farmers, locally stored and distributed. Only the surplus should be sent to a central godown.

The alliance wants the government to concentrate on small farms, rainfed and dryland agriculture and water management.

And, finally, farmers are saying to kindly stop grabbing their lands. More industry also means more pollution. Biodiversity and traditional seeds have been rapidly declining over the years, they warn.

# Weavers take to Delhi streets

Kumar Gautam and Bharat Dogra

New Delhi

AT a time when the Union government should have doubled its efforts to protect and promote handloom weaving, its textile policy has become a huge muddle of double speak. Handloom weavers have been promised all sorts of help on paper but in practice it is the big players and the mill owners who benefit the most.

Budgetary allocations to the handloom sector as a percentage of the share given to the textile sector fell from 27.5 per cent in 1997-98 to just 6.6 per cent in 2010-11. Cotton yarn prices rose by 38 per cent in the last 20 months. Silk yarn prices have risen by more than 70 percent in the last six months. Although big, mechanised yarn producers are supposed to provide 50 per cent of their total yarn output in the form of hank yarn which can be used by handloom weavers, the proportion of hank yarn has fallen to 18 per cent.

Agitated by this many-sided injustice, about 500 handloom weavers from different parts of India staged a protest march from Ramlila grounds to Parliament on 30th November demanding immediate price relief to handloom weavers through direct policy intervention in cotton as well as silk yarn.

The protest march named 'Dilli Chalo' was led by Marchala Mohan Rao from Andhra Pradesh, PK Deo from Orissa and Mangal Singh Kori from Uttar Pradesh. The protestors wanted to highlight the crisis in the handloom sector during the winter session of Parliament. Rising yarn prices, declining yarn availability and declining budgetary allocations were killing the handloom sector. The day long dharna was addressed by several parliamentarians, activists and experts.

In cotton and silk clusters, where weaving is vital to the livelihood of a large number of people, the recent hike in yarn prices has made their lives miserable on all accounts: be it availability, affordability or accessibility to yarns. As a result, production has gone down rendering thou-

sands of weavers and craft-workers unemployed.

Addressing the gathering at Jantar Mantar, veteran handloom activist and president of Rashtra Chenetha Jan Samakhya, Marchala Mohan Rao said, "The price of cotton yarn is high due to increased exports of raw cotton and the real money makers are the cotton traders, not the farmers. In Chirala alone, more than 2,000 people engaged in weaving have abandoned their work recently and are now working as construction workers, agriculture labourers and security guards."

Pledging his support to the weavers cause, Swami Agnivesh, a parliamentarian and human rights activist said, "The government's handloom policies especially after the economic reforms have not done justice to the millions of Indian weavers." B Syama Sundari, a leading handloom expert representing Dastkar Andhra pointed out: "The handloom sector has been under continuous threat due to increase in raw material prices from the 1990s. There is an immediate need to check yarn prices to prevent the rise of an unemployed workforce. It makes better sense to secure existing livelihoods than begin the work of creating new livelihoods."

Another expert in the economics of education, rural development and women's studies, D Pulla Rao observed that while the government is spending millions to generate unskilled employment in rural areas, it is not bothered about the fact that insufficient budgetary allocations to handloom is destroying livelihood opportunities for millions of skilled weavers.

Towards the end of the day-long rally and *dharna* at Jantar Mantar, separate representations were made to Sudha Pillai, Member-secretary, Planning Commission, Rita Menon, Secretary, Ministry of Textiles, the Ministry of Finance and the PMO. The leaders of the rally also plan to make a specific representation in coming months to Yashwant Sinha, chairman of the Finance Committee to seek his attention and intervention.

# The true and deadly story of Endosulfan

**Shree Padre**  
Kasaragod

**A**FTER a long and herculean struggle, the people of Kasaragod district succeeded in getting the Kerala government to ban the deadly pesticide Endosulfan. In the meantime, 400 lives have been lost according to government figures, hundreds have been maimed and a much greater number are bedridden.

So imagine our surprise when we recently found that the Union Ministry of Agriculture appointed yet another fact-finding committee to establish the link between Endosulfan and mass ill-health in Kasaragod.

Even more shocking to us was the holding of a conference in Delhi just weeks ago sponsored by a pesticide manufacturer. The conference was inaugurated by the President of India and presided over by the Union Agriculture Minister as chief guest.

Do you need a better example than this to understand with whom the sympathies of our political leaders actually lie?

Here is the true story of Endosulfan and our agony.

**Reality and denial:** In 2001, when we realized there was a link between Endosulfan and mass ill-health in our district we approached the agriculture minister in the Left-led Nayanar government in Kerala, the late Krishnan Kaniyampambil.

We showed him an album full of tragic pictures of victims. Our simple request to him was to stop the spraying of Endosulfan over cashew plantations.

He replied: "In this matter there is no scientific body more superior in the whole world than the Central Plantation Crops Research Institute (CPCRI) in Kasaragod. They say Endosulfan is absolutely harmless. I can't believe you. If you have a memorandum, give it and go."

It took another 10 years, thousands of lives and the painful display of immobile children on camera to make the political leadership melt. Thanks to the very active Kerala media and the state's Chief Minister, VS Achyutanandan's sympathetic attitude, the cry to ban the deadly pesticide gained momentum. Of course, Assembly elections were also around the corner.

In its magnitude, the Kasaragod Endosulfan tragedy is next only to the Bhopal Gas Tragedy. Like Bhopal it has been a continuous saga of suffering by the people and denial by the State.

In 1979, Somaje Mahalinga Bhat, a local farmer invited me to his farm. He had an unusual problem. All four calves born recently in his cattle shed had deformed limbs. The fourth one was just about surviving. Somaje's farm adjoins the cashew plantations of the Plantation Corporation of Kerala (PCK). His cows used to drink water from a nearby

tank and graze in the hills. Endosulfan was being sprayed here aerially.

After studying all the details, I approached two veterinary doctors. They suspected that the pesticide Endosulfan had something to do with the condition of Somaje's calves.

Endosulfan was sprayed very negligently. I wrote a feature story titled, 'Life cheaper than cashew,' for an English periodical. I also published stories in Kannada and Malayalam. Years later, Somaje Mahalinga Bhat succumbed to cancer. And 30 years after that, my district has 8,000 suspected Endosulfan victims. Hundreds are bedridden, many more seriously ill. They have lost the ability to earn their livelihood.



A victim of Endosulfan

**In its magnitude the Kasaragod Endosulfan tragedy is next only to the Bhopal Gas Tragedy. Like Bhopal it has been a continuous saga of suffering by the people and denial by the State.**

In 1979, it didn't occur to me that the inborn deformities of cattle might show up in human beings too. If a mass alert had been initiated then could we have reduced the damage? I doubt it. The pesticide lobby's nexus with the powers that be is very strong. To convince people about the 'inside truth' of poisons is a Herculean task!

For nearly 25 years Kasaragod received 60 to 70 showers of 'poison rain.' No other region in the world has endured that. The question being asked is: "Why only in Kasaragod?" The Plantation Corporation of Kerala, a public sector company, has flouted every precautionary measure stipulated by the insecticide rules of the Government of India.

Despite very serious health complaints, the corporation never cared to check onsite. Their only argument was about the 'well being' of their own labourers. Now media reports inform us of a very high rate of disease and death among their own labourers.

**Flood of committees:** Starting with the Dr Banerjee committee in 1991, three other committees clearly warned that use of Endosulfan near rivers, lakes, ponds and the sea would pollute their waters. They

recommended putting this warning in the certificate of registration as a condition. They said it should also be placed on labels and leaflets in the containers. Both warnings were totally ignored.

For aerial spraying of pesticides, permission from the Central Bureau of Insecticides (CBI) is necessary. But the CBI states it hasn't given permission to any agency for aerial spraying after 1992. Therefore, aerial spraying done after 1993 is illegal and punishable. Though the Plantation Corporation pretends to be innocent, it can't escape the responsibility of this genocide.

In fact, the Endosulfan tragedy is an act of genocide by many state agencies – the indifferent agriculture department of Kerala, the district collectors who gave permission without checking precautionary measures, the pesticide company, the CBI which comes under the Union Agriculture Ministry and failed to act against the Plantation Corporation

*Continued on page 14*



Union Home Minister, P Chidambaram, right, with Javed Abidi

# 10 ways to employ people with disability

**Shreyasi Singh**  
New Delhi

THIS year's NCPEDP - Shell Helen Keller Awards were given away by P Chidambaram, Union Home Minister, on a typical wintry morning in Delhi. The auditorium was full, an indication said the minister, that there were islands of humanity in an arid desert of indifference.

Now in its 12th year, the annual awards, jointly organised by the National Centre for Promotion of Employment for Disabled People (NCPEDP) and Shell India, recognised 10 individuals who had become role models for people with disability and companies which had provided equal rights and opportunities to the disabled.

"It's been heartening to see the awareness that has come to the disability sector thanks to efforts like this," Chidambaram remarked. He said the upcoming census, scheduled to be conducted in February 2011, will play a big role for India's 70 million plus disabled.

"This time the sector has seen tremendous cooperation from the Census Commission. There is a serious and genuine attempt towards enumeration of people with disabilities," said Javed Abidi, Honorary Director, NCPEDP. "Authentic numbers will mean significantly better resource allocation for disability issues."

"Every year it humbles me to see the nominations that come in. They are increasing in number and quality," said Vikram Singh Mehta, Chairman, Shell Group of Companies which has been involved with the awards for over a decade.

## Disabled persons who are role models

These awards are given to disabled persons who have been actively promoting employment for disabled people and are a role model for others.

**Dipti Bhatia:** Visually impaired Dipti Bhatia is the Deputy Director of Vidya Sagar, Chennai. An M Phil in history, a teacher and a bilingual poet, Dipti joined Vidya Sagar as a volunteer in 1990 and became the coordinator of the institute's Inclusion Cell in 1998. She has helped nearly 100 students get admission into schools and colleges.

**Mohammed Iqbal:** Physically disabled, Mohammad set up People's Action Group for Inclusion and Rights (PAGIR) in Leh in 2007. PAGIR is completely managed by disabled people and members of their families. The collective promotes two kinds of economic enterprise. One helps disabled artists turn waste to craft and employs about 200 people. The second enterprise, Himalaya on Wheels, makes Ladakh more accessible to disabled tourists.

**Sai Prasad Vishwanathan:** Despite being thrown out of various schools because of his physical disability, Sai went on to receive a research scholarship for an MS degree at the University of Wisconsin, US. He also became the first disabled Indian to skydive from 14,000 feet. He studied at the prestigious Indian School of Business. As an undergraduate, studying engineering at CBIT, Hyderabad, Sai was a topper. He was given the Best Trainee award at Infosys in 2007.

## Non-disabled people who are role models

This category recognizes individuals who have substantially promoted employment opportuni-

ties for disabled people.

**Anubhuti M. Bhattacharya:** A human resources (HR) professional with extensive industry experience, Anubhuti set up an HR consultancy exclusively for disabled people in May 2005. In five years, Anubhuti has helped 500 disabled people find employment in companies such as Pepsico, IBM, ITC Hotels, Yum! and Genpact. She also specialises in conducting access audits and sensitisation training programmes.

**Meera Chetan Bhatia:** Daughter of hearing impaired parents, Meera began working as an interpreter for the deaf when she was 16. In 2000, she set up Sai Swayam, a coaching institute for the hearing impaired. Sai Swayam conducts vocational training programmes and Meera helps her students find jobs as well. Over 250 of her students now work with companies like IBM, HCL, Genpact and KFC.

**Rama Chari:** Rama has over 20 years experience working with disabled people. She has worked with AADI and NCPEDP in a range of roles. In 2007, she set up Diversity Equal Opportunity Centre (DEOC) to provide policy and accessibility consultancy, training and research in the area of disability. In 2005, Rama wrote to Infosys and helped the company to become the first to recruit a large number of disabled people.

## Companies for equal rights

These organizations through their policies and practices demonstrate their belief in equal rights and gainful employment for persons with disabilities.

**Gitanjali Gems:** Under its Corporate Social Responsibility (CSR) initiative called Saksham, Gitanjali Gems, India's largest diamond and jewellery manufacturer and retailer, provides disabled people and rural youth a six-month training course in jewellery design and manufacturing at their factory in a Hyderabad SEZ. Gitanjali now employs nearly 250 disabled people, most of whom it has trained. In the next three years, the company wants to raise that figure four-fold. Gitanjali Gems plan to replicate their training model across India.

**Lemon Tree Hotels:** This chain of hotels currently employs 50 disabled people. That's a mere 3.3 per cent of its staff strength. But, Lemon Tree Hotels, one of India's first and largest chains of moderately priced, upscale business and leisure hotels, is determined to push that number to 300 or one in 10 of its staff strength. It focuses on those with speech and hearing impairments and trains them to perform at par with other colleagues. Some of these employees have been moved to front desk duties as well.

**Sinar Jernih:** An equal opportunity employer, Sinar Jernih, which has as its clients hospitality giants like the Taj, Oberoi and Hilton, has nine people with disabilities ranging from orthopaedic impairment to intellectual impairment at its Chennai head office. Since 2007, it has helped generate employment for over 370 people.

**Yum! Restaurant:** Owner of brands such as KFC, Pizza Hut and Taco Bell, Yum! opened its first specially-abled outlet in 2008. More than 50 per cent of employees in these outlets are people with disabilities. Yum! hopes to open one specially-abled restaurant in every city it operates in. One of its core work principles is, "Believe in All People."

# LC remains relevant

Mihir R. Bhatt  
Ahmedabad

PERHAPS it was time for LC (as we called Lakshmi Chand Jain) to go. His ideas and ideals had become far too out of place in today's India which is playing a game of catch-up with China and posing to be the America of the coming century. Maybe that is the reason why we, the younger generation that he inspired, still need LC, his ideals and ideas even more to change what must be changed and make India, India.

In many ways LC humbly picked up from where Gandhiji left, by encouraging local leaders of civil society and panchayats to see the political and economic significance of their work in the context of independent India: helping women's groups from the desert areas of Kutch promote their crafts; panchayats to conserve fodder in arid areas of Rajasthan; small enterprise workers to make salt in the drought prone districts of Surendranagar; or handloom weavers to revive cooperatives in Uttar Pradesh. LC wanted India's political economy to be shaped from bottom-up.

