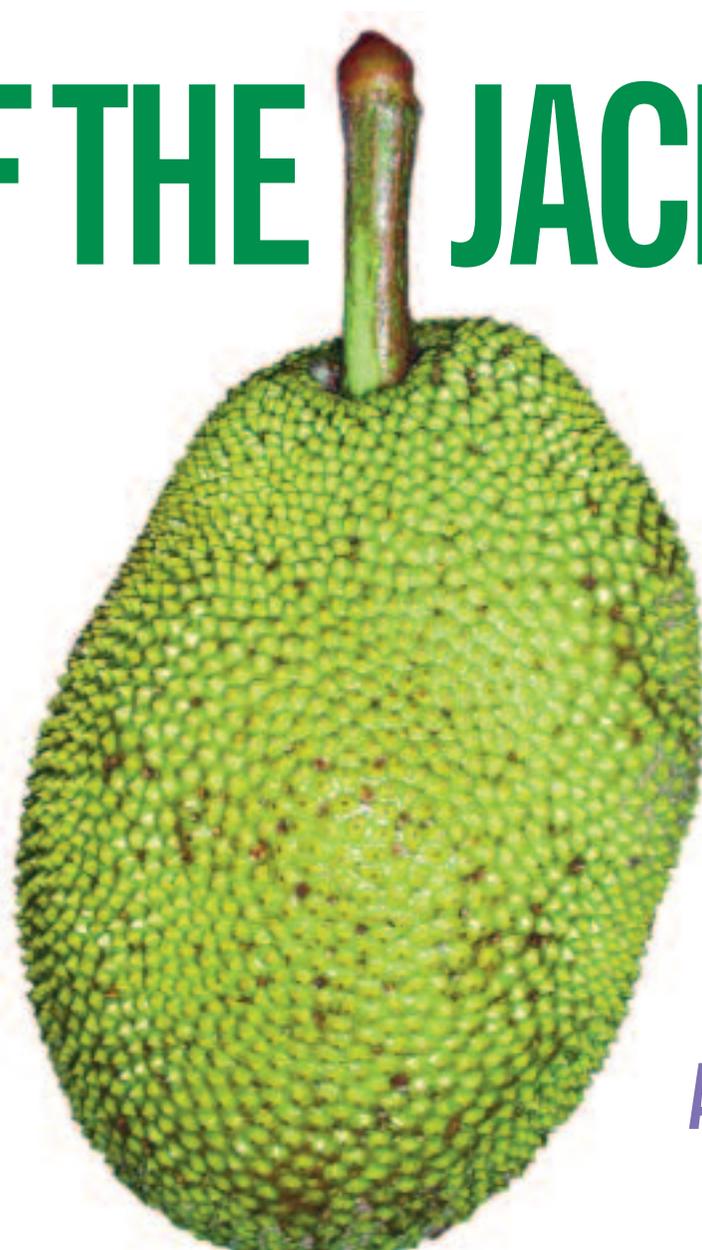


Civil Society

RISE OF THE JACKFRUIT



SCIENTISTS TEAM UP WITH FARMERS AND GIVE THE HUMBLE FRUIT A NEW STATUS IN INDIA AND ABROAD

LOWERS BP
CHOLESTEROL
CANCER RISK
CUTS WEIGHT
AND HAS
ANTI-AGING
AND ANTI-ULCER
PROPERTIES

SPECIAL RECIPES INSIDE



LEFT FINDS INTELLECTUALS HAVE GONE

Fed up with Left policies and embarrassed by flashpoints intellectuals in Bengal move on

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A WATER HARVESTING COMPANY

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CITY OF TOMORROW

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RISE OF THE JACKFRUIT

Scientists team up with small farmers to form India's first jackfruit growers' association and give the humble fruit a new status. The income of growers has tripled.

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READ US. WE READ YOU.

Farmers and the market

TALK of boosting the farm sector mostly remains just talk. It is because the government doesn't do enough for creating opportunity in villages. We are too narrowly focussed and don't know how to read our amazing biodiversity for the economic prosperity that it can provide. Jackfruit growers have shown that big leaps are possible if we let interests converge, don't live in denial of the market and reach out to the rest of the world.

The rather glum-looking jackfruit is normally passed over for not being worth too much. You will find it mainly in middle-class markets. In culinary terms it has been seen as being good for a curry but not much else.

But take the jackfruit and process it to make chips, jams and squashes and suddenly vistas open up. It can bring good returns to farmers and become the source of much needed additional income to them. For rural demand to strengthen, the basket of opportunities has to be much bigger. Farm and non-farm activities have to grow and diversify so as to satisfy changing aspirations. The jackfruit is one example of how this can be achieved.

Experience has shown that the global search for natural diets increasingly brings people to our part of the world with its wide range of vegetables, fruits and herbs. We must not lose this advantage. There is a case for examining more closely what we have in nature, understanding traditional nutrition a whole lot better and then marketing and packaging our natural products for wide consumption. If such links could be established, a whole lot of value that now lies dormant could be unleashed.

There are many ways forward. One is, as jackfruit growers have shown, by collaborating with scientists and allying with commercial agents. Rural areas will see prosperity when they are hitched to other surges in the economy. The strengths we have in marketing, packaging, technology and enterprise creation need to move beyond the big cities.

Our other big story in this issue is on the Metro. We at *Civil Society* were the first to report several months ago on the deaths of workers at Metro railway sites in Delhi. It was even more worrisome that a huge fund for worker compensation was largely unused. Our story was based on the information collected by an activist using RTI.

The Metro may have made rapid strides, but it is important that there be greater transparency and accountability in such projects. Across cities in India Metro projects have been given pushed through without enough scrutiny.

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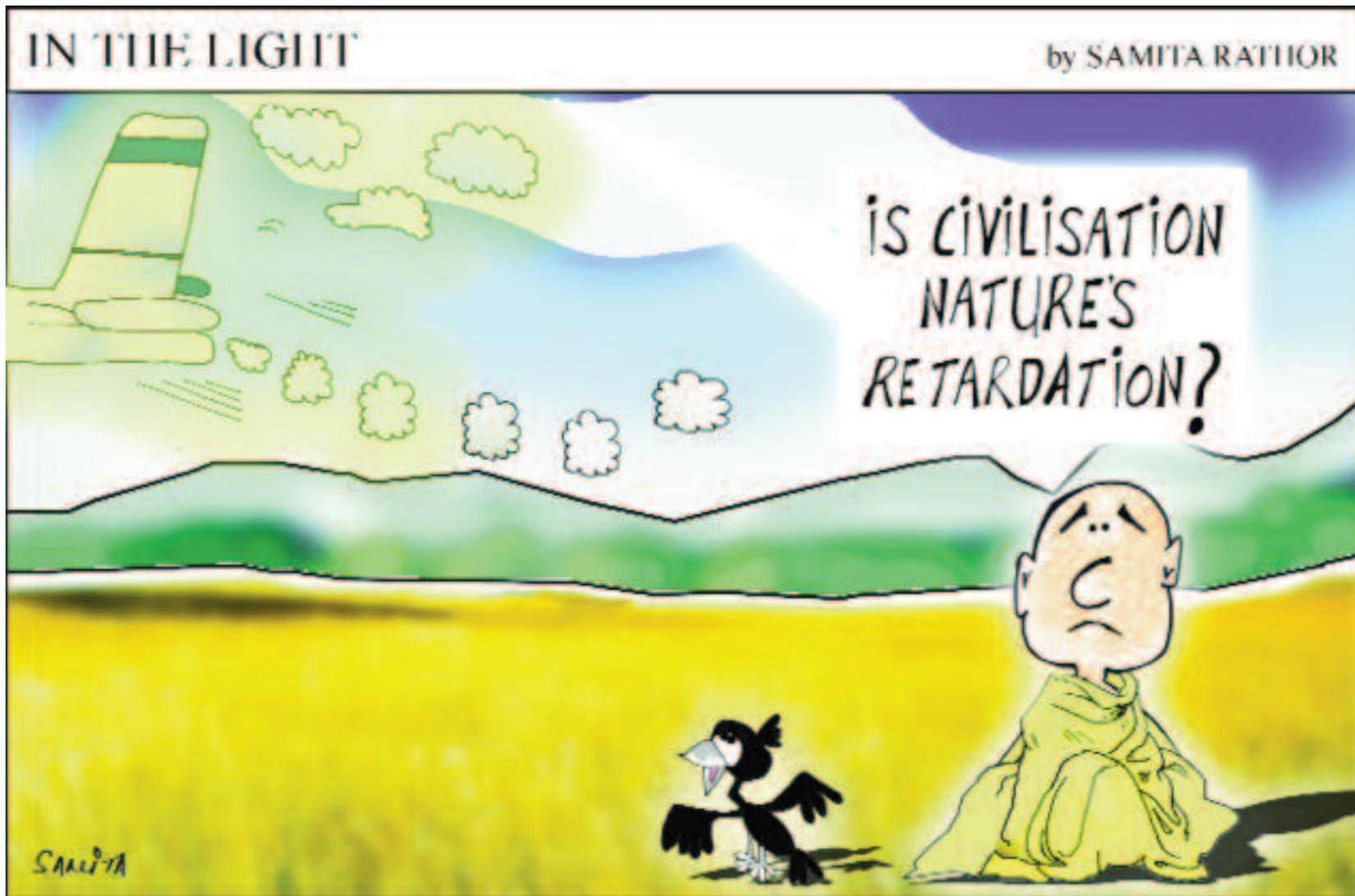
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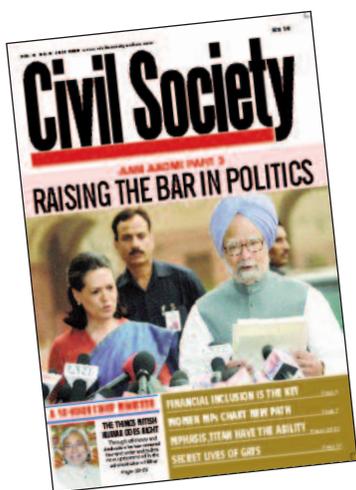
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LETTERS



UPA govt

As your July cover story pointed out, the people of India have placed their faith in the new UPA government. They have rejected divisive politics and opted for secularism, peace and development. There is great hope from our leaders in power. We hope they will not get bogged down by red tape, that they will not lose the idealism with which they began.

Gayatri

The UPA government should be very focused on inclusive growth. Thanks to the global meltdown this is the right time to be local, to see how the domestic market can flourish. If you are strong inside, then you are respected outside.

Vivek Mehta

Ministers of the UPA government have interesting agendas. Will they be able to manage the bureaucracy and make real change at the grass-roots? Macro policies can be made. But things have to be micro managed at ground level and it is here we fail.

Asha Biyani

The UPA needs to bring down prices of essential commodities. Such prices should be regulated. Every government's primary responsibility is to ensure poor people can also buy their daily necessities.

Rishab

Agenda

With great interest we read your article that contained various views of NGO leaders to the newly formed UPA government leaders in India. AV Balasubramaniam, head of an NGO from Tamil Nadu, has rightly

pointed out that what India needs are traditional farming systems. The so-called green revolution is not being able to deliver desirable results to make India hunger free. The rich are becoming richer and the poor, poorer. The green revolution could not stop farmers' suicides. People like AV Balasubramaniam and organic farmers have to be taken into the Planning Commission. Let us have an organic farming revolution.

Kalpana, Geo Resource Centre, Tamil Nadu.

Women MPs

Women are making their mark in politics without reservation. This shows society is more than willing to elect women to positions of power on merit. Let's hope the bright young women MPs will suffuse politics with the 'gender perspective'. For instance, we need much more focus on infant and maternal mortality, female foeticide, unorganised sector women and small farming in hilly and under developed regions.

Anita S Ananth

Nitish Kumar

Bihar has finally found a leader in

Nitish Kumar. He is proving that it is political leadership that counts in taking a region out of poverty. Long years of neglect have taken their toll. Bihar is a difficult region to develop. Its most crucial aspect is water management. Floods obliterate whatever development is made. We need a strategy that can help people live with floods.

Ashish Gupta

Gay rights

We hope the gay community finally gets human rights. It is cruel to punish people because of their sexual orientation. Article 377 must be abolished and a new law which helps the gay community live with respect and dignity is needed. Gay activists should outline the contours of the new law.

Mohan Negi

Being gay is not a crime. But the gay community will have to alleviate fears raised by society. Religious groups are hard to convince. The gay community should focus on larger society. They will have to work out how they would like to live. What will be the rules the gay community will follow?

Neeta Singh

Fed up with Left, intellectuals opt

Saibal Chatterjee
New Delhi

BENGAL's intellectuals, among them celebrated actors and stars, are rooting for change. For decades they were in thrall of the ideals of the CPM-led Left Front, which has ruled the state without a break for 32 years. But now they are increasingly adding their voice to the chorus of popular dissent against the Marxist government's continuing "misuse of power".

Keshpur, Nandigram, Singur, Lalgarh... numerous flashpoints have driven filmmaker-actor Aparna Sen, theatre persons Bibhas Chakraborty, Kaushik Sen and Saonli Mitra and poet Joy Goswami, among many others, to pick up cudgels against a decaying political culture that has thrived on a combination of social exploitation, administrative sloth and a crisis of leadership.

"Support for the Left from the artistes' community isn't just eroding. It has already eroded," asserts veteran filmmaker and Rajya Sabha member Shyam Benegal who, in 1982, made *Aarohan*, a West Bengal government-funded feature film that highlighted the plight of a 1960s farmer (Om Puri) who fights in vain to wrest ownership of his land from a zamindar (Victor Banerjee) aided by a slew of feudal reforms.

"The land reforms initiated by the Left Front after it came to power did make a difference to the lives of one-time sharecroppers," says Benegal. "But the government did precious little after that, and no progress worth the name was made in the agrarian sector."

Historically, Benegal argues, "the Left has never, at crucial points of our politics from 1942 to the Indo-US nuclear deal, done what is right". In Bengal, where the CPM has been in power since 1977, the gap between expectation and actual performance has only got wider over the years. It has now touched breaking point.

"Not only in Lalgarh, but in various other parts of Bengal, people are completely disillusioned with the ruling CPM," Kaushik Sen, theatre, television and film actor, has been telling the media ad nauseum since he, along with several others from the creative fraternity, visited Lalgarh at the height of the violent stand-off there between Maoists and tribals on the one hand and the police on the other.

Although the independent fact-finding team, which included Aparna Sen, Saonli Mitra and Joy Goswami, extracted an appeal for peace from the local people's committee chief, Chhatradhar Mahato, the first, and only case, that the police filed after regaining control of Lalgarh village was against these very celebrities for violating prohibitory orders.

Writing a column in a Bengali-language weekly on her return from Lalgarh, the feisty Mitra gave vent to her anger: "Will we let the Maoist story take the focus away from the neglect and deprivation that the tribals have faced for decades? The history of the world is replete with violent agita-



Shyam Benegal



Aparna Sen



Numerous flashpoints have driven filmmakers, actors, writers and poets to pick up cudgels against a decaying political culture.

tions wherever power has been abused. If the Maoists have found a foothold here, it is only because of the crushing poverty of the tribals... They've existed on the fringes for too long... No education, no healthcare, no employment... When will the government wake up?"

The case of filmmaker Sekhar Das is a classic example of an erstwhile leftist trade unionist who is now using his medium to expose CPM 'misrule' in rural Bengal. The former Life Insurance Corporation employee's third feature film, *Kaaler Rakhhal* (The Understudy), was commercially released in early April, weeks before the last parliamentary elections in Bengal, only to be quickly withdrawn from theatres ostensibly under pressure from forces that did not like its strident anti-establishment stance.

"It's my most angry film to date," says Das. *Kaaler Rakhhal* tells the story of a young Bohurupee performer who, at the behest of the political satraps of his village, stands in for a few rupees more for party-backed criminals whenever the police hauls them up. "I know the party inside out," the director says. "It's not just the leaders but also the cadres that have degenerated beyond recognition." Ironically, Das' cinematic critique of the Left ran unhindered in Nandan, which is owned by the government and is currently headed by civil servant Nilanajan Chatterjee, author of the story from which *Kaaler Rakhhal* has been adapted.

Das argues that Bengal is witnessing a repeat of the 1970s, when the Congress was voted out of power because it had become synonymous with criminalisation of politics. "It wasn't a party, but an entire political culture, that the people had voted against back then," he adds. "Today, the Left represents a culture that isn't acceptable any-

more. It represents neo-feudalism of the petty bourgeoisie, who've been riding on the back of poor, exploited cadres spread across the state."

Mamata Banerjee's Trinamool Congress has tapped into this public mood to create a strong groundswell for itself. It is no coincidence that one of the key TMC sympathisers who have ridden this wave all the way to the 15th Lok Sabha is reluctant politician Kabir Suman. The one-time left-leaning poet, songsmith, crooner, musician and self-confessed acolyte of Bob Dylan and Pete Seeger, is a Bengali Brahmin who converted to Islam in 2000. The 60-year-old Kabir Suman is, in a way, the poster boy of the anti-establishment movement that is rapidly gaining ground in Bengal. "Civilisation has died today in the fields of Singur," the singer had said on witnessing the state brutality that had been unleashed on hapless displaced farmers in that village.

In spirit, Kabir Suman is a descendant of a singer of a very different kind, the legendary Rabindra Sangeet exponent Debabrata 'George' Biswas. The latter was a card-carrying Communist. But he drifted away from the Left disillusioned with several crucial aspects of the movement. He also fell foul of Visva-Bharati, copyright holders of Tagore's creative output, because of his radically unorthodox renditions of the poet's compositions.

Even as the Lalgarh imbroglio has emerged as a symbol of a people's protest against the status quo, Biswas' autobiography, *Bratyajoner Ruddhasangeet* (Stifled Songs of the Outcast, published a year before he died in 1980), has provided the raw material for a play, *Ruddhasangeet*, conceived and directed by actor-filmmaker-playwright Bratya Basu. It celebrates artistic, personal and, by extension, political freedom of an individual.

to move on



Traditionally, the creative community in Bengal has had links, sometimes tenuous, sometimes pronounced, with the Left. But those connections have wilted and many leading theatre personalities, artists and filmmakers are churning out works that expose the ugly face of leftist totalitarianism in the guise of democracy. Veteran actor, playwright and director Bibhas Chakraborty has been staging *Mrityu Na Hotya?* (Death or Murder?), an adaptation of Dario Fo's *Accidental Death of an Anarchist*, designed as a direct attack on the politicisation of the police force under three decades of Left rule in Bengal.

Since Nandigram, many Bengali plays have pulled no punches in targeting the left. Saonli Mitra's troupe, Pancham Vaidik, has done *Poshu Khamar*, based on George Orwell's *Animal Farm*; Kaushik Sen's Swapnasandhani has come up with *Bidushak* and *Dakghar*; and playwright Bratya Basu has crafted *Agunmukho* (Fire-faced), a play directed by Suman Mukhopadhyay. Artist Shuvaprasanna, once known to be close to the CPM, has, in a recent painting, projected Bengal Chief Minister Buddhadeb Bhattacharya as Hitler.

Kaushik Sen has paid the price for his anti-left outpourings, but he isn't throwing in the towel. "We have supported several people's movements in the past two years and the government has called us names," he says. There was a time when Sen's theatre group would receive upwards of 30 invites to perform in different parts of the state. The number of on-demand performances has dropped to well below ten.

So, it isn't easy fighting a government that has been in the saddle for three decades, as Aparna Sen found out when an arrest warrant was issued against her after her Lalgarh sojourn, but it doesn't seem that this battle will end anytime soon.

Why was there a war on Lalgarh?

