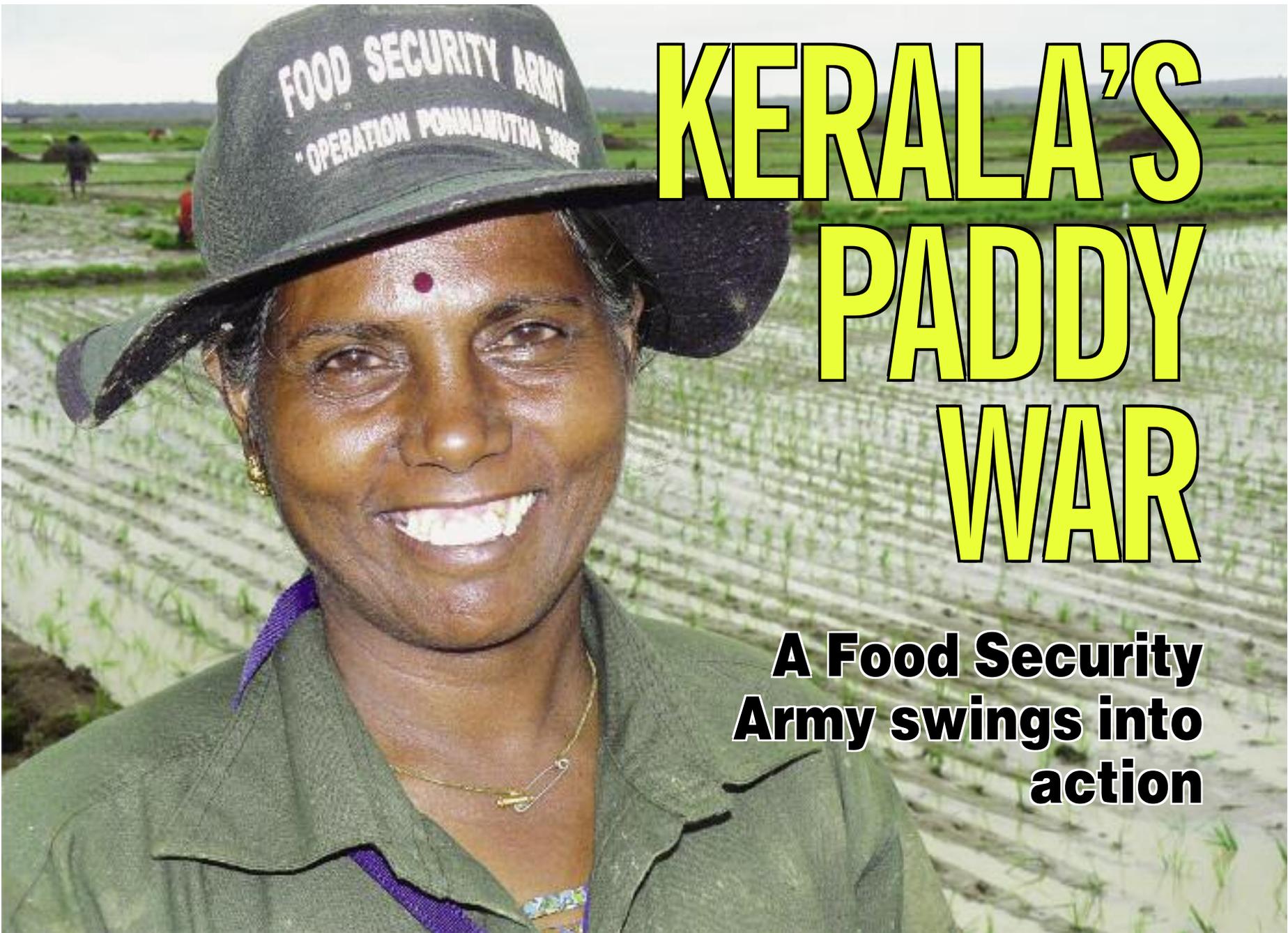


# Civil Society



## KERALA'S PADDY WAR

**A Food Security Army swings into action**

### GREEN INSIDER

**LONAVALA CONCLAVE SETS ITS SIGHTS ON FUTURE BUILDINGS**

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A Food Security Army is deployed in an experiment in Kerala to show that mechanisation and an organised workforce can speed up paddy cultivation.

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# Civil Society

READ US. WE READ YOU.

## *The carbon dance*

WITH the attention of the world on Copenhagen, we thought it would be a good idea to speak to some of the people who have already begun to experience the impact of global warming. In India you will find them on the coasts and in the mountains and chances are that you will soon find them surfacing in slums in cities. Their stories put together by our correspondents appear over three news pages in this issue as a reminder of the escalating problems resulting from carbon emissions.

For anyone who chooses to look beyond the carbon dance of competing interests at Copenhagen, it would be quite clear that the problems caused by weather changes are very real. A difficult and hugely expensive task awaits the Indian government as indeed it does others in the developing world. Coping with displacement, water shortages, loss of livelihoods and so on will be much more challenging than mastering the somewhat spurious complexities of emissions.

The answer to the rich nations is to confront them with their callous record. Urgency and resolve are needed, not the flirtatious engagements that provide a mere \$ 100 billion or \$ 200 billion. When the future of the planet is threatened what is needed is honest action and moral commitment. Money is needed, but just throwing money at the developing world so that industrialised nations can continue to pollute won't make the problem go away.

India should have been the natural leader of a new urgency because the burdens that we are going to have to shoulder will go far beyond alternative technologies and reduction of our emissions. We will have to bear economic and social costs that are not part of the current reckonings.

In this context to try and talk the language of the developed world in the hope of getting some kind of pat on the back is really quite silly. Instead we should be aggressive claimants of compensation on the one hand and our share of the globe's carbon budget on the other.

Whether it is environment or agriculture, experience shows that emerging economies need people who roll up their sleeves and get down to work. Better governance comes from those politicians who have their feet firmly on the ground and can deal with local realities. Our cover story on mechanisation of paddy cultivation in Kerala is one of many stories we have done which show that there is no alternative to engaging directly with farmers, passing on techniques and technologies and helping them do agriculture more efficiently. It is much the same with managing the environment and the impact of global warming. While the sophistications of new technologies are needed, action in real time is indispensable. We will have to do better than clever speeches in Parliament.

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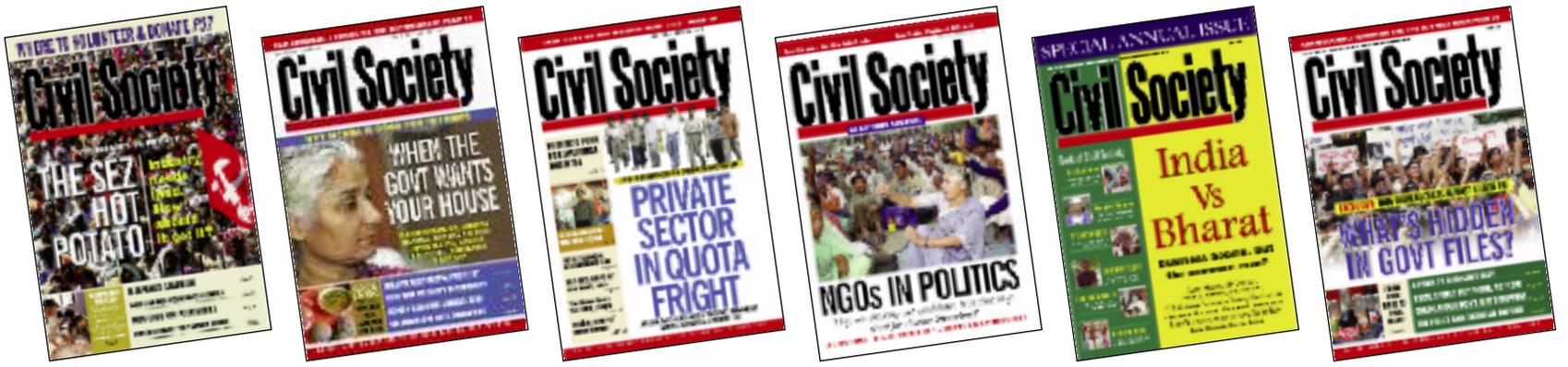
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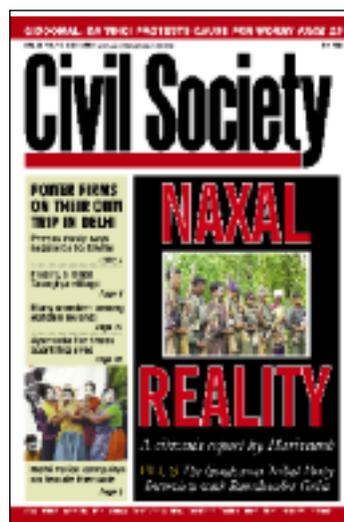
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# POLITICS IS NOT JUST ABOUT POLITICIANS

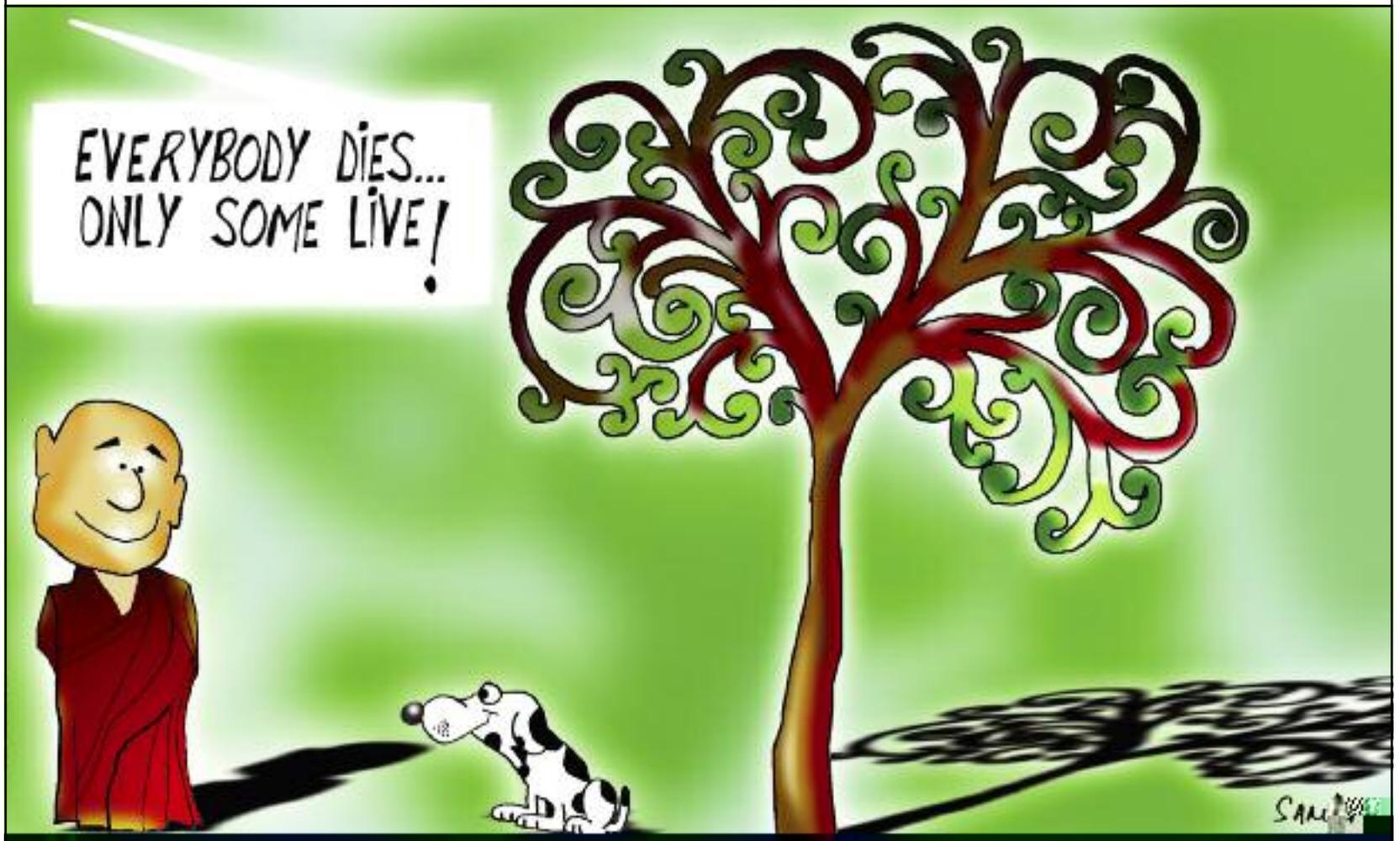


UNDERSTAND DEVELOPMENT  
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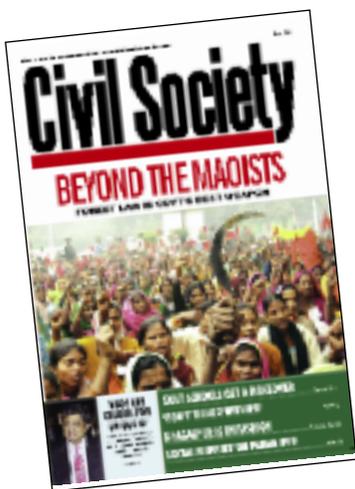
**Civil Society**  
RIGHT PLACE FOR POLITICS

## IN THE LIGHT

by SAMITA RATHOR



## LETTERS



### Forest rights

I have been reading your magazine with pleasure. Without entering into a controversy I would like to comment on the editorial and story that appeared on the Forest Rights Act in the December issue. This law is in the spirit of our Constitution which protects tribal interests. It enjoins on the State to protect our forests and environment and makes

it the fundamental duty of every citizen to do so too.

Over the centuries we have been slowly marginalising the original, tree-loving communities of tribals like the Gonds, Chenchus, Bhils, Koyas, Santhals etc. The lands they have been roaming and even ruling have been taken over and their trees destroyed steadily. They have been forced to go deeper into the remaining forests of the country.

The concept of community rights over forest land which Ashish Kothari has rightly stressed has been eroded with large swathes of forest land on which rights were granted, or not even granted, being taken away by the more aggressive non-tribals both subtly and overtly.

Such examples can be found all over India, like in the Andaman and Nicobar Islands. Where constitutional safeguards like the Forest Rights Act have been made, benami transactions take place and the tribals remain only de jure owners!

The insertion of protection to 'forest-dwellers' as distinct from tribals is a definite indicator to confer individual rights to non-tribals even in tribal forest land areas.

The Forest Rights Act should have instead given statutory rights of pro-

tection for collection, pricing and marketing of forest produce by the tribals who have instinctive reverence for trees and take only the annual usufruct instead of felling trees and cultivating crops.

Forest produce is distinct from forest products. Forest produce is acquired only by felling trees for timber, pulpwood etc. Forest produce, wrongly assigned a lowlier position by describing it as 'minor forest produce' has tremendous nutritional and other value for both the tree-loving tribals and their non-tribal consumers outside forests. Are we going to barter this away slowly in the name of forest rights and promote usage of trees as timber or for cultivation of less nutritious crops?

This is the argument of a humanist and not a 'conservationist' as I am sure I will be dubbed by most readers who, like me, enjoy the comforts of teakwood furniture and wheat flake cereal.

The practical course is to determine scientifically where we should have forests depending on tribal cultures, soil conditions, retention of moisture and local needs for fuel, fodder. We could promote tree plantations on farmland where they will

grow better. Such an exercise could be done by an organisation like the Forest Survey of India in consultation with experts in soil science, hydrology, energy and with NGOs.

The kind of rights envisaged in the Forest Rights Act should be conferred on tribal communities and not on individuals or non-tribals.

**Raghunath Rajamani**

Tribal regions need to be developed. Unless they have roads, schools, health centres and business opportunities, Maoism will continue to prevail.

**Anisha Das**

Getting rid of Maoism is tricky. If the army marches into jungles, they may not find them and end up harassing tribal communities driving them further from the mainstream. A better strategy is to bring the Maoists to the dialogue table in an amiable way. Meanwhile, government should develop infrastructure in those areas and provide governance. People's groups can help with development issues which need micro-management.

**Prabha Devi**

# Global warming victims are

*Civil Society speaks to people who are losing land and income. See how their world is changing...*

**R**ATAN Mondol, 86, is one of the first environmental refugees from the Sunderbans. Old and bent, Mondal recalls how the rising sea destroyed his life.

"Erosion in the Sunderbans began 35 years ago," he says with the resigned air of one who has seen it all. "My grandfather shifted to Ghoramara island from Midnapore. When the British cleared the forest, he was one of the early settlers."

The Mondols were prosperous farmers in Ghoramara. They owned 100 bighas. But over the years, chunks of it began to be swamped by the sea.

"The first major exodus began 15 years ago when all the fertile land in Ghoramara was swallowed by the swirling waters of the Bay of Bengal," he says. One night, recalls his wife Ujjala, they woke up and found themselves surrounded by the sea.

The Mondols lost all their land. They took refuge in nearby Sagar, the largest island here. They watched as Lohachhara and Suparibhanga islands disappeared into the sea after 1982.

The Mondols were given one and a half bighas of land where they grow a little paddy. They have a house built under the Indira Awas Yojana and a small pond.

But Sagar is rapidly losing land, about 100 bighas every year. The Mondols don't know how long they can live in Sagar for soon it will be taken away by the sea. For the Mondols, climate change and a rising sea have meant loss of self-respect and security and dependence on official largesse. Things are getting worse. There is no land to resettle new climate change refugees.

Rising temperatures are impacting people in

ways that tend to get forgotten as the focus shifts to the high drama of summits such as the one at Copenhagen. The food and water security of millions, most of them poor, is being threatened even as conference delegates spar over carbon and energy intensity.

The hills and the coast are feeling the most heat. In the Himalayas, plant species are disappearing and glaciers shrinking. Farmers are confused about when to sow, fishermen find fish species vanishing. The sea's ingress is turning sweet water, salty. Cyclones have increased in ferocity. The impact of global warming is compounded by human actions like deforestation and abuse of beaches.

"Published reports show that sea levels have indeed risen by 10 cm in the last century. The average is reported to be 1 to 1.5 millimetres a year,"

PRASANTA BISWAS



# not heard in Copenhagen

PRASANTA BISWAS



**A family in Sunderbans abandons home and hearth due to Cyclone Aila. Cyclones are becoming more fierce**

says Antonio Mascarenhas, scientist at the National Institute of Oceanography in Panjim, Goa.

The developed world is mostly to blame for this mess. America emits 19.78 tonnes of carbon per person, Australia, 20.58 and Canada 18.81 tonnes. China emits 4.58 and India only 1.16 tonnes per person. Since the days of the Industrial Revolution, the western world has been emitting vast sums of carbon into the atmosphere.

Now India needs its share of the atmosphere to develop. But emission targets come in the way and weather changes are taking a heavy toll. Hill to coast, farm to forest, people are expressing their concerns over changes in their environment due to global warming.

Listen to what Anto Elias, fisherman and secretary, Kerala Swatantra Matsya Tozhilali Federation, and member, National Fishworkers Forum has to say: "Global warming has meant warmer waters and a change in the direction of ocean currents. It has affected the amount of plankton available for fish to feed. Many species of fish, especially the smaller variety, have completely disappeared. Bigger fish have also dropped in abundance. But the worst effect of sea rise has been the collapsing of beaches. Combined with uncontrolled sand mining, the ris-

ing sea is destroying fishing villages all along the Kerala-Kanyakumari coast. It has rendered at least 10,000 people homeless."