As an economist, LC was acutely aware of the history of India's freedom movement. His awareness was not limited only to the mainstream, official history recorded mostly by and for the Indian National Congress, but also to the trail of violent events such as the Meerut Conspiracy. LC, no doubt, firmly believed in the removal of poverty in non-violent ways. But he could understand, and I think anticipate, the reasons for the poor becoming violent. Maybe this explains his life-long commitment to speaking out on behalf of northeast India and Kashmir before they go the Maoist way. To him, I often imagined, India is even more present in what has become its periphery.

Gandhian economics – monuments of economic ideas – were shattered soon after Azadi. Those ideas now reappear as "green" and "clean" economy. This was a serious matter for him. He showed us a more holistic role that panchayats could play not only as political institutions but also as economic agents fighting poverty, promoting local production and balancing top-down prosperity of large industrial plants in their neighbourhoods with the rights of the ecology of drinking water.

LC combined the idiosyncrasies of direct experience and the power of systematic and system-wide economic thinking to bring local realities to the high table of national policy making — before and after he served as a member of the Planning Commission in the early nineties. The practical roots of India's policies were as important to him as the policy itself.

LC would blend reminiscence of post-Partition refugee camps in Delhi with estimates of the number of job losses for leather workers in Gujarat. He could recite a soul searching two lines of Kabir's poetry to a rookie journalist writing a piece for 26 January, and combine a portrait of a poor female artisan digging earth all day long on a roadside in Madhubani, Bihar, with criticism of the deteriorating political economy of investments in infrastructure in Delhi to a US educated young number cruncher in the Finance Ministry. Neither India, nor anything Indian, could be separated into small boxes as far as LC was concerned. India was India for being one and whole.

LC showed us a larger role for India, within and outside, despite and because of its large numbers of poor, and because of its longer and diverse traditions of dealing with poverty removal. He pointed out to us the innovations that empowered the poor on a large scale and used that knowledge to inspire all those who dream of an India free of poverty.

With field workers LC was arresting and provocative because of his engrossing feat of tale-spinning ideas that illuminated genuine poverty removal efforts. LC was always informed and even-handed and spoke and wrote about poverty in India as if he was poor himself. What he said had the ring of truth, and it resonated for a long time in the minds of younger listeners when they imagined their India.

LC's untiring efforts to reach out to us, the younger generation, was a labour of love, the love of a man who has witnessed the worst of India – Partition and Emergency and continued poverty. Yet he found hope and optimism in India's future. I think he wanted us to wait for future prime ministers who would declare that poverty in India would fall at 9 per cent per annum and not be satisfied with merely the GDP growing at a robust 9 per cent rate. LC shaped our sense of politics in the 1970s that made us aware in the early 2000s of the chilling and unacceptable fact of continued poverty in a rapidly growing Indian economy.



L C Jain

*Continued from page 12*

– all have blood on their hands. None of them took action to protect public health.

Instead we have had one committee after another visiting Kasaragod.

According to media reports 17 fact-finding committees have come here. We have lost count! Ironically, except for the National Institute of Occupational Health (NIOH) committee, the rest reached their conclusion after just one flying visit. There was no thorough investigation, no blood, water and soil analyses! Just one sitting at Kasaragod was deemed sufficient. Interestingly, many 'experts' who vouched that Endosulfan is safe, refused to drink water from our area.

Dr Shripathy Kajampady, my fellow activist, often jokes: "We can even tolerate Endosulfan but not these committees." Couldn't this huge sum of money have been spent on the poor victims? How many times will our mothers have to give their breast milk for testing? When will this saga of 'recommending for a thorough study' end? We fear the committees because in the past we have seen quite a few pesticide industry agents arriving here in the guise of experts.

The NIOH committee concluded that: "The most probable cause for the health problems could be relatively high and continued exposures to Endosulfan."

And the Dr P K Sivaraman Committee stated: "Since the committee couldn't find any other reason that could explain the health hazards in the area, this may be attributed to aerial spraying of Endosulfan."

**No awareness:** Even today, agriculture and medical students graduate without knowledge about pesticide abuse and the ill-effects of dangerous pesticides. Even so called experts are ignorant about chronic poisoning. We were surprised to come across a few leading doctors who believed that 'thorough washing' will clear vegetables of all pesticide residues. They weren't aware of systemic insecticides at all.

Go to any state in India, everybody, including agriculture graduates call poisons as 'medicine.' This is a classic example of the discreet brainwash done by pesticide companies.

Sixty-three countries have already banned Endosulfan. The Kasaragod tragedy was also responsible for the Endosulfan ban in Cambodia. But for many people in power, "there is no conclusive proof to accuse Endosulfan." The fact that 400 people have already died as per government records, that humans and animals have been deformed, were not reason enough to call for a ban.

If you have a child who has been reduced to a cabbage, a relative with deformed limbs, would you act so mercilessly? Would you speak in an inhuman way and say that you require more proof to keep a deadly pesticide away?

We, the residents of the ill-fated area of Kasaragod, have just one question. If there is doubt about this tragedy whom will you give the benefit of the doubt to? Would you choose the scores of suffering people or the pesticide industries?

You don't need an expert to answer that question. If anyone with common sense and an open mind visits a dozen families in the affected area, he or she will have a ready answer.

Mihir Bhatt is with the All India Disaster Mitigation Institute, Ahmedabad (E-mail: mihir@aidmi.org).

## ACCOUNTABILITY

Aruna Roy



### *Citizens as auditors*

Public hearings carry information from the realm of papers, figures and accounts to the real world of accountability.

## FINANCIAL INCLUSION

Vijay Mahajan



### *Money can fly*

India is on the threshold of a big leap in financial services to the poor with over 80 million bank accounts being opened in three years.

## CORPORATE SECTOR

Arun Maira



### *Transform capitalism*

Rampant capitalism corrodes institutions of democracy that everyone in the world should hold dear.

## AGRICULTURE

M.S. Swaminathan



### *Seeds of the future*

Nearly 80 per cent of seeds used in India are from farmers' seeds system. This system will have to be strengthened and scientifically upgraded.

## EDUCATION

Dileep Ranjekar



### *Smarter govt. schools*

The government has a constitutional responsibility to provide quality universal education to all children.

## ENVIRONMENT

Chandrasekhar Hariharan



### *Green equals hi-tech*

Sustainable architecture and design is now perhaps the fastest growing industrial segment worldwide.

## BIODIVERSITY

Darshan Shankar



### *Plants for health and wealth*

Medicinal plants and decentralised manufacturing can provide an income to thousands of women and youth.

## URBANISATION

V. Ravichandar



### *Cities can do it*

The future lies in having 'live and work' clusters that are urban nodes within the regional network.

## TECHNOLOGY

Rob Sinclair



### *Disabled as super able*

Technology and services will be smarter about who we are, what we need and our abilities in that moment.

## INFRASTRUCTURE

Vinayak Chatterjee



### *Rural roads need annuity*

You can't charge user fees in village areas so let the government pay the private sector to build and maintain rural infrastructure.

# TIME TO

## Rita & Umesh Anand

**H**OW should we remember the past decade in India? Should it be for its scams and scandals or for unfinished efforts at improving governance? Do we celebrate the surging wealth of a few or worry about the poverty in which the majority of Indians continue to live?

It has been a decade full of contradictions. The GDP is up but the access that the poor enjoy is down. Real estate drives the economy but very few can afford to own a home. Water companies do booming business, but a scarcity looms over all of us. Inclusion is on everyone's lips, but a yawning trust deficit reigns with people being wary of politicians and suspicious of industry.

And yet this has been a decade that has witnessed greater understanding of the issues at the grassroots. A new activism has taken shape, drawing on talent from across different sectors of the economy. Today we know much more about our problems from the inside than we ever did before. We also look for solutions to them in an enlarged bandwidth of society.

A new and relevant legislative framework has been put in place. Several key rights have been established with laws on the right to information, education and food. A rural health mission seeks to get medical facilities to every village.

At the same time, corruption flourishes. There aren't schools which provide quality education to all children and people go hungry in the absence of a reliable food distribution system. Public health care exists only in name because the facilities available to the less privileged are appalling. Some 500 million of us remain outside the banking system and are denied the financial opportunities that should rightfully be available to everyone.

In several key ways India has moved forward, but it has also been standing still. If ever there was a time to look within, it is now so that another decade doesn't pass us by.

In this magazine in the past seven years we have sought to engage with the many realities that make up India in the hope that they will all meet at some point. Rather than dwell on problems, we have looked for solutions. We have found hundreds of individuals and organisations that strive to make India a better place to live in for everyone. They succeed in their own multiple ways, but in the absence of good governance their efforts don't have as big an impact as they should.

The challenge ahead is clearly in implementation. A huge responsibility rests on government. NGOs, activists and sundry do-gooders can at best be catalysts or provide limited solutions. For what governments need to do there can be no substitute.

For the practising politician, the choice is clear: deliver and be elected. People have been consistently voting for governments that get down to essentials. In Bihar, Nitish Kumar has shown

# LOOK WITHIN

what is possible even against awesome historical odds. As an evolved politician he has succeeded in nurturing aspirations for a better life across divides of caste and income.

To the Congress-led UPA and its National Advisory Council (NAC) we must give the credit for focussing national attention on issues such as transparency, hunger, land rights, evictions, education, pollution and forest peoples' rights.

Even more significantly, new laws on the right to information, employment guarantee and food distribution have been discussed and drafted in consultation with activist groups. Perhaps not everyone is satisfied with the outcomes, but this is a laudable bottom-up approach.

In this atmosphere, it has also been possible to dismantle dams on the Ganga, stop another one in Himachal and revisit the question of land for industry.

But despite two consecutive terms in office, the Congress-led UPA hasn't been able to bridge the distance between the National Advisory Council (NAC) and the government. Perhaps now is the time to ask why such a gulf should exist at all.

Similarly, Congress-run state governments, which should have been frontrunners for fresh and inclusive ideas, have instead been laggards. The vast state of Maharashtra is a case in point. In fact, on certain counts, political parties in opposition to the Congress have been more dynamic.

Across the country there are agitations over basic issues as people get tired of waiting for something to be done. Farmers face serious problems of land degradation and water availability.

There are concerns over the entry of corporations into farming and seeds. Often these groups turn up in Delhi, camping haplessly at Jantar Mantar, delivering emotional speeches and trying to get central politicians to espouse their causes.

For this special issue we asked some of the best minds we know to give us ideas that they believe governments should be focussing on in the next decade. Many of the contributors have been featured in our magazine from time to time. However, their offerings here are very special. Of course, no such collection can be complete. There are many additions we can think of. But we are nevertheless proud of what we have put together.

Vijay Mahajan has given us an insight into microfinance and how it helps financial inclusion. Remember microfinance has hit a bad patch and been in the news for all the wrong reasons. It has, on the other hand, helped millions. We need to think

through a national response to microfinance, regulate it and see how the many gains it has made can be built upon.

Aruna Roy, Nikhil Dey, Nachiket Udupa and their colleagues at MKSS showcase the public audit as an instrument for transparency and accountability. The public audit is as yet in its early stages. It has had its ups and downs. But it is without doubt one of the most interesting ideas of the decade gone by and deserves to be better understood and pursued in the years ahead.

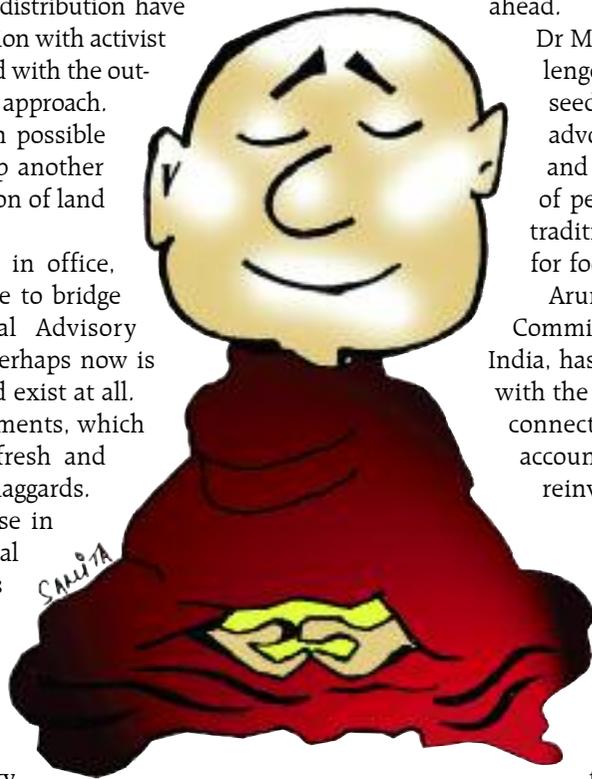
Dr M.S. Swaminathan tells us about the challenges in Indian agriculture and what the seeds of the future will be. He has been advocating changes in systems of storage and distribution so that the nutrition needs of people are met. There is a need to marry tradition with modern science in the search for food security.

Arun Maira, now a member of the Planning Commission but formerly chairman of BCG in India, has been an insider of the corporate world with the mission of changing the way companies connect with society and make themselves accountable. He argues that capitalism has to reinvent itself to ensure its survival and relevance.

V. Ravichandar has been leading an initiative to help city governments acquire the skills that they need to solve urban problems. Darshan Shankar is a veteran of the traditional medicine sector and has worked closely with communities to protect biodiversity and build livelihoods at the grassroots.

Chandrasekhar Hariharan has been a real estate developer with a difference. His company, BCIL's constructions have been based on a mixture of green, energy-saving technologies. The construction industry is a key driver of the economy and a big-time gobbler of resources. Understanding its limitations and making it eco-friendly is important.

Dileep Ranjekar of the Premji Foundation works closely with government schools. He tells us what the school system needs to do to provide quality education to all children. Vinayak Chatterjee knows infrastructure only as an entrepreneur can – from end to end. Here he suggests how rural infrastructure initiatives can be made viable. From Rob Sinclair and Annuska Perkins of Microsoft we learn about software solutions that will make the lives of people with or without disabilities a whole lot easier.