Joya Mitra
Kolkata

It is over a fortnight since the state government's anti-terrorist operations in Lalgarh-Ramgarh began. Fifteen, 18 or, maybe, even 20 companies of the BSF, CRPF, Cobra Force (what an exciting name) and our very own state police, armed with automatic rifles, rocket-launchers, grenade-launchers and helicopters arrived for one big gala fight. But against whom? The answer is riveting. Against the tribal population of a single police station Lalgarh, in East Midnapore!

This is no border area. There is no trace or influence of any foreign armed force. Under the Lalgarh police station's jurisdiction are little villages and some tiny traces of forests surviving from the old days. There is immense poverty. But, it seems, the people of Lalgarh have committed an unpardonable crime – that of resisting years of atrocities inflicted by the police with a non-violent mass boycott!

Let us look into what had really been going on at Lalgarh before and after 2 November, 2008.

The forest lies in the midst of tribal occupations, medicines, festivities, food. It is the very foundation of this primitive community life. Thirty years ago, the forests of Jhitka, Chakadoba and Kantapahari were so dense that tourists could not get around without a local village guide. The entire Ranibandh hill was enveloped in thick forests with tiny Santhal habitations. Uncontaminated tasty vegetables were plentiful in the *haats* on Saturdays. These villages used to welcome with open arms even complete strangers from the city. There were different animals in villages and forests.

Today, Barabajar, Ranibandh, Goabari, Kantapahari, are a shadow of their rich past.

The confluence of the two rivers Kansai and Kumari was the sacred spot for local festivals. The Kansai Kumari had all her impregnable melodies, all those unforgettable images! The two rivers used to irrigate the fields of Bankura, Purulia and Midnapore.

Instead, people from Kolkata now frolic at the Gorabari dam. The waters of the Kansai Kumari flow through the canal of the dam and provide irrigation to Howrah and Hooghly. The villages of Bankura and Midnapore do not even get pond water for irrigation. The tribal girls from these villages have to walk miles to fetch water. The officers of the Forest Department, after failing to prevent poaching and timber smuggling, now give audacious advice to tribal people. The officers don't want them to hunt even during their sacred hunting festival. They can't understand the innate dignity of tribal people and come up with statements like, "Let them stop hunting animals in the hills and then the forest depart-

ment will pay for their meat."

We, the people who live in cities, have never tried to see such humiliation and deprivation as an attack on tribal communities. Their very own resources – farming and forests – have been devastated. They have been compelled to depend on the public distribution system (PDS) and the money market, and then those facilities have not been given properly, either. Whether it is the BPL card or the ration card or the 100 days of work, nothing ever reaches these people. Whose responsibility is it to ensure that? It is not only Lalgarh. Everybody knows all tribal populations across the country have been subjected to this methodical onslaught for such a long time now.

One Amlashole, Amjharna or Varnobari has not been able to stir the government and administration of West Bengal. Actually, tribals have seen it all. Whenever they resist being starved to death or displaced, the police and the military have pounced on them. And then there have been some alms from the government. The cracks have widened. The state government with its police and cadres and the tribal people have become two contesting sides. The Peoples Committee Against Police Atrocities of Lalgarh brought this reality out in the open.

From November to May, the Committee proved that without any government or police, law and order created no problem whatsoever in the lives of the people. No incident of riot or dacoity occurred. Apart from the rampant culture of killing established by cadres of the ruling party in West Bengal, there were no cases of homicide in the area. People slept comfortably without the terror of the policemen knocking at midnight.

Not a single tribal girl was raped in these seven months. The local people themselves say this. A general health service centre has been founded in Kantapahari. Even in April, when a peoples' court was held under the leadership of the Peoples' Committee Against Police Atrocities, some 64 persons, accused of social crimes, were judged by thousands of villagers. Punishments were given as per rural customs, like making someone wear a garland of shoes or do sit-ups holding their ears, 10 to 15 times. Among the convicts, there were four women, who were not punished.

But, if we look at the picture on the other side, we will find a CPM panchayat member in every court in Nadia, Murshidabad, Howrah or Burdwan, in a position of authority. On every occasion, it is the women who have been harassed the most. They have been made to walk naked, forced to accept the unjust demands of oppressive husbands, even compelled to sleep with their fathers-in-law.

Without the police or the CPM, the local people of Lalgarh were able to live a peaceful life. Instead

Continued on Page 8

Continued from page 7

of a terror-driven single party 'democracy', a participatory democracy was coming into being at Lalgah and its vicinities. The state government could not accept this. It would have denuded its long history of exploitation.

Despite the behaviour of the government, the representatives of the Peoples' Committee Against Police Atrocities have always come for discussions when asked to do so. They even participated in talks with the police chiefs. In the tripartite discussions that took place on 22 April at the Midnapore Circuit House, the Committee had clearly expressed its enthusiasm for participating in the elections. The Chief Election Commissioner and the DIG, Western Range, made promises of a smooth conduct of elections, which they did not keep. No bus went to fetch distant villagers, no booth-slips reached the voters.

So, the voice of opposition could not be reflected in the ballot. Then, 1 June was fixed as the date for the tripartite discussions to look into old cases and false suits. Since talks could not take place that day, discussions were held on 14 June and 14 July was zeroed in as the next date. After the 14 June discussion, both sides were optimistic about fruitful dialogues in the near future.

Then on 17 June, without any further discussion, the chief minister started a military offensive on the Lalgah tribal population with central paramilitary forces and state policemen. This shameless attack, in support of Anuj Pandey and a few other corrupt persons, brought in unparalleled horror to the lives of the peace-loving people and their plots of land. These are the pieces of land the chief minister has been trying to hand over to the Jindal Group for quite some time now. Against whom is this battle? The Maoist excuse has fallen flat. Not a single Maoist leader was found anywhere.

The Home Secretary has said that Chhatradhar Mahato is not a Maoist. Yet it is announced that he shall be arrested whenever found. Why? To create more chaos in the state? We, the ordinary tax-payers, do not want our hard-earned money wasted at a time of sky-rocketing prices.

After destroying the livelihoods of a rural, tribal territory for 20 days by the para-military forces and state police personnel, the state government has now arranged for a motley package, just for show.

The people of Lalgah are not present in the meeting, only the state secretaries are.

How will they know what Lalgah needs? Do they live in Lalgah?

All the drinking water sources at Lalgah have been contaminated by the cadres. The dwellings of ordinary villagers have been ransacked. Urban attention has been cleverly shifted from the relief scam in the Sunderbans and the hands down defeat in the Lok Sabha with the instigation of a civil war. The conscientious intelligentsia and personalities like Medha Patkar and Gopal Menon have been harassed by the police.

A level headed, non-violent and extremely popular leader like Chhatradhar Mahato has been threatened with arrest. Will the chief minister tell us clearly, what direction he is steering the state to?

SAURABH YADAV



A group sang songs on NREGA. Pappu (left) with mobile phone

NREGA mela in RTI

Saurabh Yadav
Vijaypura (Rajasthan)

VIJAYPURA has ensured its place in history. It is here that the right to information movement led by the Mazdoor Kissan Shakti Sangathan (MKSS) was born in Rajasthan. A Dalit is the sarpanch of the village. The rural jobs scheme is also vigorously implemented here.

Now there is another first to Vijaypura's name. It has played host to a Rozgar Guarantee Mela: a unique celebration to mark the empowerment of the poor in asking for employment and transparency in the disbursement of public funds.

Thousands of villagers converged on Vijaypura on 25 June to learn all about the National Rural Employment Guarantee Act (NREGA). Stalls displayed the provisions of the scheme, an ideal NREGA worksite, 10 rights of NREGA workers, redesigned implements and how complaints can be lodged.

Songs about NREGA filled the air. Information about the scheme was put to music. Pappu, a supervisor under NREGA, had personally composed the songs.

"NREGA has been successful only where it goes hand in hand with the RTI. Without this transparency, the bulk of funds under NREGA will go into the pockets of middlemen and we're talking about crores of public money here," explained Nikhil Dey of the MKSS.

The mela was organized by the Vijaypura Panchayat, and the Deogarh Panchayat Samiti

along with the MKSS, School for Democracy and the State and Central Governments.

It got the attention it deserved. A high powered team descended on this dusty village. There was the Chief Minister of Rajasthan, Ashok Gehlot, accompanied by the Union Minister for Panchayati Raj and Rural Development, CP Joshi and Secretary, Ministry of Rural Development, Dr Rita Sharma.

Ashok Gehlot asked for reconstitution of the National Advisory Council, chaired by Sonia Gandhi so that schemes like NREGA can be better implemented.

"The mela is a forum for the common man to interact with officials at the Panchayat, Block, District, State and Central level. People will become aware of their rights and see the work that has been done," said Tilak, Panchayat Sachiv of Vijaypura.

All 19 Gram Panchayats under the Deogarh Panchayat Samiti had stalls with muster rolls and registers ready for inspection along with models of the work they were carrying out. Tasks completed in dry Rajasthan included reviving traditional water conservation and storage structures like shallow dams, bunds to stop rainwater from flowing away, tanks, and planting trees on the periphery of villages to halt billowing sand.

The MKSS' stall enlightened people about 10 rights under NREGA through posters, pamphlets and an informative talk. Volunteers enthusiastically repeated the exercise for each batch of visitors. This was one of the most popular stalls of the mela. There was also interest in the stall where the procedures for lodging complaints under



Puppets got the message across

village

NREGA were spelt out.

MIT Institute of Design, Pune, displayed tools ergonomically designed for efficiency. The tools have been tested by NREGA workers in Vijayapura in the field. Curious villagers examined a recycled rubber 'tasla' to carry mud and implements which helped to dig, cart mud and carry loads.

The Vijayapura panchayat's stall showed a model NREGA worksite with all facilities in accordance with the Act – a shaded area, water, first-aid, a creche if there are more than five children under the age of five and so on. It was emphasized that these facilities should be there at every work site for a safe and productive atmosphere. Guidelines have been set for one day's work defined according to the hardness of the ground, the incline and depth of excavation, construction of walls, bridges and roads.

Kaluram Salvi, sarpanch of Vijayapura, is famous for his activism. He is a Dalit who got elected as sarpanch from a general seat, spending just Rs 800 on campaigning. He had a point to prove: that elections don't have to be won by distributing money and liquor.

Salvi has now completed four and a half years in office and lived up to his image. He took the lead in ushering transparency by painting the details of work under NREGA on the Panchayat office walls. This 'Janta Information System' available for all to see round the clock carries details of work sanctioned in the village, families to whom work was provided, payments made in the year, expenditure on labour and material including

curement. Imagine what a Web Wall like this one could do for every panchayat in India.

"Vijayapura's freely available information gives ordinary people a weapon to fight corruption," said Shankar, an activist with the MKSS. "Earlier each panchayat used to get Rs 10 or Rs 15 lakhs. That has increased to about Rs 1 crore. It is important that accounts are made available for all to see else NREGA will become redundant. Scams in our country are revealed only when accounts and paperwork are there for all to see. When citizens are vigilant there is less scope for pilferage."

Yet glitches do exist. For one, payments for NREGA work have not been easy to come by.



Models of work done like check dams were displayed

In Vijayapura, funds for work done from 1 January to 31 March were released only on 28 April.

As per NREGA, accounts should be cleared every 15 days. Payment for the work done from 1 to 15 January which were due by 1 February, were delayed by 87 days. For the months of April and May, payments were cleared on 20 June, five days before the mela.

Paucity of funds cannot be an excuse because funds are available with the Panchayat Samiti.

Delays are caused by programme officers and junior engineers who measure the work done and scrutinise the muster rolls. They take their own sweet time.

Then banks take another 20 days to clear payments. Engineers, officials and banks blame the 'excess workload' for the delay. But funds have been earmarked for administrative purposes and these should be put to proper use. The Vijayapura panchayat spent almost Rs 91 lakhs on NREGA work in one year.

Before the Rozgar Guarantee Mela got underway, MKSS did a lot of quiet homework. Activists went to several NREGA worksites to check things out and find out what problems workers were facing on the ground. Some of the problems identified were:

- Application forms for job cards were not available and filled forms were not accepted.
- Job cards were either not issued or retained by officials.
- ID cards were made in fake names and there were false entries in muster rolls.
- Work was not available and unemployment allowance was not given.

The Rozgar Guarantee Mela inspired confidence in people. Three women marched up to talk to Aruna Roy, leader of the MKSS. They wanted to work under NREGA, though their village fell under urban Deogarh. They had seen and heard about the scheme and wanted work. For them and others who had complaints, there was a stall where volunteers took down details to pass on to relevant authorities.

The other view on the Metro

Gautam Singh
Mumbai

Is the Metro railway a wonder-solution to the problems of transportation in India's cities or is it a gobble of funds and a heartless displacer of people? With Rs 100,000 crores to be spent on Metro projects over 10 years in the five cities of Delhi, Mumbai, Bangalore, Kolkata and Chennai, there is a growing urgency to find answers to these questions.

A two-day national meeting held in Mumbai recently raised questions about the way in which Metro projects have been passed, evictions, environmental damage, the cost of a Metro ride and so on. It was attended by social activists from cities where Metro projects are underway. In addition there were academicians, environmentalists, transport experts, and architects.

The meeting was organised by the National Alliance of People's Movements (NAPM) and the Ghar Bachao Ghar Banao Andolan, an NGO working with slum-dwellers on the issue of housing rights. NAPM is an alternative voice, which raises issues that are often overlooked by policy-makers. It is an umbrella for a large number of people's organisations and movements in India.

There was dissatisfaction among the participants at the way Metro projects have been sanctioned. Invariably there has been lack of public debate and consultation with stakeholders.

In the case of the Bangalore Metro, it was difficult for the public to obtain the detailed project report (DPR). Members of Hasiru Usiru, a citizens' network, said the Bangalore Metro Rail Corporation (BMRC) provided a hard copy only when the Right to Information (RTI) Act was used.

"The rule of law is not being upheld," said Leo Saldanha, convener of Bangalore's Environment Support Group (ESG). This was evident in the way land of Bangalore's historical botanical garden, Lalbagh, was acquired for the Metro by an ordinance. It would normally have required amending the Karnataka Government Parks Act of 1975, which forbids the sale of park land for commercial use. The bill to replace the ordinance was never tabled, even though according to Article 213 of the Constitution, an ordinance lapses if it is not tabled within six weeks of the last day of the following session.

"The public was kept largely in the dark regarding the development plans of the Metro in Bangalore even though the Karnataka Town and Country Planning Act (1963) provides for public input into the planning process," said Saldanha.

The BMRC has claimed it had held public consultations as per the law, but there is no record of this, and whatever meetings did take place did not constitute statutory public meetings as required by the law, according to Saldanha.

"The norms and statutes as laid down by the TCPA must be implemented, especially in the case of large projects like the Metro which involve an enormous expenditure of public money and affect a large number of lives. The involvement of the residents of the area in the decision-making is fundamental and stip-



Medha Patkar



Participants came from across cities

There was dissatisfaction among participants at the way Metro projects have been sanctioned. Invariably there has been lack of public debate and consultation.

ulated by law. Urban development projects should be planned with public participation and be synchronous with their needs," said Saldanha.

Have the benefits of the Metro been exaggerated? It has been a pattern across cities that public approval for the Metro has preceded its construction. This is perhaps the result of campaigns in the media based on selective information. "Studies on the Metro should be made public," said C Ramachandraiah, convener of Citizens for Better Transport in Hyderabad.

He claims that even after extensive enquiries by activists the authorities have not been able to

provide the studies on which they have based the supposed benefits of the Metro. For instance, there is no study or research made available to substantiate its claim that the Metro will lead to a reduction in vehicular traffic.

"Why this secrecy when the claim is that the Metro is for the benefit of all? Instead of transparency, there seems to be a strategy to inundate the inquirer with legal documents that are incomprehensible," said Ramachandraiah.

"The statistical methods of their surveys have not been revealed. They are simply cheating the public with numbers and therefore any claim without any empirical evidence should not be given credence," said Saldanha.

The overall experience of dealing with the authorities was one of being stonewalled, but patient work paid off in some cases. Bangalore's ESG has been successful in using RTI for obtaining vital documents which revealed discrepancies in figures quoted in the Environment Impact Assessment (EIA) reports.

In Chennai, where six high speed corridors are being planned, T Venkat found the RTI useful in gaining access to documents pertaining to the project. While the authorities claimed that 3,000 slum structures and 1,000 non-slum structures were to be demolished, he later found out that Chennai's Slum Rehabilitation Authority was surveying 10,000 slum households as affected people for just one corridor, so there was bound to be a greater discrepancy in the figures when all six corridors would be taken into account.

Similarly at Laljipada in north Mumbai 25,000 households worry about eviction.

H M Chandrashekhar, a resident of this colony and one of the leaders of the Ghar Bachao Ghar Banao Andolan, says that the residents uniformly oppose the construction of the Metro. They learnt of this project not through a notification, which is the norm, but when a surveyor came to their colony.

What is Delhi Metro's real record?

Civil Society News
New Delhi

QUESTIONS are being raised about the Delhi Metro's track record of safety after two serious accidents took place recently in quick succession. On 12 July, a pillar of a bridge under construction collapsed in south Delhi killing six workers and injuring 15. Metro officials said the launching girder of a segment of the bridge lost balance. As if that wasn't bad enough the very next day three cranes, called in to clear the rubble, crashed while trying to lift the massive girder off the ground. Six people were injured.

Are such accidents to be expected in a project of the Delhi Metro's scale? Is Delhi Metro Rail Corporation (DMRC) stretched because of deadline concerns? Or is there a lack of accountability because of the special status that the DMRC enjoys?

To SA Azad, who represents a union of construction workers, the recent accidents come as no surprise. Azad alleges that workers have been regularly dying at Metro sites, but there has been no transparency about the numbers or the safety measures taken. He has been using the right to information (RTI) law to gather the details. His experience is that DMRC is an opaque outfit. The DMRC's figures and the records at police stations are at variance, he points out.

Azad believes these deaths of workers are an indication of exceptionally poor supervision at the Metro sites and an utter lack of concern for workers at construction sites in Delhi in general. He points out that a Workers' Welfare Board set up by the Delhi government to implement the Delhi Building and Other Construction Workers Act has compensated just one worker in seven years. (See *Civil Society's February issue*)

Azad runs an NGO called Prasar (Peoples' Rights and Social Action Research) and represents the Nirman Mazdoor Shakti Sangathan (NMSS) which is affiliated to the New Trade Union Initiative (NTUI), a conglomeration of informal trade union workers. Soon after the two accidents, the NMSS lodged an FIR against the DMRC, the Delhi government's Workers Welfare Board and the Union Labour Ministry.

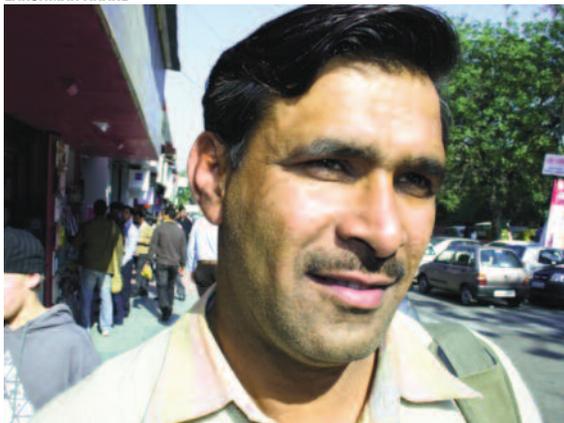
Excerpts from an interview with *Civil Society*:
How safe is construction of Delhi's Metro for workers?

Accidents have been happening. The DMRC itself says 69 fatal accidents have taken place and 52 serious injuries. But police records, which we have got



The accident site in south Delhi

LAKSHMAN ANAND



SA Azad

through RTI applications, show 290 injuries onsite. On the whole for all of Delhi, 261 construction workers have died and 481 were injured as per police records.