If anyone cares to take a look Elias recommends you travel along the coast from Trivandrum, to Quilon, Kasaragod, Ernakulam and Alapuzha.

"Every high tide sees some villages washed away," he says. "As beaches collapse, sea water rushes into coastal villages. Salty water from the sea destroys wells in our homes which were our main source of drinking water. In Trivandrum district, our wells are only yielding saline water. Groundwater sources have been destroyed."

Neither the state nor the central government has done anything although promises have been made. Nobody has thought of having our fisher folk represented at climate talks though they bear the brunt of the angry sea.

Arable fertile land along the coast is shrinking. In December 2006, a tsunami hit the coast of Tamil Nadu. Nagapattinam was the worst affected. Bhuvana Kannan, an agricultural scientist has been helping farmers grow crops on lands destroyed by the salty waters of the tsunami.

"The most affected are landless agricultural labourers and small and marginal farmers, compris-



**Ratan Mondol and wife Jwala**



**Jugal**



**Talsa**



**Anto Elias**

ing about 85 per cent of the total agricultural population in Nagappattinam district," she says.

Nagappattinam forms part of the Cauvery river basin and delta. The district has a coastline stretching to 190 km. Most of Nagappattinam lies either below sea-level or between 0-5 m above sea-level. It is vulnerable to inland flooding from the Cauvery River and sea water flooding. In 2008, Cyclone Nisha lashed the district.

"Sea water inundation is leading to salinisation of soil and groundwater," says Kannan. "The situation is unlikely to improve since there is complete lack of drainage in the Cauvery delta. The rainfall of Nagappattinam district is only 970 mm, but lack of drainage and sea water flooding give the impression of very heavy rainfall. Since several parts of this district are below sea-level, the damage from flooding is real. Drainage congestion and floods add to poverty and food insecurity. People are forced to migrate and seek livelihoods in casual employment."

Sand dunes and mangroves could temper the ferocity of the sea but these too are disappearing because of people's actions. The result is erosion of sandy beaches. Dr Mascarenhas has been working on the protective aspects of natural formations like sand-dunes and mangroves against storm surges and tsunamis. This is what he has to say:

"In Goa, coasts get eroded only during monsoons. Published papers reveal that erosion is generally cyclic whereas beaches are rebuilt naturally during fair weather. Therefore, coastal erosion has been episodic, so far at least."

During monsoons, he says, huge waves and high wind speeds lash the coast. Combined with high tide, the waves could travel further up the beach, to the base of dunes. "Although the dune base gets eroded, these geomorphic features ultimately neutralize wave energy and protect the hinterland," he explains. "If sand dunes are absent or destroyed, as is the case at several places in Goa, the inherent natural protection capacity of the coast is lost. The result is erosion and over wash."

Every beach should have dunes and mangroves. Coasts need spaces to function but all that space is taken up by people, says Dr Mascarenhas.

"Note that the coast in Goa has been tampered by humans. Some beach shacks are located on dunes and the dunes are razed. Some structures invade sand dunes to be close to the beach as in Candolim. A massive stone wall is found at Sinquerim dangerously close to the waterline. Such measures lack scientific validity and exacerbate erosive processes. The beach in front has disappeared. A sea wall should never ever be located within the reach of the waves," he says.



**Bhuvana Kannan**



**Antonio Mascarenhas**

**'Sea water inundation is leading to salinisation of soil and groundwater. There is complete lack of drainage in the Cauvery delta'**

Coastal erosion, he warns is not merely linked to global warming.

"I refer to coastal tourism and related activities. Although sand mining of dunes is rarely reported, the way coastal dunes are being treated is a cause of concern. Sand dunes have been razed, levelled, or simply removed. How then can one expect these geomorphic features to remain stable and perform functions they are meant for? The extravagant use of our coastal spaces bypasses all limits of imagination," he says.

In the Himalayas, it is the same sad story. Nur Alam, 54, looks miserably at his dwindling herd of 200 buffaloes. He is a Van Gujjar and rears animals. Along with his tribe he lives in Chilawali village in the range of the Rajaji National Park, Haridwar district, Uttarakhand. Nur Alam is a worried man these days. He says his animals are dying. There is less rain and the weather is warmer.

"Dryness is spreading inside the forest," he says. "Green grass is disappearing. Water sources are drying up. My animals are yielding less milk. This year we had no rain. This dry winter is harmful for animals. They are getting a disease in which they become very weak and die. Also, the dry grass is becoming infested with worms, making animals weak."

Every year Alam goes to the high Himalayas dur-

ing the monsoon with his herd. This year he migrated very late in August and returned by end September since it hardly rained. Amazingly, almost 50 per cent of Van Gujjars chose to stay behind. Milk yield has gone down and so have incomes. The proud, dignified Van Gujjars are being forced to work as daily-wage labourers to survive.

The high Himalayas have their own share of problems. Apart from melting glaciers, species are disappearing and there is increased human-animal conflicts. "The holy Ganga is threatened," says Bauni Devi. A colleague of the legendary Gaura Devi, a key leader of the Chipko movement, Bauni Devi is a resident of Salana village, Chamoli district, and president of Jandesh, an NGO in Joshimath.

Bauni Devi was given the Indira Gandhi Vrikshamitra Award in 1987 for forest protection. She has made it her mission to conserve forests in the high Himalayas. A walk with her up to Kalpeshwar Mahadev, one of five Kedars in Chamoli district, is a revelation. The 10 km trek is covered with dense forest.

"Many species are disappearing in forests," she explains. "Some which are almost extinct include atis, (*Aconitum Hterophyllum*), kutaki, (*Picrorhiza kurroa*) jatamasi (*Nardostachys Jatamansi*) and vankakadi (*Podophyllum hexandrum*). Fodder species like banj (oak) are also threatened. Plants in the upper reaches which treat cancer are becoming extinct because of warm weather and no snow. In the lower valleys, we used to collect a useful herb called guchi which is tough to find now."

She blames the current development model for higher temperatures. "Our hills are drying up and resembling deserts. We don't get much snow. It is now the middle of December and it has not snowed. There is no bone chilling cold anymore. Wild animals are not getting enough food, so they are attacking villages, resulting into people-wildlife conflict. We must act fast."

If you travel down to the plains of Bundelkhand in Uttar Pradesh and talk to farmers they will tell you that the wayward weather and murderous dacoits had been ruining their crops. But they have found a way to get even with the rain gods by building water tanks.

"Rain has not only been scarce but also extremely erratic, deceiving us at critical times," says Jugal Mawasi, a small farmer of Gursarai hamlet in Manikpur block of Chitrakut district. "Dacoit gangs also made it difficult to cultivate. But there is some hope. Now tanks are being constructed and water is available. The weather is a little better. Land which had been abandoned is being cultivated. Adverse weather doesn't mean that there is no hope."

"Earlier when agriculture failed, we could still get food from forests. But this time even forest produce declined alarmingly. We had no choice but to do daily wage labour to survive," says Talsa Kol a small farmer of Mangavaan village.

People need help to adapt to climate change, says Anurag Danda, of WWF's Sunderbans programme. "A lot of investment is required. By indulging in a debate, we are disowning them. It is not a happy situation when people are losing their homes and their farms. There is no compensation plan for them."

He is right. But who will pay the price is the big question.

*Reported by Rina Mukherji, Rakesh Agrawal, Bhagwat Prasad*

# Social audit runs into backlash

## Civil Society News

New Delhi

THE government of Rajasthan's order suspending social audits in 16 districts of the state has disappointed activists.

In early October, CP Joshi, Union Minister for Rural Development and Panchayati Raj facilitated a social audit in his own constituency of Bhilwara. State government officials worked in close coordination with the Mazdoor Kissan Shakti Sangathan (MKSS) to undertake the social audit and find out how money disbursed to panchayats for the National Rural Employment Guarantee Scheme had been spent.

The audit turned out to be a resounding success. Corruption got uncovered, officials gained experience and awareness spread. People who volunteered got trained. Good practices, like the Vijapura wall on which details of work, materials and people employed were displayed, began to be copied by other panchayats.

Buoyed by its success, the government had then said that social audits would be carried out in all the districts of the state. So the order cancelling audits has caused dismay.

"Bhilwara created a huge momentum. That will be lost," said Nikhil Dey of the MKSS.

Trouble had started brewing soon after the Bhilwara social audit. Sarpanches and gram sewaks realised that their embezzlement of funds would be uncovered by a transparent social audit. They ganged together and sat on *dharna*. Local politicians cutting across party lines joined them wrongly believing panchayat elections would go in their favour. Such was the fear of the social audit that in Madhogarh panchayat, the sarpanch even disappeared with all relevant papers.

"The panchayats are dominated by feudal interests and the social audit shakes those interests," says Dey. "Many sarpanches are known for corruption and are not popular with the people."

Activists point out that in Andhra Pradesh where social audits were done in every district overriding opposition, the government won elections handsomely and the people appreciated their efforts to promote transparency.

The Social Audit Directorate was set up in Rajasthan with the announcement that it would be based on the "Andhra Model". This process succeeded in Andhra because ministers, MLAs and others were exposed to the audit and were told categorically that this process could not be stopped.

Andhra's success was based on strong political will. But in Rajasthan, there has been opposition even to doing just one panchayat in each district as a model. Vested interests will agree to the social



Wall displays all details of how government funds for NREGA were spent

SAURABH YADAV



Shankar Singh, Nikhil Dey and Aruna Roy

**Sarpanches and gram sewaks realised that their embezzlement of funds would be uncovered by a transparent social audit. They ganged together and sat on dharna. Local politicians cutting across party lines joined them.**

audit only if it is conducted as per their wishes, in a manner in which their misdeeds will not be uncovered.

It is under such pressure that the government has agreed that no 'outsiders' will be given a role in the social audit. Only gram sabha members would be allowed to speak and take part.

In fact, the demand is that even people who are nominated by the government to the social audit team should be removed. Activists find this strange. "If the government inducts a person into the team he or she becomes part of government," said Dey.

It is important for the public hearing to be an open forum and not be reduced to a village fiefdom. The presence of 'outsiders' gives everybody the right to speak. It encourages the weak-hearted to speak up.

The MKSS is asking for action to be taken against those opposing the social audits. It wants fresh dates for social auditing. "The social audit should now be held 30 days from the date when the government took the decision to conduct these 16 social audits and announced its schedule."

The preparatory process of sharing information and disseminating it with the citizens of the concerned panchayats should continue.

As per orders of the state government given on 20 April all panchayats were supposed to display on their walls the list of materials spent on pucca work done. Details of people employed, their details of job cards etc were to be painted on all hamlets. MKSS is asking how many of the 16 panchayats have complied with the order.

# Dementia strategy takes shape

Gautam Singh  
Kolkata

GAUTAM SINGH

In a showcase full of pictures there is one of Mrs Sukla Bhattacharjya, 76, in which she has a hint of a smile on her face. That isn't unusual except when you consider that she's sitting an arm's length away, unmoving and perhaps asleep, and that her husband and caregiver, Brig (retd.) SP Bhattacharjya, had to watch almost all day to capture that fleeting moment of wakefulness. Sukla, who was diagnosed with Alzheimer's disease in 1996, hasn't spoken in four years, is now in the terminal stages of the disease after a 15-year struggle, and it is for these daily moments when her eyes open that her husband waits.

Mrs Bhattacharjya is one of 3.5 million Indians with dementia, a disorder marked by a steady decline in memory and mental abilities. This figure is set to more than double in the next 20 years. In fact, low or middle income countries (LAMIC) like India will show a proportionately higher rate of increase of dementia cases over the next 40 years than developed countries. By 2050, almost 59 per cent of the world's 115.4 million dementia-affected people will be in Asia.

New studies also suggest that the rate of prevalence of dementia for people in India over the age of 60 years is now considered to be 5.7 per cent (India's population of elderly is predicted to be 178 million by 2030), up from the earlier estimate of 3.4 per cent, which is comparable to those in Europe and Australasia. Dementia has the dubious honour of being the leading cause of disability among older people in LAMIC.

So how are we as a country prepared to tackle this looming problem? A three-day conference of the stakeholders-caregivers, doctors, researchers, associations and government-organised by the Alzheimer's and Related Disorders Society of India (ARDSI), was held in Kolkata from December 4 to 6 as a prelude to a meeting of experts held subsequently in New Delhi, to work on a strategy and to frame a set of guidelines in the form of a policy document on dementia in India.

Earlier this year, the UK came out with a National Dementia Strategy which, as Professor Martin Prince, founder of the 10/66 Dementia Research Group (DRG), a collective of researchers carrying out population-based research into dementia, non-communicable diseases and aging in LAMIC, says, "didn't come out of a vacuum" and had the benefit of an awareness among policy makers that things "weren't going quite right" for the elderly. Earlier policy initiatives had revealed the shortfalls in efficacy and they were able to estimate that dementia costs the UK economy 17 billion pounds yearly, and this would triple by 2030.



Sukla Bhattacharjya with her husband Brig. SP Bhattacharjya and her niece, Ahana



Prof. Martin Prince

The Indian government, on the other hand, has no specific policy on dementia, no area-wise figures, cost of the socio-economic burden, or of what works and what doesn't. Maybe it's in a state of denial. For a start, three areas of focus were chosen at the conference to work out a strategy: to raise awareness about dementia; to improve diagnosis and treatment; and to provide cost-effective interventions and care.

**RAISING AWARENESS:** "In India the biggest problem is awareness," says Daisy Acosta, chairman of Alzheimer's Disease International (ADI). "People don't know what dementia is and seek treatment too late. It is an epidemic of unprecedented proportions and our duty as an association is to make governments understand what is coming, to be better prepared," she adds. The objectives of any policy in this direction would be improved public and professional understanding of dementia among general practitioners, healthcare professionals, policy-makers and the media.

"California is developing a State Alzheimer's Plan. The business sector is getting involved to give more visibility to Alzheimer's disease as a big social concern," says Michael Splaine, director, State Policy and Advocacy Programs of the

Alzheimer's Association in the US. "India has a huge problem but it should look at its assets. There are a large number of cellphone users. The network can be used to create awareness, move information, help caregivers," he adds. The stigma attached to the disease and the false belief that dementia is a normal part of ageing and that nothing can be done constitute the biggest barriers.

Acosta, who as chairman of ADI deals with various governments of low and medium income countries, says: "Creating awareness will help fight the stigma associated with Alzheimer's and identify the problem earlier to empower the family to seek timely treatment."

**IMPROVE DIAGNOSIS AND TREATMENT:** On the home page of the 10/66 DRG is a simple equation: good quality research generates awareness, shapes policy, encourages and pioneers service development. It's interesting that this organisation was born in Cochin in 1998. Its name 10/66 refers to the two-thirds (66 per cent) of people with dementia living in low and middle income countries, and the 10 per cent or less of population-based research that has been carried out in those regions. Since then it's working hard to offset this imbalance, and its studies have contributed largely to the revised figures of prevalence and worldwide estimates of dementia.

Prof. Prince says: "Research in this field provides evidence for policy makers. There's been a great deal more of quality research carried out in India over the past ten years, in Mumbai, Kolkata, Chennai. We've had to



Dr Suvarna Alladi

revise our estimates. We're looking at probably 3.7 million people now increasing to around 14 million by 2050. It's a virtual epidemic here and the major concern is that at the moment there are very few services that meet the needs of patients."

"It's important that people are encouraged to take the elderly to the doctor in time without waiting for the disease to progress," says Dr. Mathew Varghese, Prof. of Psychiatry at the National Institute of Mental Health and Neurosciences (NIMHANS).

Dr Suvarna Alladi, Associate Professor of Neurology at the Nizam's Institute of Medical Sciences, says: "In India the most difficult part for the doctor is reaching the patient because people in the early stages don't seek help as there is low awareness. Awareness even among primary care professionals is low."

**EFFECTIVE INTERVENTIONS AND CARE:** "The family is the bulwark of care, even in the US, and even more so in India," says Splaine. "We have to figure out how we should support families better to provide care to the patient," he adds. Prof. Prince says "We are now putting the accent on intervention, in helping the caregiver."

A study is being undertaken in Goa on the effectiveness of this intervention. "We've done a random control trial to evaluate the effectiveness of home care-advisors, trained to provide non-pharmacological interventions for families coping with dementia," says Dr Amit Dias, India coordi-

nator of the 10/66 DRG. "The intervention helped in reducing the caregiver perception of burden and the caregiver burnout. It is a cost-effective model that could be scaled up and integrated with the existing Primary Health Care network in India to address the needs of people with dementia,"

**'We're looking at probably 3.7 million people now increasing to around 14 million by 2050. It's a virtual epidemic here'**

adds Dias.

The cost of dementia is enormous and an estimate puts the societal costs at US\$ 315 billion. Zodingpuii, from Mizoram, serves in the government and her mother, a former school teacher, was diagnosed with dementia seven years ago. She intends to help set up a chapter of ARDSI in Aizwal. "We have the resources to take good care of my mother, and have three caregivers. We are lucky, but it's a luxury that the poor people of the village perhaps can't afford." The family must be supported in providing care, especially in India as

the economic costs, along with the psychological pressure, can be back-breaking.

"In our study we found that a quarter of caregivers surveyed had to give up paid work to be able to take care of the patient," says Prof. Prince. "In some countries in the west, we have established the principle of providing care-giver benefits, as he saves money for society. Perhaps in India a disability pension could be given, this changes the way an older person is perceived," he adds.

**THE TASK AHEAD:** "A preliminary Dementia India report should be ready by the first quarter of 2010," says Varghese. State-wise figures of dementia patients are being worked out and the economic burden of care-giving faced by a family is going to be estimated. "We will have to analyse these figures and see whether we have the wherewithal to handle the patients," he adds. "By June 2010 we should have a detailed report and perhaps by September a call to action."

Till now the government's attitude has been perhaps Ostrich-like, but Mukul Wasnik, the minister for Social Justice and Empowerment, who spoke at the National Meeting of Experts, has assured that the recommendations from the deliberations will be included in the review of the National Policy on Older Persons.

Meanwhile, every seven seconds there's a new case of dementia worldwide and in some family, somewhere, a dramatic chain of events is being triggered off.



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# More teeth for education says CRY

**Shreyasi Singh**  
New Delhi

**T**O conclude its national campaign, 'Sabko Shiksha, Samaan Shiksha' (Equal Education for All), Child Rights and You (CRY) organised a walk, public meeting and a symbolic lighting of candles at Delhi's National Bal Bhawan on 11 December.

Symbolically, this is the day India ratified the United Nations Convention of the Rights of the Child (UNCRC) 17 years ago.

Hundreds of children with their families gathered to show their support for a campaign which highlighted gaps in the Right of Children to Free and Compulsory Education Act 2009, a landmark legislation passed in August 2009 to give each child in India the right to education.

CRY believes the Act is limited in scope and must be amended to truly reach each of India's 440 million children. The 'Sabko Shiksha, Samaan Shiksha' campaign was launched on 14 November to garner support and generate awareness of the weaknesses of the present Act.

CRY brought out a Charter of Demands which sought three key changes. The charter's first demand is to expand the Act's ambit to include children below six years and those between the ages of 15 and 18. The Act currently includes only children between six and 14 years of age.

"This is especially important. A child's intellectual development in the first few years often lays the foundation for life. We can't ignore this," said Jean Dreze, development economist and activist who spoke in support of the charter at the event.