## PUBLIC HEARINGS CARRY INFORMATION FROM THE REALM OF PAPERS, FIGURES AND ACCOUNTS TO THE REAL WORLD OF ACCOUNTABILITY

# *Citizens as auditors*

**Aruna Roy with Nikhil Dey and Nachiket Udapa**



**G**RAM Sewak, you have thrown sand in our eyes all these years," was the headline in the only newspaper that covered the first *Jan Sunwai* (public hearing) in the state of Rajasthan on 2nd December, 1994. This public hearing in Kot Kirana village, Pali district, factually corroborated the angst of thousands of people looted for years. A landmark for many reasons, but most importantly, it placed official records and information in the public domain, for collective examination by the concerned in the area.

For weeks preceding the *Jan Sunwai*, activists from the Mazdoor Kisan Shakti Sangathan (MKSS) along with local villagers had gone from village to village sharing the contents of records of development expenditure they had managed to informally access. Frustrated with a process of petitioning the same authorities responsible for perpetrating a wrong, the MKSS had decided to quite literally take the issue to the people.

The results were dramatic. The muster rolls brought into the public domain for the first time, details that substantiated stories of corruption that were common knowledge but impossible to establish. It removed the secrecy and red tape these acts are buried in, and the consequent helplessness of people to act.

Muster rolls revealed the names of dead people. Relatives of these familiar names were more than indignant. The living had been refused work on the plea of shortage of funds. The cash that disappeared now left a visible trail. As the records were disclosed, power relationships began to change. People who had used the power of position and office to 'command' respect, were exposed as common thieves. For the first time the crooks were identified and segregated. Information in the public domain empowered the poor and exploited, as it disempowered the corrupt. A story emerged behind every name on the muster roll, and every citizen evolved into an investigator, inspector and auditor.

The process of auditing is ancient and has a history that is lost in mystification. It is derived from the Greek '*audere*' which means to speak out aloud so that others can hear. Applied to a collective Indian condition of partial literacy, it came alive. The Kot Kirana *Jan Sunwai* and the series of public hearings that followed, demonstrated the power of disclosure and public testimony and brought the value of audit alive even more dramatically.

The first *Jan Sunwai* was conducted under a tent against the backdrop of an unfinished Patwar Ghar. The records, when they were read out, showed the building as 'complete.' In fact it had no doors, no windows and no roof! It turned out that even the bills for stone used for its construction were false, as the people testified that an old building had been torn down to build the 'new' one, and no new stones had been bought. No auditor could have discovered this important trick of accounting.

The *Jan Sunwais* helped to make the battle for the Right to Information a livewire public campaign connected to the lives of ordinary people. It also helped carry information from the realm of papers, figures and accounts to the real world of accountability.

The first set of *Jan Sunwais* outlined four explicit requirements as part of what the MKSS realised were the beginnings of a new discipline in democratic governance:

- Transparency of all information
- The need for the accountability and presence of concerned officials
- Redressal of grievances (including the recovery of money)
- A Social Audit in an open democratic platform.

While they are all connected, it is this fourth mode of citizen- government interface that opened up new avenues for finding new people- centric ways of institutionalising the powerful, but casually used terms of transparency and accountability.

In fact, the *Jan Sunwais* proved to be very useful in all these areas of public participation in governance, even before the right to information became a reality. They allowed the MKSS to use even samples of information obtained informally, to demonstrate the power of that information. Even the reaction of the bureaucracy and the politicians to clamp down and deny the people the right to information, only served to help involve people in the process.

"We are not willing to subject ourselves to this so called 'social audit' – we are only willing to have government audits," was the refrain of the gram sewaks who went on strike against the *Jan Sunwais*. This was while the *Jan Sunwais* were proving in many cases, that there were ghost projects and construction works where the papers had been duly 'audited.'

The struggle to enact effective RTI legislation also drew its strength from the power that *Jan Sunwais* and Social Audits demonstrated in enabling action against corruption and the arbitrary exercise of power. The apparent symptom was corruption, the deeper malaise was an opaque, unaccountable and arbitrary system of governance. The people affected by the impact of these scams – small or massive, remain helpless, while the ruling elite from the Panchayat to Parliament and the Secretariats survive every scam.

There is also a peculiar helplessness which takes over when figures are tossed around without grounding them in a citizens examination that connects money with delivery and ownership. That is why ₹167,000 crores is a sum beyond our imagination, and after a point we lose track of numbers and even begin to lose interest.

However, Sushila from Jawaja in Ajmer District who had only passed Class 4, answered a question put to her by a former Prime Minister in Delhi about why a woman like her would be interested in the right to information. She said: "When I send my son to the market with ₹10, I ask for accounts. The government spends millions of rupees in my name, should I not ask them for accounts? *Hamara paisa, hamara hisaab* (our money, our accounts)"

In a descriptive sense, this is as much of an intellectual leap as between the word *audere* and audit. The four words – "Our money, our accounts" connect democracy, accountability and the citizen in a way that any of our theoreticians would be hardpressed to do.

And that is why the public nature of this campaign might provide some answers to our current distress. The government boycotted the initial *Jan Sunwais* even though they were specially invited. Corrupt officials and elected representatives were nevertheless forced by moral pressure to publicly return stolen money, and the government was forced to take action against the guilty. From Panchayats to the Government of India, the organs of the State unfortunately only act under public pressure. Public disclosure has led to collective battles. The misdeeds in the records revealed two powerful truths – the exploitation of the vulnerable and the casualty of development that is a part of corruption.

Even constitutionally empowered autonomous organisations are helpless. The Comptroller and Auditor General of India (CAG) stated three years ago, that his ambivalence to the RTI law was resolved when a junior officer pointed out that the Act had created a hundred crore potential auditors! The CAG's attempts to integrate the Social Audit within its broader discipline has pushed audit closer to democratic needs.

The last three decades have seen a conscious attempt to address the failure



A Jan Sunwai on the national rural employment guarantee scheme in progress

of systems of governance. Perhaps part of the problem is that we seek solutions from one leader, one effort. The nature of the Indian polity is too pluralistic to relate to unifocussed mobilisation. Social audit, by lending itself to multiple and simultaneous applications to problems of misgovernance, allows diversity. But it gives us a common tool to use. It enables and empowers a million struggles. The sum of all these struggles will bring about a more active citizenry and a more accountable governance system. It also disaggregates the issues in a manner in which people can comprehend the issue and therefore act.

What distinguishes the *Jan Sunwai* or Public Hearing from Social Audits, is the need to forge a formal relationship with the State. It mandates government to perform: provide information proactively, demystify information, create platforms for dialogue, enabling the poor and marginalised to speak fearlessly and act on the findings as per the provisions of the law.

The Social Audit has broken the nexus, linking personal monetary loss with social and political fraud. It redefines fraud as injustice. This mode is paving the way for the Herculean struggle to clean the mess in governance. Brazen reactions by the power elite proves that potential apart, the Social Audit is beginning to deliver. When five MLAs of Alwar district in Rajasthan, from different parties, blocked the National Highway to prevent social audits, the reason was obvious to everyone. The resistance to the social audit made mandatory in the Mahatma Gandhi National Rural Employment Scheme (MGNREGA) has now reached national proportions, with the bureaucracy and politicians alike resisting it. What better certificate for its efficacy!

#### SOCIAL AUDITS AND THE MGNREGA

The MGNREGA is the first legislation to have included social audits as a statutory requirement. It provided the space to put the concept into practice, display its enormous potential and explore challenges. It has helped place this

**Social audits can promote political mobilization and force the administration to respond. It empowers the oppressed to demand their rights.**

discipline as inherent to participatory democratic governance.

This potential to foster transparent governance is visible in mass social audits organised in Rajasthan and Andhra Pradesh. Armed with copies of official records, hundreds of people walked from one worksite, one village to the next, inspecting works, verifying records, conducting surveys, holding public meetings to create an environment where people are empowered to claim their entitlements under the Act – for work on demand, minimum wages, timely payments, participatory planning and corruption-free implementation.

The use and impact of social audits has been varied across the country. In Andhra Pradesh,

there has been a social audit programme unparalleled anywhere in scope and action taken. There are other states where it is merely a symbolic exercise on paper. The sharp reaction in Rajasthan demonstrates that properly conducted, it fundamentally threatens the nexus of vested interests that have destroyed development efforts. Political consent will have to be extracted through public pressure. Its potential has been internationally realised. Inspired by the Indian experience, in countries like Kenya, the social audit has been used to strengthen accountability in democratic political processes.

Experience shows that social audits can promote forms of political mobilization and force the administration to respond. It empowers the oppressed to demand their rights, and the apathetic mainstream to speak, strengthening democratic processes. It has the potential to compel government accountability, dramatically improve delivery in government programmes, and help define participatory governance.

The Social Audit has grown beyond an idea. Like all effective mechanisms, it will face challenges. As a practical tool it has thrived even under attack. As a means to transform transparency and accountability into action, it has energised us to look for answers, to India's growing worries and concerns about ethical public action.

## FINANCIAL INCLUSION

### INDIA IS ON THE THRESHOLD OF THE 'STD-PCO-FICATION' OF FINANCIAL SERVICES DELIVERY

# Money can fly

Vijay Mahajan



THE decade 2010-2020 is the Golden Decade of India, provided we can convert the growth of the past decade into inclusive growth benefiting those left out – the Dalits, the tribals, the minorities, a vast majority of women and the youth, and special segments of the population such as the disabled. There are also regional inequalities in growth. For example, in spite of a GSDP growth rate of over 11 per cent per annum for the last five years, the per capita income of Bihar is still less than one-fifth of Haryana.

States in the northern Hindi belt continue to have high population (and thus political weightage), but low growth. This will have to be corrected.

Millions of young people and women in these states will have to get gainful employment, and since it is not conceivable that so many jobs will be created by the formal economy, they will get work in the informal sector, either as wage workers or be self-employed. In either case, micro-investments will have to be made at the level of the household, for those employed on wages – in primary education and vocational training to ensure that remunerative wage work becomes available. For the self-employed, micro-investments will have to be made in fixed and working capital for agriculture, livestock and non-farm rural enterprises, as well as in urban micro-enterprises.

In short, macro-economic inclusive growth needs micro-economic capital investments. The only way this can be done is through widespread financial inclusion. In other words, financial inclusion is a necessary (though not sufficient) condition for inclusive growth.

What is financial inclusion?

Though financial inclusion has been referred to as access to credit through a no-frills bank account, we should define it more broadly. For us, Universal Financial Inclusion (UFI) is defined as the following set of seven desirables being available to all adults in India, over a reasonable period of time, say by March 31, 2013.

- Financial literacy: building awareness and understanding of basic financial concepts among all adults.
- A bank account: initially no-frills, later regular, for every adult.
  - Access to the full range of financial services covering:
    - ◆ Savings: particularly micro-savings such as daily/recurring deposits.
    - ◆ Insurance: for lives and livelihoods – health, crop, livestock, assets.
    - ◆ Remittances: from family members who have gone for work elsewhere within India or abroad.
    - ◆ Payments: incoming (such as MNREGA wages) and outwards (such as utility bill payments).
    - ◆ Credit: both for working capital as well as investments in farms, micro-enterprises, agro-processing and common infrastructure.
    - ◆ Systematic investment plans into mutual funds to enable poor people to benefit from returns which beat the inflation rate.
    - ◆ Pensions for old-age financial security.
    - ◆ Derivatives based on warehouse receipts, to enable farmers to get the best price for their produce.
    - ◆ New financial products as they arise.
- Biometric identification for all adults in line with Unique Identification (UID) specifications
- Large numbers of Business Correspondent Outlets (BCOs) to enable trans-

actions without going to bank branches. This is very important to actually make use of the no-frills bank accounts.

- Each adult has a credit history in a regulated credit information bureau, so that lenders can access it and ensure there is no over-lending.
- A nationwide, across-the-services spectrum consumer grievance redressal system in the form of Financial Services Ombudsmen Offices, with sufficient powers to discipline financial institutions and reduce the power asymmetry between the median user and the institution.

#### WHERE ARE WE TODAY?

A recent study by CGAP and the World Bank, titled Financial Access 2009, shows that India's position in this regard is fairly low.

Country	Bank deposit accounts per 1000 adults	Bank loan accounts per 1000 adults	Bank branches per 100,000 population
Bangladesh	319	42	5.2
India	680	124	9.3
Sri Lanka	1652	487	9.1
Malaysia	2227	973	11.6

What these figures show is that we have to catch up a lot, if we have to achieve UFI. If we see the last column of the table above, we can see that in terms of branch density, India scores fairly well, with 9.3 branches per 100,000 population. So, thanks to the branch expansion policy that was pursued soon after nationalization in the 1970s, we seem to have actually cracked the 'last mile' problem decades ago. But the poor have still to see the 'first smile' from the service providers. More branches have not translated into better access for the poor. They still find it difficult to fulfil the "know your customer" (KYC) requirements to open bank accounts and contending with surly staff in bank branches.

How do we change this?

There are at least two ways to do this, both witnessed by us in India, in the telecom sector. The first one was when Sam Pitroda revolutionized access to telephones through the concept of the STD-PCO. At its peak, there were nearly two million of these, manually operated telephone call centres. Even a child or an old woman was able to walk to an STD-PCO a few hundred metres away from home, and was willingly assisted in calling a local or a long-distance number. Through the STD-PCO, Sam Pitroda cracked the 'first smile' problem! The innovation was appointing private individuals as STD-PCO operators, who earned a share of the telecom revenue on each call. Had every PCO operator been a salaried telecom department employee, imagine what the service would have been like. India's banking system for the masses in 2010 is a lot like the Indian telephone system was in 1990, before the STD-PCO revolution.

Happily, India is now on the threshold of the 'STD-PCO-fication' of financial services delivery, with over 80 million accounts being opened by banks in the last three years. The UID number, with biometric identification, will soon be given to every Indian. This will eliminate the need for further KYC requirements to open bank accounts. The RBI has permitted *kirana* shops (grocery stores) to become BCOs for banks. Recognising that banks will find it hard to deal with thousands of BCOs, the RBI has permitted for-profit companies to become BCs, to enable small transactions for deposit, withdrawal, fund transfer and payment within walking distance of most users.