Is the DMRC following safety standards?
They are supposed to follow the provisions of The

Building and Other Construction Workers Act, 1996. Chapter 38 clearly says if 50 workers or more are employed on a site, a Safety Committee has to be formed to oversee and approve ongoing construction work. But DMRC did not set up such committees. If they have set up Safety Committees, show us their reports. A Labour Inspector from the central government's Ministry of Labour is required to go there and check out the site. He has powers. But does he use them? Has he made an enquiry, or ever slapped a penalty?

Look, accidents of this nature cannot happen just like that. Take the crane which collapsed. How much weight it can carry is clearly specified. If you can't see that, your engineering degree is nothing. E Sreedharan can fulfil his 'moral responsibility' by lodging a case against the engineers, safety officers, if any, and the company responsible. And let me add, all those 121 workers who died earlier or were injured while working for DMRC, each case should be investigated.

Does the DMRC pay compensation?

Compensation is also a judicial procedure. It has

to follow the Workmen's Compensation Act, 1923. There could be a liability, there could be a sentence. But the DMRC has found an ingenious way of getting around the Act. Workers are compensated by the DMRC's Labour Welfare Fund Rules which it flaunts as a unique initiative by the company. Compensation is a matter of right and justice. It should be done by the Labour Court as per the laws of the land. DMRC is just a company, one among many. Rules cannot be bent for it.

Are workers getting minimum wages?

First of all they are hiring few workers for a lot of work. They need to increase the number of workers. Labour is being paid between Rs 80 to Rs 120. But Delhi's minimum wage for unskilled workers is Rs 151. For skilled workers it is Rs 168. Overtime is double. Workers are not getting minimum wages. Muster rolls need to be made. They should provide first aid, canteen, crèche, drinking water at the site as laid down by the law.

Is the Workers Welfare Board appointed by the Delhi government to implement the Delhi Building and Other Construction Workers Act finally doing some work?

It accumulated funds worth Rs 300 crores. Around Rs 69 lakhs have been spent since it was appointed in 2002. In all these years, the board has paid compensation of Rs 15,000 to one worker only. It has five worker representatives but it has not done any welfare. Delhi's Labour Minister is the chairman. It held 15 meetings and the minutes are available. The board gives some priority to children but nothing has been done for construction workers. They got 16,000 workers registered. They made each construction worker shell out Rs 20 for registration. Workers are saying the board took our money but did nothing for us.

New course on green buildings

Shreyasi Singh
New Delhi

DEVELOPMENT Alternatives (DA), a non-profit in New Delhi, recently organised a three-day Capacity Building Training on "Building for Future: Green and eco-friendly". Attended by students, architects and civil engineers from across India, the training programme aimed at creating awareness about sustainable building practices and green buildings.

Development Alternatives, which helps to create sustainable livelihoods, believes it is critical that construction industry professionals learn to optimise resources because around 40 per cent of the world's materials and energy and 16 per cent of annual available fresh water is consumed by this sector.

India is witnessing a green building movement, led by the Indian Green Building Council (IGBC). The council would like 1,000 green buildings to be registered by 2010 and one billion sq ft of green building to be registered for certification by 2012. It is aiming to train 5,000 IGBC accredited green building professionals by 2010.

DA's capacity building workshop is important in achieving these ambitious goals. With the help of interactive discussions, site visits, case studies and experiential learning, the course's key objective was to give participants an overview of the parameters of green buildings, establish the decision-making criteria for the design and construction of green buildings, and to gain an exposure of alternative building materials and technology.

"We will be successful if those who attended the programme go back with a new building philosophy and try and explore greener ways of building," said Pankaj Khanna, a building technologist, and the key resource person for Development Alternative's Sustainable Environment programme.

"Our forefathers built in the logical, sensible way that is the hallmark of a green building. But, somewhere we have rejected that knowledge. Green buildings need to respond to the environment and climate they are built in. In this workshop, we have tried to illustrate

that a green building design need not possess high technological complexity. It should be down-to-earth, organic and efficient."

A 'green building' is designed to be as efficient as possible

in its use of energy, water and building materials, disposal of solid waste and functionally, financially and aesthetically viable to both client and builder.

The training workshop also included modules on understanding a building's energy behaviour. Clean, efficient energy usage is a crucial component of a green building but most Indian buildings are copying western energy-intensive building concepts such as floor upon floor of glass facades that trap heat, and use indiscriminate air conditioning.

"To optimise energy efficiency, there is a 5 to 15 per cent increase in capital costs at the time of building. But, the payback can come within two to eight years. Those building and those using the space are two different entities. A builder isn't concerned with operating costs because he doesn't have to bear them. The impetus for the green building movement needs is a big demand for such construction from end consumers. Like the way consumers have forced air conditioner and refrigerator manufactures to adopt more energy efficient machines," said Dr Sameer Maithel, who took the energy efficiency class, and is the Founder Director of Greentech Knowledge Solutions, a technical consulting firm that simulates, designs and facilitates clean energy solutions.

Dr. Maithel explained that India does have an Energy Conservation Building Code (ECBC) which prescribes acceptable levels of energy efficiency, but its recommendations are not mandatory on builders.

Those attending the three-day workshop were surprised that such a logical, common sense approach to building was ignored in the curriculum of even the best architectural and engineering colleges of the country.

"I haven't been introduced to any of this in my formal syllabus. There is very limited attention given to environmentally sustainable ways of building. We have to take courses like this on our own if we want to explore these areas," said Sai Siddartha, a second year civil engineering student of the prestigious Manipal Institute of Technology.

Participants were introduced to alternative construction materials with a guided visit to Development Alternative's production unit which manufactures fly-ash bricks and clay bricks with manual machines designed in-house. Use of locally available raw materials which need minimum treatment and transportation were recommended in place of exotic materials that squander energy to reach the site.

With the help of interactive discussions, site visits, case studies and experiential learning, the key objective was to give participants an overview of the parameters of green buildings.



**16th
National Media
Fellowship Programme
2010-11**

Giving Voice to the Unheard

For Print and Photo Journalists

THE National Foundation for India has a media fellowship programme for mid-career journalists to research and publish articles and photo essays on a wide range of issues of importance to ordinary Indians, their battle for a better live and covering diverse aspects of gender, social justice and development related issues. This includes Community Health, Elementary Education, Livelihood Security, Local Governance and Peace & Justice.

In addition, fellowships are also awarded to print and photo journalists interested in covering the issues of Right to Education, the role of adolescents in development, child nutrition and sanitation in India.

Issues related to tobacco control, links between poverty and tobacco and the health hazards of smokeless tobacco products, are also included.

The fellowship amounts to Rs. 1,00,000/- each. Women journalists and stringers from small local newspapers are encouraged to apply.

The last date for receipt of applications is

October 29th, 2010

For more information & application guidelines contact:

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National Foundation for India is a professional, independent India grant making and fundraising body, helping people improve their own lives. It supports partners who look for innovative solutions to complex development and social problems in poor, remote and challenging parts of the country.

GJM shuts down hills

Vivek Ghatani
Darjeeling

THE Gorkha Janmukti Morcha (GJM) has asked for tripartite talks on Gorkhaland at political level. The party is giving a call for an indefinite strike.

"The fate of the indefinite strike will depend on what happens in Delhi. We are working closely with the BJP leadership to raise the statehood issue. What we want is a tripartite meeting at political level," said Binay Tamang, assistant secretary of GJM in Darjeeling.

Two rounds of tripartite talks have been held at secretary level between the Centre, the state government and the GJM. Union home ministry officials said the Centre had suggested August 24 as a tentative date for the next round of talks. But the Morcha has been clamouring for talks that will include its political leaders.

Four GJM leaders, Roshan Giri, Harka Bahadur Chhetri, RP Waiba and Rohit Sharma are in Delhi to coordinate with the BJP leadership. The party has chalked out separate strategies for the hills and the plains. It has threatened to start an agitation in the Dooars, if its demands are not fulfilled.

The GJM describes its indefinite strike as the start of a real agitation for Gorkhaland. Party president Bimal Gurung said the strike has been called to support Jaswant Singh, the BJP MP from Darjeeling in the Lok Sabha and Rajeev Pratap Rudy, BJP Rajya Sabha member, as they raise the statehood issue in Parliament.

The strike is adversely affecting the tea industry. "Plucking the second flush would have been completed in the next 10 days. We are now in a fix as the gardens will have to close," said a tea garden official.

GJM asked students and tourists to leave. Schools are in a quandary. About 5,000 students from all over India and from countries like Nepal, Bhutan, Bangladesh and Thailand come here to study. School principals have decided not to send their wards home.

"It is difficult to get in touch with parents in Bhutan and Nepal. Sending students home without escorts will not be preferable. We are happy the Morcha is not forcing us to empty our hostels. Since we support the demand for Gorkhaland, we will definitely keep our schools closed," said a teacher, who did not want to be named. The authorities of these institutes feel that if they can stock up on food, the students will not face any problems.

Many school principals said if their students were sent home, it would be hard to convince parents to bring them back later.

"They would not like to send the children back



Youth patrol the streets

here. Moreover, if there are positive developments in Delhi and the strike is withdrawn after a few days, the guardians will have to come again to the hills with their children. We want to spare the parents any unnecessary inconvenience," said a school head.

Also, the time given by the Morcha was too short for students to vacate their hostels. Most institutes have just begun their classes after a 15-day summer break.

The principal of a school in Kalimpong said the GJM should have taken the schools into confidence before announcing the strike.

"If the Morcha or any of its front organisations had talked to us, it would have been better. There are certain logistical problems in reaching so many students to their homes all over India and abroad," he said.

The GJM has put in place an elaborate plan to ensure the strike is a success. There will be patrolling of streets so that there is no law and order problem, said Gurung.

Youth wing members with batons will set up pickets across the hills between 6 am and 6 pm. The GJM will not oppose the deployment of policemen on foot.

"We will only allow the district magistrate, the police superintendent and the sub-divisional officers to use their vehicles," said Gurung.

BACKBEAT

By Balraj



Fishworkers score in Delhi

Civil Society News
New Delhi

THE National Fishworkers' Forum (NFF) has won significant gains from the UPA government. An NFF delegation was here in Delhi. Its members met Pratibha Patil, President of India and Jairam Ramesh, Union Minister for Environment and Forests (MoEF). The delegation received assurances from Sharad Pawar, Union Minister for Agriculture and they held talks with officials in the ministries of labour and home.

Last year NFF leaders had launched an agitation against the new Coastal Zone Notification (CZM) which would replace the older Coastal Regulation Zone (CRZ). NFF had pointed out the new CZM would pollute the coast, block the access of fishing communities to the sea and destroy coastal ecology.

Jairam Ramesh told the delegation that MoEF is willing to drop the current CZM notification which lapses on 22 July. It will be allowed to die a natural death. He said the environment ministry will respect the traditional rights of the fishing community. MoEF will hold five consultations with NFF on the best way to manage the coast. These talks will be held in Bhubaneswar, Chennai, Cochin, Goa and Mumbai.

The NFF delegation also requested the MoEF to enact comprehensive legislation along the lines of the Forest Rights Act to protect the rights of the fishing community and sea ecology. Such a suggestion has been made by the Parliamentary Standing Committee on Science & Technology, Environment and Forests headed by Dr V Maitreyan, MP.

The NFF delegation sought the intervention of the MoEF on the issue of the Jambudwip fisher folk, who have been displaced by unfair implementation of the Forest Protection Act. The minister sympathetically agreed to review the Jambudwip situation.

Sharad Pawar, Union Minister for Agriculture and Prof KV Thomas (MoS) assured NFF that the ministry would consider waiver of bank loans to traditional fishermen and women on the lines of the debt waiver to farmers. The ministry sought details on loans provided to fisher folk.

NFF has also been assured that a separate Ministry of Fisheries will be set up at the Centre. Labour Minister Mallikarjun Kharge promised to ratify the ILO Convention on Fishing and enact appropriate legislation.

The NFF delegation was led by Thomas Kocherry, Executive Committee Member, T Peter, Secretary, Kerala, Vasudev Bloor, Secretary, Karnataka, RK Patel, Executive Committee member, Maharashtra, Sagar, senior member, Gujarat and other members.

Beating back domestic violence

Rakesh Agrawal
Dehradun

DOMESTIC violence is rampant in Uttarakhand. Women play a key role in the state's economy, but tradition keeps them from exposing the oppression in their homes. They have rights under the Domestic Violence Act of 2005, but not enough has been done for the implementation of this strong law. District committees have been set up but are dormant.

The Jaago Re Abhiyan, a campaign across 200 villages in the six districts of Kumaon, has succeeded in creating some awareness. Run by 19 NGOs under the Centre for Advancement of Rural Empowerment (CARE) in Dehradun the campaign used workshops, posters, street plays and rallies to spread the message of women's rights between December and March. Jaago Re was supported by the Mahila Samakhya, a centrally sponsored scheme for women's empowerment and education.

The result has been better awareness and some official intervention. Udham Singh Nagar will have special protection officers as per the Act. Similarly in Pithoragarh the district magistrate has held meetings and sought action.

The Chief Medical Officer of Uttarakhand has told all medical officers to treat victims of domestic violence immediately and inform the police. Both the police and lawyers were involved in the campaign.

Rakesh Agrawal spoke to Gita Gairola, State Director, Mahila Samakhya (MS), Uttarakhand.

How many cases have been registered under the

Domestic Violence Act in Uttarakhand?

We gathered information on cases registered under the Act using the right to information (RTI). Our inquiries revealed 232 cases have been registered in 11 districts—barring Chamoli and Uttarkashi districts. Out of them, 185 cases have been registered in Dehradun alone.

How did you plan the Jaago Re Abhiyan?

We, along with some NGOs, discussed violence against women and found that the government was rather cold-hearted about implementing the Domestic Violence Act.

Then, we decided to launch a campaign to make people aware about the law and initiate a dialogue with the government at different levels. The campaign was for administrative officers and police officials and for ordinary men and women at community level. We wanted to spread the word that it was not against men, but against violence.



Geeta Gairola

Can the Domestic Violence Act restrict violence against women?

It is a strong law which not only deals with episodes of violence but also has a vision for the role of women in development. If it is implemented well it can do a lot for women. But the problem is that the state machinery has not been able to implement the law.

What is Mahila Samakhya doing to make this Act effective?

We are making an attempt in three stages. First, through the Jaago Re campaign. Secondly, by establishing dialogue with the state government.

Thirdly, by creating awareness about the law at community level through posters, pamphlets, and meetings.

Are women able to use this Act?

Women face many challenges at the community level, the biggest being that men say that this law is anti-men, that it will break their homes. The idea is that women should feel emboldened to use the law to protect themselves. But for this state machinery is needed. For instance, the law requires that protection officers be appointed. The protection officer is very important because this is the person the woman will go to when conditions in her home become threatening. But the officers have either not been appointed or not been trained.

What has the state government done to implement the Act?

I don't feel that the government has done anything meaningful. It has no budgetary provision nor any political will to implement it at ground level and it is quite blasé in this regard.

What are your expectations from the government?

The government should create a proper structure to implement the law, allocate a separate budget for it, train officers and see to it that they are gender sensitive. Separate judges should be appointed to hear and decide case lodged under the Domestic Violence Act.

What is your implementation strategy?

We have decided to remain in touch with the administration. For instance, we think we can help train the protection officers to make them more effective. We have written to many of them, asking them to come to us. We are also talking to members of the district committees.



Kashmir's ardent RTI campaigner

Jehangir Rashid
Srinagar

Dr Raja Muzaffar Bhat, a dental surgeon, is the leader of a vigorous RTI campaign in Jammu and Kashmir. He travels all over remote hills and valleys to tell small villages about the power of the RTI Act and how to use it.

On 9 April, this year, the Jammu and Kashmir Assembly passed a new RTI Act, replacing its earlier toothless old law. The new Act, with its stronger provisions, is at par with the Centre's Right to Information Act, 2005. Under it a person can seek information from security agencies like the CRPF and the police. The law gives more power to the people. They can access information about implementation of government schemes, projects and development work.

It was Dr Bhat who, as leader of the Right to Information Movement (RTIM), persuaded the National Conference-Congress coalition government to make public the draft RTI Bill. It was then placed online, comments solicited and some suggested changes incorporated.

Dr Bhat says he got involved in the RTI movement by chance. After completing his Bachelor's in Dentistry he set up a clinic in Chadoora in Budgam district. Patients from near and far trickled in. As he went about fixing teeth, they told him all about their difficulties.

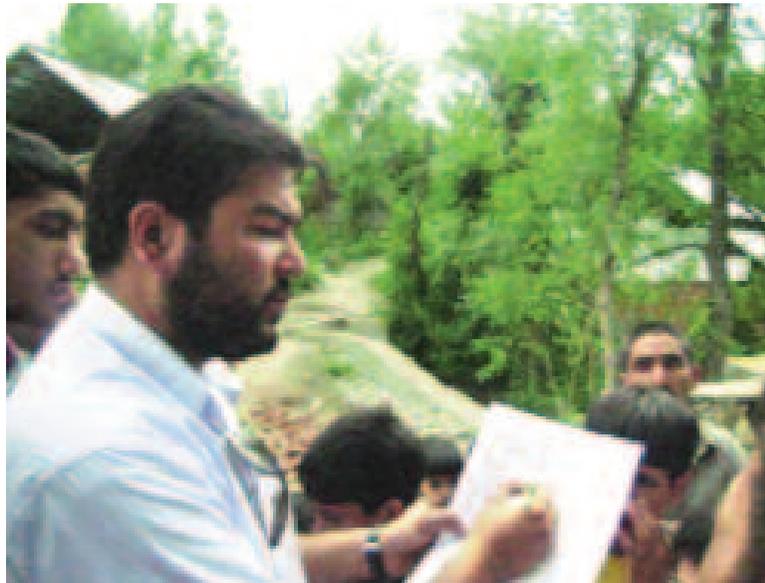
"I belong here. I set up my own dental clinic since I did not want to be a contractual doctor. Patients would tell me about how they are being denied even basic facilities," says Dr. Bhat.

He was always keen on social work. He decided to visit their villages. "I used to practice till afternoon. After that I would accompany patients back to their village to see things first hand. This continued for many months and I came to know about the pitiable condition of people living in Branwar, Hanjura and other areas of Budgam district," says Dr Bhat.

He was surprised to see that ration cards were denied to people. Tin-sheds, made under the Indira Awas Yojana (IAY), specifically for poor people, were given to well-off families. All this deeply moved him and he decided to make a difference.

"I was astonished to see that people were left out of the IAY. Below Poverty Line (BPL) ration cards were issued to those who were above the poverty line (ABL). People got their revenue extracts only after bribing officials of the revenue department. If they complained, they were thrown into jail," he says.

In October 2006, the doctor's RTI Movement filed its first RTI asking for details about sanctioning for prosecution, officers of the Indian Administrative Services (IAS) Kashmir Administrative Services (KAS) and other bureau-



Dr Raja Muzaffar Bhat telling people how to fill up an RTI application.

crats involved in various scams since 2001.

Although, the information is supposed to be provided within 30 days there was dead silence.

"I was given the cold shoulder by the General Administration Department (GAD). I approached the then chief secretary. Still there was no action. Then I approached the then chief minister. He too failed to come up to the expectations of people. I was somewhat disheartened, but never gave up," says Dr Bhat.

He then turned to Wajahat Habibullah, Chief Information Commissioner, and told him about the lackadaisical attitude of officials in providing information under the RTI Act.