Second, the charter demands that the Act ensures that schools have qualified teachers and proper facilities and are located within one kilometre of every habitation. Currently, no minimum standards have been defined for teachers, school infrastructure and facilities.

"In India only 53 per cent of habitations have a



Jean Dreze

LAKSHMAN ANAND



Children lit candles

primary school. Of course, the reach of the Act will be at best partial. Also, because of the way it has been passed, the Act does not cover every child. It is underfunded and ignores the reasons why children don't go to school, such as poor quality of teaching or distances from home," says Puja Marwah, Director, CRY.

Third, the charter demands that India allocate 10 per cent of its GDP to education. It points out that over the last two years, what the government spent on education has actually reduced from 3.84 per cent in the Union Budget of 2008-2009 to 3.03 per cent. In fact, critics of the Act say its funding model is likely to be its biggest shortcoming with state governments and the central government wanting the other to foot the bill.

"No country has been able to reach universal education without central government funding. Without the assistance of the Union government, I don't think this Act can be implemented," said Ashok Agrawal of Social Jurist. He is a well-known lawyer who has consistently fought for child rights.

The charter received a good response and has successfully collected 779,021 signatures across 20 cities and 6,700 slums and villages. It will be presented to the President of India, Pratibha Patil.

"We need to continue to put pressure on the government on a daily basis. We need interactions at all levels – local communities, district administration, state leadership to create change that is permanent. Campaigns just help us escalate the ante but they are really built on the little things we do each day," explains Marwah.

## SAMITA' S WORLD

by SAMITA RATHOR





From left: Krishnendu Mudhopadhyay of Sri Ramachandra University, Manoranjan Mishra of Jeevan Rekha Parishad, Perry Gottesfeld of OK International and Bipin Patnaik of the Orissa Stone Crusher Association

# Washing out silicosis

**Madhu Gurung**  
New Delhi

It was in 2002 that Perry Gottesfeld, a public health professional, started Occupational Knowledge (OK) International in San Francisco in the US.

His outfit helps developing countries curb illnesses caused by exposure to hazardous materials and environments in places of work.

To fulfill its mission, OK International assists NGOs in checking industrial pollution and preventing workers from falling ill. Accordingly, Gottesfeld put out a request for proposals - offering technical assistance and a grant of \$1,000.

"We got 60 responses from all over Asia and Africa," he says outside the conference room in Delhi's Qutub Hotel, "but what caught our interest was one from a small NGO in Bhubaneswar, Orissa, the Jeevan Rekha Parishad (JRP). They had seen a proliferation of stone-crushers where the national highway was being built, leading to huge dust problems, but had no expertise to deal with it."

OK International and the Public Health Foundation, New Delhi, organised a Silica Hazard in Construction and Mining Conference in Delhi on 11 and 12 December. The meeting, which was sponsored by the Central Pollution Control Board and the National Human Rights Commission, brought together public health experts, urban planners, medical research agencies and government officials.

Gottesfeld, MR Mishra, president of the Jeevan Rekha Parishad, and Dr Bipin Patnaik, president of the Orissa Stone-Crusher Federation explained at the meeting how they successfully put in place dust mitigation measures and created a safer

working environment for workers and their children.

The stone-crushing industry in India has grown quickly due to increasing demand from construction agencies. Rapid urbanisation has seen small towns enhance infrastructure and build new roads, changing the face of cities around the country.

"Stone-crusher units were established in the

**'We have seen an 80 per cent drop in respirable silica dust generation, so there is bound to be an appreciable health benefit.'**

1960s and since then have grown in number. Orissa has 1,200 to 1,500 units," says Dr Bipin Patnaik. "In the 1960s when this industry started, there were no pollution laws. The Act came in only in 1998 and was enforced in 2002. In this labour intensive industry, there were little guidelines towards the exposure of workers to silica dust during stone - crushing operations."

The problem is that workers in industries like stone-crushing, mining, construction and many others face exposure to silica dust. Breathing air laden with silica causes silicosis, a debilitating disease which scars the lungs. There is no cure for silicosis. It is a death sentence. And it increases, by

three times, the risk of developing tuberculosis.

Gottesfeld recalls that OK International started by asking the NGO what exactly were the levels of exposure to silica dust? They drew a blank as Jeevan Rekha Parishad had no means or expertise to test for such a hazard. With donated equipment, the NGO trained volunteers to collect air samples from Khurda district of Orissa. These were taken to the US and tested.

"We found that exposures averaged five times above the regulatory level," explains Gottesfeld. "Respirable crystalline silica dust generated during stone-crushing operations is linked to silicosis and an increased risk of tuberculosis. While the government spends 70 million dollars on treatment for tuberculosis, there is nothing being spent on its prevention. Most stone-crushing mills operate without dust control."

OK International decided to enhance the capacity of Jeevan Rekha Parishad and started a small pilot project to mitigate dust in two or three stone-crushing mills in Khurda district. But the owners of these mills were very resentful. They did not want to spend money on any technology. No worker had ever complained of dust pollution, they said. The owners paid Rs 100 as daily wages and washed their hands off any responsibility towards their workers.

Instead of taking on the owners of the stone-crushing mills, Jeevan Rekha Parishad changed tack. They began welfare programmes like health camps and crèches and schools for the children of workers. The emphasis was on creating a safe environment.

"It was in the second year that Jeevan Rekha Parishad began making inroads. Two mill-owners installed the water-spraying system. The specially designed equipment removes respirable size particles, using what looks like an irrigation hose with special nozzles, characterised by spray patterns. This process makes the dust wet and suppresses it from rising. These nozzles reproduce a fine mist and are useful for respirable dust control," said Gottesfeld.

After the two mill-owners installed the water-sprinkling system, 40 more voluntarily followed suit. "We have seen an 80 per cent drop in respirable silica dust generation, so there is bound to be an appreciable health benefit. It has been a process. It is not destroying business but creating awareness and building the capacity of people to bring about a change in the lives of poor communities," he said.

The technology has been rather successful in Orissa. About 40 per cent of mill-owners have adopted it. "There was opposition also because people felt that selling wet chips did not have the same get up and look as the one which was traditionally done," said Gottesfeld.

The conference discussed other dust mitigation methods and came up with recommendations to prevent, identify and eliminate silicosis.

OK International hopes that similar pilot projects will be undertaken in India. Already the group is planning to enhance the capacities of local NGOs in Jajpur (Orissa), Jhansi (MP) and Hubli (Karnataka), to tackle exposure to silica by getting quarry owners to induct the water-spray technique. It can be combined with rainwater harvesting where water is scarce.

Says Gottesfeld of the Orissa experience: "It's a low hanging fruit, its benefits are there for all to see. We hope that it is taken up at the national level."

## Special Olympics at Deepalaya

District Games were held with Special Olympics Bharat at Deepalaya's Kalkaji branch on 1 and 2 December to mark Disability Day. Ten schools from the National Capital Region took part. Among them were CASP Plan, Nav Prabhat, NIMH Model Special School, Akriti School and HCRA.

A sunny day and a huge playground were an irresistible draw for the children. A march-past

was followed by a torch-run. Helped by teachers and coaches from Special Olympics Bharat, the children competed in games like Bocce, 10 metre and 25 metre assisted walk, 25 metre and 50 metre race, soft ball throw, tennis ball throw and shot-put throw. Each child was awarded regardless of performance to boost confidence.

"Let me to win. If not let me to make a brave attempt," was

the oath taken. "All of you have a lot of power and I want the whole world to know it and identify it. You will get several pedestals to prove it one of them being these District Games," said TK Mathew, chief executive and secretary of Deepalaya.

The children were given refreshments and medals were presented by two Canadian delegates who were guests of honour.



## Dignity Day march for earth

The issue for Dignity Day this year, organised by NACDOR was not job quotas but climate change. Dalits, Muslims, Adivasis and marginalised communities marched to Parliament carrying banners and chanting slogans for climate justice and inclusive policies. Candles were lit in Ambedkar Bhavan to save earth, reduce emissions, boost clean technology and usher in a low carbon economy.

NACDOR made a valid point – climate change affects marginalised groups the most. It forces them to migrate for work. Shifts in rainfall patterns, depletion of water ruins farming, forests and fishing. Sixty per cent of Scheduled Castes are agricultural labour.

"From panchayat to Parliament, Dalits have reservations yet decision-making is rarely at their command, particularly in institutions of knowledge, science and technology which frame climate change policies." Ashok Bharti of NACDOR said.

## NCPEDP's ability warriors

The annual Shell- Helen Keller Awards were given out on Disability Day, 3 December by the National Center for Promotion of Employment for Disabled People (NCPEDP) Kapil Sibal, Union Human Resource Development Minister and Shekhar Gupta, Editor-in-Chief of the Indian Express graced the occasion.

In the disabled persons as role models category, the winners were Dr Meenu Bhambhani, Head, Corporate Social Responsibility, Mphasis, a Bangalore-based IT company, Nupur Jain, a visually impaired senior executive at Wipro, and Dr Sam Taraporevala, Director, Xavier's Resource Centre for the Visually Challenged. Meenu Bhambhani was



awarded for increasing the number of disabled employees in Mphasis from 40 to 307 in just one year. Maniram Sharma, an IAS officer who is hearing impaired and G J Siddarth, an executive of a company who suffered from cerebral palsy were given special mention.

Under the non-disabled role model supporter category Dhruv Lakra, Founder and CEO of Mirakle Couriers

was chosen as one of the winners. Mirakle Couriers is a Mumbai-based courier delivery service which employs only deaf adults. It aims to combine professional excellence with a sound social cause.

A Department of Information Technology team was also awarded for its proactive efforts to refine the draft of the National Policy on Electronic Accessibility. The team

includes N Ravi Shanker, Joint Secretary, DIT, Dr Govind, Senior Director, DIT, Dr SK Agrawal, Director, DIT, and Neeta Verma from the National Informatics Centre, and the late Vikas Sharma. The National Policy on Electronic Accessibility emphasises the importance of creating awareness on accessibility, universal design and creating and implementing standards and guidelines.

IBM India, NTPC Limited, SAIL and Wipro Limited bagged the honours under the disabled-friendly corporate category for opening up access to people with disabilities.

"If we want to move ahead as a civilisation, we need to work together. It is time for the disabled persons to form a politically active grouping so that they get recognised at the political platform," said Kapil Sibal.

## Woman leader honoured

The Karmaveer Puraskar this year honoured Dr Viloo Morawala Patell, one of India's outstanding women entrepreneurs.

Dr Patell is founder and managing director of Avesthagen Ltd, a biotech company which she founded. Dr Patell was felicitated for being a good corporate citizen.

"Being recognised for integrating science, business and social responsibility at



Avesthagen brings a great sense of achievement," said Dr Patell. "Avesthagen stands for innovation and we hope to serve the agriculture and healthcare needs of farmers and the common man through technological breakthroughs."

Agri-biotechnology and health are important areas of research for Avesthagen. The company is working to innovate and provide hybrids. It hopes to bring into

the market Environment Adjusted Crops for rice, wheat, maize and other cereals for farmers.

The Karmaveer Puraskar are national awards given every year for social justice and citizens action. The award is instituted by iCONGO – the Indian Confederation of NGOs.

The philosophy behind the awards is Gandhian: Be the change you want to see in the world.

The award is given to citizens who follow the saying: better to light a candle than curse the darkness.

# DRAG finally built a school

Vidya Vishwanath  
New Delhi

SETTING up a school for underprivileged children and getting it going was no cakewalk for Gautam Vohra, founder of Development Action Research Group (Drag), an NGO.

The school, called Drag Vikas Kendra is located in an unauthorised colony called Mohan Garden in the fringes of West Delhi's Najafgarh area.

The idea germinated almost a decade ago. From day one, the plan ran into hurdles put up by local elements, corrupt policemen and greedy municipal administrators. Says Vohra, a Doon School and St Stephen's College alumnus: "I ran an NGO club back then. A girl from the northeast came to us for some help. So we visited the place. Migrants from other parts of the country had begun to settle here. We started a women's adult education centre. Many of the women had children – they urged us to start a school here as the area had no government school."

Today, the school is a cheerful three-storey red brick building bustling with children. It has a small lush green garden and a hand pump for drinking water. Sheetal Sharma, a young bespectacled lady, took over as principal just a few months ago. She is helped by Sadhana, a teacher who has been with the school nearly since its inception. Admission here is an easy process that takes only a few minutes and the school fee is about Rs 10 a month.

The school has four Balwadis named A to D, besides a primary section from Class 1 to 5. "We admit students of any age into pre-school based on ability," says Sheetal. "We have a 12-year-old in Balwadi D. The girl and her three siblings are in the same class. Students are promoted from Balwadi D to Balwadi A as they improve."

In the higher classes, the school follows the MCD syllabus and teaches English as a language. "A Class 1 student in our school gets into Class 4 in a written test in a government school," says Sheetal. The Drag school gives every student an affidavit that gets them admission into a government school without papers.

Two buildings away from this modest building stands an imposing MCD School which started enrolling students in 2009. "The MCD school's existence is a measure of our success," says Vohra. "Our school registered 350 students. We invited the local MP and MLA to our functions. The government became aware of the need for a school in this area," he says. The MCD school gives students mid-day meals, clothes and books.

Planned in 2000, the construction of the school began in 2001. It took Vohra eight years to complete. Though he was no newcomer to development issues, securing clearances took some doing. He had to find classmates at the highest levels, be it in the Police or in the Municipal Corporation, to get



Children play at the Drag school

things done. "Even they would throw their hands up in despair," he quips.

The obstacles that the former *Times of India* journalist encountered while setting up this small school for an under-served part of the city are symptomatic of the systemic rot that slows down, if not completely scuttles, any such endeavour.

Mohan Garden had no government school. Vohra drew up plans to build a three-storey school. He got funds from the Japanese embassy. But money was the least of his problems.

In 1998-99, Drag acquired land from a local coloniser, a man with some political clout. He sold agricultural land for development. In April 2000, Drag received a grant of \$55,831 from the Japanese embassy. In July 2000, they got a final plan from a well-known Jorbagh-based architect who, however, did not know the ground realities of these colonies.

Disputes over plot demarcations erupted with local farmers and other developers. The coloniser wasn't of much help – he wasn't keen to encourage any new construction. He was worried it would be knocked down by the municipal authorities. But Vohra persisted – any delay would have led to denial of the Japanese funding. So the project resumed in November 2000 but not before several parleys involving local residents and the coloniser.

Construction work finally began in January 2001. Just a month later, some police constables, who got wind from the coloniser that this was a Japanese funded school, asked for a bribe of Rs 10,000. Vohra complained to the Special Commissioner of Police, Delhi. The thwarted constables settled scores by

tipping off the MCD about the building.

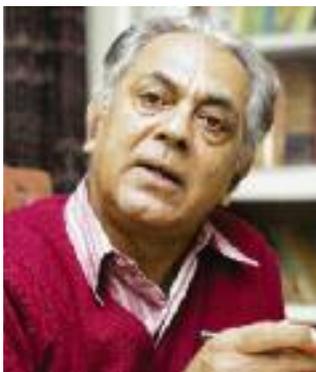
In May 2001 – the structure for a three-storey building had been erected by then – the MCD junior engineer (West Zone) arrived with a 15-strong team to demolish the building. Vohra got a panic call from his building contractor. The engineer demanded a bribe of Rs 1.5 lakh for each floor – a total of Rs 6 lakhs. Drag contacted the local MLA, who felt that the municipal councillor was behind this. He referred Drag to the executive engineer and the municipal commissioner.

The MCD commissioner was anything but sympathetic. Ignoring the fact that Drag had a ministry of finance clearance to seek Japanese funding, he simply remarked that all post-1993 buildings were unauthorised and could be demolished.

The junior engineer climbed down on his bribe demand – to Rs 4 lakh – but the stalemate continued. Drag decided to call off the construction. They started a dispensary and decided to mend the damage that the MCD had done. In September 2001, they started the school after a house-to-house survey. About 70 children were huddled into the ground floor of the school.

The school infrastructure was built piece by piece. They received donations for furniture, play material and a library. Drag then bought another small place in a pre-1993 building in the same colony. Electricity came a year later. Even as Pratham stepped in by early 2002 to train local people for teaching jobs after plans were firmed up for starting Classes 1 to 5, the school experienced a few administrative hiccups caused by a none-too-reliable principal. But the school continued to gain strength and admissions increased steadily.

It has taken Vohra, a well-connected, well-funded man, nearly ten years to get a small school going. "This is India. This is what we have to go through to get things done," he says.



Gautam Vohra

# Children one step ahead

Wearing dhotis and tricolour bands on a cold winter day, the special children on stage danced rhythmically to AR Rehman's popular number, *Ma Tujhe Salaam*. An ecstatic audience of 500 gathered to see them perform.

"We are here to tell the world that we're not inferior to so-called 'normal' people," said Inu Jain, 20, of Bajaj Institute of Learning, an NGO in Dehradun which works for physically and mentally challenged children.

The show called *Badhte Qadam*, (Stepping Ahead) is

RAKESH AGARWAL



Special children light lamps

a campaign of the National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disability, which comes under the Ministry of Social Justice and Empowerment.

"After covering 15 cities in seven states, we are here to celebrate diversity and promote an inclusive society," said Vinod Shukla of National Trust. *Badhte Qadam* honoured the skills of special children and India's diversity.

Holding wax lamps in their little hands, five girls from Sharp Memorial danced in rhythm.

The seven NGOs which took part displayed products made by the children. There were candles, bags, diaries, cards, woollen garments and crafts. "This is a very intricate card. I will send it to my friends," said Richa Dobhal, a homemaker, a visitor.

A stall put up by the Ngoenga School for Tibetan Children with Special Needs, did brisk business. The Regional Centre of the National Institute for Orthopaedically Handicapped, put up a stall displaying aids and instruments. There were callipers, spinal and fracture brace, modular lower limb prosthesis and corrective splints.

A consortium of 11 NGOs have come together to form the Dehradun Disability Forum. "The aim is not to divide our energies and work together to achieve something meaningful for these children," said Joe Chopra, director, Karuna Vihar.

The parents too have formed an association called *Aseemit* (Without Limits). "All we need is support to establish a business enterprise that will train and employ young adults who are physically and mentally challenged," says Shaila Brijnath of *Aseemit*.

## Ashish Kothari of Kalpavriksh remembers four stalwarts

### India's best field biologist



Dr Ravi Sankaran, wildlife expert, died suddenly on 17 January, at the age of 46. Ravi was one of India's best field biologists. He did path-finding work on floricans, megapods and other

bird species. I once sat with him on a tiny machaan high above the grasslands of the Dudhwa Tiger Reserve and marveled at the meticulous notes he made of every single movement of a couple of floricans below. With this work he challenged the prevalent management practice of setting fire deliberately to grasslands to get a fresh flush of grass for swamp deer. He pointed out how this may not be very good for ground-nesting or grassland species like the florican.

Ravi challenged established doctrines, often so irreverently he could be considered rude. He showed why it was counter-productive to put the threatened edible-nest swiftlet on Schedule 1 of India's Wildlife Protection Act because the best way to save the species may be to provide incentives for villagers to allow nesting in their houses and get an income from non-destructive harvesting of the nests. His persistent, scientific arguments finally managed to achieve the extremely rare feat of getting a species taken off Schedule 1.