# IDEAS FOR THE NEW DECADE

LAKSHMAN ANAND



The second solution is the mobile telephone, given that over 600 million of them are in use in India, across all regions and income brackets. It is possible for BCOs to use mobile phones in place of old style point of sale (POS) terminals. An inter-bank mobile payment switch (IMPS) has been set up by the National Payments Corporation of India (NPCI). This will greatly facilitate financial inclusion transactions using mobile phones at low-cost. But using the mobile BCO to pay out or collect currency notes, is like hitching a horse to draw a tramcar.

We have to eliminate the use of currency notes in as many transactions as possible. This can be done much more easily than it seems. Imagine a rural woman getting her wages under the Mahatma Gandhi National Rural

Employment Guarantee scheme on her mobile. She then uses the m-money to buy groceries from a *kirana* store. The store-owner in turn makes payment using his mobile phone for goods purchased to the wholesaler in the nearby town. The wholesaler deposits all his receipts of m-money into his bank account. The generalised form of this is called 'm-money' or mobile money. Already, in Kenya, 10 million out of a population of 40 million are using M-Pesa, the mobile payments service to buy and sell goods and services and to remit money. An additional service, M-Kesho, also enables them to link it to a bank account for savings and eventually, overdraft loans.

In India, we are still nowhere near this kind of use of mobile money. At present, the RBI permits mobile phones to merely act as a communication channel for transactions from one bank account to another. After satisfying itself that such technologies are reliable and tamper-proof, the RBI should permit the use of m-money more widely. This would reduce the use of currency for small transactions, just as has happened for cheques and demand drafts for larger transactions in the last decade. This will significantly reduce transaction costs of cash pay-in, pay-out and handling currency notes/coins.

What is needed to usher in this desirable scenario? We need a robust national eco-system promoting and monitoring progress towards Universal Financial Inclusion – Parliament, the Ministry of Finance and the RBI should take the lead in this matter. An annual survey of financial literacy, inclusion and transactions (IND-FLINT) should be carried out to measure progress towards UFI and a report tabled in Parliament on progress achieved. Taking a lead from the Raghuram Rajan Committee on Financial Sector Reforms, a number of academic institutions should be researching and publishing on this topic; while activists and media specialising in this field should continue to identify successes and gaps. We must not rest till all adult Indians have affordable, reliable access to a range of financial services near where they live or work.

Vijay Mahajan is the Founder and Chairman of BASIX and President of the Microfinance Institutions Network (MFIN)

## COMPANIES

## RAMPANT CAPITALISM CORRODES INSTITUTIONS OF DEMOCRACY THAT EVERYONE IN THE WORLD SHOULD HOLD DEAR

# Transform capitalism

Arun Maira



ERSTWHILE advocates of capitalism seem to be losing their faith. Their growing list includes George Soros, Joseph Stiglitz, Bill Emmott (former chief editor of *The Economist*), John Gray (an economist advisor to Margaret Thatcher) and Adair Turner (former Director-General of the Confederation of Business Industry). In a report with the intriguing title, *Has the World Gone Mad?* Bernard Connolly, chief global strategist of AIG London, says, 'We have lost count of how many notes we have, in the past few years, written with some reference to a crisis of capitalism. Tragically, that crisis is now upon us.' And Martin Wolf, chief economics commentator at the *Financial Times*, warned after the Bear Sterns collapse, "Remember Friday, March 14, 2008: it was the day the dream of global free-market capitalism died."

While many economists now say we cannot have business as usual, others say there is nothing unusual in this crisis. They say crises are inherent in cap-

italism. They imply that nothing much needs to be done because the market will sort itself out. They seem blind to two serious problems with capitalism in its present form. One is the belief amongst them that nothing has changed in the world fundamentally to make the present discontent with capitalism any different to past crises. The other problem is the idea that human beings are like corks on an ocean that have no choice, and must accept that they will be bobbed up and down by the invisible hand of the market.

Ideas of capitalism and free markets have operated within human society for centuries, certainly since the eighteenth century, the time of Adam Smith and David Ricardo, and even before them. However two new forces, of more recent origin, make it difficult for 21st century policy-makers to leave the world to the invisible hand. One, is the idea of human rights and with it, democracy. This idea developed global force only in the latter part of the last century, especially after the collapse of the Soviet Union. With it, the numbers of voices advocating the rights of diverse disadvantaged peoples, who are asking, 'Is it fair?' have multiplied enormously. And free media, accompanying democracy, is making their voices heard.

The other force appearing like a tsunami, is the torrent of information coming through multiple electronic channels that barely existed even 15 years

# IDEAS FOR THE NEW DECADE

LAKSHMAN ANAND



Farmers protest against companies manufacturing and selling seeds

ago: cell phones everywhere, the Internet, Google, and 24/7 TV news in vivid colour fed by such sources. Now people, even in Indian villages, know what others have and they do not. While their perceptions of gaps create aspirations, which are a force for progress, they also raise questions about the fairness of the system, even in capitalist America.

Robert Reich, former cabinet secretary in Bill Clinton's presidency, and now professor of public policy at the University of California, questions the morality of the growing disparities within the US. In his book, *Supercapitalism: the Transformation of Business, Democracy, and Everyday Life*, he contrasts two recent periods in US history: the period from 1947 to 1973, and the period from 1974 to 2004. The US has been a capitalist and free market society in both these periods. However, there is a great difference in the two periods in how poor people benefited from the growth of the economy.

Between 1947 to 1973, often described as a 'golden age' in US history when the US was held up as a beacon to the world of the benefits of democracy and capitalism, everyone in the US was getting richer. While the incomes of the richest fifth rose by 85 per cent, incomes of the poorest fifth rose by 116 per cent. On the other hand, between 1974 to 2004, Reich says US capitalism was transformed to 'supercapitalism', with a much greater emphasis on the institutions of capitalism and less on the institutions of community citizenship. During this later period, the incomes of the richest fifth in the US have gone up by 64 per cent but the incomes of the poorest fifth have gone up by only 3 per cent.

Reich makes an observation. The wealth of the two richest Americans, Bill Gates and Warren Buffet, is equal to the combined wealth of 100 million poorer Americans. This is the result of the capitalist process he says. He does not grudge the two their wealth. But he says a system that can result in such huge disparities cannot be right. In India, as we have unleashed market capitalism, the wealth of the richest Indians now equals the wealth of the richest Americans. How many hundreds of millions of poorer Indians' wealth do you think will equal one of these rich Indians' wealth?

Joseph Ackerman, head of Deutsche Bank, says, 'I no longer believe in the self-correcting nature of markets.' And Benjamin Barber says, 'Markets are simply not designed to do the things that democratic politics or free civil societies do. Markets give us private, not public modes of discourse: we pay as consumers in currencies of consumption, but we cannot use this currency

when we deal with one another as citizens or neighbours about the social consequences of our private market choices.'

Lester Thurow of MIT, says in his book, *The Future of Capitalism* that "Democracy and capitalism have very different beliefs about the proper distribution of power. One believes in a completely equal distribution of political power: one man, one vote, while the other believes that it is the duty of the economically fit to drive the unfit out of business and into economic extinction. Survival of the fittest."

The second problem with free-market capitalism, as I said earlier, is that it treats human beings merely as consumers and producers and as units to be counted. Hence India's demographic dividend will arise, according to economists, from the large number of children in India. Their calculations do not factor in the health and spirit of the children. The treatment of people as consumers and producers, rather than as living, learning, beings, is common to both capitalist and communist economists. The difference is that one system would leave it to the invisible hand of the market to bob the corks up and down. While the other wants top-down planning to move people around.

Economists' numbers and equations miss the essence of humanity. As the poet Robert Frost said, "When to the heart of man was it ever less than a treason, to go with the drift of things, to yield with a grace to reason." Therefore it is not just capitalism that is in crisis and requiring reform: it is also the discipline of economics – at least the version that has become dominant today.

Free trade is a mantra for many economists today. What was the US's position regarding free trade when its own economy was developing? At the turn of the 18th century, when the British economy was very strong, Adam Smith and David Ricardo propounded their theories of free trade between nations. These theories did not go down well in the USA as Norwegian economist, Erik Reinert recalls in his book, *How Rich Countries Got Rich and Why Poor Countries Stay Poor*. He says the American maxim of the 1820s was "Don't do as the English tell you to do, do as the English did," which Reinert goes on to say may be updated now to "Don't do as the Americans tell you to do, do as the Americans did!"

Healthy trade will emerge from an evolutionary process in which the interests of all nations are considered equitably; and, in the case of the Doha Development Round, especially the needs of developing nations. Rules of free trade must not be imposed by power. Hence some fundamental tensions in international trade negotiations are: how are the rules being determined, and who is determining them? Are they determined only by the rich and powerful? Or are the needs of the less privileged being heard too? In other words, is the process democratic? What is at stake in the Doha Round is not only the concept of free trade, but also the concept of democracy – the other ideal that the rich nations of G-8 say they are also keen to spread across the world.

Undoubtedly, there are many important issues to debate about capitalism today. These include the widespread belief that continuing

material growth is an indicator of the health of a society, whereas others feel that relentless growth is like a cancer that ultimately destroys its host. Another is the ruthless extension of property rights to new knowledge, and even geographical indicators, thereby denying the poor fair access to the ways they need to develop their economies. And a third is the disproportionately large role of financial markets in the global economy. As Reich says, 50 years ago, Wall Street used to work for producers. Now producers work for Wall Street.

In conclusion, I draw attention again to two fundamental problems of capitalism and economics in their present forms that I have mentioned before. One is that rampant capitalism corrodes institutions of democracy that everyone in the world should hold dear. And the other is that human society and nature are not servants of the economy, to be manipulated to make economies more efficient. Rather, economics must serve the needs of human society and sustainability of the environment.

Let us lay down our aspirations and principles first, and accordingly devise the forms of capitalism and economics we want. Make capitalism and economics our tools, rather than human beings becoming their tools – that is the challenge before us as we march into the 21st century.

Arun Maira is a member of the Planning Commission of India

## AGRICULTURE

NEARLY 80 PER CENT OF SEEDS ARE FROM THE FARMERS' SEEDS SYSTEM. THIS SYSTEM WILL HAVE TO BE STRENGTHENED AND SCIENTIFICALLY UPGRADED.

# Seeds of the future

M.S. Swaminathan



THE great physician Charaka once said that no plant on our earth is useless. Mahatma Gandhi also used to stress that nature provides for everyone's need but not for everybody's greed. Modern biotechnology, particularly recombinant DNA technology, has helped to convert Charaka's and Gandhiji's visions into reality. We can now move genes across sexual barriers and thereby create novel genetic combinations. For example, rice varieties have been bred at the

MS Swaminathan Research Foundation (MSSRF) which possess tolerance to salinity as a result of the incorporation of genes from mangrove species. Therefore seeds of the future will be derived both from Mendelian and Molecular breeding.

In order to ensure that the new seeds are both high yielding and climate resilient, there is need to integrate pre-breeding with participatory breeding. In this manner, we can combine genetic efficiency with genetic diversity. While modern biotechnology has opened up uncommon opportunities for meeting the challenges of climate change and global warming, we can still make much progress through traditional techniques like selection and hybridization. Since most of our farmers have small holdings, it is important that they have access to technologies which can increase marketable surplus and thereby income. In a country with predominantly small holdings with farmers lacking in risk taking capacity, it is important that varieties are preferred over hybrids since farmers can keep their own seeds in the case of varieties. In the case of hybrids they will have to purchase the seeds every season and hence there is need for an insurance cover. Nearly 80 per cent of the seeds used in the country are from farmers' seeds system. This system will have to be strengthened and scientifically upgraded.

The new seeds should also help us to checkmate pests and diseases. Genetic homogeneity enhances genetic vulnerability to pests and diseases. This is why there should be varietal diversity. This in turn will depend upon the availability of biodiversity in our major crops. I shall therefore like to indicate briefly the steps we should take for establishing gene banks for a warming planet.

### GENE BANKS FOR A WARMING PLANET

The bicentenary of Charles Darwin's life and work reminds us that the great biodiversity on Earth underlies natural selection, selective breeding and the biotechnologies required to provide humanity with food, fiber, fodder and fuels. In particular, biodiversity affords the development of plant varieties with novel genetic combinations, which will be required to meet the challenges arising from adverse alterations in temperature anticipated from human-induced climate change. The loss of each gene and species therefore limits our options for the future.

As far back as 1983, I stressed the need for a conservation continuum, beginning with revitalizing conservation of domesticated plants by farm families in all countries and extending to the establishment of an international genetic resource repository maintained under permafrost conditions. Since then, thanks to the spread of participatory breeding and knowledge-management systems, on-farm conservation and gene banks have become integral parts of national biodiversity conservation strategies. For example, there are now over 125,000 genetic strains of rice, of which over 100,000 are in a cryo-

genic gene bank maintained by the International Rice Research Institute (IRRI) in the Philippines.

We now largely depend on a few crops such as rice, wheat, corn, soybeans, and potatoes for sustaining global food systems. However, their genetic homogeneity increases their vulnerability to abiotic and biotic stresses. If their production is affected by a natural calamity, their prices will increase and food-deficient countries are likely to face riots and worse. Important publications such as the *Lost Crops of the Incas* and the *Lost Crops of Africa* document the historic role of agrobiodiversity in ensuring food and health security. Saving vanishing "orphan crops" has therefore become an urgent task.

Although plant conservation on farms and in the wild is the ideal approach to preserving genetic diversity in crop plants, these methods are constantly jeopardized by invasive species, human destruction of habitat and market factors. Therefore, other preservation strategies become essential. There are many cryogenic gene banks around the world resembling that at IRRI, but each is very expensive to maintain. Now, thanks to the Svalbard Gene Vault, over four million accessions will be conserved without the need for expensive low temperature storage chambers. The remote isolation and capacity of this facility should be sufficient to preserve a sample of the existing genetic variability in all economically important plants, a vast resource generated over the past 10,000 years of agricultural evolution.