"He told me that since Jammu and Kashmir enjoys special status under Article 370, the Central RTI Act doesn't apply to my state. I sought intervention of the then Chief Justice of Jammu and Kashmir High Court to treat my RTI application as Public Interest Litigation (PIL). He agreed and issued a show cause notice to the state government through the chief secretary to provide information under the RTI application," says Dr. Muzaffar.

He got a reply in April 2007. But it contained information about action taken against some junior engineers and lower level officials. The big fish were missing.

"Although, the reply was not up to what I had expected, it gave me confidence. I thought we can make a difference if we don't give up our claims. I motivated people to file RTI applications on any issue concerning public welfare. Almost 300 applications have been filed to date. But the government must do more. It has to set up State Information Commission, appoint Information Commissioners along with Information Officers," he said.

Dr Bhat devoted all his time and energy to the RTI movement. He had to abandon his dental practice. As a result he suffered huge financial losses. He was forced to sell his car and things began to turn financially tough.

"The Chief Information Commissioner came my rescue. I got a fellowship from the Commonwealth Human Rights Initiative (CHRI) under which I am entitled to Rs 13,000 per month. Some other organisations also helped us," he says.

Dr Bhat's RTIM has succeeded in helping the lives of people.

It got pending wages released for irrigation workers at Marval in Pulwama district. The irrigation division had adopted dilly-dallying tactics for two years. "The workers contacted us and within three days of filing applications under RTI, the pending wages were released. In fact, I also posed as a worker and believe me the officials offered us cold drinks and beverages!" said Dr Bhat.

Khatee Begum, a 45-year-old widow of Hanjura village had been denied a tin-shed under the IAY. After a sustained struggle by the RTI Movement, she was provided a tin-shed.

"The present finance minister Abdul Rahim Rather and former chairman of the legislative council Ghulam Nabi Lone, live in the vicinity of this widow," says Dr Bhat. "They never took up the issue of providing shelter to her. They were more concerned about their vote bank. We are happy we could do this job," says Dr Bhat.

"People in Hajam mohalla, Branwar, did not have access to clean and potable drinking water. There was only one public tap in this village. After RTIM intervened, 20 water supply pipes were provided and now the village has five public taps," he says.

In Branwar area, BPL cards used to be issued arbitrarily, even to people who were not poor. "We were able to survey and identify the real beneficiaries. We found 50 percent of BPL cards were fake. We involved religious personalities. Officials from the Consumer Affairs and Public Distribution (CAPD) department, revenue officials and the village representative were part of this exercise."

Thanks to the RTIM, Budgam's administration has become more efficient. "I can safely say that government officials in Budgam district attend to their duties on a regular basis and that too on time," confirms Dr Bhat. "Deputy Commissioner Budgam, Mohammad Rafi and Block Development Officer (BDO) Khan Sahib, have always supported RTIM."

In recent months, RTIM has spread its activities to Doda, Rajouri, Poonch, Kargil, Leh, Anantnag, Baramulla and Pulwama.

"The government is asking us to suggest a person who can be appointed as Information Commissioner. Our only demand is he should be honest, upright and not influenced by any political party or ideology," he says. Dr Bhat also expressed his thanks to his friend Dr Shaikh Ghulam Rasool who works with the Border Area Development Programme's (BADP) Mobile Medical Team (MMT), for his unstinted support.



A jackfruit procession called Chakka Varav taking place at the Jack Fair in Wayanad. The fair begins only after this sacred ritual is completed

RISE OF THE HUMBLE JACKFRUIT

Scientists help small farmers boost demand, triple profits

Shree Padre
Bangalore

THE long-neglected and lowly jackfruit is finally finding its rightful place in the market – and on dining tables. Until recently, yield far outstripped demand. Growers of the fruit would watch it rot for want of takers, but not anymore.

In May, for the first time ever, Machaan Malad, a three-star restaurant in Mumbai, held a jackfruit food festival. "We ran it for nearly a month. Customer response was very good. But we had to end it abruptly. We couldn't get enough jackfruit," says Sunil Pawar, the restaurant's manager.

In Mysore, Bangalore and Mumbai, you might have to pay Rs 100 for a single jackfruit. But in Ratnagiri or Kerala, it costs next to nothing. In Kerala, farmers used to hang a board on their jackfruit tree saying, "Anybody can pluck jackfruit from this tree."

Jackfruit growers still face social discrimination. "Carry a jackfruit plant in a bus and everyone teases you," says KR Jayan of Irinjalkuda, Kerala. "Couldn't you have got a mango or a banana plant, they ask."

A two-hour drive from Bangalore will take you to Toobugere hobli, in Doddaballapur district of Karnataka. Toobugere's jackfruit is famous for its succulence. Middlemen come here from afar to buy the fruit. Farmers would once sell at a flat rate. Entire trees would be given for a song to con-

tractors for harvesting.

It was scientists from the Gandhi Krishi Vijnan Kendra's Rural Bio Resource Complex (RBRC) linked to the University of Agricultural Sciences, (UAS), Bangalore, who rescued the jackfruit from oblivion and got farmers the income they deserved.

Dr K Narayana Gowda and Dr Doddahanumaih with their team, helped form India's only organisation of small and marginal jackfruit farmers in 2007. Once the Toobugere Jackfruit Growers' Association (TBJA) got going, scientists helped farmers rapidly sort out glitches. As a result, the income of jackfruit farmers has tripled.

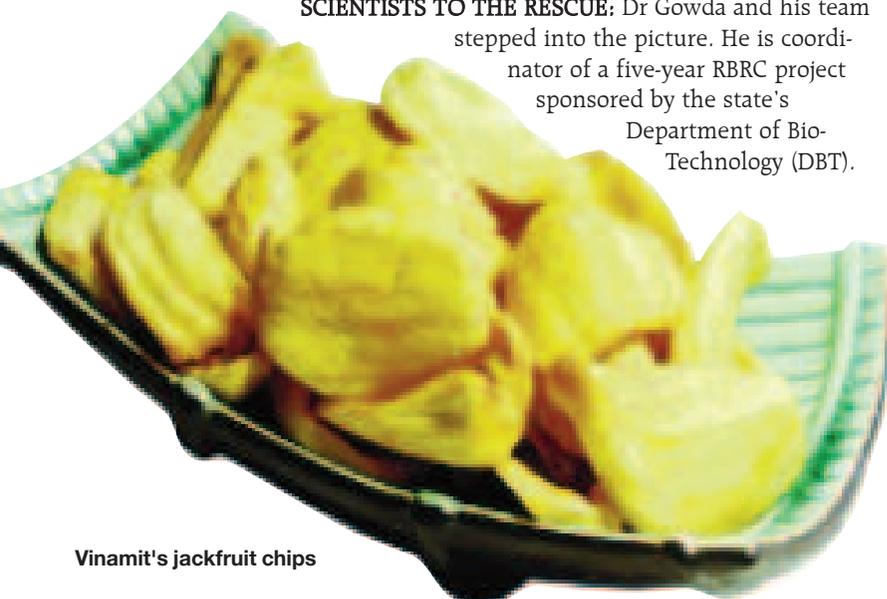
ORPHANED FRUIT: The world's largest fruit has many names – kathal, panasa, jaca, nangka, kanoon, mít or *Artocarpus heterophyllus*, its biological name. India is the world's second biggest producer of the fruit and the state of Karnataka is the leader in jackfruit production.

How much jackfruit goes waste? Nobody knows for sure. Some say 75 per cent. Kerala wastes around 350 million jackfruits annually. Karnataka hasn't listed it under the National Horticulture Mission. If you Google, you won't get statewide area and production figures for jackfruit. When nobody knows how much is produced, how will we gauge how much is wasted? Still, assuming one jackfruit costs Rs 3 and the national wastage is 50 per cent, India is losing Rs 214.4 crore worth of food every year.

In the south, the biggest problem jackfruit growers faced was lack of a supply chain and processing facilities. "In villages there is a shortage of labour. There is hardly anyone willing to pluck jackfruit, deseed and collect the flakes. Even if that is done, no one bothers to transport the produce to the city. Further processing is no problem at all. If somebody brings farm fresh unripe flakes to us, we buy it for Rs 30 per kg. There is a lot of demand for chips alone. Customers arrive in their cars," says Annappa Pai, director, Ace Foods, a reputed food products exporter in Mangalore.

Organised direct marketing has always been difficult. Jackfruit is not cultivated as a stand-alone crop. It is planted in homesteads, as wind-breakers or shade trees in a scattered way. The peak crop season is the monsoon. Harvesting and transporting fruits from different trees where roads don't exist is difficult. Then, fruits on a tree don't mature simultaneously. Selective harvesting makes it more complex. For an individual farmer, carting a few jackfruits to a distant city is not practical.

SCIENTISTS TO THE RESCUE: Dr Gowda and his team stepped into the picture. He is coordinator of a five-year RBRC project sponsored by the state's Department of Bio-Technology (DBT).



Vinamit's jackfruit chips

It is scheduled to end in March 2010. The objective of the project, the only one of its kind in south India, was to enhance the income and living conditions of farmers who are fast losing interest in agriculture. The scientists hoped to do this by transferring a range of technologies to farmers and providing market linkages.

The project's target area was made up of 75 villages of Toobugere hobli, comprising 8,340 families. The government committed Rs 436.73 lakhs to the project.

"Villagers had lost confidence in politicians and the bureaucracy. Before



Dehydrated fruit flakes



Dehydrated unripe jackfruit flakes



Unripe jackfruit flakes



Jackfruit squash



Jackfruit jam



Jackfruit shrikhand

starting the project, I went round to Toobugere's villagers. We told them, we will make sincere efforts to improve your lives. We will do whatever we promise. We won't promise what we can't do. We stood by that at any cost, effort and time required," says Dr Gowda.

Ironically, jackfruit was not on the agenda of the scientists. But every time they went around Toobugere hobli, villagers would serve them delicious jackfruit. They were shown a wondrous 300-year-old jackfruit tree owned by 84-year-old Kachahally Narasimhayya.

"Talking to villagers we learnt that such an amazing fruit didn't even fetch them 25 per cent of its real price," says Dr Gowda. The team felt very strongly that they must 'do something' and immediately incorporated jackfruit into their project.

"Our marketing experts advised us to link farmers to the best markets. But this plan didn't work," says Dr Gowda. "We did an extensive survey which showed us why. Only 15 per cent farmers were able to transport their crop to distant markets."

For the rest, 85 per cent of small and marginal farmers, the only option was selling to middlemen at whatever price was offered. To go to a distant market, a small farmer would need to hire a tempo for a few bags of jackfruit, pay an agricultural worker to look after farming operations while he

was away. He would spend money on personal expenses and then there were those offloading charges.

The survey showed that farmers in the entire target area had been spending as much as Rs 4.5 crores every year to take their crops to different markets in different cities. Naturally such high costs ate into whatever little the farmer made.

This grassroots reality sunk in. It made the team think. Organising the farmers appeared to be the only solution. The scientists examined various options. Should they start a co-operative? Was contract farming a good idea? Finally they settled for a producers' association. Decision-making rests with the farmers so it empowers them.

The scientists spread the word, promoting the idea of the association, contacting relevant agencies and doing all the paperwork. Says Dr Gowda, "What we learnt is that such work requires patience. Though your speed is 100 kilometres, things move only at 25 kilometres."

Literacy and awareness among the farmers of Toobugere is below average. This came in the way of organising them. "They need hand holding. You have to give them direction, lead by example, show them how to come out of their crisis," said Dr Gowda.

Finally, the Toobugere Jackfruit Growers' Association was born. It has Kachahally Narasimhayya, owner of the 300-year-old jackfruit tree, as its president. MG Ravikumar is the association's secretary. Its governing body, apart from president, secretary and treasurer, has ten directors. Since 'farming activity' in jackfruit is limited to harvesting, the association is active only during those four months. At present it has a modest membership of 60 farmers. But then, as it has been famously said, a small committed team is all you need to change the world.

MONEY ON TREES: The first breakthrough TJGA made was to get farmers to pool their jackfruit and take it directly to Bangalore. HOPCOMS, a co-operative marketing giant offered Rs 6 per kg of whole fruit. This was



three to four times more than what farmers were getting from middlemen.

"That year, we took one lorry load of jackfruit to HOPCOMS. After that the middlemen increased the price. They offered us Rs 10 to Rs 12 per kg. Many farmers, including non-members, sold their produce locally," said MG Ravikumar, the association's secretary.

Though accurate data is not available, it is estimated that Toobugere's 75 villages have around 6,000 jackfruit trees. Earlier, the total income from sale of jackfruit was Rs 5 lakh. According to Dr Gowda, this has now risen to around Rs 15 lakhs – a three-fold hike.

The University of Agricultural Sciences broke the story to the media. People got interested in the Toobugere jackfruit. "Urban consumers were asking for jackfruits. In villages we were struggling to find takers. So there was a mismatch," says Dr Gowda. The consumer and the farmer had to be paired. The scientists decided to launch jackfruit fairs.

In 2007 the first Jack Fair was held in Toobugere in the premises of the famous Ghati Subrahmanya temple, which attracts

thousands of devotees. In 2008 the Jack Fair was held at the Hadonahally Krishi Vijnan Kendra (KVK) itself.

This year the Jack Fair arrived in Bangalore's Lalbagh. It was a thumping success. "Consumers tasted our excellent Toobugere jackfruit and our farmers tasted fair prices," said MG Ravikumar.

Siddappa and Munirajappa, two Toobugere jackfruit farmers, stayed at Lalbagh for nearly 12 days. Siddappa earned Rs 20,000 by selling 600 jackfruits. Munirajappa made Rs 25,000 from 800 jackfruits. Non-members also made money. Said MC Rajashekhar, a farmer, "I earned Rs 7,000 by selling directly. Otherwise I would have got only Rs 1500 from the middlemen. We never knew we could take our jackfruit to fairs and make good money. I want to join the association now."

Encouraged by the scientists, Toobugere's farmers have also taken to raising jackfruit plants for sale to farmers in other states. In the last three years

Jackfruit delights

JACKFRUIT is an easy crop to grow. It requires no artificial fertilizers, pesticides or even irrigation. All parts of the fruit, except the stalk, can be converted into food.

It is nutritious as well. One hundred grams of jackfruit has 303 mg of potassium, an ingredient which helps lower blood pressure. It is low in saturated fat, cholesterol and sodium and high in Vitamin C and manganese. It is an ideal food for weight loss.

Jackfruit contains phytonutrients which reduce the risk from cancer. It has anti-ageing, antioxidant and anti-ulcer properties. The seeds too are edible and nutritious. They contain 38 per cent carbohydrates, 6.6 per cent protein and 0.4 per cent fat.

Here are some recipes for you to try.

Jackfruit burfi



Jackfruit ice cream



Jackfruit idli

Ingredients

For 15 idlis
Ripe jackfruit flakes: 250 grams
White rice: 250 grams
Grated coconut: 1 cup
Salt to taste
Jaggery: Optional

Soak rice for one hour. Mix with jackfruit flakes and grated coconut. If you want your idlis to be sweet, add jaggery. Grind to make a coarse batter. Add salt. Steam in idli cooker.



Raw jack dosa

Ingredients

For making 15 dosas
Unripe jackfruit flakes: 500 grams
White rice: 100 grams
Salt to taste.

Soak white rice for two hours. Add a little water and grind along with the jack flakes into a smooth paste. Batter has to be thick. Add salt. Make dosa. Tastes well with butter, ghee and fresh coconut chutney.

Recipes by NV Sasidharan, Ruchie, Wayanad, Kerala

Jack goes global

TOBUGERE'S jackfruit is going global. Vinamit Trading Corporation, the biggest fruit chips making company in Vietnam is keen to place an order.

Vietnam is the world leader in jackfruit products. It has 20 units that make chips. Among them Vinamit Trading Corporation is the biggest. In Vietnamese, mit means jackfruit. Vinamit exports jackfruit chips to countries like the US, Japan, Germany, Russia and China.

"For big landowners in Vietnam growing rubber is profitable. But for small farmers, jackfruit fetches them more money than rubber," says Nguyen Lam Vien, CEO of Vinamit. "Profit from jackfruit is about \$ 8,000 to \$12,000 per hectare per year." The company has jackfruit orchards in about 10,000 hectares. It has entered into an eight year purchase contract with farmers. As a result, 300 new jackfruit orchards from five hectares to 100 hectares have been developed.

Nguyen Lam Vien built his company from scratch through sheer hard work. When all the Taiwanese business people he contacted refused to buy



Vinamit's jackfruit orchard



Chips production at Vinamit



Loading boxes containing jackfruit chips

his fruit chips, he sat on the footpath and offered samples to all and sundry. In China's crowded passenger trains, he followed the same strategy.

Today the company has staff strength of 1000 and two factories. Vinamit's factories use about 100,000 tonnes of jackfruit a year. Nguyen Lam Vien's dream is to "make Vietnam a brand for jackfruit the way Philippines is for mango and Thailand is for durian."

But the industry is in short supply of firm flaked jackfruit. As such their eyes are on Indian jackfruits. Vinamit enquired from Dr Narayana Gowda if it could place an order for purchase of fresh jackfruit or frozen bulbs. The company has shown interest in buying 'as much as possible.'

Dr Gowda and the Toobugere Jackfruit Growers Association have taken the query seriously. This is a new opportunity and they have started working out their quotation. Meanwhile, according to Nguyen Quoc Binh, Vinamit's communication's director, the company is seriously considering opening a factory in Toobugere to buy jackfruit, do the initial processing to reduce weight and then take the flakes to Vietnam for the final processing.



Jackfruit halwa

Ingredients

Ripe jackfruit flakes: 1 kg
Sugar: 500 grams
Ghee: 100 ml
Cashew nuts: 10

Steam cook the flakes for 15 minutes. Finely grind flakes in a mixie. Add sugar. Cook in a utensil. Keep stirring. Add very little ghee in between. When the ghee comes on top, it's time to stop. Pour into a plate. Add cashew nut pieces and cut to required shape after cooling.



Jack seed burfi

Ingredients

Milk: 1 litre
Jack seed powder: 100 grams
Sugar: 350 grams
Cardamom: 10 grams

Boil milk. After a while, add sugar and jack seed powder. Keep under low flame. Stir continuously. When ghee rises from the bottom of the vessel, put powdered cardamom. Pour to greased plate. Cut while warm.

Recipe by Oriental College of Hotel Management, Lakkadi, Kerala.



Jackseed vada

Ingredients

Jack seed powder: 3 cups
Flour: Rice/Wheat/Besan/Maida: 4 cups,
Chillies: 4, Onions: 2
Curry leaves: A few
Ginger: Half inch chopped
Salt to taste

Steam cook the jackfruit seeds. Peel the outer cover. Retain the inner brownish skin, it's nutritious. Powder the seeds after drying. Let the powder be a little coarse. Mix all the ingredients. Press into flat round vadas and deep fry in oil.



Jackfruit Mysore pak

Ingredients

Ripe jackfruit: 1 kg
Besan flour: 500 grams
Sugar: 1.5 kg
Ghee: 500 grams

Grind jackfruit into pulp. Put all ingredients into a utensil and cook under low flame. Keep stirring. Once the ghee rises, it's time to pour into a plate. Cut to required size while warm. You can make Mysore Pak by replacing jackfruit pulp with jack seed powder. For the above proportions add 2 kg sugar instead of 1.5.

around 30,000 jackfruit plants have been sold. For instance, Narasimhayya and Marappa earned Rs 30,000 and Rs 20,000 respectively last year.

In jackfruit, though, a seedling giving true to type fruits is very rare. One unscientific act of the project is that it is distributing seedlings of excellent varieties of jack. The latex of jackfruit makes it difficult for grafting. The Agricultural University is reportedly getting a very low success rate in grafting, below 25 per cent. Even private breeders are achieving more than 60 to 70 per cent. The project has to put in more effort to solve the deficiency in 'true to type propagation'.