### Tireless crusader



Smitu Kothari died on 23 March at the age of 59. The hundreds of messages of grief and empathy that poured in were testament to his deep engagement with 'alternative' action.

With his passions as social equity, cultural diversity and ecological sustainability, Smitu challenged the dominant model of development. He engaged in conceptual work and grassroots practice, speaking up for people's movements against destructive mega-projects, the displacement and dispossession of Adivasis, violence against women and minorities, war-mongering between India and Pakistan and other forms of violence. He was a consistent critic of oppression by the State, but he could also be openly critical of civil society actions that were unethical or reeked of self-righteousness. And though primarily involved in issues of human rights, Smitu was often the first to point out that the rest of nature deserved an equal share of our attention. He wrote prolifically, authoring and editing over a dozen books, as well as contributing hundreds of articles to academic journals and the popular press.

### Protector of wildlife



Alan Rodgers, another extraordinary wildlife expert, died on 31 March, aged 65. Born in England, Alan made his mark as a dynamic young park ranger. He became one of

the world's leading authorities on miombo woodland ecosystems, taught at various universities, started several initiatives to conserve east Africa's threatened wildlife and helped the Wildlife Institute of India design a comprehensive network of protected areas for the country.

I got to know him as a guide to our research on the management status of protected areas at the Indian Institute of Public Administration. We fondly called him the Great White Fear, more because of his physical bulk than any fearful traits. All his colleagues remember him as incredibly generous with his time and expertise and always ready to play practical jokes on them. Like Ravi, Alan perceived the need to integrate wildlife conservation with people's livelihood needs, while maintaining the integrity of ecosystems and wildlife populations as the core.

### Revolutionary hero



The equally remarkable Narendranath Gorrepati, or Naren, was only 55 when he succumbed to a brain tumour on 5 July. Born into a landlord's family, son of an IAS officer, he

quit a secure bank job, did a brief stint at the NGO Lokayan (where Smitu also worked), then move back to his village Venkataramapuram in Andhra Pradesh. He was restless in the city, wanting to practice what others preached – social equity and ecological sustainability.

He struggled for a range of human rights, particularly dignity and livelihood security for Dalits. Single-handedly, he identified 12,000 acres of surplus land to distribute to the landless through the Bhu Samskranala Karyacharana Udyamam (Forum for Land Reforms).

He practiced and advocated organic farming, and even tried creating corridors to enable wild elephants to move through the area without damaging farmers' crops, displaying a rare combination of human and ecological ethics. Naren never flinched from fighting injustice whether it was from the State or from upper castes and landlords. And yet, his gentle Gandhian methods earned him the respect of all sections.



CAD/CAM training session in progress

## New Opportunities

Microsoft recognized the potential in the world's largest diamond manufacturing cluster in Surat, Gujarat, which comprises over 2200 units.

We saw people with dreams to grow bigger and be successful. We understood that this would happen faster with greater access to computers. Microsoft started imparting computer and CAD specific skills to the community, which gave them the confidence to train more people.

Today, diamond jewellery manufacturing units across the district are enabled & empowered with CAD skills, driving employment & efficiencies.

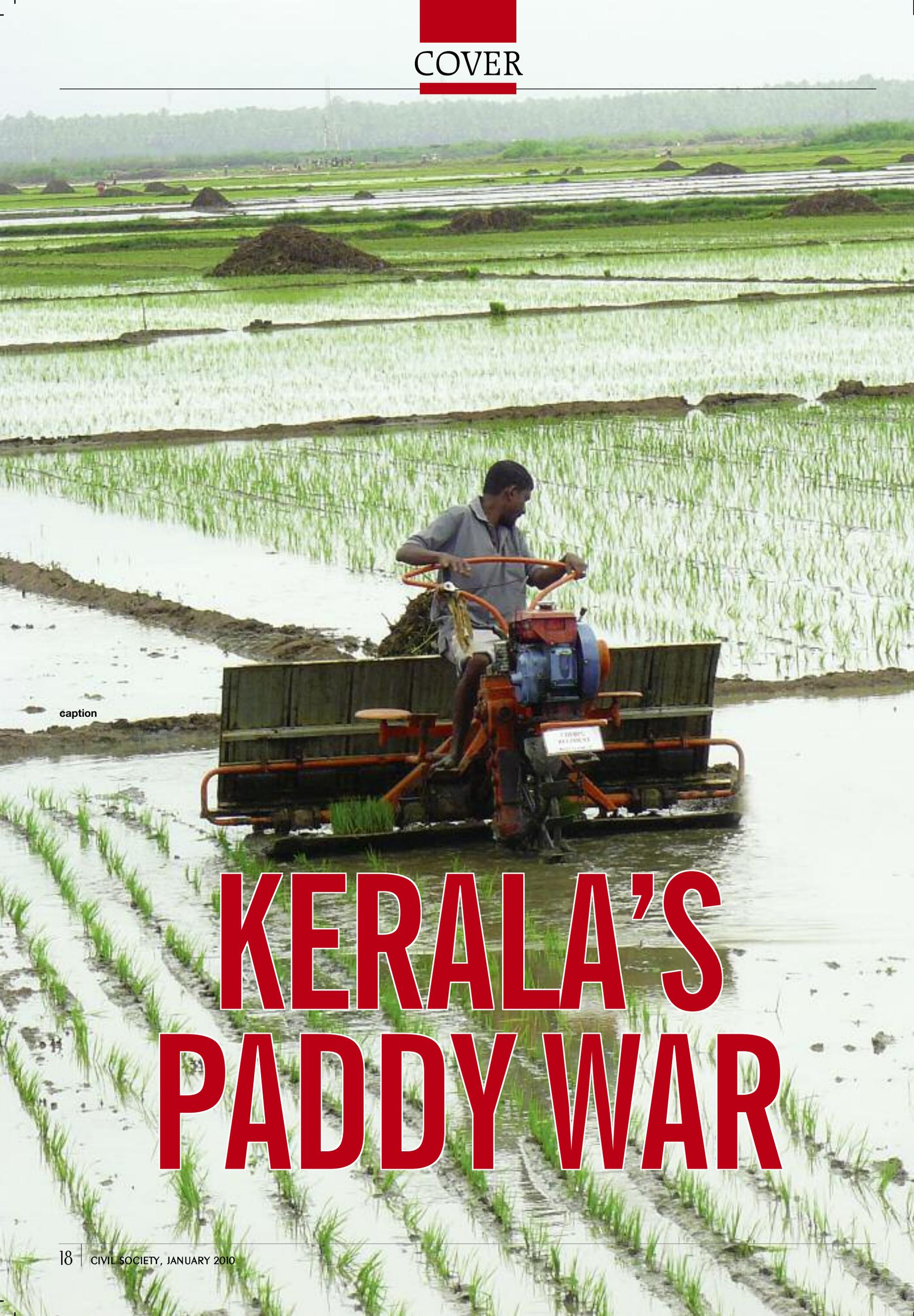
In the words of Kiran, Keen Diamonds, "After I attended the Project VIKAS CAD/CAM training, I was convinced that I can grow my business through new opportunities like jewellery design & manufacturing. Within a week of training, I implemented CAD/CAM in my company. And I have already started getting new customers.

Thank you Project VIKAS."

For more on our efforts to unleash India's unlimited potential, like Project Vikas, visit [www.microsoft.com/india/unlimitedpotential/](http://www.microsoft.com/india/unlimitedpotential/)

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caption

# KERALA'S PADDY WAR



# A Food Security Army goes to war

**Shree Padre**  
Thrissur (Kerala)

**D**r U Jaikumarán is breathless with excitement over the phone. "The next five days will be hectic and crucial in our war against hunger. We have to transplant rice on 300 acres in just five days."

Dr Jaikumarán, a professor at the Kerala Agriculture University (KAU), has been building a Food Security Army (FSA) – men and women in green uniforms organised into nine regiments and 24 battalions – who are equipped to bring mechanisation to paddy cultivation in Kerala.

Now in 'Operation Ponnammutha 300/5' 200 soldiers of the FSA are going to achieve what has never been done before. Normally 200 farm labourers would take 30 days to transplant paddy on 300 acres. But the FSA wants to prove the same work can be completed in just five days with mechanisation and planning.

The terrain at Ponnammutha in Thrissur district is tough. The approach to the area is difficult. The paddy fields are slushy. But the FSA knows this is a crucial battle.

The soldiers go all out and cover the 300 acres in six days – taking one day longer than their own impossible deadline. This too is a record.

"Self-esteem is crucial in this mission," says Dr Jaikumarán. "You can't solve the food crisis if this force feels alienated. They are fighting a war on the food security front. Hence they are like an army."

Paddy yields have been declining in India. This year rice production dropped by 18 per cent. The reason cited was drought. For the first time in 20 years there was talk of importing rice, a suggestion which sent rice prices soaring in world commodity markets. The Union government backtracked and said there was enough rice in stock for now.

The reasons for the decline in paddy are many and vary from region to region.

Take Kerala, a state that depends on rice and vegetables. It is facing a severe paddy crisis caused by large-scale reclamation of agricultural land for construction and an acute shortage of farm workers. According to the State Planning Board, Kerala lost over 500,000 hectares of paddy fields between 1980 and 2007. The harvest almost halved to 630,000 tonnes during this period, severely threatening Kerala's food security.

Legislation prohibiting indiscriminate reclamation of paddy fields has proved ineffective. Of late the state government is offering incentives for group farming of paddy. Under the scheme, committees of paddy farmers (padasekhara samitis) formed under each panchayat are provided subsidised inputs and machinery.

To increase paddy yields the obvious solution is to encourage mechanised paddy farming and overcome shortages of labour. This can give farmers the option of a second sowing season which would increase yield and the incomes of farmers.

Due to an acute shortage of labour, farmers had discontinued cultivating a second crop a few decades ago. Transplanting, too, had stopped.

## THE BUILD-UP

Dr Jaikumarán, with his wide experience in mechanised paddy farming, was always confident that rapid and large-scale transplanting was possible.

His strategy was to advance the first crop from December to September through mechanisation and thereby accommodate a second crop. This would increase the total production in Ponnammutha and three adjoining padavus (padavu is the short form of padasekhara) by at least 50 per cent.

Any delay in the first crop, delays the second one too. If the second crop gets delayed, there is a risk of pre-monsoon showers spoiling the crop. Hence the urgency.

This year, Ponnammutha and the three padavus came forward to experiment with mechanised transplantation on 1,000 acres. Most padasekhara samiti



**Paddy mats being inserted into fields**

members were initially sceptical. However, the Ponnamutha samiti was willing to give it a try. The others chose to wait and watch.

"Let us do it in Ponnamutha this time. We'll see how it fares and then we will decide," they said. Dr Jaikumaran, after consulting his soldiers, took up the challenge. Operation Ponnamutha 300/5 was conceived.

There were serious doubts if 300 acres could be covered in only five days.

These paddy fields are in kole lands (kole is local slang for jackpot) that are below sea level. Such fields are situated between two rivers. During the monsoon, along with run-off, a lot of organic material gets deposited here. Thanks to this, the productivity of kole lands, about three tonnes an acre, is the highest in the state. "The kole land's production of paddy is 2,500 to 3,000 kg per acre," says Kurian Baby, Thrissur's district collector.

KAU has done consistent groundwork for nearly a decade. The Agricultural Research Station (ARS), Mannuthy, under the directorship of Dr Jaikumaran, has been researching various aspects of mechanical transplantation. Once standardised, all new knowledge is included in KAU's package of practices.

Hit by shortages of labour, panchayats have been approaching the university to train their people. The ARS has designed a 22-day training module on running and repairing transplanting machines. The module has only 20 hours of classroom lectures. The remaining 155 hours are spent in the field learning practical lessons. Apart from machinery operations, the trainees are taught how to raise mat nurseries and master the intricacies of methodical paddy cultivation.

After training, these people get local contracts and are paid by farmers for transplanting paddy using machines. Indira Lawrence's Kodakara batch, trained in 2003, got a contract of 70 acres the same year. The Parappur group under Latha Raveendran got an assignment for 48 acres. The farmers' cooperative banks and block panchayats began buying transplanting machines for renting out to these workforces.

Mechanised transplanting is attracting more and more farmers. The Thrissur district panchayat has sponsored 60 people for the ARS training programme. The fee of Rs 3,000 charged for a trainee covers the cost of uniform, food and other expenditure. In recent years, all the trainees put together must have transplanted paddy on more than 1,000 acres per annum.

To make this workforce sustainable and systematic, they were encouraged to form societies called Agro Machinery Operation Service Centres (AMOSC). Each trainee is called an Agro Machinery Operation Service Executive (AMOSE). To speed up capacity building, training was started outside the KAU campus. An Agro Machinery Mobile Training Unit (AMMTU) was formed for this purpose and helped expedite the process.

"Around 250 persons were trained so this gave me the confidence to make the 300/5 claim," says Dr Jaikumaran. Before making any commitment, he convened a meeting of all AMOSEs. They agreed to take up this mission as a test case and complete it in five days.

### THE CRUCIAL WAR

The decision to launch 'Operation Ponnamutha 300/5' was taken in August this year. The dates fixed were September 14 to 18. The first prerequisite was draining out water from the fields. Two 50 HP pumps were used continuously. Traditional nursery plants cannot be transplanted by machines. They have to be planted in the form of a mat of a specified size. For this, the nursery



**Dr U Jaikumaran with regiment members**

has to be raised on plastic sheets. This type of nursery is called 'mat nursery.' Once grown, the bunch of plants can be rolled and cut like mats. They are then inserted into the transplanting machines slots. The machine plants in rows of eight.

Generally two-week paddy plants are used for transplanting. Nursery sowing has to be done that much in advance. The initial plan was to raise the nursery in a decentralised way – one nursery for each five acres – to minimise the need for transportation. But this couldn't be done as water could not be drained out from all the fields on day one. The soil in Ponnamutha is alluvial and slushy and readying it for transplantation was a big challenge.

Full-fledged action began at 9 am. The soldiers were pressed into action. Each battalion had a transplanting machine driver, two people to cut the mat nursery, two to transport that to the machine and four to five ground level staff to do the gap-filling and other related support work. Twenty-five acres in five days was the target for each battalion.

Twenty-four transplanting machines were used simultaneously. Six more were on standby. The machines came from padasekhara samitis, where they were lying idle since the villages could not find skilled operators. These machines were acquired by various panchayats under official paddy cultivation schemes. "Putting machines worth Rs 70 lakhs to use and showcasing their potential is another achievement of ours," a commandant said.

The arrangement in this mission was that farmers or padasekhara samitis would prepare the land. Nursery raising and transplantation was to be done by the FSA. The payment for this work was Rs 3,000 per acre. A good team can transplant paddy across three acres in a day.

The FSA members were not locals. They had to come from 10 to 40 kilometres away. A small number of them were accommodated in a community hall in the village. Indira Lawrence, 46, and her regiment had come from



Kodakara, a village 42 km away. Indira was trained six years ago. The regiment under her leadership gets smaller assignments in the vicinity. But this was the first time they were taking part in a multi-team operation.

### AGAINST ALL ODDS

The 300 acres here belong to 250 farmers. Their houses are at a fair distance. Most of them continue to live here after leasing out their fields. Many are old. Their children work in faraway places. This explains why amid the festive mood generated by this mission, the main stakeholders, the farmers, were almost totally absent.

Kole land gets soft and slushy after tilling. So carrying head-loads is almost impossible here. The army adopts an easy method of transporting the paddy plant mats. The cutout mats are kept on a long plastic sheet, which is then pulled from the other side. "This way they are able to transport more than double of what they can carry on the head. Moreover, it reduces drudgery. It is their own innovation – if this method is ever patented, it has to be in their names," says Vivency, a local agriculture officer.

The FSA grapples with other problems as well. The Ring Road that circles this vast area is very narrow. Two vehicles can pass each other with great difficulty. Small transport vehicles like tempos are therefore engaged to carry the plant mats from the nurseries to the planting sites.

The open fields that stretch for kilometres offer no privacy. For the benefit of the ladies, temporary urinals are erected using plastic sheets. Food is cooked on one side of the pump shed. The local Kudumbashree group is

given the responsibility of providing food.

A roadside space, where three to four university and department vehicles are parked, serves as the headquarters. At the back of a jeep, spare parts are kept handy. The six-member engineering corps is ready on the spot to repair the machines if and when there is a breakdown.

The FSA arrived here on a tractor for nursery-raising activities a fortnight ago. No other vehicle was able to ply on this road. "Walking is easier," says Dr Jaikumaran. Keeping his sandals on one side, he starts his regular rounds. He doesn't mind climbing the back of a tractor or walking barefoot all day. "Yes, this way I do at least six kilometres every day," he smiles.

By 8.30 am every day, this commander-in-chief of the FSA is on the spot. He is the last to return home after sunset along with the engineering team and the village officer. When the day's work ends, a lot of coordination is needed for the following day. Every night, the day's progress is analysed and the next day's strategies are drawn up.

His mobile phone rings constantly. One regiment is waiting for plant mats. Another requires diesel the very next morning. The Thankam regiment wants to know where they should go next now that they have wrapped up their work here. The food sent for the Cherpu regiment has fallen short, so can he rush a jeep there? Can he provide an additional load of mats to the Wadakanchery regiment? The commander-in-chief has to shoulder responsibilities that agricultural scientists rarely have to: crisis management, on-the-spot decisions, quick problem solving.

### MACRO-LEVEL TESTING

Says Dr Jaikumaran: "We agricultural scientists shouldn't stop at imparting training and publishing papers. Do our papers really benefit the farming community? The technology we advocate has to be translated effectively on the fields and the necessary service force has to be built. We have been content with making micro-level trials. We should go in for macro-level exercises. Only then can we understand field level problems."

Since the last 12 years, AP Madhavan's Thankam Agro Machinery Service Centre (TAMSC) has been living on earnings from transplanting contracts.

His wife Girija too works in the team. Madhavan's Cherpu-based 15-member team travels to most districts in Kerala and to Tamil Nadu to do mechanised transplanting. "Nine months in a year, we pursue this profession," says Madhavan, who is president of TAMSC.

From the service charges Rs 500 is paid to the transplanting machine operator, Rs 300 to men and Rs 225 to women as basic remuneration. Whatever money is left over is distributed equally. Some of the army members make around Rs 800 a day.

Omana, another operator, has two sons who work in the police department. While the regular work brings her Rs 300 a day, this assignment fetches Rs 500. "I have interest in farming. That's why I have come here. I'm happy with this," she says.

Women's participation is high. Of the personnel trained so far, 25 per cent are women. The commandants of Parappur, Kodakara and Mullassery regiments are Latha Raveendran, Indira Lawrence and KS Kalikutty respectively.

Kalikutty has an all-women regiment led by Mallika Sasi. There are lady captains in Cherpu, Kolazhy and Karalam regiments. Besides this, Indira Lawrence also gives tuition to school children. "I earn about Rs 30,000 in a year," she says. "This has helped us construct our house."

This is probably the first time in the country that such a vast area is being transplanted with a battery of machines. "The largest area we know where such a feat was done is Dharapur in Tamil Nadu. Seven machines were put into service there," says Keshavamurthy, senior engineer of Bangalore-based VST Tillers & Tractors whose Yanji Shakti transplanting machines imported from China were used

in the Ponnamutha operation.