But what about species that lie outside the agrobiodiversity realm? We need specialized genetic resource centers to preserve them as well if science is to ameliorate the future consequences of a warming planet. For example, the MSSRF is conserving genes from plants such as mangroves, which are unusually tolerant of saltwater, and from *Prosopis juliflora*, an excellent source of genes for drought tolerance.

A Genetic Garden of Halophytes is being established in order to convert sea water into freshwater through the medium of halophytes. This has opened up opportunities for sea water farming, involving sylvi-aqua agro-forestry systems. Sea water constitutes nearly 97 per cent of global water resource, and it is important to make use of it for strengthening food and livelihood security in coastal areas.

The recently held UN Biodiversity Conference at Nagoya, Japan, has developed 20 Aichi targets (Aichi is the prefecture where Nagoya is located) to stem biodiversity loss by 2020. If implemented with adequate political will, professional skill and public participation, humankind will have taken the steps necessary to foster a conservation continuum involving local, national, regional and global action. The proposal to create an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, should help to create a mechanism for initiating a continuous assessment of the state of gene banks around the world and for halting genetic erosion. If this happens we will be entering an era of biohappiness resulting from the conversion of biodiversity "hot spots" into "happy spots" through genetic resources conservation and sustainable and equitable use.

The seeds of the future will result from the pyramiding of genes for biotic and abiotic stresses as well as for nutritive quality. Plant breeding is in an exciting phase and breeders will have to achieve a combination of characters. For example, the Pusa Basmati strain 1121 now occupies most of the area under Basmati in the Punjab region. Seed technologists should become entrepreneurs and should ensure that good seeds become the catalysts of a productive and climate resilient agricultural system.

Prof M.S. Swaminathan is a Member of Parliament, Rajya Sabha, and Chairman of the M S Swaminathan Research Foundation in Chennai.

## EDUCATION

### THE STATE HAS A CONSTITUTIONAL RESPONSIBILITY TO PROVIDE QUALITY UNIVERSAL EDUCATION TO ALL CHILDREN

# Smarter govt. schools

Dileep Ranjekar



SOMETIME in 2005 we were doing a simple study comparing the learning patterns in urban private schools and rural government schools. In the span of about a month, we visited around half a dozen private, fairly elite schools and an equal number of rural government schools.

In a Class 5 urban school we asked the students this question: "Between sound and light, what travels faster?" About five students answered correctly. When we asked the reason why they said so, there were two

answers – it is there in the book and our teachers told us so.

We decided to ask the same question in a Class 5 rural school the same month. With much difficulty only one student answered. He said: "Sound travels faster." We asked the student the reason for his answer. We were stunned by his reply. The student said: "When I switch on the TV at my home, I can hear the sound first and then the picture."

The teacher was angry with the student. But most of us were very impressed with the logic that the child gave. He had observed something, analyzed it and arrived at a conclusion based on his thinking. At that stage in his life, he had no idea how the TV functioned and why the picture took time to come alive.

Since then, I have narrated the two incidents to many and asked them, "Which kind of learning would you prefer – the one that we experienced in the urban school or the one by the student in the rural school"? Most people prefer the answer given by the student in the rural government school – though the answer is technically wrong. The question before us is: "What kind of education and learning do we expect from our children?" Do we want them to be able to give the "correct answer" or give "a thoughtful answer?"

We analysed the SSC board examination papers for the past 10 years in five states. The analysis revealed that over 75 per cent of questions were focussed on assessing the rote memorisation of learning. The learning assessment carried out by the Azim Premji Foundation in thousands of schools in six states revealed that only in about 10 per cent of schools, over 60 per cent of students have the learning competencies expected by their respective curricula. The message coming through several other surveys on learning – such as by the NCERT or by ASER, is loud and clear! Despite about seven million government educational functionaries (including teachers) engaged in delivering education across 1.3 million schools for about 220 million children, learning levels are at highly deplorable levels.

Even more interesting is the education delivery funnel. Of the 100 children enrolled in Class 1, just about 39 manage to reach Class 10 and only about 19 of them pass that exam. Further, only around 12 students manage to pursue higher education.

Significant progress has been made during the last 15 years in improving access to schooling. Almost 98 per cent of villages have a primary school within one kilometre. However, there are gaping holes in the area of both 'quality' and 'equity.'

A single-minded focus is now needed to ensure that the 220 million children in school get the kind of education that is envisaged by the National Education Policy. Education that makes learners independent thinkers, empathetic and responsible citizens of our country. Education that enables our children to meet their future successfully.

We must not forget that the government has a constitutional responsibility to provide quality universal education to all children. Over 80 per cent of children are studying in government schools – these are typically children of parents who don't have the voice and the choice. The debate of public vs private schools is rather irrelevant. Both schools are fairly low on quality and the private schools, at best, are better rote factories since there is some accountability.

On equity—the performance on learning, enrolment and retention between girls and boys, between urban and rural and between the rich and the poor, is 20 percentage points adverse. This has to be addressed urgently through several affirmative actions at the primary school level. Reservations at higher education level is hardly the solution if we don't correct the situation right at the beginning.

What are the priorities? Plenty. But let me deal with just half a dozen in this piece.

**Political will:** Not a single political leader makes education a platform for his/her election campaign. Education – unlike electricity, roads and water – is just not on the agenda of politicians. The Right to Education Bill languished for over four years because there was no political will to commit the additional ₹ 66,000 crore necessary to implement the Act. I would go to the extent of saying that the percentages are irrelevant – we must do what is necessary –





Children at a government school

even if it is 15 per cent of the GDP till we get the base levels right.

**Administrative reforms:** Fundamental reforms are required to address a wide range of issues. The key among them are (a) ensuring the competence of people (b) ensuring that there is a stable tenure for performing functionaries and (c) there has to be accountability for outcomes enabled by some kind of risk reward system that is currently absent. Due to constant leadership instability, even a five-year education vision for any state is rarity. What is scary is that even the top political leadership has expressed their inability to anything in this.

**Teacher education:** When I was participating in a global education think-tank meeting about three years ago, the 70-plus representatives at the meeting asked the representatives from Finland the reasons for their high quality education. The answer was – invest, invest and invest in teacher education. We have to make dramatic reforms in the curriculum, teaching-learning process and evaluation of teachers. The current 10-month B.Ed course is inadequate and outdated. We must make it very difficult for anyone to become a teacher. The concept of employing 'contract' teachers who have no rigorous training has to be banned. We cannot play with the lives of children. The Sixth Pay Commission has significantly addressed the compensation issue.

**Education leadership and management:** To begin with, have a separate qualification and competence eligibility for the leaders of the 1.3 million schools. Research has repeatedly revealed that a school leader can make or break the quality of education in a school. Similar development efforts are needed for the half million education functionaries who are responsible for ensuring the infrastructure, incentives and teacher-pupil ratios to contribute to quality in the school. They must have the necessary education perspective and competence to deal with the schools.

**We have to make dramatic reforms in the curriculum, teaching-learning process and evaluation of the teachers that we are preparing.**

**Examination reforms:** "What gets measured is what gets done," is a well known phenomenon. The primary purpose of any assessment/examination is to find out the extent to which the curricular goals are achieved. Today's examinations excessively focus on measuring rote learning. Therefore, that is what gets focussed on in the classroom. At the primary education level, the teachers mostly focus on preparing children for the select questions at the end of the lesson. I believe that a well evolved continuous assessment framework can significantly shift the focus to the achievement of curricular goals rather than memorizing knowledge.

**Professionalization of education:** Unlike professions like medicine, engineering, chartered accountancy, law etc. there is no institutional framework to develop educational professionals in our country. We need thousands of professionals who understand issues such as curriculum, pedagogy, assessment, policy, managing large education systems etc. The emergence of national law schools redefined excellence in law education in India. We must have hundreds of universities and institutions preparing education professionals who can add value to the education in India and create systemic reforms.

The power of education in the socio-economic growth of a nation has been proven beyond doubt. If all our children get the quality of education that is necessary for our development, our performance on several social and development indicators will be radically different.

It is only the government that has the required experience, required people and required financial resources (\$15 billion per year are spent) for such a huge nation. And we, the people of India, must exert the necessary pressure on the government to deliver its responsibilities at high quality.

*Dileep Ranjekar is CEO of the Azim Premji Foundation.*

# Green equals hi-tech

Chandrasekhar Hariharan



WHEN I was asked if I could delineate the contours of the future of buildings and urban planning over the next two decades, I seized the opportunity without hesitation. The first thing that came to my mind was that green is the name of the game, no doubt about it. There is a war breaking out in the asphalt jungle we have known for over 50 years now.

A bird's eye view of the emerging scenario tells us that there has never been such interest in the ecological impact of buildings all

over the world. In India alone, green construction is projected to increase to about 1 billion sq ft by 2012. At ₹ 2 lakh crore, it is nearly five per cent of India's GDP. Moreover, the struggle to reduce carbon emissions and pollution levels isn't a negligible fact for a country in search of responsible and sustainable methods of construction.

It's old hat now that buildings are one of the heaviest consumers of natural resources and emit colossal amounts of greenhouse gases triggering climate change.

In India, as elsewhere in the world, construction and active energy use in buildings account for about 35 per cent of all CO<sub>2</sub> emissions. The farm sector contributes an equal quantity, while industry and commerce account for the rest. Globally, 40 per cent of all raw materials go into making buildings. Green is so fashionable that everyone is jumping on to the bandwagon, claiming astonishing sustainability or remarkably low energy consumption. But in reality, they are selling the idea – not realizing the ideal.

**URBAN REALITY:** Urban India has nearly 4,000 agglomerations, cities, and towns. Seventy per cent of food, water and energy demand comes from this two per cent of urban landmass. Since this tiny landmass is driving over 75 per cent of India's GDP, more and more people are gravitating towards it. In India, urban population will rise from the current average of 28 per cent to the world's average of 50 per cent by 2030. There is no stopping this.

Interestingly, a cursory look at Karnataka itself offers a microscopic version of what prevails in every state. Bangalore, its capital, hosts eight million people on 800 sq km of area. The remaining 238 towns host just 12 million over no more than 1,400 sq km. Of these, as many as 140 towns have less than 75,000 people with less than five to 20 sq km of area. By 2030, population in these towns will double and towns will become twice as large.

Yet, it is not hard to see how the future is not so much about technology as it is about effective management of only four challenges: energy, water, transportation and waste. If we introduce a few simple measures on the demand side for both energy and water, we could turn the clock back to 1980 levels. Well, that will need awareness of the grim future ahead, determination to bring change quickly and firmly, and a groundswell of resolve from each individual. This bit of value-engineering can alone ensure that we meet demand without those indecently large investments in either power infrastructure or supply-side water management.

In the last 50 years, the government has only looked at enhancing power generation yielding thoughtlessly to those popular and incessant demands for 'more energy and water.' Political parties and governance of every hue have gone on the defensive while making decisions on demand-side management. Even as you read this, a plethora of infrastructure projects are being launched to

enhance water supply through long-distance pipelines to our cities from rivers and fragile ecosystems. The Polavaram dam on the Godavari, the Giriganga's diversion to slake Delhi's ever-growing thirst, the further depletion of the Cauvery to offer drinking water to a burgeoning Bangalore... the list is scarily long.

What is clear is that supply-side solutions won't work. What we need is a war against waste of these two exhaustible resources. What will work and indeed should become a norm is a combination of legislation to ensure the following:

- Ban deep borewells and use of high-energy lighting systems.
- Encourage higher reuse of waste water and greater savings on flow of water with aerators and flow restrictors.
- Impose higher tariffs that deter callous consumption and practices that increase output per litre of oil or water on both industrial and farm fronts.

**NEW HORIZONS:** The world has seen a profound and deep change since the 1980s on technology. It took no more than five years to catapult from wireless telephony after a century of phones with the cord and telephone cable. The next big leap, waiting to be taken, is the one that will unfetter us from the tangle of millions of miles of electric cables and wires that cost vast amounts of copper for reaching electricity to our buildings. If that leap in technology is taken, we will have wireless transmission of energy. Already, the world has begun a quiet revolution moving towards a massive shift from AC transmission to DC transport of energy as power supply falls slowly from the State's hands into those in the private sector.

Transmission of electrical energy without wires has been around since about 1856 in one form or another: first it was mutual induction, then it was electromagnetic radiation, such as in radio waves. For example, a fluorescent tube held near an active radio transmitter radiating more than a few watts (such as an amateur radio transmitter) will glow.

Once that shift happens on power transmission, a new horizon will open up on energy sources that go beyond our crippling dependence on coal from our forests and oil and gas from sensitive shale deep down our sea waters and lands.

Here's a worm's view of what urban planners, architects, and engineers should be doing to shape our cities, suburbs and homes and offer an altogether different definition.

Sustainable architecture and design is now perhaps the fastest growing industrial segment worldwide. More and more monographs on sustainability urge us to rethink how products are designed and manufactured. This will trigger an intense greening of the supply chain for nearly every new and old material that goes into construction.

There is enough evidence of such a new language gaining currency: local economy, 'prosumption,' regional typologies, bioregionalism, renewable, post-consumer, environmentally sourced – all of them are words and phrases not recognized to be part of the building lexicon until the turn of this century.

Ahead of us lies a shift in construction patterns that will define new practices: prefabrication and assembly architecture that will promote scale and affordability. It will spell new dimensions of sustainability on use of building materials: reduced use of limestone for cement and riverbed sand for concrete – all based on renewable resources as against extracted resources. This will improve building performance, durability and structural strength for materials.

Similarly, new technologies for air management are also finding currency. Ozone-depleting substances for air-conditioning and refrigeration are slowly being phased out. Next on the cards is creation of a new green skin through urban agriculture to reduce our dependence on ecosystem lands. Such encour-



A BCIL housing project

aging urban farming practices are already going on in Havana, Curitiba, Barcelona, and Seoul.

In the business of architecture and engineering, you will see a new competition at every level which has captured public interest and generated a momentum towards making sustainability the norm.

**BUILDING WITH SOUL:** India's challenge over this decade and the next is vastly different from the sensibilities and growth approaches that the West could afford to adopt and adapt over the last half century. They enjoyed the luxury of blissful ignorance, of a complete lack of knowledge of what was befalling the planet. All that changed with the discovery of the Ozone Hole in 1984 and the steady rise in the earth's temperatures over the next quarter century to 2010.