Some Toobugere farmers like Maralli Nagarajappa and Gantaganahalli Manjunath are planning to plant jackfruit as a crop by itself on half or one acre. Some farmers are replanting jackfruit, confident of earning an income.

SMALL AND SMART: But when it comes to value addition, India is at an infantile stage. Thailand, Philippines, Malaysia, Indonesia and Vietnam have mastered value addition of jackfruit. Tender jackfruit is available in tins. Jackfruit chips are churned out by dozens of factories.

Though some of our agriculture universities and research institutions claim that they 'have been working at jackfruit value addition' nothing worthy has been commercialised. Most scientists show old samples of what they have done. However, jackfruit Srikhand and Kulfi developed by UAS appear interesting. Those who have tasted these say the two products can woo North Indian customers.

It is small food processing units that are innovating and adding value to jackfruit. Sitharam runs a sweet stall, Pavan Stores, in Tumkur. He makes jackfruit burfi round the year using dehydrated flakes and sells 350 to 500 kg of this sweet every month.

Thomson Bakery near Mannar in Kerala sells 300 kg of jackfruit halwa during the jackfruit season. Asian Home Products Pvt. Ltd, Thiruvananthapuram, produces 400 kg of salted chips daily by outsourcing to smaller units. Its proprietor, NR Pillai, says the chips sell quickly.

Adilakshmi Home Industries in Moodabidri, Karnataka produces 7000 jackfruit papads daily. Kadamba Marketing Co-operative, Sirsi has for the first time introduced branded jackfruit papads. They sold 60,000 papads last year. To make papads during the monsoon season they installed a food grade drier and that boosted production.

Laments Annappa Pai, "Unfortunately, despite demand, a full-fledged branded jackfruit papad industry hasn't come up."

"Marketing jackfruit papads is not a problem. Production is where the challenge lies," says Radhika, proprietor of Adilakshmi Home Industries.

The Krishi Vijnan Kendra in Pathanamthitta, Kerala, has been giving training in jackfruit value addition. Jackfruit jam, squash and juice, produced under KVK's supervision, are well received by local consumers. Shana Harshan, subject matter specialist in home science, offers an interesting calculation. "Each jackfruit weighs 10 kg. It has 5.6 kg of flakes. If one fruit is used to make a product it can bring a net income of Rs 700 to the entrepreneur."

The only unit that has reached a level of scale is Gokul Fruits Pvt Ltd in Udupi district of Karnataka. It makes jackfruit chips using the vacuum dry technology. Parayil Exports of Kottayam district is one of the few companies exporting frozen jackfruit to the US and other countries. A small quantity of fresh jackfruit is exported to the Gulf, UK and other countries from Kerala, to cater to the Malayalee and Tamil population there.

HOMELY JACK: To cut a jackfruit, deseed it and collect the flakes while struggling with its latex is really a cumbersome job. This is what keeps many housewives away from it. Its huge size discourages women from buying it for their small families.

One way out is to make clean jackfruit flakes in a 'ready to cook' form for super markets.

In countries like Singapore and Malaysia, fresh jackfruit, neatly packed in cellophane packets is sold in super markets. Such fresh fruit packets have now been introduced in Big Bazar, Jayanagar Super Market and other outlets in Bangalore. In Mysore some farmers have got together to do this. "Compared to marketing the whole fruit, we get double the income," says Ramesh Kikkeri, a farmer. "No packet remains unsold. We are also able to attract a new segment of the middle class who weren't getting jackfruit in this form earlier."

Jackfruit can also be made available through the year. Two Kerala farmers

have shown how. GRAMA (Group Rural Agricultural Marketing Association), a Self-Help Group (SHG) in Bharananganam, Kerala produces dehydrated ripe flakes, unripe flakes and tender jackfruit. The dried tender jackfruit lasts for six months. The other products have a shelf life of one year.

"Just re-hydrate the jackfruit flakes by soaking in water for a couple of hours. Then you can use it for any dish," explains Joseph Lukose, the brain behind this pioneering work. A food grade drier is a must. "If community driers can be installed, we can utilise all jackfruit," he says.

One Professor Lokaras has developed a unique food grade drier, which runs on farm waste like coconut husks and dried twigs. Apparently more than 3000 such driers are functioning in Karnataka and a few in Kerala.

Rural Enterprises Network (REN) in Sri Lanka is another pioneer in dried jackfruit. Unripe flakes are dried through driers in 10 centres. The product is sold locally and exported to Europe. To popularise its product, REN conducts cookery shows.

Individuals too are boosting the popularity of the jackfruit. Geetha N Bhat, a housewife in Sagar, Karnataka, knows 250 jackfruit recipes and demonstrates her knowhow on local TV channels. In fact, chefs at Jack Fairs have been showing how practically the entire jackfruit can be cooked.

Dr Usha Ravindra, Assistant Professor at UAS, can serve up over a dozen products like jam, khara sev, shankara poli, papad all made from the fruit's white fibre which is generally thrown away. Premkumar Krishnan Nair, senior lecturer, Oriental College of Hotel Management, Lakkadi, Kerala, is visibly excited about jackfruit seed. "It's a wonderful raw material. We can use it instead of expensive cashew nut in some preparations."

His students have made jackfruit seed burfi, jackfruit honey, jackfruit preserve. "Though the scope for including jackfruit in our cookery classes is limited – the curriculum is produced by the university – I can very well demonstrate it in the ethnic cooking section."

KING OF FRUIT: "Jackfruit is the real Kalpavriksh. It can fulfill the hunger of an entire family. We should declare it our national fruit," says KR Jayan, who is doing a jackfruit tree planting campaign. He has planted 4,000 plants in his home district of Thrissur and he intends to plant one lakh in his lifetime.

Jack Fairs are also growing in popularity. Eleven were held in Kerala and Karnataka this year. People vied with each other to eat fresh jackfruit and buy grafts.

"I'm told in India that mango is the king of fruits. In Southeast Asia it is durian. Others argue that mangosteen is the king. In Hawaii, Ohelo berry and poha are considered kings," said Ken Love, Executive Director, Hawaii Tropical Fruit Growers while inaugurating the Wayanad Jack Fair. "I am of the opinion that if all these are kings, then jackfruit is the kingmaker."

Spread over two years, Love's group gave jackfruit products to 650 respondents at farmers' market and sought their opinion. "Around 80 to 85 per cent of white people liked it. Many of these respondents were tasting jackfruit for the first time. Unfortunately, there is no effort to cater jackfruit to them."



Dr K Narayana Gowda

Jack Fairs are growing in popularity. Eleven were held in Kerala and Karnataka this year. People vied with each other to eat fresh jackfruit and buy grafts.

Business

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A water harvesting company

Green Systems brings value to enviro advice

Civil Society News

New Delhi

SEVEN years ago, Varun Mehta looked around him in India and thought that environment management was the right business to be in. He could see water running out and pollution growing. Laws had become stricter, but compliance was lacking. Companies were getting a bad name for what they were putting into rivers or the air or just pumping back into the ground. The lives of ordinary people were being affected and health concerns were mounting.

Green Systems was set up in the belief that a small business with a clear mission could deliver honest advice, make a difference and be satisfying to run. It was a model different from most. It saw environmental problems both as a concern and an opportunity.

A lean and spirited company with expertise could help corporations with mega footprints clean up their act. The result would be a serious reduction in the environmental costs that get passed on to society. A small effort could have big results. A limited investment could deliver substantial social returns.

The company set out to offer a range of services in water usage, advice on carbon trading and assessment of environment impact. But it is in rain water harvesting that it has great stories to tell.

Mehta wanted Green Systems to mirror his concerns and sensitivities. At a personal level he had begun to abhor the way resources were being squandered and the planet scarred.

With an MBA in finance, Mehta, 36, had been an investment banker in Australia. His family in India has a prosperous business in automobile parts. But he wanted to do something very different.

"I did not feel I belonged on a factory floor making automobile parts. Simultaneously I could see around me the environmental degradation that was taking place and how wastes were being disposed of. It is alarming the way we are drawing on groundwater and borrowing from future generations," says Mehta.

He felt he could make good practice profitable and change the way companies complied with their environmental responsibilities. The results of such



Varun Mehta

an approach are interesting.

Over the years Green Systems has arrived at annual revenues of Rs 2 crores with a margin of 20 per cent. But the impact Green Systems has is much bigger. It has helped companies put billions of litres of water back into the earth and changed the way in which many of them approach water management.

Its clients include Jindal Steel and Power, Honda, Hero Honda, the Taj Group, the Oberoi, Louis Berger, Maruti, Bharti Airtel, the Ambience Group, Munjal Showa.

Green Systems succeeds in reaching out to companies that have a poor environmental image. Some of them have been seen as being beyond reform. For instance, Jindal Steel faces much criticism for drawing groundwater and siphoning off the flow of a river to meet the gigantic water requirements of its plant at Raigarh in Jharkhand. It

has been locked in confrontation with activist groups.

But since 2002, Green Systems has helped Jindal Steel put in place different types of water harvesting measures at the Raigarh plant. There is a rooftop system which collects the rain and takes it into the ground. There are eight ponds on the 2,500 acres of the plant site.

However, really innovative work has been done with a channel which runs through the steel plant's land. The channel overflows during the rains, often flooding the company's airstrip.

Green Systems has created a water harvesting system that takes away this overflow and puts it underground. So, what was water going waste is now saved.

The result of these measures is that the water table at the Jindal plant has gone up. Initial investigations show that the rise is substantially beyond

Organic lifestyle at Dubdengreen

LAKSHMAN ANAND

Vidya Viswanathan
New Delhi

A young Italian lady has just moved to Delhi and is looking for healthy food for her baby. She gets into a Googlegroup called Delhibabies online and searches for an organic food shop. She comes across the name Dubdengreen and finds her way to the store.

Turns out Dubden is an organic minimart located between historic ruins and an electric power substation in Shahpur Jat, south Delhi. It is run by Ganesh Eashwar and his wife, Jayashree.

Grey-bearded, bespectacled Ganesh spends 15 minutes showing the lady around. The store stocks all provisions – rice, lentils, spices. It has hand rolled tea, organic clothing, chemical-free easy to make soups and health products like flax seed oil. The store stocks its own brands – Dubdengreen and Organic Bounty – and other brands like 24/7 Letter Mantra and Organic India.

Eashwar tells the lady everything in the store is available online. She could place orders from home. She could get organic vegetables twice a week and organic milk every day. He assures her that if there is something she wants that is not stocked, he could try and get it for her.

"Sometimes we spend an hour or an hour and a half with walk-in customers," points out the elegant Jayashree. She says talking develops a relationship with customers.

"We help them understand food," says Ganesh.

About 50 per cent of Dubden's customers are expats. "We expected a 60:40 ratio of expats to Indians but more and more Indians are taking to organic products," says Ganesh. People buy organic products for their babies, or if they are ailing from cancer. Many clients have started buying all their provisions from the Eashwars.

Their company, Dubden Healthy Living's objective is to provide all products to a person keen to live an organic lifestyle. Most customers are from Delhi. But the Eashwars do dispatch products to other areas. Hotels like The Taj source products for their niche customers who notify them in advance.

Padmavati Dwivedi, founder of Society for Compassionate Living, a non-profit, is one happy customer. She wanted to move to organic food several years ago but kept putting it off till her mother's cancer illness forced her to switch. Padma was looking at that time for an alternate therapy. She got in touch with Abi Masfield who had made a film on how to treat cancer with alternate food. Abi's mother had succumbed to cancer while her father recovered because he was on an organic diet. Padma found Dubdengreen on the Internet.



Ganesh and Jayashree Eashwar at their organic store, Dubdengreen.

She now buys 80 per cent of her provisions and all her vegetables from here.

What makes customers like her loyal and create word-of-mouth publicity, is Dubden's customer service. "It is simply excellent," says Padmavati. "All their products are wrapped in paper. I leave a labelled jute bag here and my provisions get delivered to my home in Greater Kailash. Their billing is very accurate. I often leave money with them. Every Monday and Thursday I get a call from the store asking me for my vegetable orders for the next day even if I forget."

All products are tried out by the Eashwars at home before being placed for sale in the store. "We know that the organic hand-rolled tea in our store tastes good. We sourced several samples and tried each one," says Jayashree. "At breakfast, we discuss lunch and at lunch we discuss dinner. I believe you are what you eat."

Prices at Dubden are reasonable when compared to branded products. The store stocks 12 varieties of rice. Ponni rice costs Rs 40 a kilo. From a south Indian store in Delhi it would cost around Rs 22. "Compare our rice with branded rice, not rice from a sack. The cost of certification, processing and packaging are factored in. Hence products are marginally expensive," says Ganesh. Padma points out that Dubden's winter vegetables bought in summer are cheaper than what is available in Delhi markets.

The shop in Shahpur Jat is large but the space to

browse is small. That's because the Delhi Government's ceiling drive permits use of only 200 square feet, like a *kirana* store. The larger space is where food is packed and orders fulfilled.

"Everything we label organic is certified organic. If it is not certified we label it 'traditionally organic'. If we know that the product is healthy and has no chemicals but is not organic we label it 'natural'," explains Ganesh.

The Eashwars started their organic store in 2003. Ganesh spent many years in advertising. Jayashree used to be an editor with a publishing house. She has worked as a market researcher. She used to write a nutrition column in the Living Media Group's *Prevention* magazine.

The two met in the seventies. "We had thought we would like to give back to Earth. We could see that the environment being destroyed..." They got into setting up an organic store because they felt that was the weakest link. Customers could not find products to sustain an organic lifestyle. NGOs and farmers could not brand and sell.

Twenty-one years ago, when the Eashwars were in high profile jobs, they bought a piece of barren, rocky land outside Bangalore at Rs 15,000 an acre. "I studied at Frank Anthony's school in Delhi. I had seen arable land converted into colonies, so I wanted to

convert barren land into arable," explains Ganesh.

The soil was studied. Rain-fed crops and leguminous crops were planted. Trees native to Bangalore were raised. "We now have 10 acres which we bought little by little with our savings," says Jayashree. Many years were spent restoring the earth with Jayashree planting each and every plant and tree.

Slowly they started growing vegetables which they would give to friends. NGOs and large stores were contacted to sell the organic vegetables. But the stores would give them very little space.

It was a tough life. They would go to the farm on Saturdays, work till late night at their home in Bangalore and then take the produce to an NGO bazaar on Monday evening. The Eashwars then started processing food from the farm. They made jams, squashes, pickles and peanut butter. They got AWAKE, a women's co-operative to process the products, but stores were not willing to stock and sell. "That is when we realised that marketing was the most critical aspect," says Ganesh.

In 2000 they moved to Delhi. Ganesh got an offer to be a consultant with a dot.com but it went bust in 2003. That is when they started a store with big plans. They have been facing the usual problems that bedevil small businesses.

There are no regrets, though. "The life we are preaching is the life we have lived," says Jayashree.

expectations. But since this is a huge jump, Green Systems wants it to be independently audited before making the figure public.

"Companies either want a green image or need to meet their legal requirements. There are others whose operations are threatened by a rapidly falling water table. A few feel deeply about the environment," says Onkar Nath Tiwari, Green System's senior manager for water resources and renewable energy.

Green Systems, says Tiwari, tries to give advice that has the maximum impact over the long term.

It doesn't encourage companies to take the easy way out. Its water harvesting systems are designed to last 40 and not just one or two years. There are many complexities in working at factory sites. One has to be careful about putting impurities back into the ground.

On the other hand Green Systems sometimes finds solutions that are cheap and linked to the topography of a location. For instance, at the steel plant Jindals are planning on 25,000 acres at Angul in Orissa it had been decided to sink a hundred or

LAKSHMAN ANAND



Onkar Nath Tiwari

so borewells to meet the construction requirements of the project.

When Tiwari visited the plant site he found that there was enough water in streams coming down from the surrounding hills which could be used for building the factory. The streams were one and two metres wide. Jump-walls could be used to divert water into ponds without substantially interfering with the flow of the stream.

"If they use these streams and manage their flow well, there will be no need to dig the borewells," says Tiwari.

The result is that instead of spending Rs 1 crore, Jindal Steel will now be spending Rs 25 lakhs. The plant will also not be drawing on groundwater.

At Haridwar, eight ancillary units producing auto parts needed to create water harvesting structures as part of the Uttarakhand government's requirements. Green Systems was hired by one of them.

Tiwari recalls that the Uttarakhand regulations required ponds to be created for watering green spaces. "We pointed out that it was important to raise the groundwater levels in the area. There was

little point in having the ponds for maintaining gardens."

Green Systems suggested an alternative model in which harvested rain would be put back into the ground. The matter went up to the Uttarakhand authorities who finally agreed that this would be better than the ponds and gave their approval pending a change in the rules. "After that we were hired by all eight ancillaries," says Tiwari.

At Pantnagar in Uttarakhand it was different story. Here too the law makes water harvesting mandatory. But when Green Systems was hired by Roop Polymer to propose a system, Tiwari found that water was available at a depth of just three metres. There was no need for water harvesting and making ponds. Finally, the authorities decided to waive the stipulation for the time being.

One of the reasons for Green Systems' success is that it is flexible and not judgmental. It is also immersed in a genuine concern for the environment. Tiwari's own background is finance. He has a B. Com from Burdwan University in West Bengal. He joined Green Systems as a management trainee but became fascinated by water and its efficient use. "Since we can't do without factories it is better to help them with conservation measures," says Tiwari.

He casts his net wide in his search for solutions. It is this that took him to the Gandhi Peace Foundation and Anupam Mishra, India's foremost authority on traditional water harvesting structures. Tiwari wants to explore how modern usage can be made more sustainable by older practices.



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India's dirty waters

RAVI AGARWAL

THE creek at Bantala just outside Kolkata is beautiful and red. Damp brown mud and verdant grass make the landscape unreal, saturated with hues. Except this is the backside of some 500 leather tanning and processing units. Their effluents have evidently been treated by a Common Effluent Treatment Plant!

The creek waters are probably laced with hexavalent chromium, a deadly toxic, and an outcome of tanning leather. A wiry farmer, points to fields all around. Nothing grows here any more, the land has become barren, the frogs and fish died, he bemoans. A bloated rotting water snake floats by. A chemical stink hangs heavy in the monsoon air.

At another site in Dinapur, near Varanasi close to the mighty Ganges, farmers grow vegetables for local markets. They irrigate their fields mainly from water supplied from the effluent treatment plant. The vegetables are laced with heavy metals like lead and cadmium from the effluent, a recent study reveals.

In Delhi, India's capital, the Yamuna's riverbank is where the city's vegetable garden lies. Acres of land cultivated round the year yield radish, okra, spinach, tomato, melons, brinjals, all consumed by the city on a daily basis. The irrigation water is black and froths white foam as it is pumped up from the river. Those who live along the Yamuna's shores narrate how they have seen the river turn from transparent blue, to murky grey and now to sheer black, along with an unbearable miasma. This is also the water the city drinks.

In distant Gujarat, near Surat, sugarcane fields use the untreated effluents of sugar mills to water their crop. Further away in Andhra Pradesh, at Patencheru near Hyderabad, a study published by a Swedish institute (2009) shows that the 90 pharmaceutical units there have been pumping 21 different pharmaceutical ingredients into the stream. "If you take a bath there you can have all the antibiotics you need for treatment. But for how long?" asks the German expert involved in the study. The Prime Minister's Office has ordered an enquiry.