For harvesting, these rice belts of Kerala commission combined harvesters from Tamil Nadu that finish off the job rapidly. Says Vivency: "Farmers are positive about mechanisation of harvesting and tilling. But though mechanical transplanting is nothing new, they have their own apprehensions. This experiment would go a long way in convincing them about the advantages of mechanical transplanting."

Thanks to Kerala's high literacy rate and levels of awareness, everyone knows about the food crisis. Adding to this, Jaikumaran and his team have

**Kalikutty has an all-woman regiment led by Mallika Sasi. There are lady captains in the Cherpu, Kolazhy and Karalam regiments.**



been successful in strategically developing a national spirit behind the mission of increasing paddy production.

Saleesh, 30, captain of a battalion, has passed school. He is a plumber cum electrician. "Farmlands are dwindling. Rice production is coming down alarmingly. I love rice farming. The training has helped," he says.

Shaji, an auto-driver, has also studied up to SSLC. He suffered a severe loss in banana cultivation on his land but that hasn't diminished his interest in farming. He brings along four other FSA members in his auto-rickshaw from their native place, Cherpu, 25 km away. Parking his vehicle in a corner, he sets off to work in the fields. "No problem, I get passengers up and down and an assured amount of money. What's more, I have the satisfaction of lending a hand to the mission to improve food production."

## SECOND CROP POSSIBILITY

Because of the rains and slushy, inaccessible roads, Operation Ponnammutha took one extra day. Since it was the first experiment of its kind spread over a large area, there were some shortcomings too. There was a shortage of nursery mats for 25 acres. As the nursery was located at a distance, transporting the mats took time and delayed the work.

Yet the biggest gain of this 'rapid action' will be the possibility of a second crop. KA George Master, chairman of four padavus, including Ponnammutha, says he is going to plant a second crop. "We have already decided to cultivate a second crop on 1,000 acres. Farmers need not be present all the time. We have booked the FSA for the second crop during the first fortnight of January."

The committee is searching for seeds of short duration crops such as Red Thriveni or Annapoorna that can be harvested in 90 to 100 days. According to George Master, these varieties bring better returns for farmers because this paddy is in demand for the seeds it yields. The government also gives subsidy for growing these seeds.

The productivity of a second crop is very low, complain the farmers. But the university agronomists argue that this is due to improper management. According to them, productivity can be improved by adding necessary fertilisers to the soil. The Krishi Bhavan has taken soil samples for analysis before starting the first crop. They will be analysing soil samples after the harvest too. Before and after pH levels will be measured. Explains Vivency: "These tests would give us a clear idea. We will then take corrective measures."

Operation Ponnammutha has been successful. But what are the prospects of scaling up? Vivency feels that it's very difficult. "A lot of planning, coordination and convincing farmers is required. To make this a success, we had to keep all our other responsibilities on hold and work very hard for one month."

Dr Jaikumar agrees that it was a very painstaking process, but he is hopeful it can be spread wider. "This task required a lot of patience. In the beginning, there were many negative responses and arguments by farmers. I have advised the FSA personnel not to get upset, react or get angry. If there are any problems, I have assured them that we will sit down together later and sort them out."

Thrissur has the highest extent of kole lands – 13,500 hectares. Only 10,000 hectares of this is cultivated now. The Kole Development Agency (KDA), under the chairmanship of district collector Kurian Baby, is striving hard to augment rice production along with Kerala University and the Department of Agriculture.

Kurian sees every possibility of Operation Ponnammutha being scaled up "because there is a very strong need". Mechanised farming is the only possibility for Kerala, he asserts.

Recently when sown seeds were damaged by excessive rain, Kurian recalls how 350 tonnes of paddy seeds were arranged in three days.

"More than money, what farmers need is caring and confidence that the state and departments are with them. If this confidence is built through timely action, they will play their role well," he says.

According to the district collector, 4,000 acres have already been brought under a second crop in his area. Last year, the district's total paddy production was 75,000 to 80,000 metric tonnes. This year it has risen to 100,000 tonnes. "Our target for the next year is 1.25 metric tonnes," he says.

There were many apprehensions and negative reactions during the planning and initial stages of 'Operation Ponnammutha'. Farmers wanted to know whether mechanised farming would give yields comparable to manual transplanting. But such doubts have melted away.

Observes Vivency, "Not only farming communities from near and far, the whole of Kerala has set its eyes on this experiment. Already 99 per cent of farmers, politicians and departments have been convinced about this possibility. When the second crop is harvested in April, more and more people will be attracted towards such ventures." A section of the FSA has already moved over to a nearby area to transplant 1,200 acres in 20 days.

According to sources at VST Tillers and Tractors, demand for transplanting machines is growing. Already 1,500 are in operation. Last year, they sold 460. This year, till now, the sales figure has touched 450. Punjab alone buying 200.

KAU has responded to the crisis ahead of all other southern Indian states by adopting mechanised farming. On an invitation from Agro Industries Corporation, KAU has conducted 21 demonstrations in seven districts of Andhra Pradesh. A Karnataka team has gone back after taking training at Thrissur. Similar training is being given in Andaman and Nicobar Islands and Tamil Nadu. A Goan team would be reaching Thrissur soon for a concerted training programme.

"This is only a beginning," says TR Viswambharan, Vice-Chancellor, KAU. "Kerala has 999 panchayats. Our 700 scientists will go to each panchayat, study the local problems in farming and try to address it with interventions like mechanised farming."

A team of KAU students had visited the site of Operation Ponnammutha. "We prefer such field studies to classroom lectures," says a class representative. "This 250-strong army will grow to 2500 in a few years, then 25,000. We are going on giving training, they in turn will train many more," says Jaikumar. "That will provide a big impetus to mechanised paddy cultivation in the state. This is the only way to attain food security."

George Master's observation is noteworthy. Says he: "We are getting good support from the government. If the state starts treating farmers with respect, more youngsters will remain in farming."

Indeed, Operation Ponnammutha has shown the way.

You can contact Dr Jaikumar at 094475 30673 E-mail: jinjith@dataone.in

**The committee is searching for seeds of short duration crop such as Red Thriveni or Annapoorna that can be harvested in 90 to 100 days.**

# Business

- Enterprise
- Inclusion
- CSR
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- Go Green

## A whole new era of buildings

*Lonavala conclave sets its sights on the future*

**Green Insider** CHANDRASHEKAR HARIHARAN

THERE were some 30 people around the table. Many of them were heads of construction companies doing at least \$ 20 million of business each. They shared a single commitment: to change the way in which we impact energy, water and waste management in the country.

The first national executive meeting of the CII India Green Business Council was being held in the recesses of the Lonavala hills in Maharashtra on a winter weekend. For the businessmen present here was an opportunity not only to reduce the pressure on the planet's resources, but also to run their companies more profitably.

Like someone said, "If Copenhagen simply concentrated on governance of the construction industry, the world would drop a chunky 25 per cent of its energy use every year."

Helping industry leaders come to terms with new realities were planners, researchers and some very senior bureaucrats. There was news that was quietly being shared on the future that is set to unfold in India in the coming months.

"Every government building to be built will be only a green building," said the Director-General of Central Public Works Department (CPWD), B K Chugh. The minimum rating would have to be three stars by energy efficiency standards.

There are 1,200 universities set to open their doors in India under the stewardship of Sam Pitroda, the current head of the Knowledge Commission. There are eight innovation universities that are being cleared by the government. There are 580 special economic zones (SEZs) that have been permitted by the government and nearly 400 of them are ready.

All these will follow green construction norms. SEZs will have to conform to guidelines specially formulated for them. The Director-General of SEZs in India, has worked over the past six months on a set of norms that every SEZ has to adhere to.

Consider more. The glazing industry has a society that is presided over by a professional who is concerned about the high use of sand in glass manufacture.

"Every square meter of 5 mm glass weighs about 12 kg, and 40 per cent of this is sand. So what are the options to optimise use of this precious natural resource that is rapidly vanishing from our river beds?" he asked.

There are big challenges ahead of the construction industry if it wants to save

BCIL



itself, straddle business growth and make for urban development that does not accelerate CO2 emission.

A cubic meter of concrete uses about 300 kg of cement. Every million square feet of any construction means a staggering 40,000 cubic metres of concrete, or 12 million carbon kg of emission!

How do government and industry turn to sunshine, wind, water, and waste to bolster energy efficiency, accommodate population growth and thrive without accelerating the release of carbon into the atmosphere? San Francisco has already made it a crime not to compost food and wet waste in a bid to cut landfill use to zero. Barcelona has now brought in regulation that says all new and renovated buildings are required to install solar collector panels for a big part of their water-heating needs. Rajkot has made mandatory the installation of solar heating systems for sanction plans for individual homes and for residential builder projects.

Beginning January 2010 commercial buildings in India will never be the same again. The Bureau of Energy Efficiency has brought in a simple regulation under a set of rules called the Energy Conservation Building Code (ECBC). In the last two years the ECBC was merely a set of guidelines that office buildings could use voluntarily. It is no longer so. The rules have to be followed.

The earlier guidelines were applicable only for commercial buildings that consumed over 500 KVA of energy. The new guidelines-turned-rules mandate that every commercial building that uses over 100 KVA will have to be governed by the ECBC.

### Not enough support systems

As the President of the India Green Building Council, Raghupathi reflected at the Lonavala conclave, "There are not enough professionals who can audit water and energy practices. There are not enough professionals who can offer solutions into this new realm of building language."

The head of a building major said, "Architects have to learn to respond to needs that go beyond space, home, aesthetics and volume."

The world of consultants who have traditionally offered solutions for water management under the quaintly termed 'public health engineering' practices, now have to recalibrate their understanding of water, of land, and of groundwater retention. Electrical consultants and engineers have to move away from the traditional supply-side management of solutions to a whole new sphere of demand-side strategies for energy. There are not enough practitioners of waste management. Technologies for any of these systems are still a little primitive with technocrats still not savvy enough on business management or on brand management. So, the good ones remain unknown. The conventional consulting professionals continue to offer solutions that are not reflective of these new concerns and challenges.

There are no testing labs for innovations in building material. Testing for energy and for structural stability is something that will gain prominence rapidly in the next two or three years. The MNRE, the BEE, USAID and many other industry bodies and government agencies are working toward creating such testing infrastructure that can help industry de-risk potential failures in building management systems and building materials in the long run.

India is clearly leading the world today in this major movement toward building green. Today we have over 321 million square feet of certified buildings that makes India the second largest in the world, only after the US. The quality of such energy efficiency in India is superior to what the US has achieved since 1994 when the green building movement actually began there. The CII India Green Building Council is determined to achieve one billion



**India is leading the world in this major movement toward building green. Today we have over 321 million square feet of certified buildings**

square feet of such certified green commercial buildings by 2012. This is two years from now.

The interesting other trend is that in the residential building sector, too, India has made rapid strides to become the second largest in the world at 100 million square feet of green residential buildings.

But there is much that is needed from industry and technologists. There are no more than 90 green building products and equipment that are available just now in the Indian building market. This is against about 2,000 on offer in the US. The need for simple innovation with high market acceptance and reliability of performance needs hardly needs to be emphasised.

### Spreading the good word

If this movement has to gain in strength evangelists have to spread the good word and secure enrolment from every stakeholder.

There is the need for rating systems and certification. Today in India we have three building rating systems with only one of them, the CII IGBC, having made some tangible inroads into organised dissemination of information. The IGBC today has nine chapters, all of them manned and driven by voluntary effort from business leaders who have nothing to gain but the satisfaction of addressing these larger concerns of the planet.

GRIHA and the Pune-based Eco-Housing System are the other two systems that have still not gained adequate visibility on the national urban horizon. The government and its officers at the senior echelons

are still to fathom the consequences of the host of technologies, directions, voluntary and regulatory standards, and the building management systems, data and analytics that make for energy efficiency in buildings.

### The myth of higher cost

Green buildings don't cost more than conventional ones – only the demands are different and need a better understanding of the resources that go to make a building. Architects are usually blamed for bad practices, but it will be sobering to remember that no more than two per cent of all buildings in the country are actually designed and driven by architects. The unorganised sector is far too large for effective monitoring of regulations and implementation. That will be the big challenge before us in the next five years.

Advertising campaigns are needed to deter home-owners from buying what is not certified. Smalltime contractors have to be sensitised. The cement industry has to reinvent itself into not manufacturing pure cement but looking for structurally sound solutions that use a blend of waste materials like fly-ash from thermal power stations and slag from steel plants.

Consumers must realise that every kg of cement equals one kg of carbon. A mere cubic meter of concrete uses 300 kg of cement and weighs 700 kg, with the rest of the weight being made up of sand and stone which are essential for concrete but which deplete natural resources in the periphery of every city and town. Every ton of steel depletes about 280 tons of rich forest resource for the iron ore that needs to be mined.

Can our cities become self-dependent without having to gorge these rich resources of ecosystems outside our cities? Can our cities stop feeding on rivers for power, water, and timber? Can our mineral resources be stopped from being pillaged at the frightening pace at which they are being exhausted now?

As I stepped out into the cool thin air of Lonavala that late evening, it was difficult not take a hard deep breath and savour it. How long will these silent forests continue to take this vandalism from civilized people? I looked at the brightly lit winter sky. The stars stared inscrutably back.

*The writer is CEO, BCIL, the Bangalore-based green buildings pioneer.*

# 'Managers need to think about ethics'

LAKSHMAN ANAND



Vasanthi Srinivasan

It is Vasanthi Srinivasan's mission to make management courses more sensitive to Indian social realities. As associate professor at IIM Bangalore, she has been teaching a course on Business, Governance and Society. It will soon be called Responsible Business. In Delhi recently at the invitation of the Business and Community Foundation (BCF), she spoke to *Civil Society* on how management teaching needs to change to produce better managers.

**You have been trying to make management courses more socially relevant.**

The more I taught leadership development, I found that that a lot of questions young leaders in organisations were asking us were of ethical dimensions. They related to making trade-offs between profitability and conscience.

We also realised that people in the course who had spent time in industry were asking the most critical questions. They were also the ones who were finding it most difficult to do anything which would follow their call of conscience. They had jobs to hold on to, EMIs to be paid and so on and so forth.

It was then that I started looking at ethics and justice as a part of leadership development. One has to think of rights and justice in the Indian context.

**Is the course demand driven?**

The course is on business, governance and society. You see what has happened to management education globally is something to be concerned about. Business ethics is taught more like moral education. You have CSR courses which are no more than stakeholder frameworks. You can have an intellectual analysis of what a mining or a pharma company has done. And then you have governance related courses that deal with the role of directors, board responsibility and so on.

But that there is an undeniable ethical premise across all these courses is not something I think management education has internalised.

We are very good at methodology, techniques and tools. So everything gets down to being a course on methods. But the question we are asking is – who is responsible? It is a multi-level problem. You have a responsibility as a citizen, as a manager in a corporation and then you have the corporation and its responsibility to other stakeholders.

Teaching something like this is a challenge because it is inter-disciplinary. You need some understanding of philosophy to be able to teach ethics. You need to be familiar with corporate decision-making to understand ethical decision-making in the corporate context.

Then you are talking about ethics in marketing,

media, HR. It is a large canvas which includes the millennium development goals, sustainability and reporting on sustainability.

**Do management students take any of this seriously? They covet jobs in finance and marketing.**

I don't know. We offer an elective course in social entrepreneurship which attracts a good number of students. Similarly there is one on environment sustainability that doesn't get numbers but does draw students of a high quality.

I don't think you have to change the world to actually have an impact. I only have to touch 20 per cent of those students to make a difference.

Students need to be sensitised so that when they are later making managerial decisions they are aware of the ethics of the choices they make. One of the things I have thought about extensively in the Indian context is corruption. There is a taker because there is a giver. So we need a mechanism for sensitising the giver.

**So how do you define your course? What do you call it?**

Responsible business – which is basically an integrated course looking at the individual, the organisation and society/economy at large. Our task is to provide the inputs that sensitise students to all the three.

It bothers me when I'm asked if what I am doing is 'value inculcation'. I say no it is 'value clarification'.

In Europe, there is a lot of context that goes into a course like this. In the US it is CSR focused. What would be an appropriate course for India? In my view it has to cover corruption, millennium development goals and international perspectives on ethics.

# Insights

- Opinion
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## Chipko lives on

BHARAT DOGRA

It was a bitterly cold night in January 1977 when villagers of Henvalghati in the Tehri Garhwal district of Uttarakhand huddled for a crucial meeting. News had just reached that the police staged a march in the nearby market of Jajal. More importantly, the police was on its way to the Himalayan forest of Advani where villagers had been struggling since days to protect trees from being axed.

What should they do now? It was one thing to confront the contractor and his workers, quite another to face a police force armed with rifles and the power to arrest people. After some hesitation, the villagers decided bravely that they will not abandon their trees. After all they had tied sacred threads on those trees. The villagers vowed to continue to protect them.

People from several villages had been coming to Advani forest to collect fuel, fodder, vegetables, fruits and herbs. This forest, like many others in the Himalayas, played an important role in soil and water conservation and in protecting villages from landslides and floods. This forest formed part of the catchment of the Henval river, which is a tributary of the Ganga river. When officials thoughtlessly auctioned 640 sal and chir pine trees of this forest, villagers realised that this can destroy the forest, especially since contractors were known to cut trees much in excess of the auctioned numbers.

This auction of trees took place at a time when several Gandhian activists of Uttarakhand region (it was then part of Uttar Pradesh) had been spreading the message of protecting forests. Opposition to the government's insistence on auctioning and felling trees had been building up. Even within Henvalghati, there had been an earlier effort to prevent damage to pine trees by plucking out the iron bars which had been inserted into



trees for extracting a thick liquid for making turpentine oil.

On 1st February nearly 500 people gathered in Advani forest to 'greet' the police with slogans of protection and peace. They chanted:

The Himalayas will awaken today  
The cruel axe will be chased away  
What do the forests bear?  
Soil, water and fresh air  
Police are our brothers  
With them we don't fight

The contractor's men moved from one tree to the next with their axes and saws ready, under the 'protection' of the police. But where was the need

for protection? The villagers did not touch a single worker. They simply hugged the trees. Women were in the forefront and children did not lag behind. With slogans of peace and brotherhood being shouted all the time, it was impossible for the police to stoop so low as to fire on the tree huggers.

A classic Gandhian struggle in action! The police soon realised that trees can't be felled with villagers clinging on to them and asked the contractor to take away his men and tools.

Recalling those days, Vijay Jardhari, a stalwart of the movement, says: "The Advani struggle was followed by other tree-hugging movements as in Badiyargad, Tehri Garhwal, in 1978. Sundarlal Bahuguna, a very senior leader and his wife Vimla Bahuguna had come here to guide this movement. He was on fast for a long time. Conditions had become very difficult here. Once, a forest official forced a worker to continue sawing the tree even while I was hugging it, to the extent that the teeth of the saw started touching me. Seeing my injury the worker told the official that he had come to cut trees, not people. He then stopped tree-felling work."

Here, too, the peaceful struggle prevailed and towards the end of January 1979 the felling of trees was cancelled.

Dhum Singh Negi, another senior activist, recalls: "Tree-hugging captured the imagination of the people. They began to speak widely of a Chipko (tree-hugging) movement. Poet-activist Ghanshyam Sailani also popularised the Chipko movement in his songs which really moved the people. He came to sites where the movement was taking place to sing those songs. In the forest of Salet I was trapped alone with the contractor's men for such a long time I had to do all the tree-



hugging on my own till help arrived from nearby villages."