A good building is not just a neutral vessel, blandly waiting for human activity to occur within its walls. This has happened in the West over the last 50 years in many buildings, particularly commercial; and over the last 20 years in particular in India. Such unseemly hurry to meet the demand for these faceless 'boxes' that give us either place to work out of, or live within, is not something the earth can afford.

A good building possesses character, or more precisely, emotional resonance – the capacity to inspire thought and feeling among its occupants. Whether you are a builder of an office space or a home, you seek out professionals whose work resonates with your aspirations. Designing buildings that connect emotionally with owners is something that will happen with far greater conscious actions and decision in future. There can't be a more opportune time and exciting decade for architects or engineers if only they know how to seize with both hands this rare challenge ahead of us.

How do you figure out how buildings stir imagination? With increasing pre-

**With 20 per cent of all buildings slated to go green by 2011, an orbit shift in the way we look at buildings is imminent in the next five years.**

mium on land in every city, particularly the top 20 of them in India, you will see a conscious effort being made by every professional on how to collaborate with land. Altering the land and the landscape is easy. You can mow down a small forest or old vegetation and rearrange a hillside in a few days. Solid rock that is seemingly unsuitable for building upon is a nuisance for builders and architects if they are unwilling to be sensitive and take on either additional time or expense to protect them and work around them.

#### ROMANTIC DESIGN

Why would modern construction be at all anxious about the land and landscape when they are free of its constraints? The existing landscape

usually possesses character – perhaps seriously undervalued – and is more an asset than a detriment if you adopt a romantic approach to design. Seeing raw, undisturbed land as a potential collaborator to create unique houses, dwellings that gain much of their distinctiveness from the limitations and idiosyncrasies of a site is not something that every architect and professional builder seeks to do, nor is trained to do.

Maybe a piece of land offers the sun, the night sky, contours and presence or absence of water. The scents, sounds, colours and breezes that characterize the atmosphere of a land need to be captured if you want to put a human face and recognize the sensitivities of the occupant.

Even a property in the middle of the densest city has some relationship to nature. The ideal partner for romantic solutions is, of course, the untouched countryside. Worshipping nature is not something that comes easily, especially in the face of the challenges that a modern city and our current times offer. But a return to such respect and reverence will do us all a great amount of good.

*Chandrasekhar Hariharan heads BCIL Zed, the Bengaluru-based global pioneer in green buildings.*

## BIODIVERSITY

### MEDICINAL PLANTS AND DECENTRALISED MANUFACTURING CAN PROVIDE AN INCOME TO THOUSANDS OF WOMEN AND YOUTH

# *Plants for health and wealth*

**Darshan Shankar**



**T**HE materia-medicas of traditional health sciences of India like Ayurveda, Unani, Sidha and Swa-rigpa (Tibetan) contain clinically validated information of treatment principles and properties of about 1,900 plant species. There are also over 200,000 herbal formulations made from these plants, alongside their therapeutic indications. Apart from codified knowledge of plants, India has a hugely widespread tradition of folk medicine wherein rural communities use around 6,500 species of plants for

human and animal health.

We don't know when the clinical validation of the codified knowledge of plants was done but obviously this must have happened over several centuries. The Ayurvedic and Sidha literature has been written over the period 1500 BC to 1900 AD, Swa-rigpa after 6th century AD and Unani after 11th century AD. Given the long history of traditional systems of medicine in India, quite understandably, we no longer have any records of the validation data, except for more recent research that has been published during the last two to three decades.

We however do know that there are four Ayurvedic methods (pramanas) that were used to generate clinical evidence – direct perception (pratyaksha); inference (anuman and upman); experiment (yukti) and unbiased testimony of great physician-seers (aptavachana). In Indian knowledge traditions therefore, Ayurveda is regarded as an evidence based knowledge system (praman shastra). It is perhaps a similar situation with Sidha, Unani and Swa-rigpa.

Thus the traditional health sciences of India represent an ocean of herbal formulations validated by traditional knowledge systems for preventive, curative and promotive healthcare including sophisticated nutraceuticals and cosmoceuticals.

Industry could harvest this ocean for centuries to come. When necessary particularly for foreign markets, revalidation exercises for the selected formulations may need to be designed and implemented in order to establish the safety and efficacy of the formulations on the parameters of biomedical sciences. This revalidation is not a big deal but it needs to be conducted in an epistemological informed manner and with adequate research and development investments.

The medicinal plants of India are widely distributed across all 10 bio-geographic zones of the country from the Western Ghats and desert regions in western India to the northeastern zone and from the trans-Himalayan zone to the coastal plains. The life forms of medicinal plants include herbs, climbers, shrubs and trees as well as lower life forms like ferns, mosses and lichens.

Contrary to popular belief one-third of Indian medicinal plants are trees and another third, shrubs. A higher proportion of species are found in dry deciduous tracts but both the hot and cold deserts in Rajasthan and the trans-Himalayas yield very important species. The tropical forests harbor most of the country's medicinal species but very important plants are also found in temperate and alpine forests in high altitude areas. Thus rural communities in every eco-system have access to medicinal plants which are native and sometime endemic to their own eco-system.

Consumer demand for herbal products is growing all over the world. The projected global size of the herbal products industry is estimated to be

around \$3 trillion USD. Yet in India the herbal industry is very small with an estimated turnover of around Rs 10,000 crore per annum which is around one-tenth of the size of the modern pharmaceutical sector.

At this stage the Indian herbal industry is nascent. Although about five out of 8,343 licensed manufacturing units are more than 75 years old, even the oldest herbal industries have turnovers of less than ₹ 300 crore per year. The industry as a whole is therefore small scale and it functions at a fraction of its market potential. It is small scale because it is driven by small players. It has not yet caught the imagination of big players or advanced a bold vision for its growth, although the sky is the limit for a big initiative.

The assumption underlying this big idea of green health for both the bottom and the top of the pyramid is that everyone both rich and poor want access to green health.

What is green health? By green health is meant access to organically grown,





safe, reliable and wholesome health products made from natural materials. The products may be food supplements like tubers of *asparagus racemosus* (shatavari) which is very good for lactation and for physical strength, or the fruits of *phyllanthus emblica* (amlaki) along with turmeric which is good for diabetes or medicated wines like arjuna arishta made from *Terminalia Arjuna* which is a cardiac drug, or hair oils made from hibiscus flowers and *eclipta alba*, or herbal eyeliner that can delay or prevent cataracts in old age. It may be even simple herbal veterinary formulations for cows, dogs and cats and there are 200,000 formulations to choose from.

The critical question to ask is: can traditional knowledge of plants and natural products provide know-how for a large network of decentralized manufacturing units in rural areas for both the bottom and top of the pyramid? The idea of decentralized manufacturing is advocated because this strategy can create income and employment for thousands of rural women and youth, just as Amul, NDDDB and KVIC have done in the context of milk products, textiles and handicrafts.

The answer is a definite yes but we need a bold, creative, multi-dimensional strategy for cultivation of medicinal plants, technologies for low-temperature drying and storage, post harvest technologies, manufacturing and quality-control technologies for producing high quality finished products and both high end sophisticated and low cost technologies for packaging. The entire programme requires a well crafted social marketing plan.

The idea of green health for both the bottom and top of the pyramid is a big idea based on sustainable utilisation of biodiversity. But like any other big idea given its economic and employment potential it will require substantial seed investment and a very well designed management system, based on private and public partnership.

## **The idea of green health for both the bottom and top of the pyramid is a big idea based on sustainable utilisation of biodiversity.**

The products needed for those at the bottom of the pyramid will be different from those needed at the top. For the poor certain products may also vary from region to region. In coastal and high monsoon areas healthcare needs may be different from those in dry, arid and desert habitats and yet more different in high altitude areas. Some problems would however be common like anemia and products for promotive health like herbs for lactation or for improving immunity. Decentralized production units located in different bio-rich regions could cater to such differential health needs. For those at the top of the pyramid the products may be related to chronic metabolic disorders, nutraceuticals, cosmeceuticals and products for

geriatric care and preventive health.

An umbrella organization like Amul or KVIC but functioning under private public partnership regime may be the apt mechanism to drive the green health enterprise. A committed network of research and development (R&D) centers located in universities, colleges and private research institutes could service this enterprise.

At the grassroots a chain of competent NGOs, cooperatives, producer companies and community based organizations could be the local manufacturers but they would need to undergo rigorous training in enterprise development and management. The enterprise would need visionary leadership. The best brains from management institutes in India like the IIMs as well as from abroad should be enrolled to design and implement this enterprise.

It has been recently pointed out by the Chairman of the National Innovation Council, Government of India, that the best brains in the world are busy solving the problems of the rich but we need them to really focus on the much larger problems of the poor.

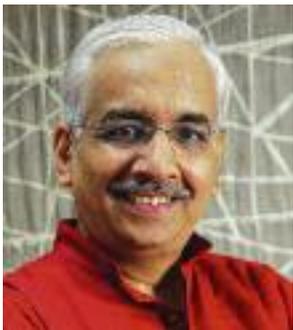
*Darshan Shankar is Advisor to the Foundation for the Revitalisation of Local Health Traditions, Bengaluru.*

## URBANISATION

THE FUTURE LIES IN HAVING 'LIVE AND WORK' CLUSTERS THAT ARE URBAN NODES WITHIN THE REGIONAL NETWORK.

# Cities can do it

V. Ravichandar



REPUBLIC Day is due this month. It symbolizes the day we renew our pledge with our Constitution. This dreamy author embarks on a wishful, fanciful tour about the actions required at all levels to make our cities truly inclusive, livable and be engines of growth. On the eve of Republic Day, the President's speech could kick-start the thought-action chain by reflecting on the future of our cities.

"..... Urbanization is inevitable and there is not a minute to waste in fixing our cities,

be it mega or smaller towns. Our Constitutional Amendments, Article 73 and 74 dealt with the way forward for our villages and our cities. While the panchayati raj system under the 73rd Amendment has worked reasonably well, the spirit of the 74th Amendment has been lost in our cities. Five years ago, the JNNURM was the first recognition that cities can find their destinies with assistance from the Central Government. It has been marginally successful and the scope to be more effective is considerable if Central, State and Local governments reformed themselves for the greater good of our children's children. We should envision a future for our cities say in 2021 and 'fold the future in' (as the late, respected Prof CK Prahlad used to advocate) to decide what is needed to match the reality of 2011. All Indians ought to indulge in such an exercise on Republic Day."

This author does take his President seriously. I am setting out five (hopefully big and doable!) ideas about Indian cities and more importantly address the roadblocks from the current reality to the desired future.

**Redesign local city governments:** The State has to let go of its considerable powers vis-à-vis cities to a third tier of city government that is in control of its own destiny and works within an overall regional framework. Oft quoted role models are Rudy Guiliani, former New York Mayor and Ken Livingstone, former London Mayor, both directly elected and accountable to citizens. Need one say any more? However, this is easier said than done. There is no reason why city MLAs, MPs and the State leadership will let go of their existing powers – it is akin to expecting a modern day Eklavya happening. Unless citizens demand it, the handover is unlikely to happen.

With enabling legislation, a city has a chance to be self-reliant and access capital markets through municipal bonds. Consequently, scarce state resources can be used for rural and underdeveloped regions. If city governments were truly empowered, the best and the brightest would prefer to be the Mayor to even being the Chief Minister. The JNNURM kind of funds from the Centre should be linked to seeing this devolution of power happen.

**View the region as the new urban entity:** Instead of thinking of expanding current cities (the 'greater' city), the State needs to view a larger regional area that goes beyond the current thinking of a few satellite centres around a city. Unless this forms part of the larger vision, any incremental fixes to making a city livable will lead to further influx causing infrastructural collapse and deterioration in the quality of living. One envisions a 'Rurban' (Rural-Urban continuum) area spreading maybe over 5000 sq km that encompasses six to eight other urban clusters. The future lies in having 'live and work' clusters (with high local community involvement) that are urban nodes within the regional network. Any two nodes in the network should have high-speed connectivity (rail and road) that allows travel (including international airport access) within two hours.

The political leadership and the system will need a huge mindset change since it challenges all conventional thinking about jurisdictional boundaries, administration planning and more. The competitive pressures between States to attract investment could provide a fillip to encouraging the regional framework. The Metropolitan Planning Council (as envisaged in the 74th amendment) framework that respects local elected bodies should be mandated to manage the affairs of the extended area around city jurisdictions.

**Existing cities and towns need urgent renewal:** Every city needs to work for all its citizens, more so for the urban poor and underprivileged sections of society. For what chance of the middle class dream to materialize if maids, drivers, vegetable vendors, garbage handlers and more do not make it on time day after day. Spare a thought for their lives and you will see the need to put them at the centre of city planning. Priorities will gravitate towards drinking water, clean sanitation, safe pedestrian walkways, reliable public transport, low cost housing, land title issues, street lighting, waste management, local culture, etc. All of these are the basic building blocks of a livable city.

Each city has its unique ethos that needs to be nurtured going forward rather than a blind aping of other cities that have a different context. Jeb Brugman in his book, *The Urban Revolution*, makes a strong case of community/institutional based urbanism over Western concepts of master planned development and industrial city models. This implies allowing neighborhood choices and decision making within an overarching institutional framework. If citizens wish to walk and cycle, the infrastructure provisioning should focus on this aspect. This coupled with increased 'door to door' public transport solutions will mitigate the need to use private vehicles allowing for a lower carbon footprint. Preserving parks, reclaiming public spaces for citizens, mixed land use, integrating hawkker zones, promoting places for arts and culture, etc. will go towards making any Indian city livable.

**Bridge the trust deficit between citizens and local government:** We do not trust our local government. Witness the 50 to 60 per cent compliance with property tax payments across our cities. Governments through their opacity, corruption and obfuscation tactics increase the trust deficit. This needs fixing. Local governments (city and state) need to build trust – passing citizen participation laws and disclosing use of finances proactively would be a good place to start. These are JNNURM funding conditions and need enforcement if local governments are unwilling.

Trust can be built if politicians implement their election promises and the middle class/ industry rein in demands that have an elitist streak. A way to expedite this is for the local city and state government to encourage collaborative platforms with various citizen groups to work on initiatives to improve city livability.