Bantala creek

RAVI AGARWAL

The story repeats itself around the country. The list is endless, the problem omnipresent. India's waters are clean no more. Dye industries in Panipat, Gujarat, Rajasthan, leather industries in Kanpur, West Bengal, Tamil Nadu, pharmaceutical industries in Andhra Pradesh, fertilizer and coal industries in Orissa, petrochemical industries in Assam, Gujarat and West Bengal, chemical industries in Maharashtra and Gujarat, paper and pulp industries in Haryana, to name a few, are releasing their deadly toxics into drains.

The Central Pollution Control Board (CPCB) has listed 22 critically polluted areas in the country. There are probably many times that number. The Ganges, the Yamuna, the Damodar, the Periyar river, you name it, are all polluted, some with water unfit even for irrigation, the lowest acceptable quality of water as per our laws. Hundreds of smaller rivers, streams and lakes which feed into these rivers contain even more concentrated pollution loads.

Meanwhile urbanisation is relocating almost half of India's population into cities as the great transformation from a rural to an industrial society gets underway. Most of our cities lie along fresh water lakes or rivers, both big and small.

Take Delhi. The river enters the city at the village in Palla, and runs almost 20 km before it enters urban Delhi at the barrage at Wazirabad, where a drinking water treatment plant is located. The water

here is already laced with pesticides and industrial waste from upstream towns and fields in Haryana. Here the first drain hits the river and empties black sewage. From this point, 17 more drains flush into the river as its pollution load increases many hundred thousand times till it exits the city. Downstream the river receives more sewage and other forms of pollution from towns like Mathura and Agra.

The problem is not limited to surface water. There is an inextricable link between surface and groundwater. In Patencheru, for example, wells also have colored water. It is well known that groundwater is almost impossible to clean up and it is like destroying our last

water security.

The types of contamination are manifold. There is mixed municipal sewage with mammoth bacteria counts, pesticides from agricultural runoffs, heavy metals like lead, chromium, mercury and cadmium from industrial effluents and landfills and other nasty organic pollutants, like benzene, DDT or PCBs, all present in our waters. Many pollutants cannot be seen or smelt. Water treatment plants do not have the technology to remove them and millions of people drink and use this water on a daily basis. However, there has never been a Parliamentary debate on it.

Wherever there are industrial clusters, or centres of urbanisation, the water is unusable, often polluted beyond redemption. Ironically, these are the places which provide the most economic gains. This seems to be the story of India's growing prosperity. The pattern is not just chance. It is direct evidence of the link between development and environment, making a lie of all talk of sustainability.

As a response, thousands of crores have been spent on Common Effluent Treatment Plans (CETPs), which have a capacity of over 600 million litres (MLD) per day, covering over 10,000 industrial units and Sewage Treatment Plants (STPs). Often CETPs and STPs are dysfunctional owing to lack of power, or they merely release the treated effluents back into the polluted stream. If they

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Farce of a public hearing

KANCHI KOHLI

PUBLIC participation is a much abused set of words today, bandied around with ease. These two words have lost their true meaning. Public participation has been reduced to a set of sham words, distorted and manipulated by government. It is a fraud, an eyewash being inflicted on people.

A prime example is the public consultation process prescribed in the Environment Impact Assessment (EIA) Notification.

The EIA notification makes it mandatory for public response to be sought on the EIA report that the project proponent puts forth. A 30 day notice period, advertised in two newspapers, is to preclude a public hearing and written comments on the proposed project. A detailed procedure is prescribed in the EIA Notification, 2006. This requirement was made a necessary part of seeking environment clearance in 1997 at a time when the original EIA notification, 1994, issued under the Environment Protection Act, 1986, was operational.

But the experience with public hearings has been marred with disappointment, conflict and sometimes even violence. Anyone remotely familiar with the way public hearings have been conducted as part of the environment clearance process knows of their ills.

These problems are primarily threefold. First, there is the inability of the district administration to create an atmosphere for a free and fair public hearing and make available necessary documents much before the hearing.

Secondly, public hearings occupy merely recommendatory space and have limited bearing on final decisions related to project clearance. Thirdly, impact assessments are shoddy and project reports are extremely inadequate, incomplete and biased.

One recent public hearing in Chhattisgarh seems to have beaten other hearings in making a complete mockery of participatory decision making. A public hearing for a 1200 MW thermal power plant proposed by M/s DB Power Ltd, held on 30 June, lasted for just 20 minutes!

"Over 1000 persons had gathered to raise objections because the public hearing was organised by the district administration 35 kilometres away from Badadarha village, Tundri, in Janjgir-Champa district of Chhattisgarh. Despite this, the public hearing started at 12 pm and closed at 12:20 pm," said Ramesh Agrawal of Jan Chetana, a social and environmental action group in Chhattisgarh.

Details from Jan Chetana and the local media indicate that there were protests and demands for a postponement so that a genuine public hearing could take place following due procedure and

public participation. This demand was loud and clear. Yet, the district collector and the presiding officer, SK Chand, concluded the proceedings of the public hearing. They did it stating that since no person was coming forth to speak specifically about the project, there was no point in continuing the public hearing. This, without ascertaining



Public hearings have been marred with disappointment, conflict and sometimes even violence. Anyone remotely familiar with public hearings knows of their ills.

the fact that conducting a public hearing far away from where the impact of the project will be felt goes totally against the spirit of the clauses of the law.

The EIA notification clearly states: "The Public Hearing shall be arranged in a systematic, time bound and transparent manner ensuring widest possible public participation at the project site(s) or in its close proximity District-wise, by the concerned State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC)." Perhaps the concerned officials need to be reminded of these requirements and told their actions are making a complete mockery of a process deemed by law.

Local newspapers covered the issue the very next day. On 1 July, the Hindi newspaper *Chhattisgarh* reported: "As soon as the public hearing began, villagers vociferously protested

and shouted slogans. They said we will give our lives but not our land. The authorities asked the villagers to come forward and submit their objections. Some villagers came forward to state their objections and to cancel the public hearing. But the district administration disregarded these objections and closed the public hearing." The district collector and the project proponents refused to comment when questioned by the reporter. "They were gleeful that the public hearing is complete and no second public hearing will be conducted," the newspaper said.

Ramesh Agrawal from Jan Chetana said local villagers have written to the Union Minister for Environment and Forests, Jairam Ramesh, expressing their shock and disbelief at the mockery of a public hearing. One 2nd July 2009, a letter from Jan Chetana was also sent to the minister. It received a response which said: "Many thanks. Let me see what I can do and revert."

The dichotomies that plague our regulatory regimes cannot be ignored anymore. On 1st July, the MoEF issued a press release seeking high

standards of transparency by announcing its new improved website where concerned documents will be available for download. But, on the ground, the most fundamental issues concerning public hearing processes continue to fester. In fact, with an increased push towards project clearances, the problems have only increased.

So, even as we look for the minutes of public hearings, clearance letters to begin appear on virtual spaces. The villagers of Janjgir are deprived of current mandatory requirements by public authorities. The EIA notification, 2006, in clause 6.4 clearly states, "every person present at the venue shall be granted the opportunity to seek information or clarifications on the project from the Applicant. The summary of the public hearing proceedings accurately reflecting all the views and concerns expressed shall be recorded by the representative of the SPCB or UTPCC and read over to the audience at the end of the proceedings explaining the contents in the vernacular language and the agreed minutes shall be signed by the District Magistrate or his or her representative on the same day and forwarded to the SPCB/UTPCC concerned."

Perhaps the concerned officials in Janjgir did not feel it necessary to do so before they decided to pack up and leave.

This 20-minute farce of a public hearing is just one more addition to a long list of public hearings that have made an utter farce of fair, just and transparent environmental decision making.

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Do rivers have enough water?

HIMANSHU THAKKAR

THE Central Information Commission's (CIC) order said: "In my view any study about water-flow in the river systems of the country must be made available to the general public for its information and education. It is not open to the public authority to hold secret critical information with which lives of millions may be related. Publication of this data informs the people about how the public authority is discharging its appointed functions and whether it was acting accountably about a matter so critical as the nation's water resources in general and the river systems in particular."

Following an appeal by Swarup Bhattacharya of the South Asia Network on Dams, Rivers & People (SANDRP), the CIC has asked the Ministry of Water Resources (MWR) to make public the reports of the Central Water Commission (CWC) and the National Institute of Hydrology (NIH) on the impacts of hydropower projects on the Bhagirathi River in Uttarakhand. For the portions that the ministry decides not to make public, "Reasons for holding these parts of the information confidential will have to be recorded, which should be open to scrutiny." This is to be done three months from the date of the order.

The CIC order dated 8 June (<http://cic.gov.in/CIC-Orders/AT-08062009-09.pdf>), followed a hearing at the CIC on 2 June, where my colleague Swarup Bhattacharya and myself represented SANDRP.

Vinay Kumar Sr. Joint Commissioner (Policy & Planning) represented the MWR. The concerned Appellate Authority is Comm. (PP) M E Haque.

FACTS OF THE CASE: On 15 October, 2008, SANDRP had filed an RTI application with the MWR on the issue of the impacts of the hydropower projects on the Ganga. The MWR accepted that the CWC and the NIH were asked on 9 July, 2008 to submit reports in one month on the impacts of hydropower projects on the hydrology and ecology of the river and hill areas. The MWR had asked for these reports following a letter of concern from Sonia Gandhi, chairperson of the UPA to the



Dried bed of Ganga

The water resource establishment has zero value for rivers with freshwater. Most rivers in India have already been killed

then Union Minister of Water Resources, Prof Saifuddin Soz. However, MWR refused to provide copies of these reports, first saying "the reports have not been accepted by the Ministry and these are under examination of MWR." On appeal, the Appellate Authority gave a new reason for not making the reports available: "Since the specific reports submitted by NIH and CWC to the Ministry include classified data of Ganga Basin, it would not be possible to make available copies".

This was indeed a very shocking state of affairs. The Ministry should have taken up studies on the impacts of so many hydropower projects on any river, on its own. It did not do that. When this becomes an issue of public concern following serious impacts of the projects on the people, river and the ecology, it still does not take any action. Then, when the UPA chairperson writes to the minister, the MWR does ask for the studies, but does not make them public on its own and refuses to make them public even under RTI. Considering the seriousness of the issue, SANDRP approached the CIC. Following an appeal on 19 February this year, the CIC heard the case on 2 June, and issued the above mentioned order.

CIC CRITICAL OF THE MWR: At the hearing on 2 June, before the Information Commissioner, A N Tiwari, the MWR officials could not even reply, "when it was posed to them that water was a crit-

ical resource which was getting scarcer by the day and the citizens of the country were entitled to know as to what was being done (by the MWR) to ensure that the river systems that sustain much of the life of the country should not run dry". Therefore, CIC observed in the order, "However, they were unable to state what part of that inter-ministerial responsibility befell on the MWR." The MWR officials were trying to pass the buck, but they were unable to state what the MWR itself was doing to ensure that rivers in India continue to have freshwater flows.

In fact, one of the questions in SANDRP's RTI application was, "What action has the Ministry of Water

Resources taken in the past to ensure that rivers in India have freshwater all round the year?" The MWR response in this regard exposed the Ministry, "Water Resources projects are planned, implementation (sic) and operated by the respective State Governments." What this reply said was that the MWR was doing nothing to ensure that rivers in India have freshwater all round the year. On top of this, the MWR is not even making the basic information of water flow in rivers in India public.

We hope that following this CIC order, the MWR will review its information disclosure policies and proactively make available all hydrologic information, including river flows, siltation rates and similar information suo moto on its website and in other forms. For the information that it cannot make public suo moto or through RTI, it should list such categories and provide justifiable reasons for not disclosing the information. MWR cannot withhold all hydrologic information for all international rivers, under the garb of international rivers.

This whole issue reflects the callousness of our water resources establishment towards transparency and more importantly, towards the rivers of India. The water resource establishment in essence, has zero value for rivers with freshwater flow. Most rivers in India have already been killed by dams and yet we have no policy for rivers, either to ensure continuous freshwater flow in rivers, or to protect some rivers in each state as 'no go' zones, where no projects like dams or hydropower projects are allowed. It is high time we work in that direction. No food security laws will help if our water security is in jeopardy.

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Lighten the load on women

Dr DK GIRI AND PATRICK KOOHAFKAN

THE Vashistha Smritia, a sacred Hindu text, teaches that to not have a son is a curse upon a person. This statement alone carries more power in rural India than any of the reports warning of climate chaos if the country's exploding population isn't brought under control.

It is inevitable that in Indian rural communities preoccupied with survival, a child will be viewed to a large extent as an investment. A son comes with a host of perceived benefits, while a daughter brings none. Once married, daughters are considered the property of their husband's family, even though it is her family that is required to pay the dowry. A son can freely work and support his parents in their old age.

As a result, Indian women living in traditional communities are frequently forced to bear child after child until enough sons are born to satisfy the husband. What's being overlooked is how this makes women's rights an environmental issue.

India has an estimated annual birth rate of 25,997,400. Sustainable development is the holy grail of environmentalism and the only solution to our climate change problems. But overpopulation will swiftly crush the sustainable development dream. To cut India's birth rate, we must combat the misogynistic traditions that make sons more special. Such a cultural campaign would appear to be the only solution in a democracy that cannot stomach China-style enforced population controls.

The majority among those battling for sustainable development and the mitigation of climate change hardly consider women's rights to be an environmental issue. But if Indian parents could learn to be happy with one or two daughters, then population growth would be curtailed and the depletion of our ecosystems would be dramatically slowed. We live in a finite world with finite food,

water and fuel resources. Rapid deforestation is taking place throughout the world to satisfy the fuel and living space desires of an expanding human race.

When we come to understand that climate change is a feminist issue, other revelations emerge. We realise that environmental degradation is not simply a question of industry and corporations visiting a terrible problem upon the little people of wider society. It is a problem linked to the sublimation of women by men at every end of society's spectrum, urban and rural, rich and poor.

We also realise the origins of climate change can be traced back much further than the Western world's Industrial Revolution two centuries ago. The origins lie in thousands of years of exploitative patriarchal traditions. Only now are the effects of these traditions upon the planet's ecosystems reaching a tipping point.

Many NGOs involved in women's rights in India face great challenges. Organisations that encourage women to stand up to their fathers and husbands are sometimes perceived as colonial invaders intent on imposing urban Indian or Western values on traditional cultures. Traditional Hindu society is so powerfully patriarchal that its men are not about to be bullied into respecting women. It is in scriptures alone that women are given similar status to goddesses. It would seem the only viable solution is one that offers an incentive for men to change their attitudes towards females.



Of course, this sounds about as naive as the idea that women can easily gain more rights simply by demanding them. It begs the question of what on earth would entice anyone to give up power and authority? Outside the realm of ethics, what practical motive could any man possibly have for allowing his wife to ignore his commands, or even potentially divorce him?

The answer lies in economics. If a woman has less children, she is more free to work. Families stand to greatly benefit from women having the same

potential income as men. This would be much more efficient than men forcing their wives into the trial-and-error method of trying to bear a son. History teaches us that women's rights come as a package deal; with a woman's freedom to pursue a career comes more political power and greater respect. Their emancipation begins by allowing them power over their reproductive organs. Not only women but our natural environment would also be freed from a spiraling human population.

In his 2008 book, *More: Population, Nature, and What Women Want*, Robert Engelman quotes a campaigner who told him this: The environment begins in the womb of a woman and ripples out all over the world. Engelman argues that women don't want more children. He says that instead they want more for their children. Fathers across India must be encouraged, warmly, to adopt this approach as well. We all stand to benefit.

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do work, the hazardous sludge is left lying around. Elsewhere, effluent pipes transport pollution far into the sea, creating dead zones and playing havoc with marine life.

Environmental destruction creates furor and attracts new money and new budgets. Several thousand crores have been spent on the Ganga and Yamuna Action Plans. The Ganga Action Plan has been elevated from a 'Plan' to a 'Directorate' and now there is the National Ganga River Basin Authority with an annual budget of over Rs 500 crores this year. On the river Yamuna over Rs 1200 crores has been spent, partly through Japanese assistance. Meanwhile the river has become blacker and blacker. Money can lead to dark consequences it seems. There is no point in allocating budgets if these are not transparently spent and monitored. It is better to save tax payers money than line the pockets of unscrupulous operators.

However, it is not only a question of bad governance. There is complete lack of caring about water

pollution and its devastating effects on human health and ecology. No politician makes a big deal of it. Probably no State Pollution Control Board (SPCB) official dares issue a 'closure order' to a polluting industry. As they say, "an order goes by speed post, but its withdrawal goes by fax."

Industry has more power with the political class than anyone else. It is an open secret that most pollution control is a sham and an eyewash. In many places industry has been intentionally pumping its toxic effluents into deep wells, rather than treating it. Despite legislations like the Environmental Protection Act, the Water and Air Acts there is failure all around. Now, instead of tightening implementation, the Government has turned to 'voluntary approaches'. It is not mere chance that SPCBs are under-funded, under-staffed and lack even technical skills to do their job. The Rajya Sabha Parliamentary Standing Committee report (2008) on the functioning of the CPCB and the SPCBs has "express(ed) its anguish over the fact that (they) have been reduced to a near defunct body."

The environment does not vote. People do. The government does not act till people die. Pollution does not always kill, it alters, and sometimes slowly. It changes life forms which live in the water such as fish, garihals, dolphins. It alters the bodies of humans who survive off them. It contaminates food by putting mercury in fish and heavy metals in vegetables and grains like rice. The state of our waters cannot be left at the mercy of those who are not willing to act.

We can do some things.

We can make environmental monitoring and regulation institutionally independent and transparent. We can shift the focus from pollution mitigation to pollution prevention through investments in cleaner technologies and processes. We can factor in costs to be borne by industry for environmental cleanups. We can examine inter-linkages between water pollution, food and health and create appropriate legal and regulatory frameworks. Else India's black waters will spread a dark death.

Ravi Agarwal is Director, Toxics Link, New Delhi

Trees are brothers

BHARAT DOGRA AND RESHMA BHARTI

THE protection of forests and rivers is at the heart of protecting the ecology of the Himalayas. But any long-term, sustainable effort must include the concerns of people living near forests and rivers. The welfare of people must be linked to efforts to save forests and rivers. Only deeply motivated people can provide the wide base for social action to protect rivers and forests from the onslaught of exploiters. At the same time, it is equally true that only the protection of forests and rivers can provide the foundation for sustainable development of hill-villages, not just from a narrow economic perspective but from a social-cultural viewpoint.

The strength of the Himalayi Paryavaran Shiksha Sansthaan (HPSS) is that its work is rooted in an understanding of the links between the protection of rivers and forests and the sustainable welfare of the people. Deeply committed to the protection of rivers and forests, the HPSS does not talk of this issue in isolation but relates it to the aspirations of the people for sustainable livelihoods and the welfare of their villages. The HPSS gets enormous strength from the strong feelings of hill women for protecting their villages and livelihoods, which is, in turn, closely related to the protection of rivers and forests.

One of the most important movements for forest protection in the Himalayan region in the post-Chipko phase was the Raksha Sutra Andolan (Protective Thread Movement). While people, particularly women from several villages, near and far, took part in the movement at various stages, the HPSS and its president, Suresh Bhai, played a key role in nurturing and sustaining the movement.

The movement partially draws its symbolism from the famous festival of Raksha Bandhan in which sisters tie protective threads on the arms of their brothers. Similarly, women went to forests where trees faced the threat of being axed, and tied protective threads on their trunks to symbolise their determination to protect them.

This Raksha Sutra Andolan can be traced to 1994 when during the uncertain period of the movement for a separate state, some strong vested interests conspired to cut down a whole lot of trees. The Chipko movement had resulted in government orders which prevented the commercial felling of green trees more than 1000 metres high. However, some exceptions were made for axing dead and dry trees. A few corrupt officials used this exception as a subterfuge to mark even green trees for felling. It was at this stage that activists and villagers got together to prevent such illegal tree felling. HPSS managed to obtain official papers relating to tree-marking (for felling) in various areas, and when groups of people inspected these areas, it became clear that actually green trees were being felled in the name of dry trees.