Sudeshya Devi, an ordinary woman from Rampur village, played the most extraordinary role in opposing tree-felling and tree-auctions and even went to jail. "We hill women know more than anyone else the damage that deforestation causes," she explains. "This realisation was behind my ability to confront officials and go to jail. At one protest against the forest-auction in Narendranagar I sat down on the senior most official's chair and declared that tree-auctions will not be held!"

The most dedicated Chipko 'activist' I met was Kunwar Prasun, a staunch Gandhian. He made crucial contributions to many struggles and went to jail, yet never publicised his achievements. He died in July 2007. His wife Ranjana Bhandari recalls: "Recently when high-tension wires linked to the Tehri dam were being laid, thousands of trees were threatened. Prasunji was away in the forests for a long time trying to find out how many trees could still be saved. Finally, a team from the Supreme Court arrived and helped to reach a settlement according to which the width of the stretch to be cleared was greatly reduced and thousands of threatened trees were saved."

In Loital in Tehri district, a forest was saved on the insistence of activists who campaigned to relocate a unit of the GB Pant Agriculture University. But the biggest achievement of the Chipko movement was that the Uttar Pradesh government agreed to stop the auction and felling of green trees over a vast area of Uttarakhand region. So, while the various hug-the-tree movements saved a few thousand local trees, many times more trees were saved due to the combined impact of these efforts.

While the Chipko movement was succeeding in saving trees in Uttarakhand, a bright young student of social work, a gold medalist, had come to visit this area. Pandurang Hegde was on a study tour, but his mind wandered beyond his thesis. People in our villages in Uttara Kannada district, Karnataka, face similar problems, he thought over and over again. Why can't a similar movement take place there?

After working for some time to pay back his study loans, Pandurang went back to his home

**Millions of trees in ecologically crucial areas like the Himalayas and Western Ghats have been saved by these two movements. These movements also worked for the regeneration of greenery over thousands of acres.**



district and started visiting several villages. He learnt that in many of these villages located in the ecologically sensitive Western Ghats, people were very upset since a large number of trees in nearby

forests had been auctioned. Villagers had written protest letters to officials but this had no impact. Apart from providing fuel, fodder, water, fibre, vegetables and medicines these forests provided green manure and a conducive environment for the famed mixed gardens where villagers grew cardamom, black pepper, arecanut, coconut and banana could flourish.

Pandurang spent long hours telling villagers inspiring stories about the Chipko movement in Himalayan villages. Can we repeat this success in our Western Ghat hills, the people wondered! Around this time Chipko veteran Sunderlal Bahuguna was visiting Karnataka. A local youth club invited him for a public meeting in Balegadde village. The inspiring words Bahuguna spoke motivated people to take direct action to save forests.

The opportunity came soon enough. In September 1983, the forest department started felling trees in the Kalase Forest. On 8th September about 60 people of Belegadde, Gubbigadde and Salkani villages trudged eight km on leech infested rough paths to reach the forest and hug trees. Felling work was temporarily stopped. A team of officials and scientists came to meet the tree huggers on 22 September. The main official first tied to deny anything was wrong, but he had to back down when the scientist accompanying him admitted that allegations of excessive felling were justified. He said that people should be complimented for bringing this to the notice of the government.

In Husri village a natural forest had been clear-felled earlier. People had access to a small remaining patch. In late 1983 when axe-men came to fell some trees in this small patch, about 200 people marched to the forest and started embracing trees.

In December 1983 Karnataka's Forest Minister visited Kalase and other forest areas and gave orders to stop the felling of trees which had been earlier marked for felling.

Pandurang Hegde continues relating the story, "The news of the new 'Appiko' (which means Chipko) movement spread rapidly in Uttara Kannada and neighbouring districts like Kodagu, South Kanara and Shimoga. At several places people rose spontaneously to save trees. Tree-hugging actions took place in Bilgal forest, Gubbigadde and Doddanahalli. Much later, in 2007, the students of Agriculture University in Bangalore also hugged trees in the city to protect them from being felled. Several padyataras or foot marches took place to spread the message of this movement to more and more areas."

In 1990 the Karnataka government announced a moratorium on felling of green trees in the natural forests of the Western Ghats. As in the case of the Chipko movement, the Appiko movement succeeded in saving many more trees than what had been saved by the tree huggers.

Millions of trees in ecologically crucial areas like the Himalayas and Western Ghats have been saved by these two movements. These movements also worked for the regeneration of greenery over thousands of acres. The results can be seen in the forests of Jardhar and Piplet in Uttarakhand or the forests near Mendemane and Gubbigadde villages in Karnataka. Taken together, the impact of these movements has led to a much greener world.

As Ghanshyam Sailani, the Chipko poet says in one of his famous Garhwali songs:

Do not axe these oaks and pines  
Nurture them, protect them  
Streams get water  
Fields their greenery  
See the flower smile in the forest

# SEZ for livestock research

KANCHI KOHLI

ONE of the most blatant forms of industrial expansion has been through the Special Economic Zones (SEZs). While the private sector has welcomed the SEZ policy, the land grab it led to has been strongly opposed by farmers, forest-dwellers and fisher folk communities. This negative reaction should come as no surprise. SEZs provide tax exemptions and special privileges to their developers as a means to encourage Foreign Direct Investment (FDI) in India.

One has heard of SEZs in conventional business sectors like information technology, pharmaceuticals, petrochemicals and so on. Some SEZs have been promoted as multi-product economic zones so that they can take advantage of regulation which permits them to use 50 per cent of land acquired to set up processing facilities for industry and the other 50 per cent for residential areas, entertainment infrastructure and so on.

But recently a new form of SEZ has popped up which has left me baffled. In Andhra Pradesh, there is an SEZ to carry out research on India's livestock! This research centre, called the Indira Gandhi Centre for Advanced Research on Livestock (IGCARL), spread

over 644 acres, is going to be located in Pulivendula in Kadapa district of Andhra Pradesh. It is to be a Public Private Partnership initiative. The SEZ claims it will be a world class facility set up under the Sri Venkateswara Veterinary University (SVVU), Tirupati. It will function as an autonomous institution. The state government of Andhra Pradesh gave approval for it in 2007.

As I dig deeper the plot thickens. The primary focus of the research centre is aimed at biotechnology and animal genetics. Pasted proudly on the IGCARL website (<http://ahfd.ap.nic.in/igcarl/>) are the finest livestock breeds in India. These include Ongole cattle, Murrah buffalo, Punganur Bull and Aseel chicken.

The importance of these breeds in our livestock and agri 'culture' is huge. The Murrah buffalo is known as the pride of Haryana. The Punganur Bull, found in the Deccan Plateau, is considered to be the world's shortest, humped cattle. The Aseel (also spelt Asil) is an ancient breed indigenous to India, originally kept for cockfighting.

The IGCARL plans to freeze and export the embryo and germplasm of some of these indigenous breeds. The next stated intention is gene modification for better production and reproduction. The production of vaccines is also on the cards. And, of course, once this research centre

makes all this effort they will want to seek proprietary rights over their products—through patents.

One was aware that the business of agriculture was fast creeping into livestock research. The Government of India has been receiving substantial aid from international financial institutions like the World Bank which funds India's National Agriculture Innovation Project (NAIP). There are also many research universities which are collaborating directly with private companies. But an SEZ for Livestock Research is one thing I was yet to come across.



**The importance of these breeds in our livestock and agri 'culture' is huge. The Murrah buffalo is known as the pride of Haryana.**

The few farmers I have had the privilege to know also rear cattle. Farm and livestock in India are inseparable and complement each other. In fact, agricultural communities live in close proximity with pastoralists and bio-diverse farms have often become havens of livestock feed. Sure, these complementary practices might have undergone change in many parts of the country, especially in areas where both farm and livestock have been taken over by production systems geared for the market. Ironically, it is livestock in monoculture and mechanised livestock farms that have borne the brunt of disease and death in recent times. The truth is that the Ongole, Punganur, Murrah and Aseel continue to survive

because of the farm-pastoral interconnect.

When the agenda of institutes like the IGCARL unfolds, it raises alarm. Like any other corporation, this research centre is inviting tenders or expressions of interest by 'developers'. People concerned with this development are trying to find out more. But I want to ask readers one question: what do you think the implications of transforming cattle rearing as a livelihood into an enterprise of new cattle creation would be? To me it sounds unacceptable.

The support for projects like the IGCARL comes from our very own planning processes. For instance, the Report of the Working Group of Agriculture Research and Education for the 11th Five Year Plan (2007-2012) states: "to achieve the productivity targets there is an urgent need for reorientation of research programmes. Emphasis needs to shift on assessing the genetic potential of indigenous breeds which of late have been found to be highly productive once given suitable management and environment. The classification of animals as dairy breeds will therefore have to be revised. Intensive research work needs to be undertaken for genetic identification of traits of excel-

lence in Indian breeds, like Jaffarabadi buffalo, Black Bengal goat, Garole sheep etc. and identify the functional genomic associated with their trait of excellence. The biodiversity existing in the domestic livestock needs to be investigated using molecular tools which should involve the transfer of major genes associated with production excellence, tropical adaptability to diseases and stress resistance." My question is, where do small farm and pastoral needs figure in all this? Moreover, do livestock keepers even know what is in store for them in our plan documents?

Andhra Pradesh is supposed to have inaugurated the research block in January 2009 and other facilities are to be fully functional by next month. The IGCARL is its way to becoming a reality without many of us being made aware of the real social and environmental implications of a livestock research like this one. Given that the business agenda has entered the livestock research arena so blatantly, I would not be surprised if there are many other proposals pending or ready to roll.

Its time each one of us opened our eyes and asked, who will benefit from such a project? Is this research designed only to sell out our indigenous breeds?

*The author is a member of Kalpavriksh Environmental Action Group and is based in Delhi*

# NREGA cement kills water structure

AMITANGSHU ACHARYA

**T**RADITIONAL rainwater harvesting practices enjoy a special place in the history and culture of Uttarakhand. Structures such as *chaal*, *khaal*, *chuptyaula*, *simar*, *naula*, *baori*, *dhara*, *guh*, etc are part of the Uttarakhand landscape as much as local folklore and songs.

These structures are excellent examples of local water wisdom. *Dying Wisdom*, a seminal book written by Anil Agarwal and Sunita Narain in 1997 brought to light the ecological and engineering principles of some of these structures, especially *guhls* (irrigation canals). These structures were recognised as unique and active examples of decentralised Farmer Managed Irrigation Systems (FMIS). Later, People's Science Institute (PSI), an NGO in Dehradun extensively documented numerous other water harvesting structures and cultural practices.

Of all the celebrated water harvesting structures, a lesser known one is the *chaal*. By standard definition *chaals* are generally "found along mountain ridge tops, in the saddle between two adjacent crests. They were formed in the past by the glacial action of snowmelt, resulting in the formation of small lakes or ponds with a relatively thick soil bed." Investigations in a number of villages and habitations in Garhwal region confirm that *chaals* were earlier located by shepherds or farmers who took their livestock to the higher reaches for grazing. They realised early that these *chaals* were a good source for drinking water for both livestock and humans. Hence, there was an attempt to harvest this water by constructing an earthen wall or bund around it. These *chaals* are generally referred to as *paramparik* or traditional *chaals*.

In the last three to four decades, upstream forest lands increasingly came under the control and regulation of the Forest Department. Cut off from high altitude pasture lands, newer grazing plots developed closer to villages. The need for livestock water necessitated artificial construction of *chaals*. This marks the migration of *chaals* downstream. However, during its journey, the functionality of *chaals* acquired newer and more scientific dimensions. A conversation with elders in villages in Dunda Block, Uttarkashi, established a clear connection between *chaals* located upstream and flow of water in *dharas* (springs) downstream. Elders were also convinced that unless there is a *chaal* located somewhere above a stream, the latter will not yield optimal water, especially in summer. Hence the recharge function of *chaals*, which is now supported by hydrological research by PSI, has led to their also being defined as units of groundwater and sub-surface water recharge. This groundwater recharge gets tapped through streams located downstream and the sub-surface discharge through *guhls*, which benefit from increased flow in streams.

Unfortunately, loss of forest management rights, conversion of forest type from broad leaved to coniferous, restrictions on grazing and finally stress migration of rural youth affected *chaal* construction and management. With the youth no longer inter-

ested in agriculture, the recharge function of *chaals* was wisdom left with village elders.

For an intervening decade *chaals* had become forgotten entities till civil society initiatives led to their revival. The most notable took place in Ufrainkhal region in the district of Pauri Garhwal through the leadership of Sachidanand Bharati. The Himalaya Seva Sangh (HSS), an umbrella organisation for a number of grassroots groups in the Western Himalayan region also rallied for reviving *chaals*, especially in the districts of Uttarkashi and



NREGA chaal

Tehri Garhwal. Their interventions since 2007 have led to construction and revival of 200 *chaals* in the above mentioned districts.

Interestingly, the campaign led by HSS has witnessed large scale participation from women in the region. This is not surprising since women are key users of *chaals*, as they needed it for providing water to their livestock while out grazing. Most importantly, since collecting drinking water is a daily domestic chore, the relation of *chaals* with water availability in springs helped to galvanize participation. Hence, from being mere users, they are now becoming managers and decision makers of their water assets.

However, this silver cloud seems to have a dark lining. *Chaals* are witnessing a crisis again, and this time at an unprecedented scale. Part of it stems from being identified solely with livestock water provision, the other being its rudimentary nature.

*Chaals* are now rapidly getting 'modernised'. The modernisation drive has two main drivers. One is based on interpreting *chaals* as storage rather than recharge structures. The importance of its recharge functions is unknown to engineers housed in government departments. Elected representatives do not vouch for them as they view *chaals* from the same lens.

While inadequate knowledge can be addressed through campaigns and outreach, the bigger challenge is to counter the political economy that pushes 'concretisation' of *chaals*.

The National Rural Employment Guarantee Act (NREGA) could have helped revive *chaals* at a reasonable scale. Unfortunately, it seems to be going the other way. Constructing a *chaal* involves very little investment in materials and labour. Hence if

*chaals* had to be repaired or constructed the traditional way using local resources such as mud and rocks, NREGA funds allocated to a Gram Panchayat would largely go unspent. Discussions with Gram Pradhans in some of the villages in Uttarkashi and Tehri Garhwal helped us understand how this bottleneck was dealt with. In most cases, the headman requested for cement application. While the publicly articulated reason was strengthening of *chaals*, the tacit one was to increase material costs. Hence a *chaal* that could have been easily construct-



Traditional chaal

ed for Rs 2,000 or Rs 3,000 was now being budgeted between Rs 50,000 to Rs 100,000.

The villagers say most of the *chaals* constructed under the NREGA scheme in villages in Uttarkashi and Tehri Garhwal are bereft of water. The general belief is that *chaals* constructed with local raw materials retain water all year around. However those constructed with NREGA funds retained water only during post monsoons. Moreover, *chaals* when constructed with local materials are easy to repair. When constructed with brick and cement masonry, breaches in the structure cannot be fixed locally.

The ecological impacts of cementing *chaals* is yet to be measured, given that cement doesn't allow percolation of stored water and neither collection of seepage. This may have severe implications on water availability for both drinking water and agriculture in the village catchment area.

Such uninformed interventions in the landscape are having likely impacts. In 2009, Uttarakhand witnessed severe climatic reversals. In January and February, the required rainfall for wheat cultivation was 90 per cent less than the average rainfall in previous years. In June and August in the district of Tehri Garhwal, the deficit was 75 per cent. Adaptation to such changes requires a marriage between different knowledge systems.

Civil society can play a significant role in bridging the gap between local knowledge and modern engineers. The task is to inform local political leadership and generate demand for sound water resource engineering practices in their constituencies.

Amitangshu Acharya is a Project Officer working with Arghyam, a non profit foundation based in Bangalore. Arghyam is supporting grassroots organisations in Uttarakhand for revival of traditional rainwater harvesting systems.

# MoEF skates on thin ice

HIMANSHU THAKKAR

INDIA's environment minister, Jairam Ramesh, released a controversial report on 9 November, 2009, saying it would "challenge the conventional wisdom" about melting ice in the mountains. Two years ago, the Intergovernmental Panel on Climate Change (IPCC) warned the Himalayan glaciers were receding faster than in any other part of the world and could "disappear altogether by 2035 if not sooner."

But the minister denied any such risk existed: "There is no conclusive scientific evidence to link global warming with what is happening in the Himalayan glaciers," he retorted. The minister added although some glaciers are receding they were doing so at a rate that was not "historically alarming". While the IPCC report's deadline for glaciers is clearly wrong considering the current state of glaciers and their melting, the MoEF paper's conclusion is also unwarranted, considering the reality of increasing global and even higher Himalayan temperatures.

However, the conclusions of the (not peer reviewed) discussion paper from the MoEF, titled *Himalayan Glaciers: A State-of-Art Review of Glacier Studies, Glacier Retreat and Climate Change*, authored by VK Raina, former Deputy Director General of Geological Survey of India (GSI) is based on very thin evidence.

First, the study is based on GSI observations of just 20 glaciers out of the total of 9,575 glaciers within the Indian Himalayan territory and none from the over 46,000 glaciers in the Tibet and Hindukush Himalayan region. Secondly, the study provides no data as to what has been the trend of snowfall over these regions, since snowfall is as much a factor that decides if glaciers advance or retreat as temperature and how climate change affects snowfall. The discussion paper in fact notes: "Studies have revealed that the major factor for the negative regimen of glaciers in the Himalayas is the relatively less snow precipitation during the winter than enhanced glacier melting in summer... Hardly any information is available regarding winter precipitation / accumulation."

The paper accepts, "Glacier Monitoring in the Indian Himalayas started in the early 20th century, when 20 odd glaciers in the Himalayas began to be monitored by the Geological Survey of India... The analysis showed that most glaciers were retreating or showing degenerated conditions along the glacier front. The average annual retreat was around 5 m, although a few glaciers were observed to have higher retreat, such as the Pindari glacier in the Central Himalayas which was observed to have an annual retreat of 8-10 m... There was an enhanced focus on glacier snout monitoring in the Himalayas beginning from the mid 1950s... This activity was extended - rather intermittently - till the 1970s... All these (20) glaciers exhibited continuous retreat as compared to their earlier positions, as well as considerable vertical shrinkage." The paper notes that there have been some further studies during



the last three decades of the 20th century, which conclude, "All the glaciers under observation, during the last three decades of the 20th century have shown cumulative negative mass balance."

The paper says that the Gangotri glacier was believed to have once extended to Jhala - about 47 km downstream of its present position. The Gangotri glacier, which had hitherto been showing a rather rapid retreat, along its glacier front, at an average of around 20 m per year till up to 2000 AD, has since slowed down considerably, and between September 2007 and June 2009 is practically at a standstill, the paper claims. However, Raina forgets to mention that the Gangotri glacier has retreated by 2.29 km in 117 years but the highest rate was recorded between 1977 and 1997 when it retreated by 92 metres a year. This has now been confirmed by the observations of Indian Space Research Organisation.

There is no doubt that globally, temperatures are increasing due to climate change. There is also evidence that the temperature increase in the Himalayas is significantly higher than the increase in global averages. Under the circumstances, if other factors remain the same, the Himalayan glaciers will retreat, as the temperature goes up. To make a contrary claim cannot be very convincing.