**Outcome oriented integration critical.** The Chief Minister and Chief Secretary as principal city integrators across departments reflect a sorry state of affairs. We need an outcome focused governance and delivery mechanism. Citizens are concerned with saving travel time, crossing roads without losing life or limb, hygienic surroundings with lower pollution, bribe-free civic services, access to basic services such as water, sanitation, electricity, public transport, etc. Many of these cut across multiple agencies that have a silo orientation and resist marching to a common 'outcome conductor.' If citizens demand accountability of their political leaders and government agencies in terms of outcomes, we stand a better chance of getting there.

It is wake up time and for now, urban realities beckon!

V. Ravichandar, Chairman, Feedback Consulting is optimistic about fixing our cities.

## TECHNOLOGY

### TECHNOLOGY AND SERVICES WILL BE SMARTER ABOUT WHO WE ARE, WHAT WE NEED AND OUR ABILITIES IN THAT MOMENT

# *Disabled as super able*

**Rob Sinclair with Annuska Perkins**



AS we enter the second decade of the 21st Century, the increasing pace of technology advances will dramatically impact our lives. The Internet 'cloud' is becoming more powerful and reliable, able to store and transmit large amounts of information and performing immense computer transactions and processing. Plugged into the cloud is a new form of computer applications, called 'services.' These services will provide targeted functionality that satisfies our computing needs at that moment, in our current environ-

ment. The services will be delivered to our device of choice, be it a personal computer, mobile device, entertainment system, or public computer. In essence, we will become more connected to real-time information and communications. This is the path that leads us to "continuous services and connected devices." Our mission in Microsoft's Accessibility Business Unit is to ensure access to these services and devices by all people, while respecting their unique level of physical and cognitive abilities.

Naturally, there is a wide variety in the level of people's abilities. One person may experience a persistent disability, such as permanent vision loss. Another person may experience vision strain at the end of a long working day. The value of making technology accessible is that it can be used by a broad set of people, in a way that meets their unique requirements. And that technology adapts as the person's abilities change – which can result from changing health, aging, or merely being in an environment or situation that reduces vision, hearing, mobility, speech, or increases cognitive load. Therefore, the market for accessible technology expands to people with mild impairments, occasional difficulties, the aging population, and the mainstream population in various situations.

Another powerful outcome of making technology accessible is that it drives innovation in the computing field as a whole. The resulting innovations are core building blocks for new, exciting computing experiences. Take, for example, screen reading software, which reads aloud information on the screen with a computer-generated voice. A person who is blind relies on the screen reader to interact with their computer, listen to documents and browse the web. Other groups of people also benefit from screen readers: people learning another language and people with dyslexia. Listening to information read aloud helps with language acquisition and comprehension. Another application of screen reading technology is the growing trend of eyes-free computing. A primary scenario for eyes-free computing is driving a car while listening to driving directions, email or interacting with entertainment devices. Being able to interact with technology while driving requires keeping your eyes on the road, making the driver effectively blind to the technology device.

Accessible technology is critical to the emerging world of continuous services and connected devices. In order to have a connection between us and our devices, our devices need to be smarter about who we are, what we need, and our abilities in that moment. In education, students will have mobile learning aids that provide instant access to literacy or math support services. They will use educational content customized to their individual learning style, such as reading level. Services that involve communication between people will need to take into account the speaking and listening abilities of the individuals. A person who is fluent in sign language can have a video call with a deaf or hearing person. We will see more translation services available, such as the Bing Translation service that translates not just from language to language in text, but

also from text to the spoken word. People will have access to their information wherever they are. For instance, if a person with a disability is travelling, they will have access to maps and their itinerary in an appropriate accessible format. That format may be any combination of text, speech, sign language, braille, and graphics.

This is truly a multi-modal experience allowing people to use various modalities (vision, hearing, speech, and movement) to interact with technology in the way that is most appropriate. The computing field has long worked towards more natural modes of interaction. One goal is to make speech commands more intuitive and the voice experience to feel more like communicating with a human. We are living in an exciting time because these technologies are beginning to come to market. Touch screens are now commonplace – affording a more natural and direct way to manipulate the interface. The Xbox 360 Kinect entertainment system uses speech and gestures as input, without the need for holding a game controller. As these interaction modes evolve, you can imagine each person using their devices in whatever mode feels most natural for each person as their environment, their task or their abilities change (such as getting tired at the end of the day). That person can choose to use speech dictation while at home switch to a touch device while on the bus, and then to a keyboard while in the office.

This dynamic ecosystem of services and devices needs to be engineered so all the pieces work together. Our engineering approach is one of inclusive innovation. The principle behind inclusive innovation is that the entire ecosystem of products and technologies needs to be designed from the ground up to be usable for everyone. This will result in robust solutions that will benefit a broad population. These solutions will be inherently customizable to meet our changing abilities and environments.

Inclusive innovation will bring people with disabilities upstream into the design process because they are expert users of technology. They are highly skilled users of screen readers, voice recognition, creative input devices, and alternative formats for consuming content. The technology community needs to leverage these individuals' expertise to create better technology for everyone.

For case studies of how engineers tap into the knowledge of their local communities, including people with disabilities, one can look at the Imagine Cup. The Imagine Cup is Microsoft's annual competition amongst technical and creative high school and university students. Within the Imagine Cup, Microsoft India hosted a 2010 Accessibility Local Innovation Award. The students partnered with accessibility organizations, such as NAB and Barrier Break, in order to gain real-world insights into the experiences of people with disabilities. This approach of user-centric design is recommended for creating pragmatic, innovative solutions.

Inclusive innovation is key to ensuring everyone has access to technology. The approach for inclusive innovation is to address the wide variety of physical and cognitive needs of individuals, to spur innovation in accessible technology, and to engineer a global ecosystem that can effectively manage these dynamic components. The realization of a multi-modal, intuitive, and personalized experience is incredibly profound, as illustrated by the experience of a family using Xbox 360 Kinect for the first time. The father was hesitant to introduce a new game system to his autistic son who typically became frustrated trying to use game controllers. After giving a few simple hints to his son, the man watched in amazement as his son began using the system with ease and with a genuine sense of play. This is an example of the true 'connectedness' the next decade of technology innovation can bring.

Rob Sinclair is Chief Accessibility Officer, Microsoft  
Annuska Perkins is Senior Program Manager – Accessibility, Microsoft

## INFRASTRUCTURE

### LET THE GOVERNMENT PAY THE PRIVATE SECTOR TO BUILD AND MAINTAIN RURAL INFRASTRUCTURE

# *Annuity is the way out*

**Vinayak Chatterjee**



**P**UBLIC policy and private interest in infrastructure has happened in what one would call trunk infrastructure and urban infrastructure – roads, SEZs, power, highways, metro rail. Somehow there hasn't been enough focus on elements of what we broadly call rural infrastructure.

In rural infrastructure, the key constituents are rural roads, rural electricity, water supply, drinking water, sanitation, irrigation, cold chain and *mandis*. These capture broadly the domain of rural infrastruc-

ture. Now, while a lot of action has happened in attracting private capital into non-rural infrastructure (the PPP model has been extensively used) the same thing has not happened in rural infrastructure.

Rural infrastructure is by and large still driven by public expenditure, managed and maintained by public agencies. There is very little "private" in the rural context.

Now, within PPP there is an interesting format called the Annuity Scheme. Broadly, in private participation in infrastructure, there are two models – BOO (Build, Own, Operate) and Annuity.

What happens in BOO is that the private entity takes the market risk. In simple terms, that means that you build the road and you are expected to recover the cost of the road by collecting toll. The fact that you are collecting toll exposes you to the market daily. And you earn a living by collecting money from the market like telecom companies take monthly bills, road companies take toll, airports take a user development charge and so on.

In rural infrastructure, the market is not sufficiently large or politically mature for people to start paying the right level of user charges. Sometimes, it is not desirable either to charge for irrigation, rural roads or rural electricity distribution.

Today, the way our society is organised, it is not sociologically right to slap user fees across the board. It isn't even feasible. The essential question is that if that is not so, does it mean that we live with two phenomena, both of which are not desirable? The first scenario is that rural infrastructure will continue to be built, serviced and maintained, or the negative of this: not built, not serviced, not maintained by public expenditure by public institutions. Is this situation a given?

We have to ask ourselves whether rural infrastructure is going to remain cut off from private capital? The Annuity Scheme is to my mind the appropriate solution for building rural infrastructure by having a scheme where the government is the owner and watchdog and the private sector brings in capital, managerial efficiencies for building the capital asset as well as for maintaining and running the asset.

Let's look at one simple example. National highways are built under the BOO scheme. But, there is, for example, a rural road scheme called PMGSY or Pradhan Mantri Gram Sadak Yojana to build major district roads and village roads. The objective is laudable. It is to connect every habitation in India where there are more than 500 people living in a cluster. The amount sanctioned is close to ₹100,000 crores. It is large by any standards and spread across the nation. There are parts of the scheme which are good. But, major improvements are needed because there are leakages and there is no onus for maintaining the road for 30 years. Why can't this method be substituted by Annuity?

What does Annuity mean? It means that the private sector is invited through public bids to build one stretch for a network of roads. The private sector brings its own money, technology, man, machine and build and maintains it for 30 years. But, it does not collect the toll. So, how does the private entity make money? In the simplest terms, it collects a rent cheque from the government. The government pays a cheque. In economic jargon, it's called annuity. The private sector company is told to build the road, build it to a specific standard and collect rent from the government every six months. This revenue stream is called annuity.

So, what is effectively happening is that you have at one stroke removed the business of awarding contracts through the public system of tendering and procurement to unaccountable, petty contractors. You've got somebody to build the road for a year and then maintain it for 30 years. Only if you find every six months that he has maintained the standards that have been laid out does he get paid. The asset belongs to the government. The contractor has just built on public land.

I have presented this idea at various forums. The question that arises is when the government has to pay an entity for 30 years it takes a liability upon itself. The moment the government says that we have to pay a guy every six months for 30 years, the government has to create in its accounts a contingent liability.

Financial conservatives or those who are prudent would say that a government is taking a huge contingent liability upon itself. My answer to that is – so what? Doesn't the government borrow? Doesn't the government take on other kinds of obligations? The more important point is if you take the ₹ 100,000 crores which will be paid over three years, you can deflect it, build it, and help it service the long duration of 30 years because you are not spending public money at one go. This can be applied to roads, rural electricity distribution, water supply because you are essentially asking the private sector to get its resources together and build and maintain for 30 years.

This is very common in relation to national highways. The annuity model is well accepted in government. If that is so why can't it be adopted for rural infrastructure? You won't be able to stop it. Ultimately, people have lost faith in the public procurement and implementation agencies because of corruption, leakages, etc. The private sector has grown in stature in terms of being able to handle projects. The private sector won't be interested if you are doing a 10 km rural road.

But, if you package it, cluster it, put three districts together with requirement of 500 km it makes sense even for the big-sized companies. More importantly, it allows a whole new generation of local contractors to become big and take responsibility for the asset they have created rather than take today's PWD contract.

My answer to the fiscal conservatives would be that define the levels of fiscal prudence, and surely the Government of India can have a payment model for paying the private sector. You would be, in any case, spending that money. You just need to channel it into repayments rather than a stream of expenditure. You are insulating the private sector.

It's the right intervention at this point of time. There are no regional variations because the annuity scheme is neutral to the market. There won't be differences between Tripura or Punjab. That's true for the total gamut of rural infrastructure. I really don't see any downside to this.

*Vinayak Chatterjee is Chairman of Feedback Ventures*

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Source: ABC (Jan-Jun, 2010)

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Anushka Rai, Age 6, Zed resident.

# My Story of ZED

Bina Rai can't stand the heat. She needs the AC always on, in the 'chill' mode. "Friends say I should live in a freezer!" She didn't bother when her power bill soared. With 100 pc power back-up at her apartment, the need to 'switch off' was never felt.

But something stirred in her one day. "You're a careless mother," declared her daughter on return from school. "Teacher says we've to be careful about using electricity. We make 'dirty things' when we produce power. It fouls the air we breathe, makes us sick." Little Anushka started switching off lights and fans at home. "I was actually ashamed," says Bina. "She made me feel like I was personally shoveling pollution into the air."

For Bina, the 'awakening' came in the shape of her daughter.

She looked around, until she found a Zed Home.



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# Living

- Books
- Eco-tourism
- Film
- Theatre
- Ayurveda

LAKSHMAN ANAND



Anuja Chauhan

## ‘Writing is blue-sky gazing’

**Shreyasi Singh**  
Gurgaon

JUST two years after her debut book *The Zoya Factor* became a runaway bestseller, Anuja Chauhan repeats the magic with *Battle for Bittora*. Set amidst the hurly-burly of a Lok Sabha election, *Battle for Bittora* scores with staple Chauhan fare – canny characterisations, laugh-out-loud descriptions, a love story and an unconscious use of Hinglish.

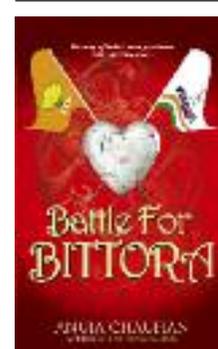
She had used the same style to hit it out of the ballpark with *Zoya* as well. *Zoya* told the story of an Indian cricket team devotee, an attractive young woman, who falls in love with the national team’s captain. In *Battle for Bittora*, childhood sweethearts Jinni and Zain, who are contesting against each other for

the parliamentary constituency of Bittora in a state named Pavit Pradesh, fall in love.

Love and parliamentary politics might seem incongruous. But, Chauhan’s insider view of the world of politics – she is the daughter-in-law of senior Congress leader Margaret Alva – helped her go beyond what, she says, are exaggerated ‘caricatures’ of people in politics.

With *Bittora*’s success, her brand of ‘romantic comedy’ has been well established. Chauhan, who recently resigned as the Creative Director of JWT, a leading advertising firm, to focus on her writing beyond the catchy taglines she crafted for clients like Pepsi, has already sold the movie rights to both her books. Shah Rukh Khan’s Red Chillies Entertainment is producing *The Zoya*

*Continued on next page*



**BATTLE FOR BITTORA**

Anuja Chauhan

Harper Collins

₹ 299

*Continued from previous page*

Factor. But Chauhan's focus now is on making sure that her new book continues to occupy the bestseller bookshelf.