The Raksha Sutra movement started in Riyala forest of Tehri district, located at a height of about 10,000 feet, in September 1994 when villagers of



Women tie rakhi on trees in Uttarakhand

This Raksha Sutra Andolan can be traced to 1994 when during the uncertain period of the movement for a separate state, some strong vested interests conspired to cut down a whole lot of trees

Khwara, Bheti and Daalgaon with their drums and bugles marched to the forest and women tied sacred threads on trees marked for felling. The Forest Corporation had cleverly given tree felling contracts to influential local villagers including village pradhans so that people would have to confront government authorities and influential local people. Deep inside the forest, however, villagers were able to build up enough pressure so that workers from distant Kashmir stopped the work of felling trees for some time.

However, next year in 1995, around early July, news began reaching activists that tree-felling in Riyala was starting again. A lot of preparation was made to confront the new challenge by holding environment camps in villages like Genvali, Jyundana, Chaili and Sand and by obtaining information on the extent of felling work. On August 10 and August 11 about 300 women tied protective threads on trees and chased away tree-fellers.

Most of this mobilisation was taking place at a

height of around 10,000 feet. Soon these remote forests were reverberating with slogans of forest protection.

*Forests survive, the nation survives
Every village thrives*

In Chauranghala area, Jethi Devi of Chaundhyaar village and Mandodri Devi of Dikhoti village climbed on a truck which was taking logs of felled trees and did not allow it to move till a decision was taken to stop the felling of trees.

Subsequent investigations by activists revealed that entirely illegal tree felling was taking place. Efforts were made to prepare detailed, well-researched reports. These were made available to senior government officials and media and grassroots efforts were intensified to mobilise people for Raksha Sutra. The Himalaya Seva Sangh in Delhi helped the activists to draw wider attention to illegal tree felling. The movement received a boost when several forest officials were suspended due to their involvement in illegal tree felling.

The movement for forest protection emphasised the role of forests in protecting rivers as evident from this key slogan:

*If trees are high,
Rivers, glaciers stay pristine*

As numerous dam projects including tunnel dam projects were started or announced in this region, it became clear that the future of free-flowing natural rivers would be greatly endangered. In many villages, affected by dam construction, the lives and livelihoods of people started getting devastated as fields and pastures were ruined, cracks appeared in houses, water sources dried up and people began to suffer from many new ailments. The threat of landslides increased. Yet, people were not able to articulate their feelings and demands freely, without fear.

HPSS helped the people overcome their inhibitions and raise genuine issues. As Pratima Rawat of Matli Village says, "It is this organisation which helped us to come out and speak about all that we had been suffering silently for a long time. Now we are more alert about the need to protect and assert our rights."

The emphasis of HPSS on integrating the protection of rivers with the emerging problems of dam affected people helped its mobilisation effort. Some activists of the Raksha Sutra movement like Basanti Negi of Harsil were increasingly drawn into the river protection movement. Women of dam affected villages also tied sacred threads on trees threatened by construction work.

Alongside, HPSS helped to repair and build about 250 traditional water harvesting structures called *chaal*. It implemented watershed protection programmes in Jalkur Valley in Tehri district and Bhagirathi Valley in Uttarakashi district.

Living

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

Plotting the city of tomorrow

Subir Roy
Bangalore

THIS is the age of the city. Jeb Brugmann, a bare-foot chronicler and theoretician of the urban revolution, explains how cities can be used to take people forward.

As incomes rise, the world is witnessing an unprecedented burst of urbanisation. Alongside, the imperatives of technology and breakdown of trade barriers have created the phenomenon of globalisation. The result is a decline in the importance of the nation-state and the rise of the city. The trend is that cities and networks of cities are beginning to matter more than country specific realities. We are firmly in the age of the city.

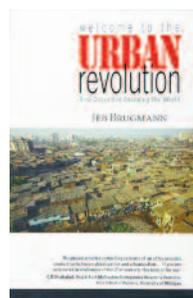
Every era produces its chroniclers and some go further, arranging facts into a theoretical framework so that they make sense and help us decide how we wish to shape our future. Jeb Brugmann straddles both. He has walked city streets across the globe for 20 years and come up with a theory of what the city means in our lives today. His recent book, *Welcome to the Urban Revolution: How Cities Are Changing the World*, puts it across powerfully - an urban revolution is on and it is cities which are changing the world.

This has greater significance for India than most other countries. Urbanisation goes hand in hand with rapid economic growth and India is in the throes of both. What is more, the urban revolution that it has witnessed till now will be dwarfed by what is coming. By 2020, India's urban population will go up by a hundred million. This means the country has to create urban capabilities for at least seven new Mumbais! How successfully it handles this challenge will determine the medium term future of India. Botch it up and you may be asking for a revolution. Handle it right and you will chart a fascinating path that lifts millions out of poverty in a democratic framework by utilising a new public good - the city.

A part of what Brugmann has to say is not entirely new, at least not to civil society folks. Put simply, they have known all along that Dharavi is not a liability but an asset. A sign that such thinking is becoming mainstream comes from the official recognition that Brugmann's work and thinking has gained. The UN General Assembly, three UN summits, and the UN Climate Secretariat have all dipped into his knowledge and insight. But



Jeb Brugmann



**WELCOME TO THE
URBAN REVOLUTION
HOW CITIES ARE
CHANGING THE WORLD**

Jeb Brugmann
Rs 399
Harper Collins

Brugmann goes a bit further. He explains why this is so and like all good academics - he is a faculty member of the Cambridge University business and environment programme - coins a handful of terms to flesh out his theory. Plus his key new idea is to define what he calls the urban strategy. This is what successful cities like Barcelona, Chicago, Vancouver and Curitiba have used to build their success.

He also differs a bit from civil society folks. So while he has a clear idea of what's good and bad, he is unwilling to be normative when it comes to laying down a roadmap. Instead, he identifies a collaborative process by which cities can become success-

es. He terms those that have succeeded in doing so, "the strategic cities". By adopting this process a city will be able to evolve a vision and strategy for its uplift (not the Indianism "upliftment" which he very fondly uses within inverted commas several times).

We are in the revolutionary process of reorganising society by urbanising it. This is the material dimension of globalisation. So we have to develop a new understanding of shaping globalisation. Planning has limited effect. You cannot plan informal settlements. Marginalising the informal sector has led to political upheaval.

"We need a new urban strategy to shape our urbanisation. At the heart of urbanisation is an economic public good and economic advantages from an urban location," says Brugmann. "For a city to successfully go forward, innovation is needed to align the interest groups that reside in it. Then, institutional legitimacy follows."

Slums left to develop on their own become high density residential-industrial districts where informal sector enterprises scale up. This leads to problems of sanitation, environmental quality,

Continued on Page 30

Continued from Page 29

etc. "Dharavi is one of the few large slums in the world that has been able to mature, as also the slums in Rio," he explains.

Traditionally, society thought slums simply needed to be cleared. But if the poor, as in Dharavi, are allowed to make their own investments while living in slums, they will raise themselves out of poverty. Therefore the need is to think differently, not evict them but provide sanitation, water supply, etc. "The starting point is design innovation to regularise. If, instead, you try to evict, you will get protracted low intensity warfare as you will be attacking the investments made," says Brugmann.

He cites the example of Vancouver, one of the best practice cases of urban regional development. It opted to concentrate employment growth in regional business centres and residential-business centres served by public transport. How do you organically link these with regular business centres? You have to convince the development industry that these regional town centres are better than the low

density suburbs. Solution: create business-residential-commercial districts or mixed use high density regional centres which represent compact growth.

"No one achieves anything unless they develop design solutions to allow competing self-interests to achieve their ends together," says Brugmann. The city is not a normative entity as it comes out of very basic motives – my advantage over your advantage. "The urban revolution is the result of the identification of manifold types of self-interest that can be better achieved in an urban setting," he points out.

The phenomenon of globalisation intervenes in this process. "People are achieving their aims by staking claims to network cities around the world. This competition is now being played out on a global scale," says Brugmann. High tech industry, as in Bangalore, is part of a global strategy for making claims on a network of cities around the world to support a global value chain. "This new global dimension is addressed by counter-intuitive bespoke solutions which are unique for each place. The strategic solution is a concrete way of doing and building things. It is not policy driven," says Brugmann.

It is very difficult to create a vibrant city via a master plan. Such entities are like neat models that economists develop with mathematics. "The city needs to be understood in game theory terms in which multiple games being played, working at cross purposes. Unless we understand the games and how each game is undermining the other game, we can't figure out how to optimise a solution. If we understand the games then we can change the rules to allow a set of games to optimise outcomes for each other. That's urban strategy," he says.

We get into trouble trying to developing cities

with master plans because they are usually for single purposes, developed in a highly capital intensive way. This prevents the organic growth of complementary activities. Such cities are difficult to adapt to new purposes when things change, as they do rapidly these days. "Yet you need anchor development projects within a site as you can't have half a dozen business districts for one kind of activity. But you also need to allocate land for complementary activities around the anchor projects," explains Brugmann.

He gives as an example his home town Toronto's dock area which first suffered an industry decline and then was identified by the government as a place to set up film studios. This was the anchor development project. But space was left for service providers, workshops for consumers and sets. Then, as employees moved in, the housing scene changed and restaurants came up. What is significant is that there was, to begin with, no master plan that provided for houses, shopping malls, etc. "There was room for dozens of different games and out of this emerged business strate-

gies," he says.

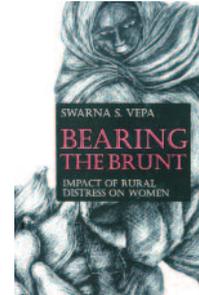
Brugmann lays great emphasis on 'modularity.' Build the city in such a way that it is extremely affordable to adapt and reuse as economic conditions change and allow different kinds of business groups to access opportunity there. If you plan in a top down manner, aligned with the interests of the development industry, you will land up in a situation where the US is today, post the housing bubble and concern over the need to cut emission levels and the cost of commuting long distances from suburbs. "In the US there is now discussion on tearing down big expensive suburban residential areas. I call them luxury residential barracks," says Brugmann.

China offers lessons, both good and bad. The good example is of Chengdu, capital of Sichuan, where there was a managed negotiation model for all the existing interests. Such dialogues yielded new solutions for old problems like a polluted downtown, slums along the river, a polluted waterfront. The city transformed its downtown to allow new business investments, the river was cleaned up, a public promenade was created and new homes for slum dwellers were built.

But elsewhere in China there was a convergence between the need to scale up, to take care of an influx of migration along with a lot of land speculation which resulted in 'show off' buildings, monument buildings with public subsidy. "The balance sheet of China is loaded with liabilities associated with this kind of massive capital intensive building. To clear the ground, they destroyed many of their most traditional forms of urbanism, the hutong, their matured version of the slum - an ecosystem for a low income population. They moved people, who lived in the hutong to high rise buildings in the periphery, and that is creating civil unrest," he says.

Brugmann lays great emphasis on 'modularity'. Build the city so that it is extremely affordable to adapt and reuse as economic conditions change

It has been



**BEARING THE BRUNT
IMPACT OF RURAL DISTRESS ON WOMEN**

Swarna S Vepa
Rs 550
Sage

WE need to wake up to cold facts. The gender gap is getting bigger. That's what Dr Swarna S Vepa, Visiting Professor at the Madras School of Economics in Chennai, warns. Her recent book, *Bearing the Brunt: Impact of rural distress on women*, is a disturbing account of how women are getting more impoverished, how their chances of survival are getting dimmer.

Dr Vepa's analysis and findings are based on hard facts. She has calculated the gender gap index at two time periods using welfare indicators and focusing on neglected aspects of gender equity. Dr Vepa examines women's work in agriculture, natural resource management and livelihood. The collapse of public services and its impact on the health of women is also researched.

Her book is full of detail and her analysis is based on solid facts. Perhaps that's why her findings will make the reader feel concern for the plight of women affected by the crisis in agriculture.

Dr Vepa spoke to *Civil Society* on her book.

In terms of priority what are the three biggest reasons you would cite for this widening gender gap?

As per statistics, the most important reasons are higher unemployment for women, fewer jobs in the regular salaried category and wage differentials. Self-employment has increased for women. Most work could be unpaid work as helpers in family enterprises. It could also be in the form of women left behind in villages managing unviable tiny pieces of land and livestock to eke out a living, while men migrate. If the unpaid status of self-employed women and the independent status of women managers are included, the gender gap would be wider than what statistics show. The major implication is not only to the present well being of women but the perceived well being of future generations and that leads to a further deterioration of the juvenile sex ratio. The worst form of gender inequity is the inequity in the chances of survival.

Most land cultivated by women is so small that it would be described as homestead. Would boosting agriculture make much difference to women's income?

I think there is a misunderstanding. The point I was trying to make is that inclusion of homestead land in the land possessed makes the number of landless appear too small, as only 10 per cent. In reality, 40 per cent are virtually landless, if we exclude the homestead land (which cannot be culti-

getting worse for rural women



Dr Swarna S Vepa

vated). This refers to both men and women. Further, land operated by women headed households is smaller than the land operated by men headed households on an average. Women manage land mostly without ownership rights, without access to technology. Most women cultivators are concentrated in backward agriculture and in hilly regions. Agricultural growth based on commercialisation, over-exploitation of groundwater, heavy doses of fertiliser and genetically modified expensive seeds will not help women farmers.

You point out that women need recognition as farmers. Should small farms in specific states be recognised as primarily a female activity and policies drawn up accordingly?

It is true that in some states and districts where men have migrated, agriculture has become a women's activity completely. In many other states it is not so obvious due to the presence of men and women. What is required is to give equal status to women who work on their own land as farmers along with men and confer ownership/possession rights. Time use surveys can be used to recognise the contribution of women to be recognised as farmers. All policies of agricultural promotion, technology transfers, market linkages, facilities of bank loans and loan waivers, should be applicable to women. Special policies may be required in districts where most

farmers are women.

Women involved in natural resource management, even by NGOs, get almost nothing for their labour. What would you suggest?

There are several problems with natural resource management and conservation by communities.



Women cannot bear the burden of unpaid community conservation work indefinitely. The cost of conservation should be recognised and provided for.

Wherever non-hierarchical communities are genuinely interested in natural resource conservation, as happens in tribal belts, the benefits of labour, the ownership of land, resource conserved and the produce grown should go to the community as a whole. In all other instances where conservation is for the public good or benefits are uneven, labour for natural resource conservation should be paid at market rates. As the need for conservation is growing, the younger generation (the so called demographic dividend) is moving away from traditional low paying activities. Women cannot bear the burden of unpaid community conservation work indefinitely. The cost of conservation should be recognised and provided for.

In terms of employment, income, access to health, education, in every way, women lag behind. What is the best role NGOs can play?

There is exploitation of women everywhere. Basically, the NGOs are people with specific skills and expertise to reach out to the poorest, the remotest, the illiterate and the most uninformed people. These workers need to be sensitised about women's rights and inequality and unfairness of the system, so that they can stand up against unfairness and exploitation and spread awareness. The rights are different in each field such as in education, health, land, water and natural resources. NGOs need to be familiar with the rights themselves.

Would you say the feminist movement has failed underprivileged women?

Underprivileged women cannot get legal protection. Violation of labour laws, minimum wage legislations, land rights, and other entitlements are common in India. Recourse to law is lengthy and expensive and out of the reach of even middle-class women. I am not an expert on feminist movements in India. I believe the feminist movement is basically different from women's public visibility or celebrating women's role, or reservations for women.

The feminist movement is a struggle for legal, social and cultural equality. We have a long way to go before we recognise the social construct that restricts underprivileged women in society.

We need to explicitly recognise the goals and systematically go about achieving them. There is potential to convert the Self-Help Group (SHG) movement into a feminist movement, which could happen with the spread of literacy and collective bargaining power.

Tea tourism and the northeast

SUSHEELA NAIR

Susheela Nair
Jorhat (Assam)

TEA tourism is the most happening thing in Assam. Intrepid tourists are making their way to verdant tea estates to savour gracious living in the lap of nature.

Foreigners arrive to trace their roots. They want to see where their forefathers spent their lives and experience the sylvan environs of tea plantations. A few days stay is like a journey down memory lane. There are others who have heard stories from their fathers and grandfathers about tea estates and are keen to experience the life of the aristocratic planter. Then, there are foreigners who come to visit old British cemeteries spread across the northeast. They prefer to stay in the tea gardens.

A stay in a heritage bungalow with a visit to a tea garden in Jorhat, the tea capital of the northeast, is an enriching experience. One can observe tea leaves being plucked, talk to the local people and learn about the fascinating bush to cup story. The visit can culminate in witnessing tea tasting sessions.

The tea industry is currently beset with problems like inclement weather and labour unrest. The tea economy is shrinking. But tea tourism is emerging as a great revenue earner. Apart from tourism, it creates awareness about good tea.

Realising the tremendous potential of tea and heritage tourism, HP Barooah, a pioneering tea planter introduced the trend of tea, heritage and colonial lifestyle tourism in tea bungalows across the northeast. A chain of heritage and tea bungalows like the 75-year old, Thengal Manor, Burra Sahib and Mistry Sahib near Jorhat and Rosaville in Shillong were given a facelift in 2001. Tourists can stay here. Currently, the Heritage North East venture is marketed by the ITC WelcomHeritage Group, which is managing 62 heritage hotels and resorts in 19 states.

Rosaville, built in 1935 by the late Raibahadur Kanaklal Barua, a prominent citizen of Assam was named after his daughter, Rosa. The architecture is neo-colonial. Rosaville has immaculate period furniture and bric-a-brac. Burra Sahib and Mistry Sahib near Jorhat are other heritage bungalows offering a taste of tourism.

There is also Thengal Manor, the ancestral property of tea planters from the Khanguja Barooah clan in Jalukonibari, just 15 km off the town of Jorhat. As you stroll through the stately white manor, you can enjoy the history and nostalgia associated with this place. A plaque at the entrance of a large porch mentions that the Assamese newspaper *Dainik Batori* was launched from here on 12 August, 1935. The walls are lined with sepia toned pictures and fascinating portraits of the family.

A lounge at the entrance leads to the imposing and tastefully furnished mansion, built in 1935. There are spacious bedrooms with carpeted floors surrounded by verandahs facing flowery, sprawl-



Rosaville, a WelcomHeritage Bungalow in Shillong



The central courtyard, a popular place to chill out

ing gardens. The plush suites with antique furniture, chandeliers, fire-places, four-poster beds with silk coverlets, wooden laundry baskets, antique desks and leather-backed swivel chairs exude colonial charm. The manor is a miniature museum with well chosen objects de art, antiques and pieces of porcelain - all from the owner's personal collection, including an ancient gramophone and a marble bird bath. The high ceilings, sprawling balconies and glass windows add to the harmony of the manor. You can lounge in the central courtyard in the evening sipping tea, reading novels and enjoy the aristocratic life of an Assamese planter in days of yore.

A ramble around the manor yields its own pleasures. After bed tea, step into the garden for a breath of fresh air. It has a variety of bloom, several species of trees and perennials. In the backyard, there are trees laden with fruit. Stop by under a leafy arbour to listen to the warble of the birds. There are two ponds for fishing and boating, a Namghar (Assamese temple) and memorials of the family. A morning walk can build up an

appetite. The manor offers a hearty breakfast of fresh fruit, marmalade, scrambled eggs and fried tomatoes along with tea and toast. The culinary delights are prepared with fresh fruit and vegetables from the garden.