But we have very little data about one of the most important 'other factor' that decides the fate of the glaciers, namely snowfall. Our water resources establishment has little data by way of sub basin wise or basin wise snowfall data over the years. Unless this crucial piece of evidence is factored in, any claim of glaciers retreating due to climate change or not cannot be accepted as credible claim.

There is a third factor affecting the fate of the glaciers that expectedly, the MoEF discussion paper and the environment minister are mostly silent about. The mad rate at which the Indian government is pushing and building hydropower projects and related blasting, mining, deforestation, build-

ing of roads, townships, tunnels, drying up the river and so on, all close to the glaciers, is also accelerating the melting and retreating of glaciers. The minister did not say anything on this, even as this goes against the objectives of the Himalayan Ecosystem Mission under the Government of India's National Action Plan on Climate Change. The MoEF paper does say, however, "The regional and the local geomorphic features have been observed to have as much influence in the glacier snout fluctuations as the climatic parameters."

Some of the most significant data about glacier melt for the Chenab, Parbati and Baspa basins come from a satellite based study by the Space Application Centre, Ahmedabad. It is interesting to note that while the glaciers in all the three basins have experienced area and volume reduction between 1962 and 2001-2004, the percentage volume reduction in all cases is higher than percentage area reduction. Volume reduction indicates reduction in volume of water held.

This study shows that area reduction percentage does not give the full picture of the loss due to glacier melt. The disintegrated analysis across various area sizes of glaciers in Chenab basin indicates that glaciers in all sizes have experienced reduction in area. However, percentage reduction in area is the highest for the smallest size and lowest for the highest size glaciers. The study says that 80 per cent of glaciers are smaller than 5 sq km and only 7 per cent have an area larger than 10 sq km.

It is very important to note here that more than the length or area of the glaciers, it is the volume of the glaciers that is crucial for downstream river flows. And hence an analysis of how the volume of the glaciers is doing in the climate change context would be most important, but the paper says nothing about this!

This controversy also reflects how poor our baseline knowledge is of the state of India's glaciers on which so many people's water security depends. Some studies show that about 70 per cent of the non monsoon flow of Himalayan glacier fed rivers is contributed by the glacier melt, as measured at the point where these rivers enter the plains.

A study by the Stockholm Environment Institute, presented at an International Water Management Institute workshop in early December 2009 showed that on an average, 17 per cent of the annual average water flow in the Ganga River at Farakka or about 68 billion cubic meters comes from glacier melt. This quantity of water is equal to the live storage capacity of 11 Sardar Sarovar Projects. The importance of glacier melt to our rivers should be obvious from these figures. But there is little systematic data in this regard and whatever little data exists, is all state secret!

It is good that the Dept of Science and Technology, Government of India, has now initiated action to create an institute exclusively for research on glaciers in the Himalayas.

Himanshu Thakkar (ht.sandrp@gmail.com)

# Living

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## The schoolboy's vision

*A Disney veteran crafts a film on the angst of growing up*

Saibal Chatterjee  
New Delhi

LOS Angeles - based Umakanth Thumrugoti's debut feature, *7 Days in Slow Motion*, is anything but your average children's film. For one, it is about children all right but it isn't only for them. Moreover, unlike Indian cinema of this genre, it does not lapse into over-simplification nor does it fall back on overt melodrama for impact.

The unique tone and tenor of *7 Days in Slow Motion*, a film about the adventures of three Hyderabad schoolboys who stumble upon a lost movie camera and decide to make the most of it, stem primarily from Umakanth's cinematic roots. "I was sure from the very outset that I'd make a film that wouldn't talk down to either children or their parents," he says.

*7 Days in Slow Motion* addresses serious issues related to the pangs of growing up within an education system that places a heavy premium on learning by rote and of being deprived of the little joys of childhood under the relentless pressure exerted by parents and teachers. But it does so without working itself up into a lather of platitudes and pat conclusions. The refreshing lightness of touch ensures that the message the film delivers is couched in a simple, entertaining format.

As a Disney hand for 15 years, Umakanth cut his teeth in the realm of animation feature films during the making of *Lion King* before going on to work in a wide array of roles in the development and production of titles like *Pocahontas*, *Chicken Little* and *Bolt*. "I admire the Disney tradition of filmmaking," says Umakanth. "A film like *Lion King* is hugely entertaining but it also provides insights into life. Films from the Disney and Pixar stables have this commendable quality."

But there is much more to *7 Days in Slow Motion* than the exceptional technical and storytelling



Still from *7 Days in Slow Motion*



Umakanth

**'It's a feel-good film about children. But it isn't preachy. I want the entire family to come and watch it.'**

skills that his Disney stint has helped Umakanth imbue. He says: "It's a feel-good film about children. But it isn't preachy. I want the entire family to come and watch it."

The film's story, though rooted in reality, has a strong element of fantasy underlining it. An American visitor, who is in town for an international film festival, loses his camera. Ravi, a sprightly schoolboy whose principal grouse is that the pie chart of his life (as dictated by his stern mother) has no room for fun, gets his hands on the gadget. In the hope of impressing his favourite movie actress, Ravi and

two of his friends embark upon an audacious enterprise.

The boys have only seven days to make a film – the American is in town for a week and the camera has to be returned before he leaves. Despite many hiccups and delays, Ravi goes all out. In the end, he emerges with a film that sets the cat among the pigeons and threatens his own peace of mind. The incomprehensible, duplicitous world of adults impinges upon his life in a way it had never done before. The camera captures too many truths for comfort and his parents and friends are antagonised.

Ravi now wants to wash his hands off filmmaking.

*Continued on page 32*

ing for good. "Films are dangerous," he tells the American as he hands over the camera. "Only good films are dangerous," replies the latter. The implication is clear: there simply aren't enough good films going around. But does that mean that Umakanth's offbeat but engaging film will be accorded a decent release?

*7 Days in Slow Motion* has much going for it. It provokes and disturbs even as it draws its strength from generous doses of humour and the innocence of childhood. *7 Days in Slow Motion* has the makings of a mainstream success a la *Hyderabad Blues* provided it is promoted and positioned right. But Umakanth is aware that getting *7 Days in Slow Motion* out into the Indian market, which is dominated by a particular kind of star-driven, commercially-oriented fare, is going to be a big challenge. "We are exploring all possibilities," he says.

In certain ways, *7 Days in Slow Motion* is akin to the youthful urban dramas that occasionally find takers in the multiplexes. But in look, feel and spirit, it goes beyond the confines of that genre. The film uses English, Hindi and Telugu on the soundtrack. "In a middle class public school setting in Hyderabad, that is the mix that children typically use," says the director.

For producer Soumya Sriraman, the absence of a space for meaningful middle-of-the-road cinema in India is a worry. "You either have big, star-driven films or small offbeat films that exist on the fringes," she laments. "There is nothing in between. There is little scope for films like the ones that, for instance, Hrishikesh Mukherjee and Basu Chatterjee used to make."

Umakanth took six months off from Disney to make *7 Days in Slow Motion*. He encountered a false start. "The Indian production company that had initially come on board backed out from its commitment at the eleventh hour, leaving us high and dry," he recalls. But once the delayed project was back on the rails, the shoot was wrapped up in 37 days flat, "on time and on budget", adds Umakanth.

He then returned to Disney to finish working on *Bolt* before quitting the job to begin work on his second feature. It is a pan-Indian theme and could be shot anywhere, but he says he would prefer to set it in Hyderabad again so that he can use the very unit that he trained during the making of *7 Days in Slow Motion*.

The idea of his first feature emerged during a lunch recess conversation on the Disney premises when someone showed Umakanth a poster of *Dhoom* and commented that it looked "like a children's film". But *Dhoom* wasn't obviously a film meant for children. That set Umakanth thinking and as one thing led to another he decided to give a genuine children's film a shot.

He says: "Although the basic premise of *7 Days in Slow Motion* is a bit morbid – it alludes to a bridge in Hyderabad which, on the day that examination results are announced in the city, has a blanket of security thrown on it in order to prevent students from committing suicide – it is a film with a positive spin."

Umakanth says that he would like to make films that "enhance the worldview of the audience, something that mainstream Indian films do not usually do". Like its young protagonist, *7 Days in Slow Motion* has a battle on its hands.

# Dance and learn at

**Shreyasi Singh**  
New Delhi

TURN the corner from Vikas Marg, a chaotic road stuffed with shrieking cars and you will find yourself in Bharati Artists Colony in east Delhi. The Bhoomika Creative Dance Studio is located here in a warm red-brick building.

Bhoomika's troupe of ten dancers is rehearsing a performance called *Rangavali*. An eight-minute production, *Rangavali* brings alive the characteristics of each colour of the Indian flag. There are three female dancers outfitted in saffron, green and white. A male dancer in white and blue represents the 'charkha'. Their moves are languid, graceful and set beautifully to a musical composition that instils deep pride in the national flag.

Practice sessions like these are held every day at the studio but there is an added zing these days. Bhoomika recently launched a performance circuit for schools in the national capital region (NCR). On offer are live stage performances for students during school hours on campus.

Bhoomika has prepared a unique repertoire of dance-theatre specially designed for children and young adults. The troupe hopes the performance circuit will stimulate young minds, dulled with computer games and silly reality shows.

"Our main aim with this performance circuit is to inspire a child's imagination. Connection with live performances is much deeper. Children can engage with the performers. That



**Bhoomika performs Rangavali, a tribute to India** always leaves a deeper imprint, a more cherished memory. It helps bring art closer to children. I grew up watching live shows. But where are such performances now? How many children have access to them," asks Deepti Gupta, programme coordinator at Bhoomika. She is a Kathak exponent, teacher, choreographer and



Money diver by Ram Raghubir Mishra

# FOD art gets better

**Kavita Charanji**  
New Delhi

THIRTY three artists, mostly hearing impaired, displayed their works at 'Beyond Limits 2009' an exhibition organised by Family of Disabled (FOD) to coincide with 3 December, International Day of Persons with Disabilities.

"Our aim was not to promote the disability. It was to promote art," said Preeti Johar, chief operating officer of FOD.

Even the most blasé art connoisseur would testify to the high calibre of art works on display. There was Ram Raghubir Singh from Allahabad with two works devoted to the Varanasi Ghats. "I have arrived at a modicum of tranquillity and peace through my art," said the hearing impaired Singh,

# Bhoomika

LAKSHMAN ANAND



trained archivist.

Schools can choose from a repertoire of six productions specifically conceived for children. Each production combines dance with theatre, music, visual art and design. There are a wide range of themes like nationalism, colour, sports, fables and the environment.

*Rangavali* is one of the productions on offer. There is also *Panchatantra Ka Sher*, a 28-minute ballet which tells the story of a lion that gets outwitted by a clever rabbit. A 35-minute performance titled *Nightingale* interprets select poems of Sarojini Naidu. There is also a 14-minute production titled *Flying Cranes* and a 10-minute show called *Patang* on the joyous game of kite flying. Then there is a 10-minute abstract dance sequence which explores different kinds of relationships between dancing bodies.

These performances will be followed by interactive sessions and dance workshops to expose children to the basics of dance theatre, rhythm development, storytelling, dancing with props and creating new moves to music. The fees depend on the productions chosen and the type of workshop a school wants to conduct.

"We have included elements to make our dances more attractive by using a lot of props, masks and exaggerated make up. The circuit also supports us to build a future audience for contemporary dance. We hope some of these students will become dancers or connoisseurs of dance," said Kashyap.

Bhoomika says such productions are powerful tools for educating children. Bharat Sharma, the troupe's director, explains that the partnership between education and dance has always been one of the founding principles of Bhoomika.

"Our founder Narendra Sharma was committed to performing for and with young audiences. He founded the troupe in 1972 with a vision to strengthen dance education in our schools. In fact, he is responsible for introducing dance as a subject in Delhi schools. This performance circuit for schools is not new for us. We have worked with schools and the Children's Film Society before. But, there was a

gap. We are bridging that now. We feel the need to go back and do more," he says.

Bhoomika has extensively toured in India and abroad. It has taken part in major dance festivals in France, Italy, Japan, Yugoslavia and several other countries. The troupe has also performed at the prestigious International Modern Dance Festival in Germany.

Bhoomika has already reached out to several schools in the NCR through a blitz of emails and interactions with principals. The response has been encouraging with leading schools like Sardar Patel Vidyalaya and Mother Teresa Convent showing keen interest. They are also getting queries from schools outside Delhi.

"We really want to strike a partnership with schools. We want their complete involvement. Children today, like adults, are mind-oriented; they are living in their mind. We want them to imbibe the physicality of dance, the visual aspect of dance," says Tripura Kashyap, also a programme coordinator and a dance educator, movement therapist and choreographer.

The performance circuit will help children understand dance beyond mass, popular interpretations, hopes Gupta.

"We want to put an end to the perception that there is either a Shiamak Davar style of dance or a traditional classical form like Kathak, Bharatnatyam, Odissi. The traditional forms can sometimes alienate a child because they require an understanding of the form before they can really be enjoyed. We want to showcase the in-between, to find the middle ground. Contemporary dance is more accessible. We want them to see different shapes that contemporary dance can create and also to create their own shapes," she explains.

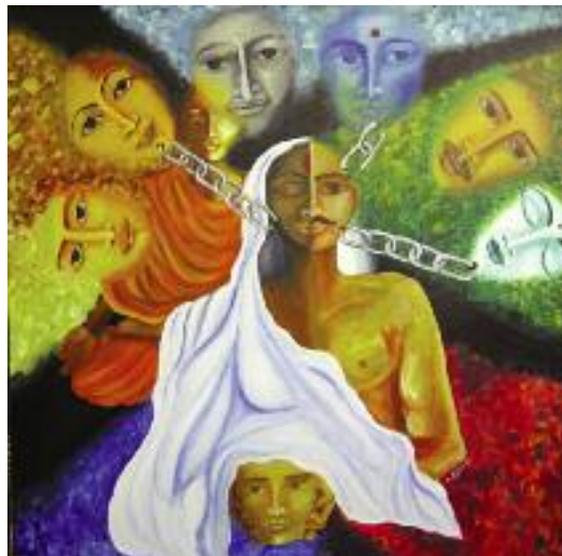
Tripura Kashyap (91.9958569192), Deepti Gupta (91.9810295778).  
Email them at bhoomikadance@gmail.com



Gurjar by Sriharsha Sukla

when asked about his theme.

Other works captured contemporary reality. For instance, 'Terrorism' by the hearing impaired Pawan Kumar Singh, an oil on canvas, was based on his perception of 9/11. His work depicted the World Trade Centre ablaze as a plane zoomed in on the horizon.



Kadiyan by Arveend Budh Singh

Another eye catcher was 'Kadiyan' by Arveend Budh Singh. This revealed the male and female persona of a single entity. Making a mockery of the 'equality' of the sexes, were the shackles imposed on the woman depicted in the work.

Vasudha Ralhan's 'Moonstruck' and Arpita Mandal's 'Modern Art' revealed the immense tal-

ent of the young artists. Vasundhara has a degree in Fine Arts. "I am at ease with a variety of media – watercolours, poster colours, dotting and pencil sketching," said Arpita.

The magnificent tigers of Ranthambore were the subject of Imamuddin's works entitled 'Affection' and 'Watchful Cubs'. Meanwhile, Siddhartha Sankar Sukla and his brother Sriharsha Sukla displayed their mastery over the collage art form – Siddhartha with his visualisations of city life and Sriharsha with his depiction of a wizened Gurjar in a colourful turban.

The organisers were backed by noted artist Aparna Caur, who offered gallery space free of cost to FOD for all six editions of Beyond Limits that have been held so far. Sudip Roy, a renowned artist, assisted in the selection of artworks.

FOD has held two other exhibitions in the course of this year. "Beyond Limits is our major endeavour every year. While the previous two shows were basically to give exposure to the artists, here we also want the art to sell," pointed out Preeti.

Twenty eight art works were sold in this edition of Beyond Limits, as compared to 37 last year.

# Capsule of social change



## COLOUR OF GRATITUDE IS GREEN

Selected Writings: 2000 to 2009  
Amit Sengupta  
Rs 150  
Shreya Publications

**Saibal Chatterjee**  
New Delhi

This lively anthology of articles, columns, conversations and reportage culled from newspapers and magazines captures the full range of the social and political concerns that underpin journalist and editor Amit Sengupta's worldview. The selected writings, marked by remarkable acuity, cover a decade of tumultuous change across domains of endeavour, casting a sharply critical and sensitive eye on the principal flashpoints and conflict



Amit Sengupta

zones that have defined this era of turmoil.

"I see this book as a time capsule. It's a sort of journalistic documentary about the current scenario of change," explains Sengupta, who has over the years worked for media platforms like *The Pioneer*, *The Hindustan Times*, *Outlook* and *Tehelka*.

The collection straddles a wide swath of issues and contemporary developments – from man-made disasters (Nepal, Narmada, Nandigram, Modi's Gujarat, Buddha's Bengal) to horrific natural calamities; from starvation deaths to the ugliness of the all-pervasive culture of con-

sumerism; from touching odes to victims of communal and other forms of violence to forays into remote regions and people's movements that are rarely, if ever, written about in India's mainstream media.

This is clearly the output of a journalist whose heart is in the right place, who knows that the current paradigm of development is fraught with danger. Sengupta is a keen observer blessed with a sharp eye for detail. He records what he sees with anger and empathy. His writing is free-spirited and informed with as much acerbic wit as gentility of adumbration.

Sengupta spares nobody. He pillories the Left with as much gusto as he brings to bear upon his critique of the divisive forces of Hindutva. He celebrates the voices of dissent around the country and elsewhere, discovers the hum of poetry in the unlikeliest of places. He gives a voice to the dispossessed and marginalised. Journalism at its very best.

# Telling the dark side of Hinduism

**Shreyasi Singh**  
New Delhi

Dalit author and activist Dr Kancha Ilaiah is used to making controversial, no-holds-barred statements. His recently launched book *Post-Hindu India: A Discourse in Dalit-Bahujan, Socio-Spiritual and Scientific Revolution* lives up to that reputation. In the book, Ilaiah predicts an inevitable civil war between the Hindu upper castes and the Dalit Bahujan community across spiritual, social and political spheres.

"Symptoms of civil war are all over India. The Dalit Bahujan community wants more space in our society. They want equality," says Ilaiah. "Dalit Bahujans are called Hindus. But are they really Hindus? How can they really belong to that religion when it does not give them the right to become priests or enter its most revered places of worship. Dalit Bahujans have had enough of this spiritual fascism."

Ilaiah's book was launched at New Delhi's India Habitat Centre. The occasion brought together many Dalit activists, campaigners and politicians. A panel discussion on their struggle for equality was organised jointly by Sage and the Dalit Freedom Network, a human rights organisation that supports the Dalit Bahujan cause for religious freedom, social justice and economic empowerment.

"That Dalits feel marginalised was evident even at a book launch like this attended by accomplished members of their community. Somebody came up to me in tears because he said he could not believe a book written by a Dalit man was being released in a place like the Habitat Centre. Why should I have to face the tears of my people even at a joyous moment," Ilaiah wonders.

In the 340-page book, Ilaiah critiques the intellectual contribution of the dominant upper castes and postulates that Hinduism, as a religion, has blunted the country's innovative skills. He theorises that scientific discovery stagnated in India because Hinduism put barriers between spirituality and occu-



Kancha Ilaiah



## POST-HINDU INDIA

Kancha Ilaiah  
Sage  
Rs 295

patation. "We only have borrowed science. Our scientists are really just skilled workers. Scientific inquiry can flourish only in societies where these tasks are believed to be the tasks of God. Hinduism does not allow that. It views production as pollution."