**Battle for Bittora released end-October. What's the response been like?**

It's doing very well. It's on the bestseller list. Every time I go to a bookstore, I look fearfully at the bestseller list to see whether my book is there. You always hope it is. In some places, *Zoya* is also back. I have no idea where to find trade figures also. I have no clue. This is how I check out if the book is doing well. I also just sold the movie rights for *Bittora*. I know it's quick. But, I wanted to get rid of the tension. You are talking to everybody and for me that is too much tension. It's about asking for the right amount of money. The negotiating stresses me out. I have sold it to Sa Re Ga Ma.

**How difficult is it to give away movie rights? Aren't you worried about how your story will be translated on screen?**

I am obsessive about the book. My stewardship ends with the book. I have done enough ads to know that you have no control, no concept of ownership in the visual medium. What you have written, you can be the boss of. But, you can't be the boss of the visual medium. For me, if there are people who want to read the original version, the book is there. You want to see the director's version, there is the movie. That's my take.

**How have your politician friends reacted to your book? Were you conscious of portraying politicians in a certain way?**

Politicians are so badly caricatured by our media. I think when you laugh at something, make fun of it, you bring it closer to you, make it less daunting. All the politicians I know who have read the book have only given good feedback. Of course, the sleaze in our system is true. But the sleaze is caricatured. I am not saying all young politicians are idealistic. Of course, they are not. But there are genuine, patriotic people too. I know some young politicians who want to be natural. But they feel they need to put on the persona people expect from them. Which is why I thought it would be interesting to see how they think, to see that world from inside out.

**Do you get upset when your work is categorised into 'chicklit'?**

It's silly. Tags get in the way of a reader reading. When you say it's a kids book or chick lit, you stop access to the book. What is Indian writing, children's writing or women writers? There are so many books that don't belong to a genre. What would you call a book like *To Kill A Mockingbird*? Is it a thriller, is it a historical? It's just really a good book. For me, there are only good books or bad books. I think some of my favourite books are when I have picked up something with no background on it. All these tags are just aggressive marketing. I think what happens is that these days chicklit sells so everybody wants to do that. Neither of my books is chicklit. But the reviewers heap this on you. Maybe this is their way of saying they know something about this, and slotting it into genres.

**Over the last few years, Indian writing has begun to make use of the way English is spoken in our country. Your books use Hinglish freely. Does it bother you when purists turn up their noses at that?**

As an author, you are always trying to authenticate your stories, your characters. I can only write in English. But I want to write the way we speak. I want it to be authentic. It sounds strange if you use the language without its Indian intonations. I don't care about what people say. It's the natural language for us. It has to sound real world. I leave enough clues in my writing so that even if the reader is from Chennai or Australia you get the idea. There are enough clues in the peppering. I have seen so many books in English with lots of French words. If that's not wrong, why is Hindi wrong?

**Authors like you and Chetan Bhagat are credited with creating new readers. In your mind, who is your target audience?**

I have done enough of target audience profiling in advertising. We'd slot people into housewives, young adults, single income homes, things like that. I write what I enjoy writing. And, I write what I enjoy reading. I just hope there are enough people like me. If I like it, they should too. I get mail from everywhere, from all kinds of people. I get mail from men, old ladies, children, filmmakers.

**How tough was it changing hats from advertising to writing books?**

Advertising teaches you catchiness, clarity. You know how not to bore people. I used the thumbnail rule from advertising. Essentially, that helps you drill down to the core of the story, get a handle on the issue and then go backwards. In advertising, we try and be brief. I remember I wrote and wrote expansively and my first draft for *Zoya* was still just 100 pages long! But there were many frustrations in advertising. You are always the nanny, never the mother. You are telling somebody else's story. You have no ownership. Here, I love the control. This is complete blue-sky gazing.

# Feast your



Painted storks

**Susheela Nair**  
Mysore

JUST outside the historic town of Srirangapatnam near Mysore, the Cauvery river meanders around tiny islets which form a picturesque pool for water birds. Ranganathittu is one of three islands on the Cauvery. The river and the trees here provide a splendid nesting site for a variety of birds.

The islets were formed by the construction of a check-dam in the mid 1600s during the reign of Kanteerava Narasimha Wadiyar, then Maharaja of Mysore. South India's best bird sanctuary would have remained in obscurity if Dr Salim Ali, the legendary Indian ornithologist, had not stumbled upon it while surveying birds of the area for the government of Mysore. He was so charmed by the bewildering variety of birds at Ranganathittu that he persuaded the then ruler of the region to declare it a protected area for birds. On his recommendation, this breeding place was protected as a sanctuary in the year 1940.

The bird sanctuary consists of two unconnected groups of islets along the Cauvery. However, the eastern part of the sanctuary remains lesser known. It is the western part that attracts bird lovers. It is home to hundreds of species of winged visitors, many of whom come from as far as Siberia, Europe and our own Himalayas. Currently, Ranganathittu is one of the best maintained bird sanctuaries in India.

As we strolled through a canopied walkway with little wooden bridges, the chirps, whistles and hoots of the birds got louder. At the crack of dawn, as we paddled towards the islet, it came alive with the hectic activities of the winged visitors from far and near. The river, too, becomes a vibrant mosaic of colours with cormorants, spoonbills, river terns, plovers, open-billed storks,

# eyes on birds

SUSHEELA NAIR



nests close to one another in the same tree and zealously guard their small territory. It is fascinating to watch the open-billed storks nursing their chicks and scores of spoonbills guarding their nests. Unlike in other bird sanctuaries where nesting starts by the end of October, here the birds nest with the advent of the first showers of the monsoon in June. During the monsoon all the nesting birds hatch.

The migratory birds fly to the island before the monsoon in May, though some species like the spoonbill and cormorants arrive earlier. The birds which arrive by end-April start building their nests by collecting small twigs and waste material. We spotted cormorants in plenty. They are the largest in number and live collectively in the sanctuary. They are black birds, resembling crows, with long tail feathers and a hooked bill. These birds are excellent divers and under-water swimmers.

Ranganathittu's star attraction is the open-billed stork, so called because of the gap in the middle of its mandibles which enables it to crack open snails. The bird appears white during the breeding season and grayish white at other times with wide black stripes on its wings and tail. We saw them nesting on the *Terminalia arjuna* tree in the middle of the river and as the sun filtered through the trees and the temperature soared, these storks flew down to quench their thirst. Open billed storks are found here throughout the year as there is plentiful sup-

SUSHEELA NAIR



Watch birds from a boat

ply of food for them in and around the sanctuary.

white ibises, egrets, darters and herons foraging into the waters. An interesting feature of this splendid water fowl preserve is the early commencement of nesting. We delighted in watching the birds building nests or plunging into the water and returning with fish for their young ones. Various birds build their

ply of food for them in and around the sanctuary.

We also passed by trees dotted with scores of white ibises nesting gregariously and some standing vigil over their young ones. They are large, white birds with black heads and curved bills. The flight of white ibis in formation is a delight to watch. Closely associated with the ibis, the spoon-

bill is elegant in flight with their spoon-like bills extended and the legs pulled back close to the body—a sight not to be missed.

The darter, commonly known as the snake-bird because of its long curved neck, small head and short beak, is an excellent swimmer and can be mistaken for a snake when it's peering out of water. We saw a darter plunging into the water and returning with a fish for its ravenous young. Avid bird watchers are apprehensive about its dwindling numbers. One can find along the river side and on rocks, river terns and great stone plovers. Birds like the river tern, though found in small numbers throughout the year, descend on the rocks in and around the river in thousands during the month of May, nest on these rocks and later leave the place at the outset of the monsoon.

Both the night heron and the common pond heron can be spotted throughout the year. Night herons usually nest in isolation in the screw pine. The most stunning of all the feathered friends here are the median egrets with their iridescent green eye-patch and gauzy plumes, both of which they acquire during the breeding season. Ranganathittu has all four varieties of egrets. Come winter and migratory birds like northern pintails, common teal, marsh harriers come from the Northern Hemisphere to escape the cold and enjoy the excellent weather here. From December to May, great stone plovers, cliff swallows, large pied wagtails, whistling teals, red wattled lapwings and spotbill ducks can be spotted.

We sighted quite a few marsh crocodiles basking open-mouthed on the rocks along the river. They slithered away at the slightest disturbance and glided into the Cauvery surfacing again at another place. We observed a large colony of fruit bats on trees at the edge of the river and at dusk spotted hundreds of flying foxes on one of the islets roosting on the highest branches of the tall trees and even in bamboo clumps. With sunset, the flying foxes set out in regular flights scouting for fruit-bearing trees while the birds return to roost for the night. The bonnet macaque, common mongoose, palm civet can also be seen in the sanctuary. The river otter is one of the rarely seen denizens here.

Even after we left Ranganathittu, the symphony of our feathered friends resounded in our ears.

## FACT FILE

**Getting there:** By road from Srirangapatnam: 4 km. From Mysore: 17 km.

**Take a bus from Mysore to Srirangapatnam and then hire an auto. If you are driving down from Mysore, take a right turn at Paschimavahini and proceed three km. From Bangalore, take the Maddur-Mandya-Srirangapatna route. Take a deviation to the right via the Paschimavahini Bridge and after a distance, take a deviation left to Ranganathittu.**

**When to go:** Though one can indulge in bird-watching throughout the year the best time is during the onset of the monsoon when the birds nest. Try to be there early in the morning or late in the evening to see birdlife.

**Timing:** 8:30 am to 6 pm

**Tip:** Watch the birds from the boat. Never leave the boat to get on to the islets or take the risk of dipping your foot or hand in the water. Carry a pair of binoculars. Do not make a noise while you spot birds. They'll fly away.

# Moon over mind

SAMITA RATHOR

**T**HE new moon and the full moon play a very significant role on living beings not just according to Hindu scriptures, but also according to many Western philosophies. Buddha quotes, "Three things cannot be long hidden: the sun, the moon and the truth."

All objects have frequencies. The frequencies emanating from the moon affect the frequencies of the body and the mind of human beings. In Hinduism the new moon is called Amavasya.

**Purnima or full moon:** Full moon is a lunar phase that occurs when the geocentric longitudes of the sun and moon differ by 180 degrees and the moon is in an opposite position to the sun. Viewed from the earth, the moon appears round and fully illuminated by the sun. But the opposite hemisphere of the moon which is not visible from the earth remains dark.

On a full moon day have you ever noticed the waves and tides of the ocean? They are so much more intense and powerful. It has been scientifically proved that the full moon has an immense effect on water bodies. Seventy to 80 per cent of the human body is made up of water. So would the full moon then not have an effect on our body and mind?

**Amavasya or new moon:** The new moon day is called Amavasya and is observed as a day of fasting in many Hindu households. Since the Hindu calendar is organized according to the lunar month, Amavasya is the beginning of the new lunar month which lasts 29 days. Amavasya or Amavasi, is the name of the new moon night in the Hindu religion. It is the first night of the first quarter of the lunar month. Since the moon is invisible on this day, it is

## SOUL VALUE

also referred to as 'no moon' night.

Symbolically, the period from Amavasya to Purnima (full moon) is considered to be the gradual awakening and transcendence into fullness – from darkness to the gradual realization of the Supreme Soul.

**Moon's effect on the tides:** This is how the moon's

## MOON DAYS 2011

NEW MOON	FULL MOON
January 4	January 19
February 2	February 18
March 4	March 19
April 3	April 18
May 3	May 17
June 1	June 15
July 1	July 15
July 30	August 13
August 29	September 13
September 27	October 12
October 26	November 10
November 25	December 10
December 24	

effect on the tides can be explained. While the moon's gravitational force causes the water to rise, the earth is also pulling downwards, causing tides. Water levels are dependent upon the force of the moon. So with a full moon comes the high tide. And from this observation, the concept of the moon affecting human behavior evolved. This is

because the human body is 80 per cent water. It is believed that just like the ocean rises when the moon is in full bloom, the water balance in the human body will also be upset, causing a human being to behave irrationally.

There are more claims about the moon's force causing human madness. From anxiety and aggression to psychotic crimes, all are believed to be due to the fullness of the moon. This myth has remained despite several findings proving no connection between the moon's gravity over man's insanity. People have embraced this myth over the years, regardless of proof. The powerful influence of the moon on behavior has been called 'The Lunar Effect.' or 'The Transylvania Effect.'

The effect of the moon on human life is soaring. The moon influences the mind and the sensations of every being, it is believed. The moon also influences the physiology of a woman.

The full moon occurs on the 14th day of the new moon and a lady is prone to conception on the 14th day of her menstrual cycle.

**THE MOON CYCLE:** The moon cycle comprises of different phases of the moon with respect to its appearance. These are: ● New Moon ● Waxing Crescent ● First Quarter ● Waxing Gibbous ● Full Moon ● Waning Gibbous ● Third Quarter ● Waning Crescent

**New Moon:** This is the beginning of the new moon cycle all over again.

Gandhi says, "When I admire the wonder of a sunset or the beauty of the moon, my soul expands in worship of the Creator."

E-mail: samitarathor@gmail.com

LAKSHMAN ANAND

## PRODUCTS

### WONDROUS SARIS

**P**ICK any sari from Berozgar Mahila Kalyan Sanstha and you'll be elated with its blend of colours and weaves. These wondrous saris are spun in villages near Bhagalpur, India's silk hotspot. Woven in tussar and matka silk, the saris are eye-catching. They drape perfectly, the pallu's lovely pattern enhancing the overall effect. You can also buy scarves, dress material and shawls.

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Started in 1993 by Niranjana Poddar in Kajrel village to provide a livelihood to 75 women who used to work as bonded labour, the sanstha which started with a seed capital of ₹ 1,50,000 now has an annual turnover of over ₹ 1 crore.

#### Contact:

Niranjana Kumar Poddar Phone: 0641-2610559, 2610775, 09431214259  
Address: Shila Bhawan, Vikramshila Colony, Tilkamanjhi, Bhagalpur, Bihar  
E-mail: weave17@rediffmail.com  
Website: www.berozesilks.com