There are other unique outdoor activities on offer. You can stroll from the manor to the neighbouring village of Jalukonibari. Or you can take a bullock cart ride to experience rural life. You can stop by to admire the works of master weavers who abound in this area. To get a glimpse of life in the 'bagan', accompany a plantation manager and watch tea being plucked in the early light of dawn, inspect the processing of the aromatic

buds, and exchange notes on tea tasting.

Proximity to other tourist spots is another advantage of this property. The world famous Teklai Tea Research Institute which researches new varieties of tea and studies the healing properties of green tea is close by. Another interesting halt is the Gymkhana Club, a heritage spot and known for the colourful history of its members. It is famous for flower shows, race weeks, and ubiquitous 'bar gossip.'

The first aeroplane to the northeast landed on the club grounds in 1928 to shift an ailing British lady for treatment to Kolkata. Jorhat is an ideal spot to explore several tourist attractions all within a few hours drive. One can play lord of the manor at Thengal or explore exotic sites like Majuli, the world's largest river island, Kaziranga, a World Heritage site and home to the one-horned rhino, or you can go see the ancient monuments of Sibsagar, the capital of the Ahom kings.

For reservations contact:

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Settling scores with anemia

Dr G G GANGADHARAN

GREEN CURES



In a year there are different seasons. Seasons in Ayurveda are called 'ritus'. The ritus are Varsha (monsoon), Sharad (autumn), Hemantha (winter), Shishira (late winter), Grishma (summer) and Vasantha (spring). Shishira, Vasantha and Grishma ritus are called the Adana kala. Varsha, Sharad and Hemantha ritus are called Visarga kala.

Anemia is a major nutritional problem in India and in many developing countries. In India, the incidence of anemia is highest among women and young children varying between 60 to 70 per cent. The groups with the highest prevalence are pregnant women at about 50 per cent, infants and children between one

and two years old are at 48 per cent, and adolescents make up 30 to 55 per cent.

Anemia is one of the important symptoms seen in a disease called Pandu in Ayurveda. It is a condition characterised by change in the normal complexion of the body to different colours, ranging from dull-red, pale yellow, white in successive stages. Rakta (blood) is one of the major dhatus involved in Pandu.

Excessive physical exertion, overuse of sour and saline food, alcohol, sleeping during the day and junk food lead to the vitiation of the rakta dhatu (blood tissue) and cause Pandu. A high prevalence of folate deficiency is also a universal phenomenon. Poor bioavailability of iron, hook-worm infestation, malaria, frequent and short interval pregnancies and related blood loss are some major reasons cited as the etiology for anemia. Certain conditions and activities increase the risk of developing anemia. Infants and children are especially in need of lots of iron during their intense spurts of growth. Women tend to fall prey to anemia and related fatigue during menstruation and pregnancy, as iron is lost through blood or given up for a growing foetus. Anemia is also an issue for those involved in endurance sports like long-distance running. Vegetarians often suffer from anemia because they do not eat enough iron-rich proteins. Supplementing the diet with extra iron in each case can easily prevent the problem.

Scaling of skin, excessive spitting, myalgia, swelling of orbital area, yellow discoloration of urine and stools, indigestion and tendency to eat mud or clay are some of the features that occur in the early stages of anemia before the manifestation of Pandu. Once the disease is manifested then the person suffers from giddiness, exhaustion, debility, body ache, fever, dyspnoea (difficulty in breathing), tinnitus (sound in the ear), poor digestive capacity, anorexia (lack of appetite). He/she develops edema of the orbital area, pale look, splitting of hair, loss of lustre, irritability and sleepiness.

Taking care of one's body is everyone's prime duty. Ayurveda says only a person with a healthy body can accomplish the four basic purposes of life, namely: Dharma (self-duty), Artha (wealth), Kama (sensual desire), Moksha (salvation). To attain good health it is essential to follow the rules of good nutrition, regular exercising, changing over to healthy lifestyle. Following a balanced and nutritional diet will help to avoid not only anemia but also other diseases.

One of the nutrients our body needs to create fully functional red blood cells is iron. We can get plenty of iron by eating foods like dark leafy vegetables, nuts, beans and egg yolks. Vitamin C helps in the absorption of iron hence food that contains Vitamin C like citrus fruits and gooseberry are also helpful.

The bone marrow also needs to be rich in vitamin B-12 to make healthy oxygen-carrying cells (red blood cells); as these cells are the ones that deliver oxygen to the body's tissues, and without sufficient red

blood cells, one won't get all the oxygen that the body needs. As a result, one may feel very tired most of the time. Vitamin B-12 comes from whole grains, leafy vegetables, eggs, all sorts of meat and dairy products. Getting enough B-12 can help avoid anemia and tiredness.

Pathya	English Name	Hindi Name	Kannada Name
Cereals and pulses			
Yava	Barley	Java	Barley (javae godhi)
Purana shastika sali	Old rice that which is harvested in 60 days	Shati chaval	Halaya aki
Godhuma	Wheat	Gehum	Godhi
Yusha	Gruel	Kanji	Ganji
Mudga	Green gram	Moong	Hesaru kalu
Adaki	Tur dal	Arhar / tuvar dal	Thogari / adhaki
Masur dal	Red gram	Masur dal	Masooru bele
Vegetables and fruits			
Pakva amra	Ripe mango	Paka aam	Mavina hannu
Pakva abhaya	Ripe myrobalans	Hara/peela-hara	Alale kayi
Haridra	Turmeric	Haldi	Arishina
Vartaka	Brinjal	Baingan	Badane kayi
Rasona	Garlic	Lasun	Bellulli
Patola	Snake gourd	Parval	Padavala kaayi
Dathriphala	Gooseberry	Amla	Nellikai
Vimba / Bimbi	Coccoloba indica	Kanduriki-bel	Tondekayee
Kumkum	Saffron	Kesar	Kaesari
Purana kush manda	Old ash gourd	Kaddu	Budekumbalakayi
Taruna kadali phala	Unripe banana	Kacha kela	Kaie balehannu
Matsyaksi	Water amaranth	Gudre-saag	Honagone soppu
Guduchi	Tinospora cordifolia	Giloy	Amrta balli
Tanduleeya	Spiny pig weed	Cholai	Dantu soppu
Punarnava	Spreading hogweed	Gadhaparna / purnava	Kommegida
Milk and milk products			
Takram	Butter milk	Chaach	Magheegae
Navanitha	Butter	Makhan	Bhaennae
Gritha	Ghee	Ghee	Thopa
Meat			
Jangala mamsa rasa sevana	Soup of goat, sheep, etc	Jangala mamsa rasa sevana	Nirinalli vasisuva pranigala mamsa rasa
Food contra- indicated in anemia			
Masha	Black gram	Urad dal	Uddina bele
Sarshapa	Mustard	Sarsoon / Lahi	Saasive
Ramatta	Asafoetida	Hing	Hingu
Masha	Black gram	Urad dal	Uddina bele
Sarshapa	Mustard	Sarsoon / Lahi	Saasive
Ramatta	Asafoetida	Hing	Hingu
Sheembi dhanya	Dicotyledons like beans, pulses, etc.	Dal	Kalugalu
Vegetable and fruits			
Tambula	Betel palm	Suppari	Thaamboola
Others			
Madhya pana	Alcohol	Sharaab	Madhya pana sevana
Ati ambu pana	Excessive drinking of water	Jayada pani peena	Haechu niru kudiuvadhu
General			
Tiksna padharta sevana	Use of hot and spicy substances	Tikae ahara padharta sevana	Ati kara padharta sevanae
Lavanani	Salty food	Namkeen padharta	Uppu
Amla padharta sevana	Sour food substances	Kattae padharta sevana	Hulli padharta sevanae
Guruvanna	Heavy food substances	Guru ahara sevana	Guru ahara sevana
Virrudha anna	Incompatible food	Virrudha anna	Virrudha anna
Adhyasana	Over eating	Baar-baar khana	Padae-padae tinuvadhu

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Monsoon revives, refreshes

SAMITA RATHOR

"Clouds come floating into my life, no longer to carry rain or usher storm, but to add color to my sky sunset." –Rabindranath Tagore

RAIN bearing winds engulf India from June to September creating a sensory vibration that slows down our strength and renders gentle the pace of daily regular activity.

This sensory padding makes the monsoon an ideal period to detoxify the body, mind and spirit. It's the best time to pamper yourself and take measures to drive away all those unfriendly toxins residing in your system, which could be a major hindrance in retarding holistic expansion.

Nature teaches us significant lessons all the time. The seasons are a vital part of that. Rain is a natural process of cleaning and purifying the environment. The monsoon slowdown of activity suggests that we should take time out to rethink and refurbish our existence.

The monsoon is a great time for natural treatments. The feel of the monsoon prepares the body, mind and spirit to be more open to the effects of any natural treatments and detoxification. The focus shifts from the outward to a longing for inner well being. Oil applications, steam baths and other treatments may have greater benefit and yield better effects during the monsoon months. It is simple logic. Water moistens and ripens. Moisture gives rise to softness and flexibility of the body and mind which helps to eliminate stubborn toxins more easily.

Similarly, a yogic practice, around the monsoon months brings more suppleness and flexibility to the body and mind making it far more receptive, effective and challenging. It's easier to prepare the mind for meditation during the monsoons in comparison to other seasons.

Sleeping during the day especially during the monsoon months is not recommended as it hampers the digestive process. Indigestion could weaken the thinking process as the body and mind are connected.

So, if you are spiritually inclined and don't tend

to sleep during the day, a rainy day is a gift for spiritual energies, a golden opportunity to submit to the internal.

MONSOON TIPS :

- Clear all clutter and junk in your living space. This can attract bacteria and cause diseases which may lead to deprivation of energy.
- Light incense and use natural aroma oils. These will give a feeling of warmth, act as a natural insect repellent and soothe weary nerves.
- Monsoon keeps us indoors a lot more than other season. Use the spare time to indulge in relaxation by listening to soothing music, getting a massage and fasting.
- It's far easier to contemplate and meditate once the body is relaxed. If you always wanted to

meditate, find a good teacher and begin your practice now.

- Undertake sometime to pen your thoughts. Express the thoughts bottled within your subconscious. You may be surprised at the outcome.
- Adopt a healthy diet. It is advisable to eat clean home food as eating food bought from outside increases chances of contamination. The body must experience the benefits of nutritious food.
- Those with breathing trouble must avoid proximity to damp walls as that could trigger respiratory ailments. Weak lungs slow down breathing which, in turn, affects blood circulation. It could lead to depression and lethargy which come in the way of holistic well being.
- Consumption of warm natural teas and drinks is highly recommended.
- Fruits and vegetables should be washed thoroughly especially during the rainy season.
- Wear natural fibres like cotton. It helps the body to breathe with all the moisture in the air. While doing any physical exercise, yoga or meditation, remember to dress in cotton garments. Live in union with nature's seasons. Learn lessons from nature. Utilize her positive signs and alleviate the negative. The monsoon period is the appropriate time to start afresh. Also remember what John Ruskin said: "Sunshine is delicious, rain is refreshing, wind braces us up, snow is exhilarating; there is really no such thing as bad weather, only different kinds of good weather."

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PRODUCTS

SOUP OF THE SEASON

The Foundation for Revitalisation of Local Health Traditions (FRLHT), an NGO, has been working since 1991 to revitalise India's medical heritage and make it accessible to people. FRLHT conserves medicinal plants, minerals and animals, demonstrates the effective applications of indigenous knowledge and energises social processes for transmission of traditional knowledge. FRLHT is an ISO 9001:2000 accredited organisation.

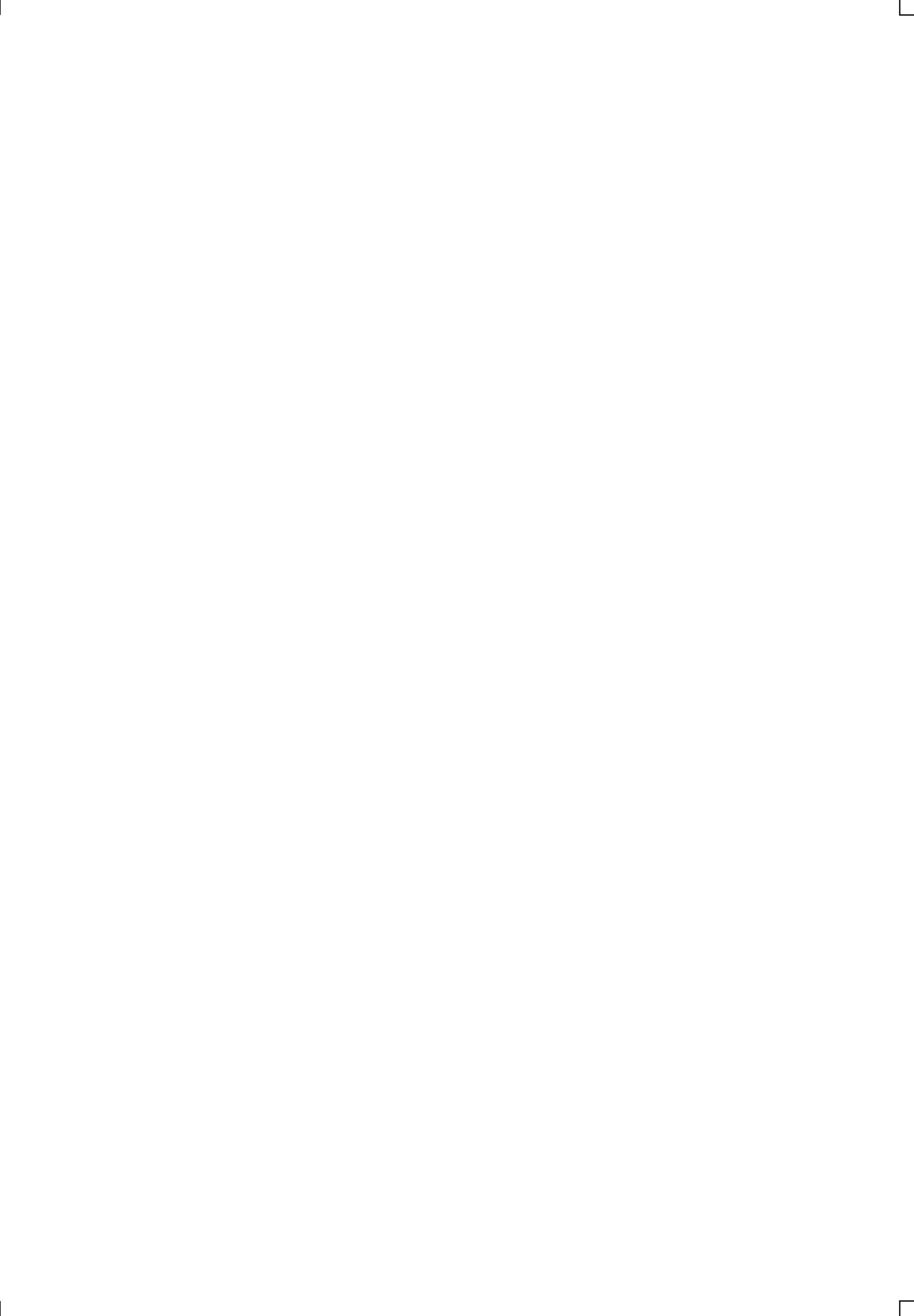
FRLHT's Centre for Pharmacognosy and Pharmaceutics, an AYUSH accredited testing and certifying laboratory has developed a range of Ayurvedic soups and drinks.

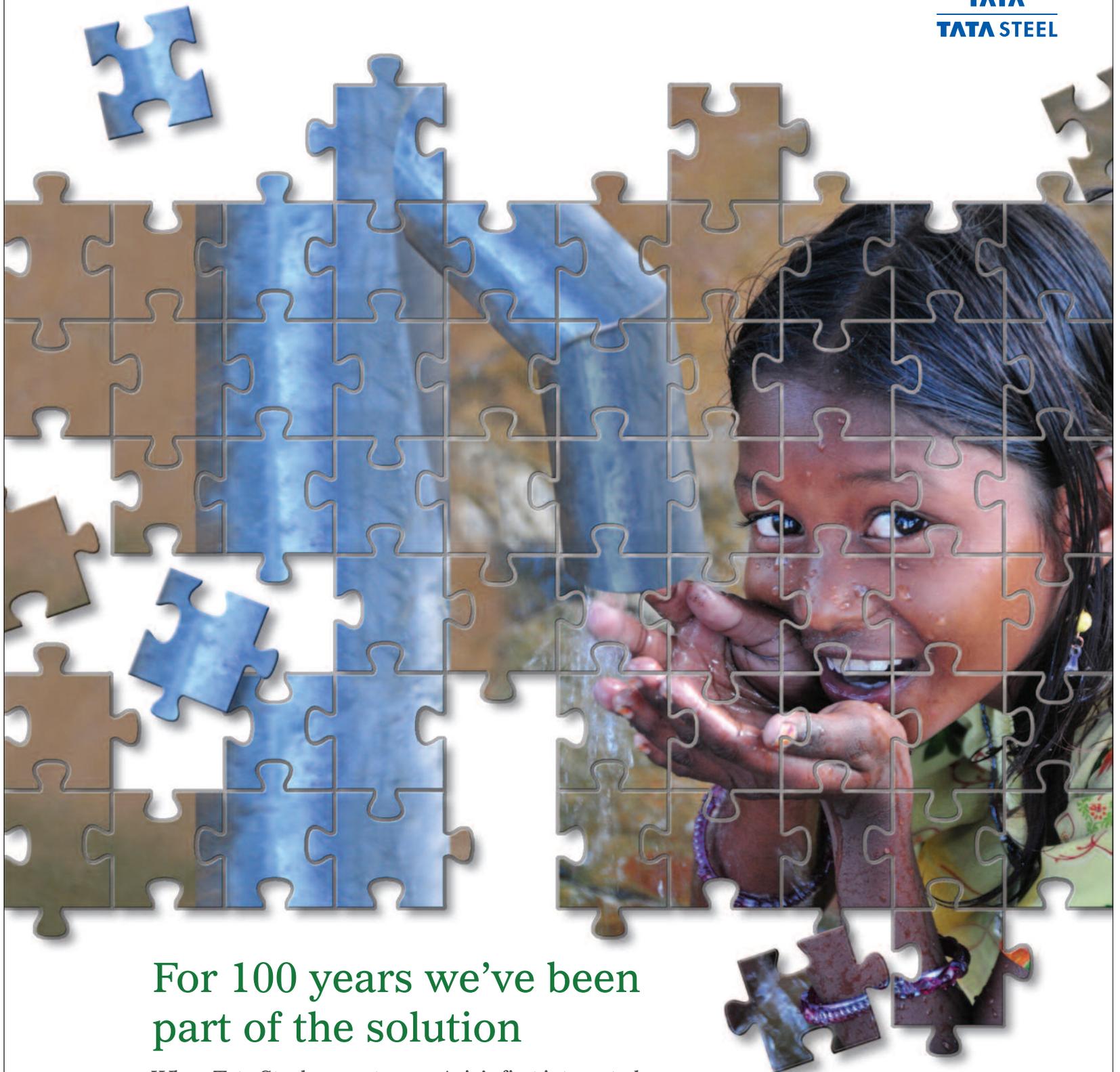
Soupherb™ has been formulated from herbal ingredients. Soups are available as powder in a sachet. Just empty contents in a cup, add hot water and stir. Try Lemon Soup and Coriander Soup for a refreshing hot drink. There is also Ginger Soup and Mint Soup for improving digestion.

We also offer Ayurvedically designed tasty herbal drinks for summer, for winter and for the rainy season. The drinks are ready-to-drink, aseptically packed and devoid of preservatives.



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It's part of our vision to become the global steel benchmark in value creation and corporate citizenship.