A professor at Osmania University in Hyderabad, Ilaiah won the prestigious London Institute of South Asia (LISA) Award for 2008 for his book "Why I Am Not a Hindu". He is unafraid to label himself "anti-Hindu", and accuses the religion of being in a time warp. "I want this book to get the frozen Hindu mind out of the freezer. Christianity undergoes

reform battles so often. Islam has a huge reform battle raging right now. Authors like Salman Rushdie and Taslima Nasreen are soldiers of that struggle. But, there is no discourse on reform in Hinduism."

His writings are often accused of rabble-rousing and war-mongering, but Ilaiah believes revolutions and civil wars are at times imperative for bringing in a new era. He says the Hindu upper castes and classes need to lead reconciliation attempts. "I appeal to them to come forward and re-negotiate all our relationships. I invite them to engage with us. People who have been made subservient for 3,000 years should not be expected to effect change."

# CSR primer

Even the top honcho in a company could get his CSR wrong and find himself a social outcast. Here is a slim primer which explains it all. Nicely written and laid out, the book takes you on a short CSR journey from ancient times to present.

The first section traces the history and evolution of CSR from Indian philosophy to the Tatas to Mahatma Gandhi's idea of trusteeship. There is a page on various models of CSR and a brief big fight on the relevance of it.

The second section defines CSR and explains its jargon. Do you know the difference between corporate social investment and socially responsible investment? Better read this book.

The business case for CSR is analysed in the third chapter. Why do companies opt for CSR, who drives it and CSR's relationship with the supply chain, the community, consumers, government are all explained. Other important chapters tell you how to design and manage CSR, how to frame a company policy and CSR's global links. There is a convenient toolbox. This is a practical, useful book for all companies and for those who want to understand CSR.



## CSR PRIMER Business and Community Foundation

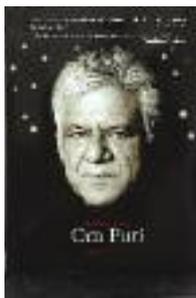
# The power of Om

Saibal Chatterjee  
New Delhi

A long overdue biography of one of India's most accomplished and versatile screen actors, *Unlikely Hero: Om Puri* has been in the news for the wrong reasons ever since it came into the public domain. While the hoopla may help sell the book, the media-fuelled assumption that it peddles scurrilous nuggets about Om Puri's personal life is less than fair to the subject and the actor's wife and author, Nandita C Puri.

This isn't obviously a kiss-and-tell, Boswell-in-the-boudoir effort. The 200-page book etches a lucid, illuminating portrait of a man and an actor who rose from humble beginnings to become India's first true crossover actor and the only film personality from the subcontinent to be inducted into the Order of the British Empire (OBE) for his contribution to cinema in the UK. His is a fascinating tale – Om was literally a rag-picker as a boy who scrounged for coal in a Punjab railway station yard – that was crying to be told. It has now been done, and it has yielded a cracker of a story.

Says Nandita, a seasoned journalist and writer: "It isn't easy making a clean breast of your past. We are hypocrites, so we cannot accept the honesty of a man who speaks the truth about himself. I guess we all want to speak the truth but cannot quite bring ourselves to do it publicly. I hope this book sets a trend."



She says: "When an act of honesty is met with a slur, it is tough to digest. I've been getting both bouquets and brickbats. It hasn't been easy. I am now wondering whether I should have written the book at all." Pointing out that the book is dedicated to her son, she asks: "Why would any woman put her own marriage at stake for the sake of a book or write anything that would hurt her son?"

Nandita, who began her professional life as a journalist in Kolkata, is now a columnist with a book of short stories and two screenplays behind her. She is currently working on her first novel – a historical epic.

Her background has come in handy. The Om Puri book is an easy read because it does not lose its way in the labyrinths of facts and analyses. "It is about an ordinary man who has risen to extraordinary heights," says the author. "I approached the task primarily as a journalistic storyteller, with a blend of empathy and detachment. Om has done 250-odd films. It would have been extremely boring for the reader had I gone into great detail about every piece of work he has done. The canvas is so huge, so I had to be selective."

*Unlikely Hero* marks a first in Indian publishing history. Never before has a writer in this country authored a biography of her spouse. Nandita mentions the instance of *Billy*, actress-turned-psychia-



Nandita Puri

## UNLIKELY HERO OM PURI

Nandita C. Puri  
Rs 395  
Lotus-Roli

teens.

As a wife writing her internationally feted husband's biography, Nandita had what could be perceived as a distinct advantage. She was privy to the kind of inside information that ordinary biographers can only dream of. "I have been on the sets of all his films for many years," she says. "So I've seen him at work from closer quarters than anyone else could have."

But that did not necessarily make Nandita's job any easier. "It was very, very difficult striking a balance between being an integral part of his life and functioning as just a writer," she says.

When Roli Books approached her, Nandita was clear that she would not do a coffee table book on

trist Pamela Stephenson's book on her husband, the irreverent Scottish comedian Billy Connolly. "It created quite a stir in the UK when it came out," she adds. Connolly had opened his heart about his tortured childhood to his wife and confessed to being abused by his father in his early

Om. "There is no documentation on the leading lights of non-mainstream Hindi cinema – Naseeruddin Shah, Shabana Azmi, Smita Patil and Om Puri. So I felt that a book on one of them should serve the purpose of providing insight into the work of the others," she explains.

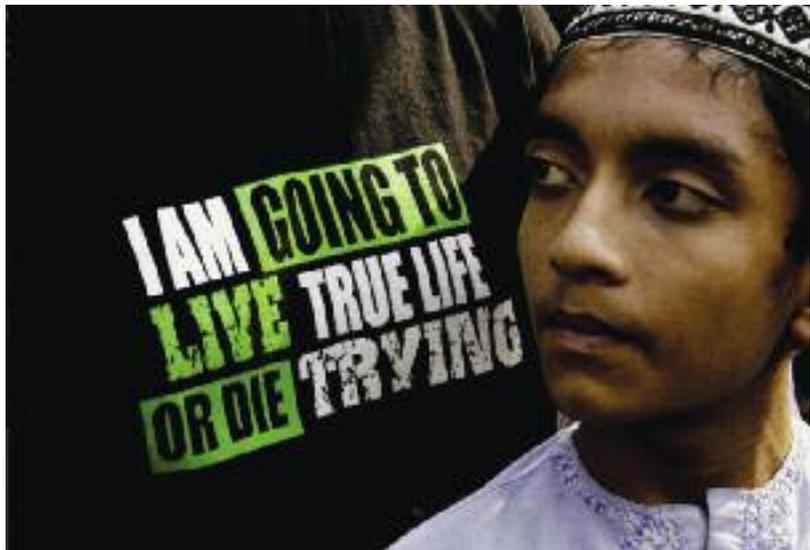
In a 35-year career that has taken him around the world, Om Puri has worked with the very best in the business – directors like Satyajit Ray, Shyam Benegal, Govind Nihalani and Richard Attenborough and co-actors like Jack Nicholson, Tom Hanks, Patrick Swayze and a host of Indian superstars. "I had to get in touch with people across the globe for interviews," says Nandita. "The process took eight to ten months."

The book, she reveals, contains only a fraction of what she knows about Om and of what his co-workers shared with her. "I could not have rambled on... so I focused on what was absolutely essential while striving to retain my integrity as a journalist," Nandita adds, citing the example of her conversation of Sandip Ray. "His observations ran into reams, but I took only one point. He told me that Om Puri is the only actor he knows who does not blink before the camera."

Nandita admits that Om still finds it frustrating at times when mainstream Hindi film directors do not do their homework. "Given his cinematic roots, he resisted the lure of commercial Hindi cinema for several years. But he couldn't live with just bread forever. He needed butter and jam too. Today, he either opts for a film with a powerful script that gives him a challenging role or he takes on films that are brainless but fetch him money. But he does both kinds of films with equal honesty," she says.

And that's always been Om Puri's forte: creative integrity. In the ultimate analysis, Nandita C. Puri's book on his life and times reflects just that – and more.

**'It isn't easy making a clean breast of your past. We are hypocrites, so we cannot accept the honesty of a man who speaks the truth about-himself.'**



Naeem Mohaiemen's Live True Life or Die Trying



Objects by Shilpa Gupta

# Freedom is just a word

Rina Mukherji  
Kolkata

WE talk of freedom but ignore the transgressions that take place on our freedom. Every day we are hindered in some way or the other. The irony of freedom is explored by three South Asian photographers in an ongoing multimedia show at Experimenter, Kolkata. Naeem Mohaiemen of Bangladesh, Bani Abidi of Pakistan and Shilpa Gupta of India set their lens on the imagery of freedom and conclude, 'freedom is notional.'

Contrasting two major rallies held in Dhaka on the same day, one by Islamists and the other by communists, Naeem Mohaiemen looks at how freedom is perceived by different groups. Dhaka and its countryside grapple with problems which are mostly economic.

Yet each group works to make a scapegoat of the

'other', to explain away issues they cannot come to terms with. The Islamists tell their supporters that deliverance and freedom from a hard life could be achieved by living the 'true life' as ordained by Islam.

The communists preach freedom from the oppression of capitalists and superpowers. As a freelance photographer who belongs to neither side, Mohaiemen sees himself as the ideal person to look objectively at all actors in the fray, including the police who are just too confused to take any stand.

The accompanying text is retrospective and delves into the ironies. The Islamists have the best banners and attract the biggest crowds due to their catchy rhetoric. But the communist rally scores an unintended march over the Islamists when a stack of hay suddenly catches fire. A linked video of mobile phone clips of the rally backed by rock music talks about the sardonic shadow play in Dhaka

between the communists and capitalists.

Bani Abidi's video *Reserved* examines how a certain neighborhood in Karachi is put on hold for that familiar VIP arrival. People who would have agitated for freedom take the multiple barricades in their stride and patiently wait for the VIP to pass.

In *Intercommunication Devices*, we see a host of devices to protect residents in a housing complex from strangers. Through details in each drawing the artist asks: Don't these devices encroach on our right to privacy, even as we build walls around us for protection?

Shilpa Gupta's monochrome series, *Confiscated Objects* has been developed from objects confiscated by the airport security staff in Mumbai. In *100 Hand-drawn Maps of India*, Gupta uses mounted video to probe shifting notions of borders by using maps drawn by 100 different people down the decades.

*Memory* is also unique. A diminishing pile of papers designed for visitors to remove one at a time, leaves behind jagged edges like memories behind when borders are carved out.

Unlimited freedom is a mirage. We are all constrained in some way, by our circumstances, our personalities, our societies, our gender.

## The buzz on Gular

The *Ficus glomerata* tree, known in Hindi as the Gulnar or Gular tree, is native to the Indian subcontinent. It is unusual because its figs grow on or close to the tree trunk. Even a single Gular in your garden can create a micro-environment that is beneficial to birds, bees and butterflies. Ants and other insects live at the base of this tree. The soil around the Gular is rich and fertile, thriving with micro-organisms. Birds like barbets, orioles, green pigeons are still found in city parks due to the presence of the Gular or other ficus trees. These birds feed on the figs of these trees. If such trees are removed, many species of birds will no longer be seen.

The Sanskrit name for this tree is udumbara. In the Atharva Veda this tree symbolises the acquisition of wealth. It is said to vanquish your foes. The tree's figs are an Ayurvedic herb, useful as an astringent, an anti-diuretic, for leucorrhoea and menstrual disorders and for healing wounds and ulcers when applied locally.



# Diet for asthma

Dr G G GANGADHARAN



**T**HE modern urban lifestyle with its excessive industrialisation and pollution has increased the percentage of asthma patients in the world. Ayurveda not only helps to treat the disease without side effects but also aims at its prevention.

Asthma is one of the 'Shwasa Rogas' and in its aggravated stage is called Tamakaswam. The 'pranavayu' located in the chest gets aggravated due to various causes and vitiates 'Kapha', causing asthma.

Exposure to dust, smoke and wind, residing in a cold place, use of cold water; habitual intake of dry food and food deficient or excessive in quantity, fasting in excess, use of mutually contradictory food like fish with milk/curd; intake of curd and unboiled milk, intake of meat of aquatic and marshy animals; intake of oily food; excessive exercise; consuming pastry, bakery products, etc. are some of the common causes of asthma.

A common feature of asthma is that the patient feels difficulty in breathing and gets pain in the sides of the chest and in the cardiac region. In the severe form of asthma called 'tamaka shwasa' an asthmatic patient will have murmuring sounds and dyspnoea of exceedingly deep velocity which is immensely injurious to life. Due to acute spasms the patient gets tremors along with cough and becomes motionless. The attack gets aggravated when the sky is cloudy and when the patient is exposed to water.

**Importance of diet in asthma:** Improper diet is one of the main causes of asthma. One should be careful to digest food properly as poor digestion produces toxins that can trigger an asthmatic attack. To combat asthma it is necessary to follow a proper diet.

**Foods to be avoided are:** ● New cereals, black gram, peas ● Fruits like oranges, banana, guava, watermelon ● Milk – sheep's milk, curd, bakery and dairy products ● Fish has to be avoided ● Groundnut oil and coconut oil ● Fried and processed food ● Avoid cold water, drinks, other

cold beverages and refrigerated and reheated food.

**Beneficial diet for asthma:** ● Old rice, yava (barley), wheat, mung (green gram), kulattha (horse gram), chana and Bengal gram are good ● Vegetables like palak, ambatchuka (green sorrel/gongaru), surana (yam), tender radish and snake gourd are good ● Fruits such as jamun, chikoo, apple can be taken ● Cow's milk diluted and warm can be used ● Honey can be taken.

## USEFUL RECIPES:

**Soups:** Leaves of Matulunga (Maphala/Citrus medica) and nimba (neem), very little, should be mixed with green gram and boiled by adding water. To this salt, hingu, curry leaf and black pepper should be added in appropriate quantity and cooked properly. Intake of this soup is helpful in asthma.

Soup prepared with drumstick leaves and radish is also beneficial when cooked with ginger, pepper, long pepper, salt to taste and a little ghee.

**Diet:** The juice of Sauvarcala (common sunflower), milk or ghee should be mixed with the powder of ginger, long pepper and black pepper. Intake of this as a post prandial drink (anupana) after taking boiled red rice is useful for patients suffering from asthma.



**Home remedies:** Take a teaspoon of fresh ginger juice mixed with a cup of fenugreek decoction and honey to taste. This improves digestion and fights asthma

Grind to a powder form - two gms each of Nagar Motha (Nut grass, Cyperus rotundus) and Bharangi (Clerodendrum siphonanthus) and mix in water to prepare a paste which should be taken with warm lukewarm water twice daily.

Mix one teaspoon honey with one teaspoon of Indian bay leaf (Cinnamomum tamala) powder and have it before going to bed at night. This will help prevent an attack of asthma at night.

Apart from diet one can practice breathing exercises or switch to yoga which will help in fighting asthma. Brisk exercises such as taking a long walk and regular exercise is also important, since the stimulus created by it can clear any blockages in chest and lung areas.

By following these habits one can prevent and fight an attack of asthma.

E-mail: vaidya.ganga@frrht.org. Dr GG is a senior physician with FRLHT, Bangalore.

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READ US. WE READ YOU.

# Control your anger

SAMITA RATHOR

*Anger will never disappear so long as thoughts of resentment are cherished in the mind. Anger will disappear just as soon as thoughts of resentment are forgotten. Holding on to anger is like grasping a hot coal with the intent of throwing it at someone else; you are the one who gets burned.*"

-Buddha

**K**RODH is derived from the Sanskrit word 'krodha' which means anger, wrath or rage. It expresses itself in several forms from quiet glumness to frantic tantrums and aggression.

Krodh, an expression of emotional energy, is destructive if handled wrongly and irresponsibly. Krodh may be expressed in several forms from intensive simmering emotions, welled up inside a person, to an emotional eruption of the most violent and hysterical type. Krodh is man's greatest enemy.

We are all born with unfulfilled desires. In the effort of trying to accomplish these desires one can get extremely stressed, frustrated and angry. Scientific research shows that you are putting yourself at high risk if you do not have anger management skills in place. Anger causes a widespread negative effect on the body – mentally, physically and spiritually.

Anger is psychosomatic. During an anger episode you may experience muscle strain, grinding of teeth and teeth clenching, ringing in the ears, flushing, high blood pressure, chest pains, excessive sweating, chills, severe headache or migraine. With chronic anger, people can also experience acidity, peptic ulcers, constipation, diarrhea, intestinal cramping, hiccups, chronic indigestion, heart

attacks, strokes, kidney problems, obesity, and frequent colds. Medical experts have found the heart muscle is affected by anger and anger can actually reduce the heart's ability to properly pump blood, leading to severe heart conditions.

Anger causes rapid breathing. Breath is life. When we get angry we are draining our life away.

## SOUL VALUE

So people who constantly get angry are shortening their life. Ralph Waldo Emerson rightly said: "For every minute you are angry you lose 60 seconds of happiness."

Anger can be external or internal. In an external scenario, anger can lead to physical violence. Internal or suppressed anger can also have emotional effects, causing depression, eating disorders, addiction to drugs and alcohol, nightmares, insomnia, sleep-walking, self-destructive behaviour and disruptions in the way a person relates to others. Suppressed anger should be avoided. It is a silent killer.

Anger can also be constructive. Anger at prejudice or immorality is a healthy, spiritual reaction. Anger helps us see what is wrong and can motivate action to create positive change in the world. Anger is destructive when it is used at the drop of a hat. An angry person may verbally abuse and use foul language which is again a destructive form of anger.

### Anger management guidelines

- Meditate and contemplate on the real cause of your anger.
- Recognise and accept the emotion as normal

and part of life.

- Breathing helps. Inhale and exhale with complete awareness. This will help the body and mind to relax.

- Never try and reason with an angry person. An angry person always sees haze and is unclear in his thoughts.

- Move away from the anger causing environment or people at that particular second.

- Listen to some comforting music.

- Express the reason for your anger and rationalise. Don't find fault with the person who made you angry. Examine the situation mindfully.

- Drink water.

- Splashing water on the face refreshes and cleanses.

- Specific yogic practices are excellent for soothing the body, mind and soul.

- Do something physical, such as going for a run, swimming or playing a sport.

- Certain foods like red meat, spicy and overcooked deep fried food should be avoided.

- Angry people would need a lot of counselling and therapy if they want to help themselves.

- Eat a lot of green vegetables, fruits and juices. It can have an incredible calming effect.

- Try smiling.

- Go to a peaceful environment or on a holiday at a serene location.

- Everyone gets angry, and anger can even be a good thing. Learn how to use it and deal with strong feelings.

Anger can be overcome. Certainly, the crushing of anger is not only possible, but also the only thing worth doing in a lifetime.

LAKSHMAN ANAND



## PRODUCTS

### WARM IN WOOL

Geetika Kakkar is an entrepreneur based in Dehradun. She has organised 100 women from villages in and around Dehradun and Rajpur into a group which knits sweaters, pullovers, blankets, skirts, tops and dresses. Her outfit is called Gauri International. Each of the women earn around Rs 2,500 from knitting. All her products are hand made and very warm. Geetika says most of this money is being used for education. Prices range from Rs 100 for a cap to Rs 6,000 for a king sized blanket.

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